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A Study of Brand Preference: An Experiential View

A Thesis Submitted for the degree of Doctor of Philosophy

By

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ABSTRACT

Consumer brand preference is an essential step to understand consumer choice behaviour, and has therefore always received great attention from marketers. Brand preferences reveal the type of attributes a brand possesses, to strengthen its position and increase its market share. Moreover, it forms a critical input in developing a company's successful brand strategy, and gives insight for product development. However, the shift to experiential marketing broadens the role of the brand from a bundle of attributes to experiences. Experiential marketing also considers both, the rational and irrational assumptions of consumer behaviour. The technological advancement helped increasing the similarities between the brands attributes and product commoditisation. Consequently, consumers cannot shape their preferences among brands using rational attributes only. They seek the brand that creates experience; intrigue them in a sensorial, emotional, and creative way. Companies' competitiveness in such market has, therefore become increasingly difficult. Their survival requires building their competitive advantage by delivering memorable experiences, which would influence consumers' brand preferences, and consequently stimulate consumers' purchase decisions.

In the marketing literature, the traditional models are uni-dimensional, and addressing the brand preferences by consumers' cognitive judgement of brand attributes on a rational basis. The role of experience is limited to the impact of its type on shifting preference level. Most of prior studies are partial and focusing on one or two antecedents of brand preferences. In addition to these drawbacks, the studies also ignore consequences determining the consumer purchase decisions. Based on these limitations in the literature, a lack of understanding of how consumers develop their brand preferences was identified.

Accordingly, the aim of this study is to develop a model that provides an understanding of how brand knowledge and brand experiences determine brand preferences and to investigate its impact on brand repurchase intentions. In this model, the brand knowledge is defined by attribute-based beliefs, referring to consumers' salient beliefs about the brand intrinsic cues, and non-attribute beliefs, reflected in the price, appearance, brand personality, and self-congruity. Therefore, the relative importance of brand knowledge factors contributing to brand preference is determined. Furthermore, the model addresses the interactions between the brand knowledge and brand experience in shaping brand preference. Thus, addressing how the experiences reflect embedded value in the brand offerings influencing consumer preferences.

To achieve the aim of this study, a sequential mixed-method methodology combining both qualitative and quantitative research was adopted. The aim of the first qualitative phase is exploratory, using focus groups, to refine the proposed model and generate items for questionnaire development. The second phase, quantitative research, is the survey conducted using self-administrated questionnaires. The structural equation modelling (AMOS) software is used to analyse the data. The findings confirm that brand knowledge and brand experience are key sources of brand preferences. In addition, all the factors of brand knowledge have a direct positive impact on brand preferences. However, the role of brand personality on brand preference is realised through brand experience. The findings also support that the impacts of the general brand attributes and appearance on brand preference are partially mediated by brand experience. Furthermore, brand preference positively impacts repurchase intentions.

The ultimate contribution of this study stems from revealing that both cognitive information processing and experiential responses form the bases of developing brand preferences, which form the link to future psychological reactions. Methodologically, the study measures the multi-dimensional constructs, brand experience and brand personality, at the aggregate level. In addition, it validates the “big-five personality” as a measure of brand personality. Pragmatically, the study suggests three levels for building brands of technological products to win consumer preferences. At the first level lies the brand functional attributes, at the second level, are the brand symbolic attributes reflected in the imagery associations and aesthetic appearance while at the third level is the brand experience. Noteworthy, these experiences are private in nature and cannot be commoditised. This model extends the notion of brand experience on preference development and can be extended in future research to build long-term consumer-brand relationship.

Keywords: Brand Knowledge, Brand Experience, Brand Preference, Repurchase Intention

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Dedication

To my parents; my husband, Moustafa; my daughter, Zeina; my sister, Rasha, and my brother, Mowaffak, your love, support, and encouragement helped me to achieve my dream. I could not do it without you.

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Declaration

I declare that this research is developed by me for the purpose of the PhD program in Brunel University and has not been submitted for any other degree or qualification to any other academic institution.

Reham S. Ebrahim

Chapter One

Introduction

1.1 Introduction

This chapter provides an overview of the thesis; beginning with an illustration of the research background and motivation. Throughout the chapter, the research problem is articulated along with the study aim and main objectives. A brief description of the methodological approach applied in the study is also provided. The chapter concludes by discussing the significance of the study and its novelty within the field of marketing, followed by an outline of the structure and organisation of the thesis.

1.2 Research Background and Motivation

1.2.1 The History of Brands

Brands are not new to marketing. Historically, the concept of brand was first used by the ancient Egyptian brick-makers who drew symbols on bricks for identification (Farquhar, 1990). Other examples of the use of brands were found in Greek and Roman times; at this time, due to illiteracy shopkeepers identified their shops using symbols. Moreover, in the Middle-Ages, craftsmen marked their goods with stamps as a trademark by which to differentiate their skills. The next milestone of brand evolved in North America with the growth of cattle farming as a kind of legal protection, proof of ownership and quality signals (De Chernatony and McDonald, 2003).

The purpose of brands evolved into a valuable intangible asset and important resource serving the strategic reference point and contributing to greater value and market success (Sääksjärvi and Samiee, 2011; Wong and Merriless, 2007). Brand management is given a high priority and the spectrum of brand has been broadened beyond marketing communication and the resource-based theory of marketing strategy. The approach of brand orientation places consumers and brand at the pivotal point of company strategy (Wong and Merrilees, 2007). Doyle (1989) reports that building a successful brand achieves a high market share and increases profitability. He defined successful brands as the associated elements that cannot be copied by competitors, ehancing consumer preferences over competing brands. Evidence of brand strength is its success, illustrating its ability to win consumer preferences and construct long-lasting relationships (Kay, 2006).

1.2.2 Consumer Preferences

Consumer brand preference is an essential step in understanding consumer brand choice; has therefore always received great attention from marketers. Horsky *et al.* (2006) demonstrate the importance of incorporating information about brand preference into the brand choice model. Brand preferences represent consumer dispositions to favour a particular brand (Overby and Lee, 2006). It refers to the behavioural tendencies reflecting the extent to which consumers favour one brand over another (Hellier *et al.*, 2003; Zajonc and Markus, 1980). Brand preference is close to reality in terms of reflecting consumer evaluation of brands. In the marketplace, consumers often face situations of selecting from several options (Dhar, 1999).

Consumer preferences for brands reflect three responses: cognitive, affective and conative or behavioural (Grimm, 2005). The cognitive components encompass the utilitarian beliefs of brand elements (Bagozzi, 1978; Grimm, 2005: Zajonc and Markus, 1982). The affective responses refer to the degree of liking or favouring that reflects consumer feelings towards the brand (Grimm, 2005; Hsee *et al.*, 2009; Zajonc and Markus, 1982; Zajonc, 1980). The conative or behavioural tendencies are denoted by Zajonc and Markus (1982) as the consumers' predicted or approached act towards the object. It is the revealed preference exhibited in consumers' choices (Hsee *et al.*, 2009). Chernev *et al.*, (2011) assumes that the association of behavioural outcome, such as willingness to pay and brand preference. These are assumed to be associated with the behavioural tendencies (Chernev *et al*., 2011).

Purchasing decisions are the behavioural outcome that precedes differentiation between several alternatives is the purchasing decision; a subsequent outcome of consumer preferences (Dhar *et al.*, 1999). Preferences facilitate consumers' choice by enhancing their intentions towards the favoured brand. Actual purchasing behaviour is likely to correspond to intentions; the mechanism of intention formation provides evidence of persistent consumer preferences (Van Kerckhove *et al.*, 2012). The consistency between consumer preferences and choices adds to the predictive validity of preference statement over attitude (Bither and Wright, 1977; Hellier *et al.*, 2003). Cobb-Walgren *et al*. (1995) report that attitude is a poor indicator of marketplace behaviour.

Moreover, belief in the malleability of consumer preferences to contextual factors (e.g. Bettman *et al.*, 1998; Payne *et al.*, 1992) have been argued by recent researchers (e.g. Amir and Levav, 2008; Hsee *et al.*, 2009), suggesting the stability of preferences across different contexts. Carpenter and Nakamoto (1994) report the difficulty of altering consumer preferences once they are developed, even if consumers discover the irrelevance of differentiating attributes to the brand.

The bias position consumers constitute toward a certain brand, created from comparative judgement between alternatives, reflects the brand strength (Biel, 1992). Thus, changes in consumer brand preferences are reflected on the brand performance and market shares (Sriram *et al.*, 2006). In addition, brand preference combines the desired attributes and consumer perceptions; thus, it offers an indirect and unobtrusive way to assess salient attributes (Keller, 1993; O'Connor and Sullivan 1995; Schoenfelder and Harris, 2004). Therefore, uncovering consumer brand preferences are considered critical input to design successful brand strategy, brand positioning, and gives insights to product development (Alamro and Rowley, 2011; Alamro, 2010; Horsky *et al.*, 2006). Consequently, understanding brand preferences contributes in building strong brands able to build long-term relationship with consumers.

Additionally, identifying patterns of consumer preference across the population and uncovering consumer heterogeneity is vital for designing and developing innovative marketing strategies (Russell and Kamakura, 1997), and efficient market segmentation strategies (Horsky *et al.*, 2006). It is important for marketers to know how consumers trade-off between different brands before making their choices. Since the brand preference has direct influence on consumer purchasing decisions, then segmenting the market based on brand preference is more interpretable and managerially useful than using the desired brand attributes (O'Connor and Sullivan 1995).

Despite the importance of brand preferences, it is still guided by the expectancy-value theory and the economic theory. This traditional view explains brand preferences as a utility function derived from consumer's beliefs of brand attributes. Thus, it provides a narrow focus (Allen *et al.*, 2005). It is argued that this view focuses on the origins of rationality rather the preferences' origin (Dhar and Novemsky, 2008). Moreover, these models are criticised for ignoring other evaluative responses and the irrationality of consumers, such as the emotional experiences (Allen *et al.*, 2005; Zajonc and Markus, 1982).

In addition to consumer's beliefs on brand functional attributes, their beliefs on the brand symbolic attributes such as the brand personality and image have been demonstrated to influence their preferences (e.g. Aaker, 1993; Sirgy *et al.*, 1997). However, the brand preference is still based on consumers' cognitive information processing constituting their brand knowledge structure. This perspective have been criticised by the experiential view proposed by Holbrook and Hirschman, (1982).

1.2.3 Experiential View

The concept of experience emerged at the beginning of 1980s by Holboork and Hirschman, (1982) to overcome the limitations of consumers' bounded rationality deemed by traditional model of consumer behaviour, and introducing the experiential view. This view highlights the importance of neglected variables such as considering consumers as feelers as well as thinkers (Addis and Holbrook, 2001). It pursues consumer responses to the symbolic, aesthetic, imagery, and fantasies meanings of the product, raising the role of multisensory experience aspects (Addis and Holbrook, 2001; Hansen, 2005; Hirschman, 1989; Holbrook and Hirschman, 1980; Tsai, 2005). Accordingly, this view expands and supplements the information processing perspective enriching it with the experiential perspective.

While, Holbrook and Hirschman, (1982) provides the initial spark. The concept of consumer experience is back to the fore again by the end of 1990s, with Pine and Gilmore, (1998) introducing experience as an upgrade or progression of economic value. Then, Schmitt, (1999) put consumer's holistic experience into brand marketing, discusses the reasons behind the shift from traditional marketing to experiential marketing, and proposes the strategic experiential modules (SEMs). At the heart of experiential marketing lies consumer's experience that can be viewed as tactical, through which companies will stage the physical environment for the holistic experiential approach (Gentile *et al.*, 2007). Tynan and Mckechnie, (2009) argues that the need of differentiation depend much on utilising the company activities to create personal experience marketing delivering value to the consumer through its brands. Therefore, it stages the experience from the range of consumer to range of company delivering the experience to its consumers (Carù and Cova, 2003). Consequently, the experiential branding as suggested by Schmitt, (2009) focus on managing consumers' experience at the brand level, by delivering distinct brand provide consumers with experience.

At the brand level, the concept of experience has different meaning but is set forth in brand marketing as consumer's holistic responses, including internal, subjective, and behavioural, evoked to brand-related stimuli (Brakus *et al.*, 2009). These set of experiential responses consumers have to any direct or indirect contact with the brand or related touch points (Brakus *et al.*, 2009; Meyer and Schwager, 2007). Consumers experience with the brand starts before the consumption and move across stages until it is stored as memorable events (Tynan and McKechnie, 2009). It thus extends the role of experience beyond the act of purchasing, usage, and choice (Addis and Holbrook, 2001). The experience delivered by the brand depends on the cue; what consumers perceived and recognised upon which they induce their responses (Berry *et al.*, 2002). An effective clue should mix up between cognitive, emotional, and symbolic aspects of the brand (Mascarenhas *et al.*, 2006). The experience is formed in response to consumer consciousness and includes not only their perceptions or beliefs of the product's tangible attributes, but also other components such as the symbolic, imagery and fantasy intangible attributes (Holbrook and Hirschman, 1982; Hirschman and Holbrook, 1982). This view places great emphasis on the importance of emotions, the hedonic, aesthetic and symbolic meaning of brand in consumer choices (Addis and Holbrook, 2001; Hansen, 2005; Hirschman, 1989; Tsai, 2005).

The brand experience reflects the diversity conceptualisation of consumer experience and provides the experiential values inherited in the experience notion of Pine and Gilmore, (1999) and Schmitt, (1999). Thus, brand experience captures consumers' holistic responses to different stimuli (Brakus *et al.*, 2009; Gentile *et al.*, 2007; Schmitt, 1999; Verhoef *et al.*, 2009). The holistic perspective of brands is perceived in marketing research (e.g. Aaker, 1991; De Chernatony and Rilley, 1998; Keller, 1993; 2003). This approach defines the brand as a bundle of product-related attributes; refers to the core functional component and non-product related attributes; refers to the external component not related to the product functions. In particular, Keller (1993) facilitates the deciphering of the functional, experiential, economic and symbolic meanings embedded in the intangible and tangible attributes of the brand (Petruzzellis, 2010; Tsai, 2005).

1.3 Research Problem

Presently, companies compete in a global market that is undergoing difficulties in creating long-lasting competitive advantages to ensure their survival. While traditional marketers focus on consumer rationality and define the brand as a bundle of attributes, experiential marketers focus on experience (Brakus *et al.*, 2009; Gentile *et al.*, 2007; Schmitt, 1999). This is set forth in brand marketing proposing consumer's experiential responses to brand-related stimuli (Brakus *et al.*, 2009). Consumer's experience with the brand is holistic; it starts before consumption and moves throughout the various purchase and consumption stages until it is stored as a memorable event (Tynan and McKechnie, 2009). Such experiences can be distinguished by three basic systems; affective, cognitive, sensations and relational (Gentile *et al.*, 2007). These systems present consumers' perceptions of the brand's added-value (Schmitt, 1999; Tynan and McKechnie, 2009). Holbrook (2007) defines value as an interactive relativistic experience. Tynan and Mckechnie, (2009) suggest that the value is delivered through consumer experience with the brand. Therefore, a successful brand is not created but by shaping consumer experience through the values embedded in the brand featurtes (Meyer and Schwager, 2007). Since consumers are seeking distinct brand that intrigues their senses, feelings, and creative thinking through their experiences.

Therefore, these experiential appeals are important components of the brand used in brand differentiation and the enhancement of consumers' preferences (Berry *et al.*, 2002; Zarantonello and Schmitt, 2010). In addition, companies build their competitive advantage by delivering experiences that focus on consumer irrationality. Such experiences became a critical component in developing consumer brand preferences and subsequent future purchase decisions (Gentile *et al.*, 2007). Examples of successful brand stories that succeeded in winning consumer preferences by offering experiences include Harley-Davidson, Apple, BMW, Dell (Meyer and Schwager, 2007).

To date, most studies investigating the role of experience in consumers' preferences are limited. They focus on the influence of experience type (Hamilton and Thomposn, 2007) or level (King and Balasubramanian, 1994) in shifting preference level.. Therefore, they ignore the role of brand experience capturing consumer internal, subjective, and behavioural responses created to the contact with the brand in determining their preferences. Such experiences provide experiential values similar to the value to utilitarian attributes leading to the preferential treatment of a brand (Brakus *et al.*, 2009). However, there is a lack of empirical research relating to this issue.

Conversely, the theoretical background emphasises brand attributes as the major source of consumer preferences. This is in light of economic theory or expectancy-value theory; providing a narrow focus depends entirely on functional attributes through which the consumer maximises his utilities (Allen *et al.*, 2005). Thus, the focus is on the rationality of preferences rather than their origin (Dhar and Novemsky, 2008). These models are criticised for being narrow; ignoring other evaluative responses and the irrationality of consumers, such as the emotional experiences (Allen *et al.*, 2005; Zajonc and Markus, 1982). Therefore, the hegemony of the information processing theories is supplemented by the experiential view (Holbrook and Hirschman, 1982). Instead, the latter view focuses on symbolic, emotional and subjective aspects.

In the branding literature, knowledge is the precursor of brand preferences (Keller, 1993). The brand meanings in consumers' minds can be distinguished by the utilitarian and functional attributes related to the product, and non-product-related attributes such as price, appearance, and symbolic or imagery associations (Erdem *et al.*, 1999; Keller, 1993; Plummer, 2000). Consumer beliefs of different brand meanings, constituting their knowledge structure, contribute differently to his preferences. Additionally, most studies are partial, focusing only on one or two factors (e.g. Jamal and Al-Marri, 2007; Kim *et al.*, 2011; Sääksjärvi and Samiee, 2011).

Despite the assumption of early studies, brand preference is a stronger predictor of consumer intentions and future purchase decision than brand attitude (Bagozzi, 1982; Bass and Talarzyk, 1972). Only few studies investigate the outcomes of brand preference and its impact on future decisions. Therefore, there is a lack of understanding of how preferences are formed (Dhar and Novemsky, 2008; Singh *et al.*, 2005) and the consequences of this.

More specifically, this study addresses consumer brand preferences for mobile phones as an example of technological products. This is for several reasons: first, these products underestimate the importance of branding (Mazur, 1999) until they demonstrate increased accessibility to mass consumers (Reddy, 1997; Ward *et al.*, 1999). Second, due to the commoditisation and similarities of technological products, consumers are unable to differentiate between brands using the rational bases; weighting the brand attribute when making choices (Petruzzellis, 2010; Temporal and Lee, 2001).

Consequently, companies utilises the advancement in technology and shift to experiential marketing; thus, changing the brand orientation to expereince (Schmitt, 1999). Third, the changing nature of the technological market increases marketers' interests to understand the drivers of consumer brand preferences (Sriram *et al.*, 2006). Mobile phones are one of the technological products experiencing massive growth worldwide, with developing countries as no exception. For example, in Egypt, the number of mobile phone subscribers exceeded those of landlines to reach over 70 million by the close of 2010. Turnbull *et al.* (2000) describe the market of mobile phones as dynamic and identify its transformation from a luxury market to a mass consumer market.

1.4 Research Questions

According to the prior discussion, the research problem is addressed in the following question:

1. What is the impact of different brand knowledge factors on consumer brand preference?
2. Do brand experiences affect consumer brand preferences, and how does it interact with the brand knowledge elements in shaping consumer preferences?
3. Do consumer brand preferences motivate repurchase intention?

1.5 Research Aim and Objectives

This research aims to:

> *Provide an understanding of how consumers' brand knowledge and brand experiences determine their brand preferences, which then influence their repurchase intention.*

As a result, the main objectives of this research are to:

1. Identify the brand knowledge aspects consumers associate with brands in developing preferences.

2. Identify the brand experience dimensions induced by consumers from different types of brand interactions.
3. Develop a framework to provide an understanding of the interaction between brand knowledge and brand experiences in shaping consumer brand preferences, and, in turn, its impact on repurchase intention.
4. Assess empirically the framework concerning the relationships between the brand knowledge, brand experience, brand preference and repurchase intention.
5. Extrapolate the results and suggest managerial implications to practitioners.

1.6 Research Scope

This study aims to understand consumer brand preference developed from knowledge and experience of the brand, and, in turn, its impact on future purchasing decisions. To achieve this aim, the scope of the study is to identify the different brand factors constituting consumer knowledge; that is, it focus on the brand added value at the consumer level. In addition, it focuses on consumer descriptions of brand experiences, presenting their response to various brand elements. Furthermore, the study focuses on high-tech product, mobile phones, in developing countries as a promising market for high-tech brands.

1.7 Dissertation Organisation

This study is organised in eight chapters, in addition to the references and appendices. This first chapter discusses the research background, and gives an overview about the brand history, consumer preferences, and experiential marketing. Then it clarifies the research problem and set the research aim and objectives necessary to provide answers the research questions. Finally, it defines the research scope.

Chapter Two: builds the theoretical foundation of the research by reviewing the extant literature of marketing, branding and consumer behaviour. This chapter discusses the concept of brand preferences and the underlying distinctions between it and other brand constructs such as loyalty, choice, and affect. Then the nature of consumer brand preferences formation from the economists view and psychologist’s traditional view of consumer behaviour. The differences between the traditional view and the experiential view are illustrated. Then, the importance of brand experience and characteristics of experiential marketing are identified, and critically review the role of experience on preference formation. Also, the elements of brand knowledge are identified with special focus on brand symbolic associations. Finally, the prior studies' findings and limitations are identified to extrapolate their weakness.

Chapter Three: proposes the research model and the developed hypotheses. The model is based on theoretical background of brand preference. Further, it explains the role of experiential view in building consumer brand preferences and identifies the basic elements of brand knowledge. The model proposes the role of brand knowledge and brand experience on developing consumer brand preferences. Brand repurchase intention present the outcome of brand preferences.

Chapter Four: This chapter explains the research adopted philosophy and its assumptions. The research design outlines the research methodology and act as a guide to the researcher through the phases of data collection and analysis. The research applies sequential mixed methods approach, combining between the qualitative and quantitative methods. The methods of data collection used at each phase is defined and justified. Then the chapter illustrate the survey design and sampling techniques. At the end of the chapter is a clear description of data analysis methods and applied thresholds.

Chapter Five: this chapter details the first phase of data collection, qualitative study. First, it defines the exploratory nature of this phase and its main objectives. Then it gives clear explanation of the focus group protocol, construction, and qualitative data analytical methods used. The results of group discussion are presented with regard to the model validation and generating items for questionnaire development.

Chapter Six: this chapter presents the second quantitative phase of the research. It starts with the pre-test of the survey instruments then the main survey. Initial steps of data cleaning and screening, and testing of multivariate assumptions are conducted using SPSS program. Then, the results of exploratory factor analysis and test of uni-dimensionality of multi-dimensional constructs are provided. The last two sections in the chapter present the structural equation modelling and results of hypotheses testing.

Chapter Seven: this chapter depicts the final validated revised model, and discusses the hypotheses testing by comparing the results with prior studies and justify the insignificancy of some relationships. In the light of this it provides possible answers to the research questions.

Chapter Eight: This last chapter provides the illustration of the research contributions at the theoretical, methodological, and managerial levels. In addition, the research novelty, limitations are discussed. Finally, the suggestions and recommendations for future proposals are provided.

Chapter Two

Literature Review

2.1 Introduction

Over the past few years, brands have increased in importance. A distinguishing tool of the companies' products or services is the branding. The theme, or combination of themes, that can be associated to brands, such as the trademark, logo, name, identity, image, personality, value and evolving entity, create the brand (De Chernatony and Riley, 1998). In general, marketing is defines as a consumer-based process that permeates organisational functions and processes, and it balances the companies' objectives and customer satisfaction. Branding is a marketing tool perceived to be important for both the company and consumer. Brands are important valuable intangible assets for companies, a distinctive tool that builds a long-term relationship with the consumers, and protects its' rights (Kolter *et al.*, 2009). For consumers, brands reflect their experience and knowledge; simplifying the processing of information accumulated over time about the company and its products or brands. In addition, brands reflect consumer' experiences and knowledge; thus, simplify the processing of information accumulated over time about the company and its products or brands. Consequently, brands act as signals for products of high quality and low perceived risk, thus, enable the consumers to capture both cognitive and non-cognitive values expressed in the positive feelings or self-expression experienced (Aaker, 1998; Kotler *et al.*, 2009). What consumers expect from the brand is crucial to shaping their preferences and determining their choices. Therefore, it is important for companies to build their brands based on the consumer's expectations of the brand.

Consumer decision-making processes and brand selection have been considered complex. The consumer chooses from different brands based on their preferences, experiences and brand knowledge. This chapter aims to investigate the extensive literature on consumer behaviour theories discovering the development of preference and its antecedent. Therefore, this chapter discusses the term of brand preference.

Section 2.2 illustrates the meaning of brand preference and compares it with other brand constructs. Section 2.3 discusses consumer preference formation from the economists'

and psychologists' perspectives and consumer research models. The subsections illustrate the role of emotions in brand preference and how preference can be perceived as a learning construct. Section 2.4 discusses the brand experience as a concept, and identifyits dimensions, and illustrate its importance in in the subsections. Section 2.5 discusses the brand knowledge factors; the brand attribute and benefits, and its symbolic associations. Section 2.6 presents a categorisation of prior work on brand preferences. The importance of branding for high-tech products and how consumers make their choices for mobile phones is depicted in Section 2.7. Finally, the last section provides the conclusion to the entire chapter.

2.2 Brand Preference

The notion of preference has been considered by different disciplines, such as economists (e.g. Samuels, 1978), psychologists (e.g. Albanese, 1987) and sociologists (e.g. Tomer, 1996). However, there is no commonly-agreed definition of preference among these disciplines. For example, economists state that preferences are exogenous, stable, known with adequate precision and are revealed through choice behaviour (March, 1978, p.589). The economic view of preference was criticised for assuming that preferences are stable and endogenous. An individual's preferences are not stable (Albanese, 1987) and can be endogenous or exogenous (Samuels, 1978). In marketing, the concept of preference means the desirability or choice among alternatives (Oliver and Swan, 1989). While Zajonc and Markus (1982, p. 128) propose that *"a preference is a behavioural tendency that exhibits itself not so much in what the individual thinks or says about the object, but how he acts toward it"*, Tomer (1996) differentiates between four types of consumer preferences; the actual preference is the degree to which the consumer appreciates and develops the capacity to use certain goods. Meta-preferences are one's preferences about actual preferences that reflect the normative judgments of the higher-order self (meta-self). True preferences are a unique set representing what is really and truly the best for the person. Finally, unrestrained preferences are those that satisfy the lower or physical needs. The individual's preferences are determined by his or her actual preferences that reflect the meta-preferences and unrestrained preferences.

In marketing literature, there are numerous definitions for brand preference. Table 2.1 summarises these definitions and extrapolates brand preference meaning. From this table, the current study proposes this definition for brand preference as the behavioural tendencies reflecting the consumer's attitude towards a brand. Brand preferences are created from differentiation between alternatives resulting in a biased position toward a certain brand. This position is depicted by holistic responses; an affective response is presented by degree of likeness, while cognitive response refers to the unique added value of the brand and behavioural response is illustrated by the intended act toward the brand.

Table 2-1 Brand preference (BP) definitions

Source	Definition	Extrapolation
D'Souza and Rao, (1995)	The consumer's predispositions toward a brand that varies depending on the salient beliefs that are activated at a given time.	*Differentiation* BP is created from consumers' differentiation and comparisons between various alternatives of brands considered by them.
Wu, (2001)	The preferred brand is the chosen brand among several brands of the same quality.	
Hellier *et al.*, (2003)	The extent to which a consumer favours one brand over another.	*Biasness* The distinct evaluation of alternatives resulting in a disposition toward a certain brand.
Anselmsson *et al.*, (2008)	The sum of unique assets captured by the consumers and measured by the brand strength experienced by the consumer.	
Chang and Liu, (2009)	The consumer biasness toward a certain brand.	*Holistic* Consumers' predisposition toward the brand is reflected by affective, cognitive, and behavioural responses.
Hsee *et al.*, (2009)	Differentiate between two types of brand preferences; the liking preferences reflecting the hedonic responses toward the brand and the revealed preferences or the choice reflecting the behavioural responses toward the brand.	

2.2.1 Distinctions between Brand Preference and other Brand Constructs

Brand preference can be related to, but remain conceptually distinct from, other brand constructs. Differentiating brand preference from other branding constructs can provide better understanding of its meaning. In particular, brand preference is different from brand loyalty, brand choice, brand attachment and brand awareness/liking.

Brand preference and Brand loyalty - in the dictionary brand preference means *"a measure of brand loyalty in which a consumer will choose a particular brand in* *presence of competing brands, but will accept substitutes if that brand is not available."* Whereas, brand loyalty means "*extent of the faithfulness of consumers to a particular brand, expressed through their repeat purchases, irrespective of the marketing pressure generated by the competing brands.* " (www.businessdictionary.com). In the marketing literature, Oliver, (1999, p.34) defines brand loyalty as:

> *"A deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour."*

This definition identifies two basic dimensions of brand loyalty: behavioural loyalty or purchase loyalty, related to the repeated purchases of the brand; and attitudinal loyalty, the psychological commitment toward the brand in terms of the consumer's disposition (Chaudhuri and Holbrook, 2001). Consumers pass through four phases to become loyal: cognitive loyalty, affective loyalty, conative loyalty and action loyalty. In the first phase, consumers are rational and focused on the brand attributes and other features. The second phase is that of emotional development due to satisfaction with the brand performance enhanced by positive experiences. At the third level, affective loyalty is transformed into behavioural intentions of buying the brand. The final level at which consumers are loyal involves the action of purchasing and the repeat purchase of the brand, and overcoming barriers (Oliver, 1999).

The first three decision-making phases of brand loyalty constitute the focal point of brand preference. It describes the stated preference toward certain brands over time, accompanied by behavioural consistency (Moschis *et al.*, 1984). Brand preference is distinct from attitudinal loyalty (Mattila, 2001); however, both assume that consumers' strong beliefs about the brand cognitive structure enhance brand loyalty (Kim *et al.*, 2011). Consumers' brand preference does not exhibit the action of purchasing; however, this behaviour will be expressed later with the persistent of strong preference (Mellens *et al.*, 1996). Heilman *et al.* (2000) postulate that consumers are likely to be loyal to their preferred brands. Therefore, the main theme is that brand preference is related to brand loyalty. However, brand loyalty is depicted more consistent by long-term repeat purchasing behaviour.

Rossiter and Bellman, (2005) suggest different levels of preferences and their corresponding states of loyalty. There is strong brand preference for single or multiple brands; the state at which consumers can be loyal to a certain brand. Moderate brand preference refers to the state of brand switching, where there is no inclination towards a certain brand and consumers are more likely to switch from one brand to another. Neutral preference refers to how consumers can be unaware of the brand or loyal to other brands. Negative brand preference occurs when consumers are not, and will not become, loyal. Each brand preference level represents a market segment; therefore, marketing managers design strategies, targeting consumers at each segment, based on the level of preference. Consumers' moderate or neutral brand preferences can be stimulated to become strong. However, consumers with a negative brand preference cannot be loyal; rather, they can end up with a weak or moderate preference level.

Brand preference precedes consumer loyalty and influence attitudinal (Kim *et al.*, 2011) and behavioural loyalty (Tolba and Hassan, 2009). Thus, loyalty can be perceived as a true measure of brand preference (Gupta, 1988; Hardie *et al.*, 1993). However, the reverse relationship; assuming the influence of loyalty; measured by frequency of consumer past purchases on brand preference was not supported (Hellier *et al.*, 2003). In addition, Horsky *et al.*, (2006) state that the omission of brand preference from the brand choice model leads to the overestimation of brand loyalty and systematic bias within loyalty parameters.

Brand Preference and Brand Choice – choice is the process of preference consolidation facilitating the choice task (Beach 1993). Brand choice is concerned with the selection and consumption of the brand (Bettman *et al.*, 1998). Brand preference can be viewed as a motivator of brand choice. Consumer choices are based on well-defined preferences through which consumers can determine the set of alternatives from which they will make their choices (Louviere, 2000). Consumer preferences and choices tend to be more consistent; therefore, preference provides a more accurate prediction of consumer choices comparing to attitude (Bither and Wright, 1977). Economically, the main target of the consumer in the choice task is to satisfy his preference and select the alternative with maximum utility (Rizvi, 2001). If a consumer does not select the optimal alternative to maximise his utility, he is compromised by conflicting preferences (Yoon and Simonson, 2008). Hansen (1976) identifies the confliction between alternatives preceding choices among the aspects that characterise choice.

Sagoff (2003) suggests that the relationship between brand choice and brand preference is subject to market conditions. In perfect market conditions, consumers will choose from their preferred alternatives. While in the imperfect market, choice is subject to situational factors, such as availability; whereby, consumers' brand choices can be inconsistent with their preferences. Surprisingly, marketing managers are more interested in brand preference than brand choice to signal repeated purchases, since consumer preferences tend to be constant across the different contexts, rather than choice-limited to a specific context (Amir and Levav, 2008).

Brand preference and Brand Attachment/ Affect/Commitment and Attitude - Brand attachment exists at a higher level of emotional response than brand preference; including passion, connection and affection. It measures the strength of the bond between the consumer and the brand (Thomson *et al.*, 2005). Therefore, brand attachment reflects the long-term relationship and predicts current and future purchases based on past purchases (Esch *et al.*, 2006).

Brand affect/brand liking and brand commitment are concepts that are related to emotional factors. Brand affect reflects a valenced feeling state (Mano and Oliver, 1993). Brand liking is related to the strength of positive brand assets (Anselmsson *et al.*, 2008). Brand commitment refers to the deep emotional attachment of consumers to brands (Carlson *et al.*, 2008; Desai and Raju, 2007). However, consumers' brand preferences involve cognitive and behavioural responses (Hsee *et al.*, 2009; Zajonc and Markus, 1982), and are related to the uniqueness of the brand asset (Anselmsson *et al.*, 2008). The distinction between brand attitude and brand preference is illustrated by the view of attitudes as stable psychological tendencies to assess an object; a unitary evaluation of certain brands (McFadden, 1996). Moreover, preference refers to the comparative judgment between alternatives in the decision process (Ben-Akiva *et al.*, 1999; McFadden, 1996), exhibited by how a consumer thinks or feels towards an object, and how he will act (Zajonc and Markus, 1982). Table 2.2 summarises the main differences between brand preference (BP) and other branding constructs.

Table 2-2 Difference between brand preference (BP) and other branding constructs

Branding Constructs		Brand Preference	Product Type	Reference
Brand Awareness	It defines the primary knowledge of the brand mind.	It reflects the biased position toward a certain brand developed after exposure to brand.	Peanut butter	Hoyer and Brown, (1990)
Brand Affect	It reflects the balanced feeling state, positive or negative.	A behavioural phenomenon reflects consumer's affective and cognitive judgement toward a certain brand.	Low & high involvement product	Mano and Oliver, (1993)
Brand Attitude	The psychological tendencies based on unitary evaluation lacking the element of comparison.	It refers to the comparative judgement between alternatives in the decision process.	Cosmetics and household goods	Suh and Yi, (2006)
Brand Choice	It refers to the process of selection, purchase, and consumption of product or service.	It reflects the subjective value of alternatives and process of trade-off preceding the brand choice.	Theoretical paper	Bettman, (1998)
Brand Loyalty	It is more consistent depicted by the long-term repeated purchasing behaviour.	It represents biased behaviour toward the brand exhibit how a consumer feels and thinks about the brand.	Theoretical paper	Oliver, (1999)
Brand Attachment	It describes the strength of the bond between the consumer and the brand.	It can be an outcome of strong, consistent, long relationship.	Self-selected brand	Thomson *et al.*, (2005)

2.2.2 Preference Map

Preference is stated to be related to the distance of an alternative from the ideal (Lehmann, 1972). This is referred to as "preference maps", an intuitive presentation of information in a single graphic (Faure and Natter, 2010). The brand preference "*is interpreted as the distance from the brand to the ideal brand and choices are predicted based upon these preference estimates*" (Hansen and Christensen, 2007, p.47).

The key objectives for companies to use preference maps are as follows (Faure and Natter, 2010). *First*, preference maps provide a representation of competitive market structure and help companies to identify key competitors as a basis for (re)positioning, product-line decisions, and advertising budget allocation decisions. *Second*, preference maps help identify attractive product attributes. *Third*, preference maps present a picture of consumer mind-sets regarding a given market and a combined representation of products and attributes. Thus, they identify the attributes that consumers associate with the products and those of their competitors. *Finally,* many preference maps depict consumers typically as ideal points. A preference map that includes consumer ideal points enables managers to fulfil two additional objectives: identify the relevant groups of consumers for products, and the specific attributes' combinations. By combining these last two objectives, companies can utilise preference maps to identify attractive consumers segments, and/or attractive markets niches. Additionally, when they are used in combination with product attribute information, they help in the design of repositioning strategies.

Ironically the greatest benefit of preference maps has led to some skepticism (DeSabro *et al.*, 1997). *First*, preference maps offer only summary information; some information is lost in the graphical representation process. *Second*, the configuration of preference map changes if products or attributes are added or eliminated. These changing configurations reflect actual consumer decision-making processes that lead to interpretation difficulties. Moreover, Day *et al.*, (1979) doubt whether a preference model based upon distances from ideal-points to products remains a reasonable predictor of individual or segment behaviour.

2.3 The Nature of Consumer Preference Formation

There are two perspectives of preferences. The first assumption is that consumers have well-defined preferences; this is linked to the archaeology uncovering hidden value. The second assumption is that consumers construct their preferences at the time of valuation; they are not simply revealed. This architecture nature of preference is shaped by the interaction between the properties of information-processing system and the decision task factors (Payne *et al.,* 1999). The construction of preference has been the prevailing theme of behavioural decision theory (Payne *et al.*, 1992). However, Simonson (2008) argues that this perspective does not cover the pre-existing preferences that are not determined by the task or context factors. The notion of construction highlights the process of judgment and ignores the determinants of preferences, and the processed preference consumers brought to the context or choice situation (Simonson, 2008). Consumers generate preferences for the product attributes and maintain them across different contexts while consumers can learn about the structure of the context. These context decision strategies are specific to each context and are not portable (Amir and Levav, 2008; Hoeffler and Ariely, 1999).

The two perspectives of preference formation are based on extremes, whether consumer preferences are well-defined at one stream or constructed at the other. However, consumers are not consistent in their choices, and no single path can define the formation of brand preference. Neither the archaeology, embracing the economic assumption, nor the construction provides a complete interpretation of the preference formation process (Hoeffler and Ariely, 1999). Bettman *et al.* (2008) suggest that the construction process of preference is compatible with inherent or well-defined preference, but stable preferences can result from the construction process. Consequently, these two perspectives are suggested to be complementary rather than substitutes (Duarte and Raposo, 2010; Russel and Kamakura, 1997). Yoon and Simonson, (2008) argue that the nature of consumer preferences can be either well-defined or constructed; however, its stability and consistency varied according to the contextual factors. It is assumed that the consumer has relatively stable preferences determined by the subjective assessment of the brand attributes. However, in the choice construction, he learns from the context-specific strategies without engaging in subjective value assessment (Amir and Levav, 2008).

In consumer behaviour research, differences exist between economic theories; based on the normative assumption and consumer rationality, and the information processing theories; based on bounded rationality and regards consumer as a logical thinker. The rational assumption of the economists was then violated by early psychological theories, such as the Engel-Kollat-and Blackwell-EKB model (Engel *et al.*, 1971) or theory of buyer behaviour (Howard and Sheth, 1969) then adopted the bounded rationality assumption. However, Dhar and Novemsky, (2008) argue that the behavioural decision theory focuses on the origin of rationality rather than the origin of preferences. The next section illustrates the economic view and the information processing models, and how the psychological-bounded rationality assumption was updated by the experiential perspective (Holbrook and Hirschman, 1982).

2.3.1 Economic View

Economists have always been concerned with consumer behaviour and the motivation of choice. The basic assumptions for standard economic theories are:

- The rationality of consumers and the normative definition of behaviour (McFadden, 1996). Rational consumers in the economic theory are those seeking utility maximisation, have clear and complete knowledge about almost all relevant aspects, and high computational skills. These enable them to calculate perfectly the utility of available alternative course of actions (Dhar and Novemsky, 2008; McFadden, 1996; Payne *et al.*, 1999).

- The stability, coherence and consistency of preferences (West *et al.*, 1996). These assumptions mean that consumers have a complete and unchanging preference ordering for alternatives based on a perfect processing of information (Dhar and Novemsky, 2008; Rabin, 1998). However, economists disagree about the existence of well-defined preferences (McFadden, 1996).

The Under such assumptions, consumer preference is a utility function formed by the trade-off between attributes of the concerned product/brand (Louviere *et al.*, 2000). Thus, consumer choices uncover pre-existing preferences, revealing preferences for the alternative with greatest utility (Dhar and Novemsky; 2008; Payne *et al.*, 1999). The utility in the economic theory refers to the attribute value offered by the brand, and consumers learn about this before forming their preferences (Louviere *et al.*, 2000).

The normative assumption held by economists in understanding human decision behaviour was violated. *First*, in terms of defining rationality by the utility maximisation, consumers can be rational and maximise their satisfaction from choices rather than the absolute value of attributes (McFadden, 1996). *Second*, the implausibility of the normative assumption pertains to the human ability and computational skills to process all the available information before reaching a decision. However, economists no longer believe in the assumption of perfect information processing (Dhar and Novemsky, 2008). *Third*, the assumption of preference stability, coherence and consistency is not upheld in the real world. Preferences can be either exogenous or endogenous (Albanese, 1987; Samuels, 1978). They are volatile; changing with consumer experience (Zajonc and Markus, 1982), which can be proved by the phenomenon of preference reversal (Nowlis *et al.*, 1997).

To understand preference formation and its affecting factors, it is important to go beyond the assumption of given preferences for consumers (Albanese, 1987). Howard, (1977) has argued that economists have no real participation in uncovering the nature of preference formation, degree of stability and influential factors.

There are differences between economists and psychologists in discussing consumer behaviour. Psychologists focus on studying consumer choices as an output of the choice process, while economists focus on the decision process (Hansen, 1976). Other distinctions lie in the assumptions of the two views. The economists assume consumer rationality with well-defined, stable and complete preferences based on the function of utility maximisation. Nevertheless, psychologists hold the assumption of bounded rationality; emphasising the limited capabilities of consumers for processing the available information and utilising the theme of constructed preferences (Dhar and Novemsky, 2008; Hansen, 2005; McFadden, 1996).

2.3.1 Expectancy-Value Model

The expectancy-value model or multi-attribute models are widely accepted. The domination of these models was evident in the 1970s; however, they are still applied today (Allen *et al.*, 2005). The multi-attribute and expectancy-value models aim to understand consumer attitudes based on the cognitive factors; consumer's beliefs about the object (Mitchell and Olson, 1981; Wilkie and Pessemier, 1973). The difference between both models lies in the conceptualisation of belief and importance (Wilkie and Pessemier, 1973). According to the expectancy-value model, consumer attitude towards the object is explained by the strength and value of the expected consequences of the object or the act in question (Bentler and Speckart, 1979; Mazis *et al.*, 1975). The multi-attribute models focus on consumer beliefs about salient attributes (Wilkie and Pessemier, 1973).

Among various attitude models, Rosenberg's (1956) and Fishbein's models (1965) are the most popular and widely used by marketers in investigating consumer brand preferences (e.g. Bass and Talarzyk, 1972; Mazis *et al.*, 1975; Mitchell and Olson, 1981). Bass and Talarzyk (1972) introduce preference in the model of purchasing behaviour rather than attitude, assuming attitude to be a weaker indicator of purchase. The attitude represents the affective component determined by the beliefs accounting for the cognitive component; therefore, to include the conative component in the model, the preference is included. Brand preference is consistent between consumer affective and conative associations (Tankersley, 1977). Both Rosenberg's (1956) and Fishbein's models (1965) utilise the expectancy-value model of attitude in their understanding of consumer behaviour.

The multi-attribute models are applied widely in marketing, providing insights into the linkage between consumers' perceptions of brand attributes content and their preference development. These models are developed in the area of social-psychology, but its application in marketing requires some modifications. These include altering satisfaction, desirability of attributes, and the probability of attainment by the specification of brand attributes, assigned weights and brand beliefs. The behaviour towards the object or act being studied represents the preferences for competing brands at the individual-level (Bass and Wilkie, 1973).

The Rosenberg attitude model is based on the cognitive consistency theory aimed at studying the process of attitude learning and attitude change by formulating the relationship between consumers' personal beliefs and attitude towards objects. The model postulates attitude as a function of the ability of the object to provide a satisfactory outcome and the satisfaction with the offered outcome. According to this model, consumer preference for brands is derived from the brand benefits followed by the degree of satisfaction with the brand value. These values stem from the brand attributes. Brand preferences were measured quantitatively and the following equation represents the model mathematically (Mazis *et al.*, 1975; Raju *et al.*, 1975; Rosenberg, 1956). It is important to note that the term "value importance" in the equation does not measure the degree of importance of the value provided by an object. Rather, it measures the degree of satisfaction with the value provided.

$$\mathbf{Ao} = \sum_{i=1}^{N} (PIi)(VIi)$$

Ao: is the consumer preference toward an object.
PI: is the perceived instrumentally of the object; beliefs about the ability of the object to offer value i.
VI: is the value importance; the degree of satisfaction with the value i provided.
N: the number of values offered.

The Fishbein model (1965) represents the conceptual foundation of marketing studies (Ahtola, 1975). This model attracts the most interest in consumer behaviour explanation and sound conceptual antecedents. It is used widely in understanding consumer brand preference (e.g. Bass and Talarzyk, 1972; Bass and Wilkie, 1973; Lessig and Copley, 1974), and defines it as the learned predisposition of human beings in shaping their responses towards an act or object (Fishbein, 1965). This model stems from behaviour theory; it uncovers the relationship between attitude and behaviour by studying the impact of attitudes on behaviour (Fishbein, 1965). Based on this theory, consumer predispositions towards the object/brand are illustrated by employing behaviouristic learning theory. The evaluative responses towards the brand are determined by the strength of belief on the salient brand attributes; postulating a causal relationship between beliefs and attitudes (Bettman *et al.*, 1975).

The Fishbein model explains consumers brand preferences based on their beliefs about the cognitive value of the brand derived from the brand attributes (Erickson *et al.*, 1984; Ryan and Bonfield, 1975). Accordingly, consumer brand preferences are measured algebraically as a function of the evaluation of the brand weighted attributes and belief of its associations with the object (Bentler and Speckart, 1979). The cognitive algebra model of the Fishbein theory can be represented quantitatively by the following equation (Bass and Talarzyk, 1972; Bettman *et al.*, 1975):

$$\mathbf{A}\boldsymbol{i} = \sum_{\mathbf{i=1}}^{\boldsymbol{N}} (\boldsymbol{Wi})(\boldsymbol{Bib})$$

Ai: the preference toward a particular brand.
Wi: the weight/importance of attribute i.
Bib: the belief toward attribute i for brand b.
N: the number of attributes important in selecting brand b

Differences between Rosneberg and Fishbein models - The two models are largely similar; however, there are some differences. Mazis *et al.* (1975) suggest that these differences are insignificant with regard to the application of the two models' formulae in attitude measurements. The differences lie in the following points:

First. The Fishbein model is more generalised than Rosenberg, not only in studying the attitude, but also in understanding the attitude-behaviour relationship. Rosenberg refers to the attitude towards the object while Fishbein considers the attitude towards the object and ascertains that the attitude towards the act is the best predictor of consumer intentions and behaviours (Ryan and Bonfiled, 1975). Rosenberg is limited only to the attitudinal affect, unlike the Fishbein model that measures the behavioural act towards the object, (Raju *et al.*, 1975). Therefore, the Fishbein model allows the marketers to differentiate between the preference for the brand and the act of buying it (Tuck, 1973).

Second. Fishbein broadens the definition of beliefs to include attributes, values and goals, not only values as in the Rosenberg model. In addition, the Fishbein model assumes two types of beliefs that affect the behavioural intention: the belief about the consequences of the behaviour and the belief about positive perceptions of other people in the consumer context (Fredrick and Dossett, 1983). The operationalization of beliefs in both models is different. Fishbein measures beliefs by to what extent the outcome is associated with the behaviour in question; while Rosenberg measures how likely the behaviour will result in the outcome.

Third. The theoretical background of both models is different. Rosenberg explains attitudes based on functional approach (Mazis *et al.*, 1975), whereas Fishbein is based on the stimulus-response learning theory and cognitively instrumental theory (Oshikawa, 1979).

The multi-attribute model presents the theory of attitude formation and change. It is also used as a measurement model of preference. The structure of the multi-attribute model is based on attributes, beliefs and weights. Attributes are the basic dimension in the model; however, there is no clear specification for the inclusion of attributes, generally, it reflects the product characteristics. Beliefs or the perceived instrumentally reflect the degree of association between the salient attribute and the brand. If the weights or the value importance concept lack accurate conceptualisation it can reflect either the prominence or value; thus, it is an ambiguous term that can lead to measurement error (Wilkie and Pessemier, 1973).

Beliefs or the "perceived instrumentally" reflect the degree of association between the salient attribute and the brand. The weight or the value importance concept lacks accurate conceptualisation. It can reflects either the prominence or evaluative aspect; thus, it is an ambiguous term that can lead to measurement error (Wilkie and Pessemier, 1973).

Multi-attribute models have strong contributions and are applied currently, as before, to study consumer preferences (e.g. Muthitcharoen *et al.*, 2011; Singh *et al.*, 2005), attitude (e.g. Allen *et al.*, 2005) and choice (e.g. Agarwal and Malhotra, 2005). The components of the algebraic equation have been questioned, such as the number of attributes, definition of salient attributes, inclusion of weights and measurement of beliefs (Wilkie and Pessemier, 1973). Table 2.3 depicts the early role of expectancy-value theory, such as the Fishbein and Rosenberg models, in predicting consumers' brand preferences focusing on their beliefs on brand attributes. Erickson *et al.* (1984) suggest that these models did not differentiate between different types of beliefs in preference formation. They assume that consumer perceptions of physical attributes define only the descriptive beliefs. Furthermore, there is another type of beliefs; inferential, which reflects consumer experiences and non-attribute or imagery characteristics affect the brand evaluation and consumer preferences. In addition, Park and Srinivasan (1994) illustrate that the two types of brand association; attribute-based and non-attribute based, contribute to the added-value of the brand, and relate differently to marketing mix elements. Other limitations of these studies are part of the multi-attribute models restrictions and can be illustrated by the following:

1. Halo effect: this is defined as "*raters failure to discriminate among conceptually distinct and potentially independent attributes*." (Leuthesser *et al.*, 1995, p.58). In multi-attribute models, the consumer rating to single attribute is distorted by their overall evaluation of the product. This suggests dual causality of the model due to the high correlation between beliefs and attitudes. Therefore, consumer ratings to the product attributes are considered haloed and can lead to wrong decisions by brand managers concerning brand design and positioning (Leuthesser *et al.*, 1995).

2. Uni-dimensionality: these models measure consumer preferences to brands by a single value representing the summation of beliefs about each attribute and their corresponding weight. This traditional dimensional attitude model, thus, limits the attitude component to a single evaluative value ignoring other interactive dimensions that can explain consumer attitude. New information added to the model will be considered redundant and will not affect the overall. Therefore, more complex models with multi-dimensional antecedents are required to explain consumer attitudes towards brands (Bagozzi, 1982).

3. Emotional beliefs: in the multi-attribute models, beliefs are conceptualised as the cognitive mechanisms describing the subjective probability that an attribute is associated with a certain object (Bettman *et al.*, 1975; Leuthesser *et al.*, 1995). The theory ignores the non-cognitive belief-based antecedents, including emotions or affective determinants (Agarwal and Malhotra, 2005; Allen *et al.*, 2005). This is defined by Zajonc and Markus (1982) as to be used interchangeably with cognitive stimuli or in different mixes to determine consumer preferences. The models emerged after arguing the non-belief based antecedents of attitudes were judged by Fishbein and Middlestadt (1995) as artefacts.

4. Type of products: the attribute perceptions are not the only component of consumer preferences for all products. The non-attribute component contributes and is considered an important determinant of consumer preferences (Holbrook and Hirschman, 1982; Zajonc and Markus, 1982). Therefore, the application of multi-attribute models was limited to attribute-based products and restricted on other products categories, such as perfumes, which the attribute-based contributes by small proportions in consumer preferences (Park and Srinivasan, 1994).

5. Model validity: the construct validity of the model was assessed (e.g. Bettman *et al.*, 1975; Wilkie and Pessemier, 1973); however, the inclusion of weights in these models had been questioned. The study of Sheth and Talarzyk, (1972) reveals that consumer beliefs are the most important component in determining consumer preferences. The inclusion of weights decreases the predictive power of the model. Similarly, Churchill (1972) compares the Fishbein model with a simpler model without the weighting of the attributes by value importance. The results reveal the indifference between both models in predicting consumer preference; moreover, the simpler model provides better predictions by increasing the number of attributes. Furthermore, the vague conceptualisation of value importance or weights impedes the uniformity of its inclusion in different studies (Wilkie and Pessemier, 1973).

While the attitude theory was further modified, such as Fishbein BI, or the theory of reasoned action (TRA-Fishbein and Ajzan, 1975), the main focus of the model was the behavioural intention uncovered by the attitude towards the act rather than the object (Tankersley, 1977). Similarly, the salient beliefs shaping consumer attitude are not determined and the affective factors are not considered. The cognition factors processing prior to purchase behaviour is only considered (Bray, 2008). Another stream of social-psychology models providing explanations of consumer behaviour and brand choice is the traditional information processing models.

Table 2-3 Summary of multi-attribute preference model studies

Model	Author	Purpose of the study	Algebraic Equation				Unit of Analysis	Findings
			# ATT	Weight	Beliefs			
					Type	Measure		
Fishbein Model	Bass and Talarzyk, (1972)	Predict consumer preferences using attitude model, based on perceptions and value of attributes.	5	√	attribute-based	Scale	2000 household Mail survey Dental & personal care, beverages, lingerie, cosmetics (6 brands)	• Preferences can be determined using attitude model. • Age and educational level are correlated with incorrect preferences. • The usage rate has no impact of model ability to predict preferences.
	Harrell and Bennett, (1974)	Use the extended Fishbein model of behavioural intention to predict preference	6	√	attribute-based and normative beliefs	Level	Mail and personal interview 145 physician Drugs	• The extended Fishbein model adding normative beliefs did not improve the prediction of preferences at the individual level. • The product attributes contribute in the explanation of buyers preference and purchasing intention.
	Mitchell and Olson, (1981)	Investigating the role of attribute beliefs in mediating the relationship between advertising and brand attitude.	6	-	attribute-based	Level	71 undergraduate students Personal care (4 brands) Experimental design	Both the attitude toward advertising and salient beliefs about product attributes mediate the relationship between exposure to advertising and attitude toward the brand and the act of purchasing it.
Rosenberg model	Sheth and Talarzyk, (1972)	Study the significance of perceived instrumentality (PI) and value importance as preference (attitude) determinants.	5	√	attribute-based	Scale	2000 household Mail survey, regression analysis Dental & personal care, beverages, lingerie, cosmetics (6 brands)	• The consumer's beliefs about the brand's attributes are more important than the value importance in determining brand preferences regardless to the product type. • The predictive power of buyer's beliefs about brand attributes (PI) is lowered when assigned by weights.
Vector model	Ahtola, (1975)	Improvement of the predictive power of Fishbein model by distinguishing between the content of belief and its strength.	4	-	attribute-based	Level	190 undergraduate students, questionnaire, correlation coefficient, Beverage (3 brands)	The vector model predicts brand preferences better than Fishbein model. The vector model takes into consideration the possibility of evaluating a concept based on level not direction as in Fishbein model.

Continued

	Author	Purpose of the study	Algebraic Equation				Unit of Analysis	Findings
			# ATT	Weight	Beliefs			
					Type	Measure		
Luce model	Moore and Lehmann, (1989)	Develop a model to represent individual-level preference structures instead of the aggregate level.	3	Tree-level	attribute-based	Scale	25 respondents (church and MBA students, nested logit model with paired comparison preference data. Beverage (12 brands).	The heterogeneity of choice can be addressed in preference structure on individual level better than the aggregate level.
Multi-attribute model	Erickson *et al.*, (1984)	Study the impact of image variables "COO" on brand beliefs and attitude.	5	√	attribute and non-attribute based	Scale	96 MBA Students Survey using questionnaire OLS regression – attributes divided into 2 factors using EFA: quality and economic Automobiles (10 brands)	• Brand familiarity and consumers beliefs about the quality and economic factors positively affect the brand attitude. • The COO as an image variable has no impact on consumers attitude toward the brand.
	Park and Srinivasan, (1994)	Measuring brand equity at the customer level (BE = overall BP – multi-attribute BP objectively measured) to predict the brand extension.	4 5	√	attribute and symbolic beliefs	Vector and Level	200 consumers, Telephone and computer survey. Regression analysis and multi-attribute to measure the cognitive structure 4 brands of toothpaste and 5 brands mouthwash	Both the attribute and the non-attribute components of the brand equity for the brand extension are positively related to the parent brand. The brand associations unrelated to the cognitive structure of the brand are more important in shaping brand equity.
	Singh *et al.*, (2005)	Investigate the correlation between consumer preferences of common attributes across different product category.	7	-	attribute based	Vector	250 household 3 snack food category Multi-attribute preference model	Preferences for elemental attributes are correlated across categories.
	Agarwal and Malhotra, (2005)	Integrate affect into multi-attribute attitude model to investigate brand choice.	7	√	attribute & non-attribute based	Scale	258 undergraduate students Self-administrated questionnaire Regression analysis and SEM Sneakers (one brand)	The interaction between the cognitive evaluation of brand attribute with feelings provider better predictive validity of attitude and brand choice than the traditional model.
	Muthitcharoen *et al.*, (2011)	Integrate the multi-attribute preference model with the technology acceptance model to build a model of technology preference	3	-	attribute-based	Scale	353 participants Online survey Structural equation modelling Service channel	The attribute-based preference (cost, product, and perceived risk) significantly impact the attitude-based preference, which in turn positively impact users attitude and behavioural intention toward technology.

2.3.2 Information Processing Models

The prosperity of consumer behaviour research began at the end of 1960s by the development of comprehensive models of buyer behaviour, such as those of Engel *et al.*, (1968), Howard and Sheth, (1969). These models play an influential role in understanding consumer behaviour, but their role did not exceed being descriptive due to their complexity (Simonson *et al.*, 2001). They evolved from the rationality assumption of economic theory and classical decision theory to the bounded rationality assumption (Holbrook and Hirschman, 1982). These models deviate from the normative assumption by limiting the computational capabilities of the consumers and study the impact of perceptual learning and cognitive factors on consumer decision-making (Payne *et al.*, 1999).

The theory of buyer behaviour was developed mainly to provide deeper insights of consumer brand choices (Howard and Sheth, 1969). Initially, Howard, (1963) provides an insightful analysis of consumer behaviour scenarios based on the consumer's degree of familiarity. This differentiates between three types of problem-solving and the amount of information required at each situation (Howard, 1977). The theory of buyer behaviour was one of the first models to focus on brand choice. Unlike economists, this theory is based on the following assumptions (Howard and Sheth, 1969):

- Bounded rationality: the rationality of consumers is limited, unlike economists' assumption. It is limited by their cognitive capacities and availability of information.
- A positive theory assumes that consumer buying behaviour is systematic. The brand factors are the stimulus or inputs to the system, while purchasing behaviour is the output.

  The basic idea behind this theory is that consumer buying behaviour comprises three main elements: motives, decision mediators and alternatives. Decision mediators match between the consumers' needs and the alternative of having potential to satisfy these needs. Brand preference refers to consumers' predisposition towards certain brand, which summarises their cognitive information processing towards brand stimuli (Howard and Sheth, 1969).

This theory emphasises the central control unit and the mental abilities of consumers. It ascertains the role of brain-stored knowledge and actual experience in articulating consumer choice. The consumer in these models is a problem-solver who is aroused by different brand-related stimuli creating his experiences and knowledge (Biehal and Chakravarti, 1986). Therefore, it follows the same sequence that consumer perceptions of brand attributes lead to preferences or attitude affecting his intentions and brand choice (Bagozzi, 1982).

This theory was among the first to provide a comprehensive analytical view of consumer choice behaviour; however, it was criticised for being a complex model with unspecified linkage among the variables. Therefore, its validity is questioned due to the lack of empirical-oriented marketing research, and the model is more likely to be descriptive (Farley and Ring, 1970). As a matter of fact, most of the information-processing approach was not applicable to marketing communication research owing to its broad dependent measures and the little concern on the intervening process between the inputs and outputs (Bettman *et al.*, 1975).

Bettman (1979) emphasises this particular sequence of events but deepened it into the bounded rationality. Consumers seek information from different sources and processes in order to reach a decision (Bagozzi, 1982). The computational abilities of consumers are limited to the amount of information available (Payne *et al.*, 1998). This model is based on the EKB model and adopts the theme of constructive preference (Payne *et al.*, 1999). Drawing on these theories, consumer preferences are constructed at the time of decision-making based on the interaction between consumer prior knowledge, experience and processing capacities (Bettman *et al.*, 1998; Payne *et al.*, 1992). Processing capacities include the characteristics of the decision problem, such as the task and context factors (Payne *et al.*, 1999; 1992).

In the information-processing models information is processed and the preferences are developed leading to the purchase action. Therefore, preference represents a transition state between the inputs and outputs; a bridge between the information processing and intentions. Conversely, intentions mediate the relationship between preferences and the actual purchase or choice (Bagozzi, 1983).

This model ignores the role of experience in shaping consumer preferences (Dhar and Novemsky, 2008). Consumers reveal their preferences for experienced objects; even constructed preference is based on inherent preference constituted from experience generalised from other objects (Howard and Sheth, 1969; Simonson, 2008). Information-processing models were also criticised for being complicated with and untested relationship between influences (Foxall, 1983).

The common criticism directed to cognitive behaviour theory is the oversight of the emotional aspects and ignoring the irrationality of consumer behaviour in its assumption. The information-processing models hold the belief that consumers depend on their emotions when they are overwhelmed with information, or have limited cognitive processing abilities (Grimm, 2005). These traditional models are criticised by Holbrook and Hirschman (1982) for ignoring the experiential responses of consumption. They present a view that considers consumers' rational and irrational side and includes ignored emotional, sensorial, aesthetic and enjoyment responses.

The experiential view focuses on consumer consciousness, including not only beliefs about the brand attributes, but also non-verbal cues reflecting the hedonic, imagery and symbolic meanings. Consciousness affects the emotional experience and determines the consumer experiential responses (Holbrook and Hirschman, 1982). Moreover, in the traditional view, the affect refers to evaluative judgment either by attitude or preferences, while in the experiential view it is related to emotions (Mano and Oliver, 1993). The consequences of this model are the experiential values created by the consumer consumption (Holbrook and Hirschman, 1982).

The differences between the traditional and experiential view are illustrated in Table 2.4. The experiential view provides a holistic view of consumer responses to various brand-related stimuli in determining consumer behavioural intention and behaviour (Bagozzi, 1983). The experiential view does not substitute the traditional models; however, it broadens the view of the consumer behaviour by considering the hedonic, symbolic, aesthetic, emotions, play and creativity consumption experience. This expansion highlights neglected issues in consumer research, such as (Holbrook and Hirschman, 1982, p.139):

> "*(1) the role of esthetic products, (2) multisensory aspects of product enjoyment, (3) the syntactic dimensions of communication, (4) time budgeting in the pursuit of pleasure, (5) product-related fantasies and imagery, (6) feelings arising from consumption, and (7) the role of play in providing enjoyment and fun.*"

Table 2-4 The differences between the traditional and the experiential view

Point of Comparison	Traditional View	Experiential View
Product Stimuli	Utilitarian functions and tangible benefits based on its objective features.	Utilitarian, hedonic, and symbolic meanings of the subjective characteristics.
Stimulus Properties	Verbal brand attributes	Verbal attributes and non-verbal sensory cues
Communication Content	Consumer responses to the semantic aspects of communication content.	Consumer evokes sensorial and emotional responses to the communication content.
Resources	Consumer maximises his monetary utilities in terms of price and value of money.	Consumers are maximizing overall utility even in terms of time as a valuable resource consumed in the decision process.
Task Definition	The information processing models define consumers as in a mission to solve problem.	The experiential view emphasises the importance of both the cognitive thinking with affective principle.
Type of Involvement	Focus on the level of cognitive involvement (low and high)	Focus on the type of involvement (cognitive and affective)
Search Activity	Acquiring information from ordinary sources	Consumers explore all types of stimuli as an information source
Individual Differences	Poor performance of personality characteristics in consumer behaviour models	Revive the personality and allied variables
Cognition	Cognitive oriented perspective of information processing	The cognition occur at the conscious and subconscious levels such as the fantasies and social responses evoked by consumers
Affect	The affect is impeded in the attitude component of the expectancy-value models.	The affect aspects in the experiential view include the emotions, feelings, moods, and pleasure experiences along the consumer decision making process.
Behaviour/ Output	Brand choice and achieving the utility function	Brand choice and the fun, fantasies, feelings aspects of brand consumption experience.

2.3.3 The Role of Emotion in Brand Preference

The main shortcoming of the previously discussed consumer behaviour models is the ignorance of the role of emotions in forming consumer choices. Petty and Cacioppo, (1984) consider two routes for persuasion and attitude formation: the central and the peripheral. Bitner and Obermiller, (1985) argues that the central route of persuasion is based on cognitive evaluations while the peripheral route attitudes can change due to simple inferences based on the negative or the positive cues of the object. There is no much thinking on the peripheral route; therefore, it always leads to weak preferences comparing to the strong preferences form at the central route resulting from consumer cognitive learning of preferences. In contrast, Zajonc and Markus, (1982) contend that preferences are difficult to change after the affective reaction is formed.

Moreover, the emphasis that preferences are a post-cognitive behaviour and that emotions are generated after the evaluation of the brand attributes and utilities has been argued. Consumer preference can be based on either cognitive or affective components or a mix of the two with no preceding order for any factor. Bagozzi, (1983) suggest that the consumer choice is formed in this sequence: perception →preference → intention → choice. Preferences result from consumer perception to alternatives and the generation of cognitive and affective judgements toward the brand. Similarly, Zajonc and Markus, (1982) suggest the importance of the mining components of affective and cognitive factors in preferences formation toward objects.

Exposure to the brand can be followed by affective or cognitive evaluation or both given the probability of dominance of a single factor over another (Zajonc and Markus, 1982). Early psychologists (e.g. Bartlett and Osgood, 1932 cited in Zajonc, 1980) have faith that feelings always came first and always accompany consumer thoughts and cognitions. Preference as a complex psychological state cannot be described on elementary terms such as the brand physical attributes. Recently, the significance of affective factors on brand preference development has been demonstrated. Allen *et al.*, (2005) exhibit the role of emotional experience in improving attitude models. Consistently, Grimm, (2005) demonstrate the importance of affective responses in addition to the cognitive perceptions in understanding consumer brand preferences.

In the extant literature, many studies are attempting to investigate how consumer trade-off between the hedonic and utilitarian dimensions of the products when making choices (Batra and Ahtola, 1990; Chitturi *et al.*, 2007; Dhar and Wertenroch, 2000; Grimm, 2005; Voss *et al.*, 2003). Such research suggest that consumer value between different dimensions according to its relative importance to the product type (Batra and Ahtola, 1990; Dhar and Wertenroch, 2000; Grimm, 2005). Consumer gives high importance to the hedonic dimensions after the fulfilment of the utilitarian aspects (Chitturi *et al.*, 2007). However, it has been argued that the interplay between the two dimensions in consumer behaviour resulting in different emotional responses and behavioural consequences (Chitturi *et al.*, 2008).

In the development of preference there are several characteristics of the affective component defined by Zajonc, (1980). First, affect is basic; it is the base for human actions and rationality. Second, affective reactions are inevitable; consumers have little control on them. However, a person can control his affective expressions but not the experiences. Third, affective judgements are irreversible, unlike Petty and Cacioppo,

(1985) a person can be wrong in his cognitive evaluations and look for better alternative. However, the person cannot be wrong about his feelings and emotions, determining what he likes or not likes. It is easy to convenience the consumer with different information about the brand attributes, or utilities, or product design, but it is difficult to alter the experienced emotion induced toward the brand. Fourth, affective judgments implicate the self; the ideal point of preference is reached when the affective judgments match the self of the person. This is can be emphasised by the high preference consumer develop for brand image congruent with himself (e.g. Sirgy, 1997; 1982). Fifth, affective reactions are difficult to verbalise; consumer express his emotional evaluations by rational reasons. Consistently, Hsee *et al.*, (2009) suggest that consumer preferences are developed based on emotional factors but he refers to cognitive factors such as the brand specifications to confirm his choices. Sixth, affective reactions need not depend on cognition; this characteristic is proven by the failure of consumer behaviour models depending on rational theories in providing comprehensive explanation of consumer choices. Conflicting, Tsal, (1985) argues the independence of affective factors in preference formation, demonstrates the mediation of cognition influences even at unconscious level. Lastly, affective reactions are isolated from content; consumer cannot recall the brand specifications but can recall the affective experience.

Moreover, in neuroscience the brain activity regions involved in emotional and self-referential processing increases when consumers are selecting brands with prior preferences (Wells, 2003). Koenigs and Tranel, (2008) proves that the emotions are playing pivotal role in preference, evidenced by the activation of the prefrontal cortex (brain emotional area); different part of the brain from the cognition processing.

Assumptions are placed on the role of emotional experience in explaining consumer preferences and choices (Hirschman and Holbrook, 1982; Holbrook and Hirschman, 1982; Zajonc, 1980). Although this view was rejected by number of research (e.g. Fishbein and Middlestadt, 1995; Zaltman, 1997) doubting the conscious of emotional experience formation in consumer mind and its reliability in measuring attitudes. Nevertheless, Allen *et al.*, (2005) and Aggarwal and Law, (2005) demonstrate the importance of emotions in understanding consumer attitudes. The integration of emotional factors will increase the multi-attribute models predictive and diagnostic ability of consumer brand preferences.

2.3.4 Preference Learning

Learning plays a fundamental role in a wide range of theories and modes of consumer behaviour (e.g. Bettman, 1979; Engel *et al.*, 1971; Howard and Sheth, 1969; Sheth, 1968). There are two sources of preference learning; the feedback or experience and the information about the brand attributes. It is difficult to trace the consequences of choice back to the antecedents. Therefore, feedback is a weak source of learning (Amir and Levav, 2008). Experience is important in preference learning acquired by repeated choices or mere exposure (Alba and Hutchinson, 1987; Bettman and Park, 1980; Hutchinson and Alba, 1991) and responses to brand-related stimuli (Brakus *et al.*, 2009; Schmitt, 1999). Trade-off learning is the inference or perception of the weight or significance of brand attributes consumers draw on to develop preferences (Amir and Levav, 2008; Hoch and Deighton, 1989).

Learning is conceptualised as an "*intuitive hypothesis testing process whereby consumers adapt their beliefs to make sense of new data*" (Hoch and Deighton, 1989, p.2). According to attitude models (e.g. Fishbein and Ajzen, 1975), consumers learn from beliefs standing at different levels of the product attributes and benefits. These prior beliefs, the first stage in the learning process, constitute a hypothesis for testing. True learning occurs when consumers experience the product either directly or indirectly. Through these experiences, consumers can differentiate between alternatives and revise their prior beliefs (Hoch and Deighton, 1989).

Hoch and Deighton, (1989) describes experience as self-generated, allowing consumers to store rich and actual information in their memory. This information is directive and can affect consumer behaviour.

The traditional view pertaining to information about brand attributes, benefits and functionality constitutes an important part of consumer brand knowledge, thereby affecting consumer behaviour. In the experiential view, the emotional, sensorial and experiential information associated with experiencing a brand is used as evaluative information crucial for judging a brand (Goode *et al.*, 2010). Carbone (2004) suggests that this information contains experiential clues that promote consumer preferences.

2.4 Brand Experience

Discussion of experience in marketing context has a long history. The early definitions focused essentially on the experience as accumulated knowledge and the utilitarian view of experience (Abbot, 1955). These definitions serve the traditional way of thinking about consumer behavior. To obtain a more accurate definition, the dictionary definition will be deliberated. Collins English Dictionary describes experience as "*the accumulation of knowledge or skill that results from direct participation in events or activities*" and "*the content of direct observation or participation in an event*". Similarly, in the Oxford English Dictionary, experience is defined as "*active participation in events or activities, leading to the accumulation of knowledge or skill*". These definitions serve the traditional way of thinking about the consumer behaviour. The dictionary definition that considers the affective role is that the American Heritage Dictionary, which defines experience as "*the feeling of emotions and sensations as opposed to thinking*" and "*involvement in what is happening rather than abstract reflection on an event*" (Palmer, 2010). Besides the progression of knowledge and the emotional involvement, Dewey (1963) adds the uniqueness of the experience. Pine and Gilmore (1998) consider all the characteristics of experience as memorable, unique and sustainable overtime. The meaning of experience has different meaning among different areas of science. In science, experience resembles an experiment with objective facts. In philosophy, experience describes the state of trial and subsequent accumulated knowledge. In sociology and psychology, experiences are the subjective and cognitive activities allow individuals to construct reality. In anthropology, experience describe individuals consciousness and coping with life events (Caru and Cova, 2003).

The multidimensionality of experience was realised by marketers treating experience as the outcome of the learning process associated with cognitive and affective behaviours. The work of Pine and Gilmore (1998), sparked the experience economy, while Schmitt (1999) considered the first responses to the experiential aspects defined by Holbrook and Hirschman, (1982). Accordingly, experience is defined as:

> "*the private events that occur in response to stimulation and often result from direct observation and /or participation in events, whether real, virtual, or in dreams providing sensory, emotional, cognitive, behavioural, and relational value that replaces functional ones*", Schmitt, (1999, p. 60).

The key elements of experience in Schmitt's (1999) definition are private, induced and multi-dimensional events. The literature review is rich with different definitions of experience; the following table (2.5) presents a summary.

Table 2-5 Brand experience definitions

Source	Definition	Extrapolation
Carbone and Haeckel, (1994, p.8)	The takeaway *impression* formed by people's *encounters* with products, services, and businesses – a perception produced when humans consolidate sensory information.	*Interactions* Experience is created from a set of direct or indirect contacts between the consumer and the brand, organisation, marketing communications, or any other brand-related stimuli
Pine and Gilmore, (1998, p.98)	An experience occurs when a company *intentionally uses* services as the stage, and goods as props, to engage individual customer in a way that *creates a memorable event*. Commodities are fungible, goods tangible, services intangible, and experiences memorable.	
Shaw and Ivens, (2002, p.6)	An *interaction* between an organization and a customer. It is a blend of an organization's physical performance, the senses stimulated and emotions evoked each intuitively against customer experience across all *moments of contact*.	*Personal* The consumer engages in a personal experience with the stimuli.
Haeckel *et al.*, (2003)	The feelings customers take away from their *interaction* worth a firm's goods, services, and atmospheric stimuli.	*Responses* The different levels at which consumer involve with the stimuli: sensorial, emotional, behavioural, intellectual, social, spiritual, rational…etc.
Poulsson and Kale, (2004, p. 270)	An *engaging act* of co-creation between a provider and a consumer wherein the consumer perceives value in the encounter and in the subsequent *memory* of that encounter.	
Mascarenhas *et al.*, (2006)	The total positive, engaging, enduring, and socially fulfilling physical and emotional *responses* across all major levels of consumer consumption chain.	*Memorable* The experiential events are memorable.
Meyer and Schwager, (2007, p. 2)	The internal and subjective *response* customers have to any direct or indirect *contact* with a company.	*Evaluations* Consumer evaluates his experiences by comparing his expectations and stored responses generated from contacting the stimuli at different time.
Gentile *et al.*, (2007)	The personal *customer's involvement* with the brand at different levels: rational, sensorial, emotional, physical, and spiritual.	
Hulten, (2011)	The central position of *value* creation from brand consumption.	
Brakus *et al.*, (2009, p.53)	The subjective, internal consumer *responses* (sensations, feelings, and cognitions) and behavioural responses evoked by brand-related stimuli.	*Holistic* Consumer experience is holistic in nature involves: pre-consumption, current, and post experience.

From this table, the following implications of brand experience can be concluded:

First. For experiences to occur it requires personal interaction between the consumer and the brand. This interaction can be direct or indirect; the consumer acquires experience indirectly when searching, shopping or being exposed to brand advertising, and directly by brand trial and usage (Brakus *et al.*, 2009; Hamilton and Thomson, 2007). Although the direct experience is the source of credible information, the preferences formed from either type of experience are the same (Hamilton and Thomson, 2007).

Second. The results of this interaction are the experiential events stored in consumer memory (Pine and Gilmore, 1998; Shaw and Ivens, 2002).

Third. The responses developed from this interaction range from subjective and internal responses, such as the sensorial, emotional and creative analytical thinking, to behavioural responses, such as social experience (Brakus *et al.*, 2009). The level of interaction and the context distinguish the experience provided by a service or brand (Gupta and Vajic, 1999).

Fourth. Consumer experience with the brand is holistic in nature and involves the pre-experience, current-experience, and post-experience. This holistic view adds more sources of value creation (Tynan and Mckechnie, 2009).

Fifth. Consumer evaluation of the current experience is based on comparing his expectations with pre-experience occurred at different moments of contact with the stimuli (Shaw and Ivens, 2005).

Further, Schmitt (1999) introduces the experiential marketing and differentiates it from the traditional marketing. The four key points of comparison are the focus of the market, the consumer type, defining competitors and the methods. In traditional marketing, the main focus is on the brand features and benefits. Accordingly, the consumers are rational decision-makers seeking the functional attributes of the brand. The competitors in the traditional marketing are defined narrowly to include other firms in the same industry producing the same product category. The most appropriate method is the quantitative techniques measuring consumer evaluation of different brand attributes. The main characteristics of traditional marketing are illustrated in the Figure 2.1.

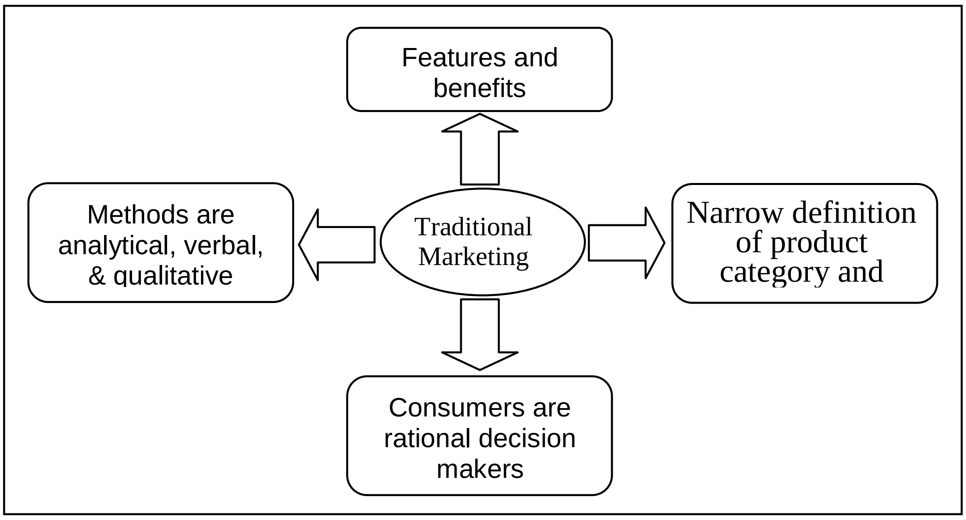


Figure 2-1 The characteristics of the traditional marketing, Source: Schmitt, (1999, p.55).

Conversely, experiential marketing is moving away from traditional techniques by focusing on the experience delivered through the brand appealing to the consumer sensorial, emotional, intellectual, behavioural and social values. Therefore, the consumers are both emotional and cognitive human beings who can make their decisions based on rationality, but at the same time they are seeking enjoyment. Competitors in the experiential marketing are broadly defined, not limited to other firms in the same industry producing the same product. The experiential marketing looks at competition by going deeper horizontally; broadening the concept of category, and vertically; examining the meaning of specific consumption situation in its wider socio-cultural context. Figure 2.2 illustrates the distinctive characteristics of experiential marketing.

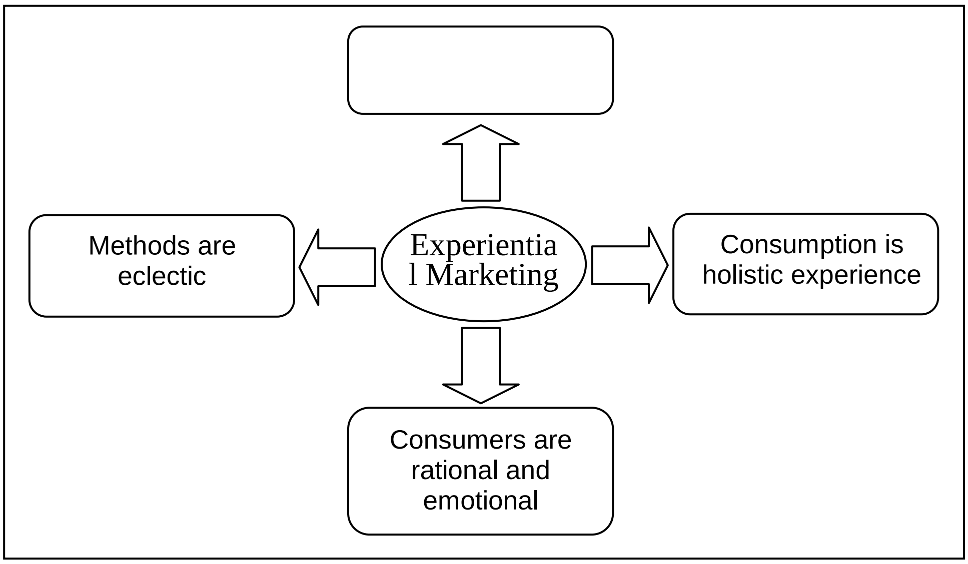


Figure 2-2 The characteristics of the experiential marketing, Source: Schmitt, (1999, p.58)

2.4.1 Brand Experience Dimensions

The dimensionality of consumer experience can be determined by consumer responses evoked by direct and indirect brand contact (e.g. Gentile *et al.*, 2007; Brakus *et al.*, 2009), by the type and level of connection between the consumer and the event (Pine and Gilmore, 1998), or by the corresponding effort consumers exert with different experience levels (Hoeffler and Ariely, 1999). Table 2.6 summarises the brand experience dimensions discussed in the extant literature.

Table 2-6 Dimensions of Brand Experience

Source	Type of Study	Dimensions
Holbrook and Hirschman, (1982)	Conceptual	Fun, feelings, and fantasies.
Hirschman, (1984)	Empirical (consumer)	Cognition seekers, sensation seekers, and novelty seekers.
Alba and Hutchinson, (1987)	Conceptual	Cognitive effort, cognitive structure, analysis, elaboration, and memory
Otto and Ritchie, (1996)	Empirical (tourism industry)	Hedonic, novelty, stimulation, safety, comfort, and interactive.
Hoeffler and Ariely, (1999)	Empirical (consumer brands)	Effort, choice, and experience.
Pine and Gilmore, (1998)	Conceptual	Entertainment, education, aestheticism, and escape.
Schmitt, (1999; 2003)	Conceptual	Sense, feel, think, act, and relate.
Holbrook, (2000)	Review	Experience, entertainment, exhibitionism, evangelizing.
Wirtz and Mattila, (2003)	Empirical (Chinese physician service)	Objective knowledge (actual information) Subjective knowledge (self-assessed knowledge)
O'Loughlin *et al.*, (2004)	Qualitative (financial banking industry)	Brand experience, transactional experience, and relationship experience.
Chang and Chieng, (2006)	Empirical (service brands)	Individual experience (sense – feel – think), and shared experience (act – relate).
Gentile *et al.*, (2007)	Empirical (consumer brands)	Sensorial, emotional, cognitive, pragmatic, lifestyle and relational component.
Tynan and Mckechnie, (2008)	Conceptual	Enjoyment, entertainment, learning, skills, nostalgia, fantasising, evangelising.
Verhoef *et al.*, (2009)	Conceptual	Cognitive, emotional, social, and physical
Brakus *et al.*, (2009)	Empirical (consumer brands)	Sensory, emotional, intellectual, and behavioural
Walls *et al.*, (2011)	Qualitative (luxury hotels)	Physical environment (ambience, sensorial, functional, symbolic) Human interaction (employees and fellow guests)

2.4.1.1 Response Dimensions

The pioneering work of Holbrook and Hirschman (1982) addresses the experience consumption facets related to the fun, fantasy and feelings (the three Fs) of product use. Experience can occur in many settings, when consumers consume, shop or use the brand. The responses the consumer creates by contacting the brand are defined by the subjective, internal and behaviour responses (Brakus *et al.*, 2009; Gentile *et al.*, 2007). These dimensions include the sensory, emotional, intellectual, behavioural, social, pragmatic, lifestyle and physical. The three dimensions (sense – feel – think) can be categorised as individual experience and the two dimensions (act-relate) are categorised as shared experience (Chang and Chieng, 2006; Schmitt, 1999). The first category can have significant impact on the second category (Chang and Chieng, 2006).

The sensory experience is defined as consumer perceptions of the goods or services through senses that draw certain images in his mind (Hulten, 2011). The senses data represents the stimulation of channels of exposure to the multiple sense organs (Hirschman, 1984; Zajonc, 1980). Consumers' cognitive activities practiced during shopping, consuming or reading a report secure the sensory experience (Hirschman, 1984).

The brand appeals to the consumer's five senses: sight, sound, touch, taste and smell. This is distinguishing tool that adds value to the brand (Schmitt, 1999). Every sense can create a value experience to the brand. The sense of sight is the most powerful and captures the details of the brand. The sense of sound is related to emotions and feelings, and experience interpretations. The sense of smell is related to pleasure and is linked to emotions and feelings. Taste is the most distinct sense and often interacts with other senses. Finally, the sense of touch represents the physical and psychological interaction between consumer and the brand. The multi-sensory brand experience refers to the brand engaging more than a sense of consumer senses (Hulten, 2011), the receipt of experience in multiple sensory modalities (Hirschman and Holbrook, 1982).

The sensory experience relates closely to the emotional. Most of the senses are related to emotions and feelings; thus, the affective dimension is the focal point of consumer experience (Pullman and Gross, 2004).

The second dimension of brand experience is emotions; the mental state results in specific physical expressions or actions arising from the cognitive assessment of the event (Bagozzi *et al.*, 1999). The emotional component is an important aspect defining consumers' experience with brands (Halvena and Holbrook, 1986). Emotional responses are important components of consumer experience in any context: service (e.g. Otto and Ritchie, 1996; Walls *et al.*, 2011) or goods (e.g. Brakus *et al.*, 2009; Gentile *et al.*, 2007), and retailing (Verhoef *et al.*, 2009).

However, there is debate between psychologists about the emotional response, raising the questions of pre-cognitions, post-cognitions or mediated by cognitions (e.g. Tsal, 1985; Zajonc, 1980). It has been proven by the neuroscience that the emotions and cognitions are developed due to the activation of different parts of the brain (Koenigs and Tranel, 2008). The brand engages consumer emotions and feelings by creating a certain atmosphere that places him in a positive mood with feelings of joy (Schmitt, 1999). Consumer experience with the brand can create a strong emotional bond (Brakus *et al.*, 2009).

It is important to determine the affective aspects and establish its frame. Cohen and Areni (1991) describe affect as the state of valenced feelings, described by emotions and mood. Emotions are the intensive feelings linked to the stimuli while moods are less intense diffused feelings. Both emotions and moods reflect feelings, but they are different and have distinctive characteristics. Moods are long lasting, low intensity, unintentional and uncoupled with actions, whereas emotions are intentional and explicit through actions (Bagozzi *et al.*, 1999).

In marketing literature, the emotional aspects are represented by different factors. The most acceptable of these factors are those defined in the PAD model: pleasure, affect and dominance (Mehrabian and Russell, 1974). Pleasure refers to feelings of happiness, enjoyment and pleasantness. Arousal refers to the feelings of excitement and the extent of stimulation. Dominance refers to the feelings of mastery and power. Empirical studies provide evidence that both arousal and pleasure are the main components of emotional experience (e.g. Mano and Oliver, 1993). They illustrate that pleasantness-unpleasantness and arousal-quiet are the dimensions of the affect circumplex. The rotation of the two axes will result in many positive and negative affective outcomes. Both emotions and mood have influenced the learning process and the memory (Bagozzi *et al.*, 1999).

The hedonic experience defined by Hirschman and Holbrook (1982) is related to the multi-sensorial aspects, emotive aspects and fantasy feelings. The hedonic aspects relate closely to the imaginative construction of reality identifying the brand image, symbolic and intangible key determinants affect brand selection.

The third dimension of experience is intellectual, which is related to creative cognitive thinking. Brands target consumer convergent and divergent thinking in order to enhance the creativity and problem-solving experience. The intellectual brand experience is created by stimulating consumer curiosity and always being provocative and surprising. This dimension is related closely to high-technological products; however, it can be extended to other product categories (Schmitt, 1999).

The fourth dimension is the behavioural experience, which targets consumer actions and lifestyle. The brand motivates and inspires consumers to change their behaviour and lifestyle (Schmitt, 1999). The act experience extends the ordinary assumption that consumer lifestyle affects their choices (Andreasen, 1984), and proposes that consumption experience is interactive. The symbolic interactive perspective establishes the product as behavioural stimuli that guide consumer role performance (Helman and De Chernatony, 1999).

Gentile *et al.* (2007) differentiate between two components of the act experience. The first is the pragmatic component of experience, from the brand perspective, which is created by changing the practical act of doing something and extending the brand usability. This component touches the act of the brand. The second is lifestyle experience; from the consumer perspective, experiencing the brand becomes a means of holding certain values shared between the consumer and the brand or its company.

The last dimension of brand experience relates to the social or relational experience. This dimension is expanded beyond the consumer personal context by relating to others in the broad community. It focuses on the brand role as a self-improvement tool that relates consumer to broader society and reflects positive impressions (Schmitt, 1999). The brand leverages the social experience by encouraging common consumption or creating a community and be its focal passion (Gentile *et al.*, 2007). Consumers use their social relationship norms to guide their interactions with the brand (Agarwal and Law, 2005). McAlexander *et al.* (2002) demonstrate that the brand social experience form a community between consumers sharing the same brand. Sharing experience allows consumers to learn about the brand and capture its values. Marketers can cultivate proactively the brand community by increasing the integrated feelings and, thus, brand loyalty.

2.4.1.2 Level of Interaction Dimensions

The second set of experience aspects, determined by Pine and Gilmore (1998), are based on two dimensions: consumer participation and consumer connection. Consumer participation refers to the degree of consumer interference in the experiential event. This dimension gives rise to two types of consumers at two extremes; passive consumers having no role at the event, and active consumers, who are the key actors in the creation of the event. In the same manner, in the second dimension, consumer connection refers to the level of unity between the consumer and the event. Along this continuum, two types of consumers are identified: absorption and immersion.

Four realms of experience are identified based upon these two dimensions: entertainment, education, escapist and esthetic. Consumers can have an entertainment experience by being passive in the absorption role, or have an educational experience by being a more active participant while remaining connected to the event as an absorbent. If consumers increase their level of connectivity to the event and become more immersed, they will enjoy an escapist experience. Finally, if consumers change their level of participation and return to being passive, thereby preserving their immersion, they will enjoy an esthetic experience.

2.4.1.3 Level of Effort Dimensions

The last category of experience dimensions is identified by Hoeffler and Ariely (1999). They classify experience into three states: effort, choice and experience. This classification is based on the corresponding effort for each experience level; information, trial or hard-choice. Effort refers to the mental energy consumers spend in making up their mind. Choice refers to the consolidation of preferences for a choice task and experience is the outcome of the choice. Other studies such as Morgan-Thomas and Veloutsou, (2011) and Sheng and Teo, (2012) have considered the brand experience as a uni-dimensional construct.

2.4.2 Brand Experience Antecedents and Outcomes

The design of brand experience is all about the creation of cues. A cue is anything that can be perceived, sensed and recognised by its absence. The physical attributes are the main clues of the brand; additional clues can be created by emotional and symbolic features. The clues can be based on the brand functionality or the brand experiential aspects whether created by the consumer, such as the feelings induced toward the brand material, or the brand itself, such as its taste, smell and look (Berry *et al.*, 2002). The clue should be mixed between cognitive, emotional and symbolic aspects of the brand. Thus, it provides consumers with superb functionality along with the positive feelings of happiness, enjoyment or a sense of belonging (Mascarenhas *et al.*, 2006).

Research interests are not only directed towards understanding the antecedents of brand experience, but also towards investigating the impact of consumer experiences, as shown in Table 2.7. The first stream of studies discusses the antecedents of brand experience in different contexts; hospitality service (Ismail *et al.*, 2010; 2011; Pullman and Gross, 2004; Walls *et al.*, 2011), retailers (Rose *et al.*, 2011; Verhoef *et al.*, 2009), m-commerce service (Min *et al.*, 2012) and products (Sheng and Teo, 2012). These studies focus on cues delivered by service providers, retailers and brands to create experiences.

The second stream of studies was directed towards understanding the role of brand experience in influencing how consumer behaviour in the long and short-term. These studies demonstrate the significance of brand experience on building a brand relationship (Chang and Chieng, 2006), brand equity (Biedenbach and Marell, (2010), brand loyalty for products (Brakus *et al.*, 2009; Iglesias *et al.*, 2011), or services (Ismail, 2010; Ismail *et al.*, 2011) and service brand prestige (Choi *et al.*, 2011). Even more, the role of brand experience has been illustrated on internet-based marketing (Ha and Perks, 2005; Rodgers, 2005). The brand experience significantly affects online brand trust (Ha and Perks, 2005), online brand relationship (Morgan-Thomas and Veloutsou, 2011), and loyalty (Rodgers *et al.*, 2005). It is noteworthy that sensorial and emotional brand experiences have gained special interest over other dimensions. For example, Tsai (2005) studies the impact of emotional experience on developing different types of values; symbolic, affective, trade-off and perceived brand quality. The impact of the sensorial brand experience on enhancing the brand knowledge was also investigated by Li *et al.* (2003) and Von Wallpach and Kreuzer, (2012).

Table 2-7 Antecedents and consequences of brand experience

	Author	Purpose	Hypothesis	Sample/Method	Findings
Antecedents	Clatworthy, (2012)	Transfer the brand strategy by building service personality to service experience during the early stages of new service development.	Stage 1: Strategic brand identity input Stage 2: transformation to brand personality Stage 3: experiential manifestation	Qualitative interviews and observations.	Highlight the importance of aligning customer experience to new service development by creating a service personality.
	Mehmetolgu, (2012)	Study the impact of consumer demo-psychological characteristics on experiential consumption.	Big-5 personality traits →experiential consumption activities	1000 respondents Telephone interviews Experiential activities as proxy of experiential consumption	Experiential activities are affected by the personality traits. Age has significant impact on all experiential-activities.
	Min *et al.*, (2012)	Examine the impact of mobile commerce factors in stimulating consumer emotional consumption experience.	Convenience, media richness, subjective norms, self-efficacy → emotional responses. Emotional responses → consumption experience	293 users of m-commerce services. Self-administrated survey	The hedonic factors of have a significant positive impact on emotions; unlike the utilitarian factors insignificantly or negatively related to emotion. Emotions play a significant role in consumption experience.
	Sheng and Teo, , (2012)	Investigate the impact of product attributes on brand equity mediating by the customer experience	Perceived ease of use and perceived usefulness → customer experience Entertainment and aesthetics →customer experience	262 mobile users Mobile phones Online survey	The hedonic and utilitarian attributes affect brand equity directly and indirectly via the customer experience. However, the hedonic attributes contributes more to the customer experience than the utilitarian attributes.
	Ismail *et al.*, (2010; 2011)	Understand the antecedents and consequences of customer experience applied on tourists.	*Antecedents*: Brand name, price, advertising, employees, services cape, core service, WOM, mood, perceived quality → customer experience. *Outcome*: customer experience → brand loyalty	509 tourists Netnography and questionnaire	Customer experience is shaped by the price, employees, core service, WOM, and the perceived service quality. Customer experience affects the brand loyalty.

Continued

	Author	Purpose	Hypothesis	Sample/Method	Findings
Antecedents	Walls *et al.*, (2011)	Determine the dimensions and the antecedents of customer experience in luxury hotels	What constitute customer experience at luxury hotels?	In-depth interviews and semi-structured interviews with 15 guests.	Trip related factors and the personality characteristics shape the experience of guests at luxury hotels.
	Rose *et al.*, (2011)	Discover the antecedents and consequences of online customer experience	Information processing, Perceived ease-of-use and usefulness, perceived benefits, Perceived control, Skill, Enjoyment → online customer experience → trust, satisfaction and repurchase intention		Conceptual paper
	Verhoef *et al.*, (2009)	A holistic view of the determinants for creating customer experience provided by retailers.	Social environment, Service interface, Retail atmosphere, Assortment, price, retail brand, experience (past/other retailers) → customer experience		Conceptual study
	Pullman and Gross, (2004)	Examine the impact of service elements on eliciting emotional experience and loyalty.	Service tangible and intangible elements → emotional experience. Emotional experience → loyalty	Mixed method for data collection: interviews followed by survey. A sample of 400 guests in hotels.	The guests perceptions of the service elements positively affect the emotional experience and the loyalty behaviour.
Consequences	Von Wallpach and Kreuzer, (2012)	Study the impact of multi-sensory experience on brand knowledge elicitation	Multi-sensory experience → brand knowledge	Qualitative study of 15 consumers in workshop. Multi-sensory sculpting	Multi-sensory experiences (5 senses + emotion) support the development of embodied brand knowledge.
	Iglesias *et al.*, (2011)	Study the direct and indirect impact of brand experience on brand loyalty	Brand experience → brand loyalty Mediated by affective commitment	195 full-time MBA students Paper and internet survey 3 product categories: cars, laptops, and sneakers	There is no direct relationship between brand experience and brand loyalty for the three product categories. this relationship is fully mediated by affective commitment.
	Gabisch, (2011)	Extend the theory of planned behaviour by adding the virtual world brand experience and the self-image congruence and perceived diagnosticity.	Virtual world brand experience → Purchase intention & Purchase behaviour Moderated by self-image congruence and perceived diagnosticity.	209 registered users in second life Online questionnaire	The extended model support the impact of visual brand experience on purchase intentions and behaviours moderated by self-image congruence and perceived diagnosticity.

Continued

	Author	Purpose	Hypothesis	Sample/Method	Findings
Consequences	Choi *et al.*, (2011)	Study the impact of brand experience and brand personality on brand relationship quality and brand loyalty.	Brand experience → brand prestige	309 customers Online-survey Coffee house	Brand experience positively impacts the brand prestige.
	Morgan-Thomas and Veloutsou, (2011)	Combine marketing with information system investigating the impact of online brand experience on online brand relationship.	Online brand experience →online brand relationship mediated by: behavioural intentions satisfaction	456 respondents. Street-intercept questionnaires. Online search engines.	Brand relationships is an important outcome of online brand experiences, positive interactions with consumers activate their intentions and raise their satisfaction.
	Biedenbach and Marell, (2010)	Analyse the impact of customer experience on the brand equity dimensions in B2B.	Customer experience → Brand awareness brand associations Perceived quality Brand loyalty	647 responses. Telephone interviews	Direct and indirect experience with the service providers are the basis for the information of brand equity.
	Brakus *et al.*, (2009)	Investigate the impact of brand experience on behavioural outcomes: satisfaction and loyalty	Brand experience → brand personality - brand loyalty - satisfaction	209 students 6 products categories * 2 brand each. Questionnaire	Brand experience affects the brand loyalty directly or indirectly mediated by the brand personality and satisfaction.
	Hamilton and Thompson, (2007)	Compare consumer preferences after direct/indirect experiences	Direct/indirect experience → product perceptions and overall product evaluation	67 undergraduate students MP3 players Experimental design	Consumers with indirect and direct experience highly evaluate product capabilities than product usability.
	Gentile *et al.*, (2007)	Investigate the role of customer experience in creating value	The component of customer experience is related to the functional and hedonic values. Customer experience component contributes to the overall evaluation	2368 respondents on 12 different brands in different product categories. Explorative and descriptive survey. (interviews and questionnaire)	The study proves that the value delivered to the consumers is related to experiential features. It is recommended to deliver a balanced value of utilitarian and hedonic.
	Chang and Chieng, (2006)	Study the consumer-brand relationship based on consumer experiential brand view mediated by brand meaning elements	Individual a shared experience → -Brand associations -Brand personality -Brand attitude -Consumer-brand relationship	690 respondents in Shanghai and Taipei. Coffee stores in both countries.	Individual experiences affect the brand associations, brand personality, and brand attitude in both contexts. Shared experiences affect the brand associations in both contexts.

Continued

	Author	Purpose	Hypothesis	Sample/Method	Findings
Consequences	Ha and Perks, (2005)	Investigate the relationship between brand experience and brand trust in the internet-based marketing.	Brand experience → brand trust mediated by: Brand familiarity Satisfaction	203 respondents Web-based survey 4 product categories: bookstores, Abata malls, CDs and travel agencies	Brand experience affects the brand trust directly and indirectly via satisfaction.
	Tsai, (2005)	Study the antecedents and consequences of brand perceived value.	Direct emotional experience → Symbolic value, affective value, and trade-off value	960 consumers. Products: computers – coffee and denim wear. (320/ category), Questionnaire	The emotional experience significantly affects the different types of value. Also, emotional experience is positively related to perceived quality.
	Li *et al.*, (2003)	Investigate the impact of virtual experience on consumer learning.	The effectiveness of virtual experience (visual, touch, behavioural) → product knowledge Brand attitude Product decision quality Cognitive evaluation	73 undergraduate students participated in experiment. Products: wristwatches, bedding, and laptop. Questionnaire for dependent variables. The differences between the consumption experiences were measured using 3-D and 2-D visualisation.	Consumer virtual experience is an initial step in consumer learning.
	Ortmeyer and Huber, (1990)	Study the moderating impact of brand experience on negative promotion impact	Brand experience moderated the negative relationship between promotion and purchase intention	320 nonstudent consumers. Experiment design using computer simulation.	The negative impact of promotions on purchase intention is eliminated for consumers with high brand experience.

2.4.3 The Role of Brand Experience on Preference Formation

Consumer behaviour theories postulate that experience developed directly or indirectly are sources of preferences (Howard and Sheth, 1969; Sheth; 1968). The type of experience moderate the relationship between consumers' attribute perceptions and preference; thus, can shift the preference level (Hamilton and Thomposn, 2007; Thompson *et al.*, 2005). Changes in consumer preferences result from changes in his experiences (Zajonc and Markus, 1982). Moreover, stability of consumer preferences is related to the effort experienced in choice situations. In other words, consumer choices are associated with high levels of effort result in stable preferences, but less preference strength than those developed in easy-choice conditions (Hoeffler and Ariely, 1999). The existence of inherent preference from prior experiences has been argued by Simonson (2008).

Consumer preferences are not only related to the associated effort with experiences, but also to the level of experience. Carbone (2004) differentiates between three levels of consumers' experiences and their preferences at each level using a chart called the experience-preference model; band aid chart. Using this chart, there are three sequential levels of experiences that correspond to the development of consumer preferences. The first level presents consumers with negative experiences and who reject the brand. The second level has consumers with neutral experiences, who accept the product as a commodity. The third level shows consumers with positive experiences and preferences towards certain brands. The market can be segmented by consumer preferences to the different aspects of brand experiences (Zarantonello and Schmitt, 2010).

Preference is also affected by the expertise level of consumers. King and Balasubramanian (1994) differentiate between the consumers' expertise level and the preference formation strategy. There are three strategies for consumers to develop their preferences: own-based strategy, others-strategy and hybrid strategy or mixed strategy. Expert consumers have high abilities to possess declarative and procedural knowledge and adopt the own-based preference formation strategy. While novice consumers have experience of the brand, but low evaluative abilities of available brand knowledge; therefore, they adopt other-based strategy. Novice consumers cannot evaluate a brand alone, so they require the recommendations of others.

Additionally, the level of experience relates to the brand preferences of new consumers. Heilman *et al.* (2000) investigate the evolution of preferences for new consumers to the market through experience. They demonstrate that new consumers who enter the market with no information and no experience do not have the chance to be loyal to any specific brand. By gaining purchasing experience and information, they tend to be loyal to their preferred brand.

The relationship between the consumer experience and information was supported by the inverted U-shape. The utilisation of consumers' experiences and prior brand knowledge depends on the phase of choice process. At early phases, consumers either with low or high level of experience and knowledge rely on available information to narrow their choices. But at the latest phases of choice, consumers may need more information to face hard complex choices (Bettman and Park, 1980). Inconsistently, Hoeffler and Ariely, (1999) suggest that consumers are developing stable but fewer strength preferences at high levels of experience.

The experience order was found to affect brand preferences either directly or mediated by the brand attribute recall and brand attitude (Niedrich and Swain, 2003). Table 2.8 summarises the prior studies that have investigated the impact of experiences types and levels on consumer preferences to brands. Brand familiarity presents the accumulated product-related experiences (Alba and Hutchinson, 1987). The studies examined the impact of brand familiarity on brand preference. Baker *et al.* (1986) and Sääksjärvi and Samiee (2007) support the positive impact of experience on preference development.

The studies that examine the impact of experience on preference focus either on the level or type of experience. The first stream focuses on the level of experience; examines the impact of different experience levels (King and Balasubramanian, 1994), or the impact of consumers' accumulated knowledge with certain product category acquired through multiple purchases (Heilman *et al.*, 2000), or usage (Sääksjärvi, M. and Samiee, Saeed, 2007) on consumers preferences. The second stream distinguishes between the type of experience and changes preference levels (e.g. Hamilton and Thomposn, 2007; Thompson *et al.*, 2005). Therefore, these studies focus on the impact of usage or consumption experience and differentiate between two types of experience based on the level of interaction between the consumer and the product.

Consumers' subjective and behavioural responses forming their brand experiences are fundamental for determining brand preferences and consumer purchasing decisions. These responses result when consumer have either a direct or indirect interactions with a brand (Brakus *et al.*, 2009; Gentile *et al.*, 2007). Holbrook *et al.,* (1986) suggest that the reasons for purchases or preferences are entailed in the different mixes between the extrinsic and intrinsic values of experience. Brand experience is more holistic in nature and captures the responses to the brand at the individual level with various mixes of usability, brand functionality and hedonic experiences are examples of experiential outcomes (Gentile *et al.*, 2005; Halvena and Holbrook, 1986; Morgan-Thomas and Veloutsou, 2011). The significance of emotional experience, one of the most important experiential responses, affects positively user attitude, as demonstrated by Allen *et al.* (2005).

Table 2-8 Review on Experience – brand preference related studies

Author	Purpose	Hypothesis	Sample/Method	Findings
Zarantonello and Schmitt, (2010)	Segmenting consumers based on brand experience	Clustering consumers based upon preferences for different brand experience aspects. Brand attitude → purchase intention moderated by the brand experience aspects	1134 respondents Products: automobiles *3 brand, mobile phones *4 brands food and beverages *6 brands	Five clusters of consumers emerged based on the different aspects of brand experiences. The impact of brand attitude on purchase intention increase for consumers have high experiences on the different dimensions.
Sullivan and Heitmeyer, (2008)	Study the impact of experiential values on Gen Y preferences.	The impact of experiential values on shoppers' preferences is indifference across groups.	130 shoppers meeting the age specification of Gen Y. Self-administrated questionnaire Brick and mortar retailer.	There are no significant differences in Gen Y brick and mortar apparel shoppers of retail preferences and the experiential values.
Sääksjärvi, M. and Samiee, Saeed, (2007)	Examine the impact of non-price factors on brand preferences. Brand familiarity (Alba and Hutchinson, 1987).	Brand familiarity → brand preference Internet shopping experience →brand preference mediated by brand evaluation	114 participants Cyber brands and extension brands	There is a positive relationship between the brand familiarity and brand preferences. However, no impact was found between the internet shopping experience and brand evaluation.
Allen *et al.*, (2005)	Integrate the emotional experience to multi-attribute models	Emotional experience → attitude (expert vs. novice)	141 blood donors	The emotional responses supplement the cognitive information in explaining attitude. The emotional experience contributes in predicting attitude of the experts versus the novice.
Niedrich and Swain, (2003)	Investigate the impact of pioneer advantage and experience order on brand preference.	Experience order →brand preference mediated by: Brand attitude Attribute recall	Experiment 1: 231 students Product: microwave popcorn * 2 fictitious brands Experiment 2: 296 students Product: bicycle tyres * 2 fictitious brands.	There is a direct impact of experience order on brand preference and indirect mediated by brand attitude and brand attribute recall.

Continued

Author	Purpose	Hypothesis	Sample/Method	Findings
Heilman *et al.*, (2000)	Test how brand preference and consumer choices vary with gaining experience for new consumers.	Purchasing experience → brand preference	125 and 73 first time purchasers of disposable diapers and baby towels respectively, six brands each.	Consumers new to the market prefer the brands with low perceived risk as they engage in information collection and their purchasing experience increase they will buy their preferred brands only.
Hoeffler and Ariely, (1999)	The impact of experience dimensions of preference stability	Experience dimensions (choice, experience, and effort) → preference stability	Study 1: 84 undergraduate students Product: gas grills	The experience and the corresponding effort affect the preference stability. The experience consumer gain in easy-choice condition vs. hard-condition affects the stability and the strength of preference. The increased effort the more stable and the less strength preference developed.
King and Balasubramaninan, (1994)	Examine the impact of experience level on the preference formation strategy. Assuming no based preference or consumption experience or decision heuristics.	Type of consumer (expert/novice) → preference strategy Product type → preference strategy	115 undergraduate students 2 products * 4 fictitious brands : camera and film processing service Experimental design	Expert consumers having brand knowledge will select the brand based on their own preferences. For the product with search attributes will use their own skills in evaluation and preference formation.
Monroe, (1976)	Study the effect of price differences and the level of familiarity on brand preferences	Prior experience →brand preference Using 3 cognitive levels: direct experience (recent – 2 years – indirect)	Housewives Experimental design Coffee, cologne and fabric softener	The buyer experience with the brand is a dominant factor in his choice behaviour. The level of brand familiarity affects the consumer brand preferences.

2.5 Brand Knowledge

In the extant literature of marketing, brand knowledge has been explored extensively in consumer research (Alba and Hutchinson, 1987). Keller (1993, p.3) conceptualised brand knowledge as "*consisting of a brand node in memory to which a variety of associations are linked*". Traditionally, knowledge has been treated as a unidimensional construct most often referred to as product familiarity or prior knowledge (Alba and Hutchinson, 1987). At the general level, brand knowledge reflects the brand meanings consumers holds about the brand (Johnson, 1989). The consumer brand knowledge was related to the cognitive representation of the brand (Peter and Olson, 2001), understanding the brand and its benefits (Duncan, 2005). However, a more explicit multi-dimensional account of the knowledge variable was needed (Alba and Hutchinson, 1987). Keller (2003) defines consumer brand knowledge in terms of personal meaning about the brand stored in consumer memory, including all descriptive and evaluative brand-related information. Consumer perceptions about the brand attributes and benefits, symbolic associations and affective associations as well constitute the dimensions of brand knowledge utilised in the learning process (Erdem *et al.*, 1999).

2.5.1 Brand Associations (Attributes and Benefits)

Brand associations are the perceptions of the different levels of attributes associated with consumer memory to constitute an important factor in the learning theory (Erdem *et al.*, 1999; Hoch and Deighton, 1989; Romaniuk and Thiel, 2011). Dillon *et al.* (2001) differentiate between the general brand associations and the specific-associations referring to the brand attributes and benefits.

The brand attributes are the descriptive features consumers associate with the brand (Keller, 1993). Attribute-related information always incorporates the development of consumers' brand preferences/choices – the learning process in the cognitive psychology and econometric models (Erdem *et al.*, 1999; Puth *et al.*, 1999). Through the brand attributes, consumers can determine the descriptive features of the brand and its utility (Hutchinson, 1986). In addition, consumers use attributes perceptions as an important input variable in the decision-making process by using the multi-attribute models. Moreover, the attributes can be viewed as varying along a continuum that moves in six levels from concrete to abstract attributes, consequences and values (Cohen, 1972; Olson and Reynolds, 1983).

There are numerous ways to classify brand attributes (Myers and Shocker, 1981). The product attributes can be dichotomised as extrinsic or intrinsic cues (Olson and Jacoby, 1972). The intrinsic attributes are linked directly to the product, while the extrinsic attributes are not. Keller, (1993) classifies brand attributes using a broader view of product-related and non-product related attributes. The product-related attributes are the important features or characteristics necessary for the product performance and function, while the non-product attributes do not directly influence the product performance, related to its consumption or purchase. Price and image have been classified as extrinsic cues (Olson and Jacoby, 1972; Siu and Wong, 2002; Szybillo and Jacoby, 1974). Keller, (1993) adds brand appearance to the non-product attributes.

The benefits are the personal values consumers attach to brand attributes (Keller, 1993). The consequences are derived from the concrete and the abstract attributes (Johnson, 1989). Olson and Reynolds, (1983) postulate that values are placed at higher levels than the consequences or benefits representing the desired end state. The benefits are what the consumers seek when purchasing the brand (Kotler, 1999; Puth *et al.*, 1999).

Keller (1993) distinguishes between three categories of benefits: functional, experiential and symbolic. The functional and experiential categories are linked to intrinsic product-related attributes. The functional benefits satisfy the basics needs and motivations, while the experiential benefits relate to feelings, emotions and pleasure. The advantages of the brand extrinsic non-product-related attributes are linked to the symbolic benefits that concern the self-concept.

The vast majority of studies differentiate between the utilitarian and hedonic goods (e.g. Batra and Ahtola, 1990; Chandon *et al.*, 2000; Okada, 2005). The first type offers primarily cognitive and functional benefits, while the second offers experiential benefits (Chandon *et al.*, 2000). The brand benefits do not stand on extremes; a brand can offer both types of benefits with different levels (Okada, 2005). Usually, consumers make trade-offs between the functional and hedonic benefits before setting their choices (Chitturi *et al.*, 2007). However, the two types of benefits affect consumer preferences and choices (Okada, 2005; Overby and Lee, 2006). Gentile *et al.* (2007) suggest that successful products should deliver an adequate balance between both types of values.

2.5.2 Brand Personality

Brand personality is the second factor of brand association. It is based on symbolic perspective and should be discussed separately from other associations (Aaker, 1996). In the marketing literature, there is an overlap between the terms of brand identity, brand image and brand personality. Kepferer, (2008) defines brand identity as the brand meaning the company delivers to the target consumers. Brand personality is an important component in the brand identity prism constructive source.

Brand personality can be viewed as a viable metaphor to brand image (Caprara *et al.*, 2001), and the two terms can be used interchangeably (Batra *et al.*, 1992). However, Keller, (1993) defines brand image as the brand perceptions of the consumer. The brand image refers to the brand's functional and symbolic benefits (Low and Lamb, 2000), while the brand personality refers only to the brand's symbolic associations (Keller, 1993). Therefore, Plummer, (2000) considers brand personality as an important component of the brand image. He defines the brand personality as the symbolic meaning of the brand linked to the non-related brand attributes.

The personality of the brand originated from the brand image, brand attributes and the associated traits consumers assign to the brand (Lin, 2010). The personality traits consumers assign to the brand are influenced by direct and indirect contact with the brand (Aaker, 1997; Heding *et al.*, 2009). The direct contact is between the consumer and the stereotypical brand user, company employees, the CEO or brand endorsers, while the indirect contact is between the consumer and the brand tangible or intangible attributes. Aaker (1997, p.347) was among the first to provide a solid definition of brand personality, referring to it as "*the set of human characteristics associated with a brand*". Brand personality means humanising the brand (Swaminathan *et al.*, 2009). It reflects how people feel about the brand, rather than how they think of the brand (Keller, 1993).

There have been several trials to identify the dimensions of brand personality, such as the NEO model (McCrae and Costa, 1989) and ACL (adjective checklist) (Piedmont *et al.*, 1991). These models describe the personality traits perceived by consumers rather than brands (Phau and Lau, 2000). The most predominated definition and scale of brand personality in the marketing studies is that given by Aaker (1997); however, it has been criticised.

Defining brand personality as a set of human characteristics is imprecise. The human characteristics can include demographics (age, gender...etc.), psychological factors (personality traits) and other social, cultural and personal variables such as lifestyle and ethnicity. Therefore, it is important to define the brand personality based on the measured traits (Geuens *et al.*, 2009). Azoulay and Kapferer, (2003) argue that this definition is too wide, and includes other facets in the brand identity prism other than brand personality, which can be considered as human characteristics such as the inner values of the consumer and the physical traits of the typical user. Moreover, Aaker (1997) was focusing on the personality traits associated to the brand.

This loose definition induces problems about the construct validity of the concept and consequently its dimensions that do not cover personality traits (Geuens *et al.*, 2009). Consequently, the factor structure of this model could not be generalised at brand level (Austin *et al.*, 2003) and could not be replicated cross-culturally (Azoulay and Kapferer, 2003; Geuens *et al.*, 2009).

A more strict definition proposed by Azoulay and Kapferer (2003, p.151) describes brand personality as "*the set of human personality traits that are both applicable and relevant for brands*". Thereafter, recent studies uncovering brand personality have relied on this definition since it is more rigorous and can be used cross-culturally without confusion (e.g. Bosnjak *et al.*., 2007; Geuens *et al.*, 2009; Milas & Mlačić, 2007). In order to understand brand personality, the personality in psychology must be examined constituting the base of concept meaning and dimensions.

2.5.2.1 Brand Personality and Human Personality

In the area of psychology and personality research, it has always been difficult to define the personality, identify the battery or the scale of traits that can classify different human personalities, or relate it to consumer responses and predispositions (Plummer, 2000). There are numerous theoretical perspectives for personality conceptualization in psychology. However, the personality is tiered into three levels: personality traits, personal concerns and life stories. Psychologists focus on the personality traits, which distinguish between individuals and their consistencies overtime and across environmental situations based on temporal and situational personal traits (McAdams, 2001). These traits are defined as "*the relatively enduring styles of thinking, feeling, and acting*" (McCrae and Costa, 1997, pp.509). Aaker, (1997) positions the brand personality on the human personality traits (Aaker, 1997; Fennis and Pruyn, 2007; Geuens *et al.*, 2009; Park and John, 2010; Sweeney and Brandon, 2006).

The difference between brand personality and human personality lies in two main points; the level of personality and the process of creation.

First. There are two levels of self-concept; independent and interdependent (Heding *et al.*, 2009). Sung and Tinkham, (2005) refer to them as the actual (objective) and implicit (perceived) component of human personality. In contrast, brand personality has one component, which is the hypothetical traits developed by the consumers; i.e. there is no other objective or actual traits independent of the consumer's brand perception.

Second. The process of brand personality creation is different from the process of human personality creation. Brand personality is created from direct and indirect contact with the brand reflecting brand stereotypical users, attributes and other associations (Aaker, 1997), while human personality is inferred from demographic and psychographic characteristics (Sung and Tinkham, 2005). Personality traits describe the internal characteristics of human beings, from which their behaviour in different situations can be predicted and explained (Heding *et al.*, 2009, p.122). The human personality is not identical to the brand personality, as not all personality traits described in the big-five can be applied to brands. However, if human traits are adapted, it can be used to describe brands (Caprara *et al.*, 2001; Sweeny and Brandon, 2006).

The big-five factor structure describing human personality was first developed by Goldberg, (1990). These dimensions are: agreeableness relating to the orientation towards being cooperative; likeable and caring about others; extraversion, the preference for social interactions and activity, dominance and assertiveness; conscientiousness, referring to the degree of organisation, dependability and reliability; emotional stability, which is associated with being calm and coping effectively with negative emotions; and openness to experience; the orientation to new, imaginative and innovative ideas. The correspondence of brand personality dimensions described by Aaker, (1997) and the big-five human personality traits, along with the overlap between both dimensions when applied across cultures, are illustrated in Appendix A. This table outlines the differences of the brand personality scale defined by Aaker (1997) when applied to different settings. All the dimensions of brand personality can be captured by the big-five factors, with the exception of sophistication and ruggedness. The sincerity dimension captures the traits of agreeableness, excitement taps the traits of extroversion, and competence can be represented by conscientiousness (Aaker, 1997). Applicability of the big-five traits to describe the brand personality has been proven in several studies (e.g. Bosnjak *et al.*, 2007; Caprara *et al.*, 2001; Geuens *et al.*, 2009).

2.5.2.2 Brand Personality Dual Facets

Brand personality is an important construct constituting a major component of brand equity (Aaker, 1996), brand meaning and associations (Keller; 1993; 2003), brand image (Plummer, 2000) and brand identity prism (Kapferer, 2008). There several positive behavioural consequences of brand personality, as illustrated in Table 2.9. From this table, the followings can be deduced:

First. Marketers use brand personality to differentiate between brands and position them in the market. The salient or the appealing brand personality is the source of the positive outcomes, such as preferences (Kim *et al.*, 2011; Valette-Florence *et al.*, 2011), loyalty (Brakus *et al.*, 2009; Lin, 2010) and purchasing intention (Freling *et al.*, 2011; Wang and Yang, 2008). The impact of brand personality has been examined on service and for different product types. There is insufficient evidence of the possibility of personification of high-technological products and its impact on consumer behavioural responses.

Second. The construct of brand personality can be measured by aggregate level or by disentangling its dimensions. The aggregate level considers the different personality dimensions as measurement items of the construct. Thereby, it focuses on consumers' perceptions of the brand symbolic aspect. Ignore the impact of each dimension regardless of the type of personality describing the brand. Disentangle means measuring the impact of brand personality and distinguishing between the impacts of different dimensions; personality types. Recently, research on brand personality are investigating its impact using the aggregate level (e.g. Brakus *et al.*, 2009; Valette-Florence *et al.*, 2011).

Third. Although, there is extensive criticism of Aaker's (1997) brand personality scale and its usage in non-American culture, some of the studies conducted on different cultures ignore the non-replicability of the five dimensions cross-culturally (e.g. Ramaseshan and Tsao, 2007; Wang and Yang, 2008).

Fourth. Many authors support that brand personality is the central driver of brand preference (Aaker, 1997; Biel, 1992; Fournier, 1998). Empirically, little research has examined such an impact, but focuses on the impact of the brand's salient personality on consumer brand preferences.

There are two faces of brand personality, as suggested by Plummer (2000, p.80):

> "*The two faces of brand personality therefore are input, that is, what we want consumers to think and feel, and out-take, what consumers actually do think and feel. These two perspectives on brand personality can be expressed in two forms. The first is the brand personality statement, that is, our communication goals for the brand which have been in use at Y&R for many years as an important part of creative strategy. And the other is the brand personality profiles, which are consumer perceptions of the brand*."

Brand personality represents the symbolic benefit of the brand and helps the consumer to shape his brand knowledge and increase the brand's added-value (Valette-Florence *et al.*, 2011). Moreover, the salient brand personality can be transferred to the consumers (Park and John, 2010), and give impressions about the owner by carrying over his own personality (Fennis and Pruyn, 2007). The appealing brand personality helps the consumers to express and enhance their self-concept (Aaker, 1999). Park and John (2010) posit that only consumers with certain conceptions about themselves can allow the brand personality to carry over their personalities. Consumer personality can affect the brand personality (Lin, 2010). The consumers preferred personality represents either his actual or desired personality can affect the perceived brand personality (Phau and Lau, 2000). Brand personality is very closely related to, and exerts greater influence over, self-concept and self-congruity (Phau and Lau, 2000). This leads to the discussion of self-concept and self-congruity theory in the next section.

Table 2-9 Brand personality studies

Author	Dimensions			Level of Analysis		Unit of Analysis		Context	Outcomes
	Aaker*	Big-5	Other	Aggregate	Disentangle	Product	Services		
Folse *et al.*, (2012)	√				√	Tissue	Restaurants	US	SIN and EXT → BT and BATT
Valette-Florence *et al.*, (2011)			√	√		Laptop Coffee		France	BPER → BE
Kim *et al.*, (2011)	√			√			Restaurants	US	BPER → BPRF and ATT-LOY
Freling and Forbes, (2011)			√	√		13 products		US	BPER → PI
Lin, (2010)	√				√	Toys, Video games		Japan	COM and SOP → AFF-LOY and ACT-LOY
Sung and Kim, (2010)	√				√	Apparel, watches, perfume		US	SIN and RUG → BT EXT and SOP → BA COM → BT and BA
Poddar *et al.*, (2009)			√		√		Website	US	SOP → PQUAL
Wang and Yang, (2008)	√				√	Automobiles		China	BPER → PI
Fennis and Pruyn, (2007)	√		√			Fashion			Salient BPER → owner personality
Murphy *et al.*, (2007)	√		√				Tourism	Australia	Different brand personality for each region
Ramaseshan and Tsao, (2007)	√				√	Personal care, jeans, watches	Hotels airlines	Singapore	EXT and SOP→PQUAL
Freling aand Forbes, (2005)	√				√	Bottled water		US	BPER → BATT Positive BPRF → favourable associations
Phau and Lau, (2001)	√				√	Beer		Singapore	Preferred BPER overwhelms perceived BPER and demonstrates self-congruity

*Aaker brand personality dimensions- brand personality – BPER: sincerity – SIN, excitement – EXT, competence – COM, sophistication –SOP, ruggedness – RUG. Outcomes: BT- brand trust, BA – brand affect, BE – brand equity, BPRF – brand preference, ATT-LOY – attitudinal loyalty, PI = purchase intention, AFF-LOY - affective loyalty, ACT-LOY – action loyalty, PQUAL – perceived quality, BATT – brand attitude.

2.5.2.3 Brand Personality and Self-Concept

Self-concept or self-image denotes the totality of the individual's thoughts and feelings referring to himself as an object (Sirgy, 1982). The self in psychology is defined as the individual's perception of himself. There are two types of self: the perceived self, reflecting the individual attitude toward himself or others; and the inferred self, describing the individual's personality (Ross, 1971). There are three types of self-concept. Actual self or real self refers to how a person perceives himself. The ideal self is how a person would like to be perceived (Dolich, 1969). Social self refers to how person presents himself to others (Sirgy, 1982) or how he feels others view him (Jamal and Goode, 2001). The perceptions of self are related closely to the personality. Individuals tend to buy the brands whose personalities correspond with their own self-image (Schiffman and Kanuk, 2000). Self-congruity refers to the degree of congruence or similarity between the brand image and the self-image (Sirgy, 1982). Self-congruity is formed as a result of the interaction between the preferred brand image/brand personality and the users' self-concept: actual or ideal (Phau and Lau, 2001).

Self-congruity and brand personality are two different constructs and separate research streams (Parker, 2009). *By definition*: self-congruity reflects the matching degree between the consumer and the brand image (Dolich, 1969; Sirgy *et al.*, 1982); while, the brand personality means humanising the brand by assigning human traits to it (Aaker, 1997; Swaminathan *et al.*, 2009). *Level of awareness*: self-congruity requires high awareness from the respondents and to focus on self-concept; while, low to moderate awareness is need from respondents and the focus is on the brand. *Process of memory*: self-congruity is based on recalling specific measure; whereas, brand personality is determined by respondents recognition of different characteristics listed (Helgeson and Suupphellen, 2004).

The vast majority of the studies in brand preferences have focused on examining the impact of self-congruity. They investigate the impact of matching between the brand and the self-concept on driving brand preferences (e.g. Branaghan and Hilderbrand, 2011; Dolich, 1969; Green *et al.*, 1969; Grubb and Grathwohl; 1967; Grubb and Stern, 1971; Hong and Zinkhan, 1995; Hughes, 1976; Jamal and Goode, 2001; Jamal and Al-Marri, 2007; Kressmann *et al.*, 2006; Ross, 1971; Sirgy, 1982; Sirgy *et al.*, 1997).

2.6 Prior Studies on Brand Preference

The prior studies on brand preferences can be divided into two categories: consumer-oriented factors and brand-oriented factors. A summary of selected studies is illustrated in Table 2.10.

The first group of studies focuses on consumer-related factors. Consumer characteristics can be classified according to cultural, social, psychological and personal differences. Among these characteristics, self-concept is the only variable that plays a significant role in determining consumer preferences (Dolich, 1969; Green *et al.*, 1969; Grubb and Grathwohl; 1967; Grubb and Stern, 1971; Hong and Zinkhan, 1995; Hughes, 1976; Ross, 1971; Sirgy, 1982). Moreover, several studies findings reveal the significant impact of consumer lifestyle on brand preferences (Andreasen, 1984; Lee *et al.*, 2007; Mathur *et al.*, 2008; 2003; Orth *et al.*, 2004). According to these studies, consumers cope with changes in events or status by changing his lifestyle and preferences. The changes made depend on the level of stress of the event experienced by consumer. Thus, the change in preferences is a consequence of coping behaviour and not the event itself (Mathur *et al.*, 2003).

There is no evidence to support the significance of cultural impact on consumer preferences. However, Keillor *et al.* (1996) found differences in consumer' responses to sources of information based on culture. In the collectivistic culture, the consumers depend more on family in order to shape their preferences different from individualistic culture. But in both cultures, salespeople and advertising have limited influence on shaping adolescent preferences. Furthermore, the impact of ethnic groups on brand preferences is not supported. Berkowitz *et al.* (2005) find no significant differences on consumers' preferences for manufactures or store brands between Hispanic and non-Hispanic consumers. The replication of Stafford's (1966) study by Ford and Ellis (1980) shows conflicting results and rejects the hypotheses of the social group, leadership and group cohesiveness impact on brand preferences.

Even more, the consumer demographics are confirmed in most studies to have significant but low impact on brand preferences (e.g. Bass and Talarzyk, 1972; Jamal and Goode, 2001). The studies that support the significant impact of gender and age on consumer preferences are conducted among groups of young consumers (Hogg *et al.*, 1998; Lambert, 2008; Moschis *et al.*, 1984). Also, Perez *et al.* (2011) supports the homogeneity of preferences across the inter-generation since preferences are transferred from parents to their children. These results contradict the fact that consumer preferences are heterogeneous (Horsky *et al.*, 2006) and that each consumer has an ideal brand that fit his characteristics (Schmitt and Schultz, 1995).

The second group of studies focuses on brand-related factors. This category focuses on the impact of brand attributes on developing consumer preferences for brands. Brand preference is the result of the brand added-value acquired through the different responses of consumers to the brand attributes. The brand value can be endowed by the brand arising from its related attributes and non-related attributes. Therefore, it represents consumer different responses and the evaluation of brand functional and symbolic attributes (Farquhar, 1990; Park and Srinivasan, 1994).

Prior work has demonstrated the positive and significant impact of brand equity, which improves consumers' perceptions of the brand (Erdem and Swait, 1998) in the service industry (Chang and Liu, 2009) and products (Tolba and Hassan, 2009). The definition of brand equity, as the strength of association between the brand and the different types of evaluation stored in their memory, is relevant in studying consumer behaviour (Farquhar, 1990). The impact of brand equity on consumer preferences is measured at the aggregate level without investigating the impact of its different dimensions (Chang and Liu, 2009; Cobb-Walgren *et al.*, 1995).

In a recent study, Tolba and Hassan (2009) examine the impact of different dimensions forming brand equity: knowledge equity, attitudinal equity and relationship equity on brand preference. The results support the significant impact of relationship equity, consumers' experiences, on brand preferences of users. For non-users, their preferences of brands are affected by attitudinal equity, functional utility and symbolic image. .

Other prior research focuses on the impact of different types of attribute on brand preference, especially non-related attributes: price (e.g. Monroe, 1976; Moon and Voss, 2009), appearance (e.g. Creusen and Schoormans, 2005; Creusen and Schoormans, 1998), brand personality (e.g. Kim *et al.*, 2011) and self-congruity (e.g. Hu *et al.*, 2012; Branaghan and Hildebrand, 2011; Jamal and Al-Marri, 2007). In addition, Sääksjärvi and Samiee, 2011) demonstrate the significant positive impact of brand image on brand preference. This retains the importance of the different evaluative aspect of the brand attributes in consumer preference development.

The role of brand communication, promotion and advertising on the brand preferences has been investigated in a number of studies. Over time, there is a belief of the negative impact of promotion on consumers' preferences and brand evaluation. Since the promotion, price cuts direct consumers' attention to price (Aaker, 1996). When the impact of promotion was examined, the results were conflicting. Davis *et al.* (1992) reject the hypothesis of promotion having a negative impact on consumer preference, brand evaluation and repurchase intention. The authors reject the insignificant impact of promotion on the attitude or behaviour of loyal consumers and being limited to the stimulation of brand choice for neutral consumers. The meta-analysis study of DelVecchio *et al.* (2006) proposes the role of promotion characteristics and product type in the relationship between post-promotion and brand preferences.

For advertising, there is no support for a direct significant impact on brand preferences. Generally, the impact of advertising on brand preferences is complicated and often indirect (D'Souza and Rao, 1995). Advertising increases consumer preference for a brand by affecting their beliefs about the brand attributes (Chakravarti and Janiszewski, 2005), or increasing consumer awareness for a brand and placing it at the forefront of the mind (D'Souza and Rao, 1995; Woodside and Wilson, 1985), or by affecting the brand equity (Cobb-Walgren *et al.*, 1995). Doyle (1989) suggests that it is a misperception to consider advertising as a tool that can enhance consumer preference for certain brands over their competitors. There is little correlation between the advertising and strength of the brand; many superior brands exist in the market and have little or no advertising at all.

In summary, the following points can be drawn from reviewing prior studies on brand preferences:

First. Most of the studies of brand preferences are partial; studying the impact of one or two factors (Duarte and Raposo, 2010). Additionally, these studies focus either on consumer-related factors or brand-related factors. Consumers' cultural or socio-economic factors are demonstrated to have insignificant impact on brand preferences. There is argument on the impact of demographics factors on brand preferences. While the brand attributes are demonstrated to be the drivers of brand preferences, very little research attempts to build a model that provides better understanding of consumer brand preferences.

Second. Consumers are heterogeneous in their preferences and their choices. However, the studies examine the impact of consumer characteristics on brand preferences reveal low significant impact. Consumer characteristics help marketing managers on market segmentation by discovering the taxonomy of consumption pattern and dividing the market into sub-markets (Lin, 2002).

Third. The majority of studies depend on groceries, personal and healthcare products, automobiles, soft drinks and clothes or services to study consumer preferences for brands. Despite the growing value of branding in high-tech products, little attention from research in the area of consumer preference development was given to high-technological products.

Fourth. Although consumers express their preferences in a more qualitative way (Hindriks *et al.*, 2009), most research follows the quantitative approach to study consumer brand preferences.

Most studies are directed towards the partial investigation of brand preferences determinants. Only few studies have examined the possible consequences of consumer brand preferences on purchasing decisions.

Table 2-10 A summary of selected studies on brand preference

	Factor	Author	Description	Methodology PRT/SRV	QN	QL	CON	Major Findings
Consumer oriented-factors	Social group	Stafford, (1966)	Explore the impact of groups (cohesiveness and leadership on BP of its members.	Bread	EX		US	There are no differences in BPs among consumers in the same social group. Also, the preferences of group leader significantly impact the BP of members, and no impact of degree of cohesiveness among group members on BPs.
		Ford and Ellis, (1980)	Re-examination of Stafford, (1996) study using the same data.	Bread	EX		US	Results are contrary to Stafford, (1966) showing no impact of social group on member BP.
		Keillor *et al.*, (1996)	Examine the impact of social groups as sources of information on BP of adolescents. "comparative study"	Cloths Food Movie	SR		US Mexico	Adolescent BPs are more affected by familial relations in collectivistic culture than in individualistic culture regardless to the level of involvement; while, no impact of salesperson and advertisers on BP in both cultures.
	IGI	Perez *et al.*, (2011)	Examine the impact of intergenerational (IGI) impact on BP.	Grocery Toiletries	SR		Mexico	IGI is a phenomenon that means preferences are transferred from parents to children for brands with strong positive associations.
	Ethnic group	Berkowitz *et al.*, (2005)	Investigate the impact of ethnicity on BP for store brands vs. manufacturer brands.	Grocery	EX		US	There is no significant difference for store BP between the ethnic groups.
	Demo-graphic	Moschis *et al.*, (1984)	Develop a model of brand loyalty based on the socialisation process.	12 products	SR		US	Age and socio-economic status have significant impact on the development of BP for children.
		Hogg *et al.*, (1994)	Study how young consumers develop their brand preferences.	Fashion clothes	SR	√	UK	Both age and gender of young consumers affect their BPs.
	Life status	Andreasen, (1984)	Investigate the impact of changes in life style on changes in consumer BP and its subsequent impact on satisfaction.	Beverages Toiletries Bread	SR		US	Changes in consumer BPs are subject to changes in their lifestyle, and these changes in BP increase the satisfaction with products.
		Mathur *et al.*, (2003)	Examine the direct impact of life events experienced on BPs and indirect mediated by changes in life styles.	17 product	SR		US	Consumers experience stress due to changes in life events, and they cope by changing their life style which leads to changes in their BPs.
		Mathur *et al.*, (2008)	Examine the impact of stressful life events experienced and anticipated by consumers on changes in BPs.	Products and services	SR		US	The stressful life events experienced or anticipated by consumers have no direct impact on changes in preferences; however, the consumption coping behaviour is the only predictor of changes in BPs with decreasing impact overtime.

Continued

	Factor	Author	Description	Methodology			CON	Major Findings
				PRT/SRV	QN	QL		
Brand-oriented factors	Self-congruity	Hu *et al.*, (2012)	Examine the impact of symbolic and functional congruence on brand preference and the moderating impact of brand familiarity.	Automobile	SR		China	Surprisingly, the symbolic image congruence has a negative impact on brand preferences. The incongruence between the ideal self and the brand image the greater preference to brands with no moderating impact of brand preference.
		Branaghan and Hildebrand, (2011)	Integrating the facets of brand personality into self-congruity and examine its impact on ideal and realistic preferences for brands.	2 studies: automobile soft drink	SR		US	Self-image can be represented in the brand associative network. The self-congruity is predictive to consumers ideal and realistic preference to brands.
		Jamal and Al-Marri, (2007)	Investigating the role of self-congruity on brand preference and satisfaction with the role of expertise.	Automobile	SR		Qatar	Self-congruity positively influences of brand preference,; this impact is greater for novice than experts.
		Han, (2006)	Integrating the symbolic and the functional congruence in prediction of brand preference.	Ski Ski poles sunglasses	SR		Korea	The self-congruity is a significant predictor of brand preference for both speciality and shopping products type; but not for convenience.
		Jamal, (2004)	Investigate the impact of self-congruity on brand preference and satisfaction in banking sector.	Bank	SR		India	Self-congruity is positively related to brand preference for both users and non-users of self-service technologies.
		Jamal and Goode, (2001)	Investigate the impact of self-congruity on brand preference in jewellery market.	Jewellery	SR		UK	The results support the positive impact of self-congruity on brand preference. Demographic characteristics have no impact on preferences.
		Sirgy *et al.*, (1997)	Assess the predictive validity of two measurements of self-congruity by examining its impact on brand preferences.	Clothing, Automobile Beverages Watches	SR	√	UK	The predictive of the new scale is higher than the traditional measure “absolute difference” in predicting consumer brand preferences across different products and services.
		Ericksen, (1997)	Study the impact of self-congruity on brand preference and purchase intention.	Automobile	SR		Europe	There is a significant positive of self-congruity on brand preference and purchase intention.
		Hong and Zinkhan, (1995)	Examine the impact of congruence between the self-concept and the brand image on brand preference and purchase intention.	Automobile Toiletries	EX		Germany	Consumers prefer and have high purchase intentions to the advertised brand congruent with their ideal or actual self-concept.

	Factor	Author	Description	Methodology PRT/SRV	QN	QL	CON	Major Findings
Brand-oriented factors	Brand Personality	Kim *et al.*, (2011)	Examine the impact of brand personality on aggregate level on brand preference.	Restaurants	SR		US	Brand personality has a significant positive direct impact on brand preference and attitudinal loyalty.
		Phau and Lau, (2001)	Examine the impact of consumer preferred personality on the perceived brand personality.	Beverage	SR		Singapore	For preferred brands consumers preferred personality overwhelm the perceived brand personality.
	Brand Image	Sääksjärvi and Samiee, (2011)	Compare between the impact of brand image and brand preference in offline and online retail brands.	Internet and Offline-extension brands	SR		US	For both types of brand successful brand image results in brand preference. With an advantage for offline brands over online brands,.
	Brand Familiarity	Sääksjärvi and Samiee, (2007)	Examine the impact of non-price factor on brand preferences for online and extension brands.	Cyber and extension brand	SR		US	Brand offering and brand familiarity have significant influence on brand preference of online brands but not for extension brands.
		Baker *et al.*, (1986)	Explore the role of brand familiarity in developing consumer brand preferences.	Theoretical study				The study proposes that exposure to brand stimuli generate positive affective responses act as crucial inputs that stimulus consumer preferences
	Brand Equity	Chang and Liu, (2009)	Investigate the determinants and consequences of brand equity.	Tele-communication	SR	√	Taiwan	Brand equity has a significant impact on brand preference, which in turn, affects purchase intention.
		Tolba and Hassan, (2009)	Study the impact of organisational brand equity on brand market performance mediated by brand preference.	Automobiles	SR		US	Consumer based brand equity; the perceived value is the driver of preference for luxury while brand image affect brand preference of economy consumers. The relationship equity is the main driver of brand preference for brand users, while, attitudinal equity is the primary driver of brand non-users.
		Cobb-Walgren *et al.*, (1995)	Examine the impact of brand equity on brand preference and purchase intention.	Detergent Hotel	SR		US	Advertising yields high levels of brand equity which in turn, significantly affects brand preference and purchase intention. Advertising affects brand

Continued

	Factor	Author	Description	Methodology			CON	Major Findings
				PRT/SRV	QN	QL		
Brand-oriented factors	Promotion	DelVecchio *et al.*, (2006)	Study the effect of sales promotion on post-promotion brand preference.	Meta –analysis study				Sales promotion have no impact on post-promotion brand preference, its impact is subject to the promotion and product characteristics.
		Davis *et al.*, (1992)	Test the impact of promotion on brand evaluation and repurchase intention at the individual level.	Grocery Personal care	SR		US	There is no negative impact of promotion either on consumer brand preferences or repurchase intentions.
	Advertising	Florack and Scarabis, (2006)	Study the effect of regulatory focus of advertising claims on brand preference.	Beauty products	EX		Germany	The advertising claims as part of advertisement should not only be clear, unique, and memorable, but also, fit with the regulatory focus of participants to affect his preferences and choices.
		Chakravarti and Janiszewski, (2005)	Examine the impact of generic advertising on brand preference.	Food products	EX		US	Generic advertising affect consumers brand preferences by affecting their beliefs about brand attributes and price responsiveness.
		D'Souza and Rao, (1995)	Study the impact of advertising repetition on brand preference and choice.	Hotel	EX		US	Repeating an advertisement affect significantly the brand awareness and the brand name preference.
		Woodside and Wilson, (1985)	Study how consumers brand awareness and advertising can affect their preferences for brands,	Beverages Food Bank	SR		US	Exposure to advertising place the brand at the consumers top of mind awareness and thus can have a positive impact on his preferences.
	Pioneer Advantage	Niedrich and Swain, (2003)	Understand the advantage of pioneer advantage on consumer preferences for brands.	Microwave popcorn Tyres	EX	√	US	Pioneer advantage affects consumers brand preference mediated by brand attitude and brand credibility. Also, the experience order has significant impact on brand preference directly and indirectly mediated by attribute recall and brand attitude.
		Capenter and Nakamoto, (1989)	Examine the impact of market pioneers in the development of consumer preferences comparing to later entrants.	Computer-software Quilt	EX		US	Consumers prefer pioneers when the ideal attributes are not determined yet; therefore, they prefer early entrants than later. For late entrants to compete pioneers they have to be differentiated in ideal attributes not just in terms of price; pioneers are less sensitive to price of undifferentiated products.

Continued

	Factor	Author	Description	Methodology			CON	Major Findings
				PRT/SRV	QN	QL		
Brand-oriented factors	Price	Moon and Voss, (2009)	Extends the reference price model by introducing a price range model. It also compares the relationship between response models and consumer behaviour.	Personal care			US	By segmenting the market based on reference price, the internal price shoppers have strong brand preference compared to external reference price shoppers and price range. The price range shoppers having low preferences and high probability of switching concern more about the current prices.
		Kalwani and Yim, (1992)	Investigate the impact of price promotion length and frequency on expected brand price, brand preference, and brand choice.	Detergent	EX		US	Brand preference has significant positive impact on brand choice. Price cuts affect consumer expectations on price and purchasing behaviour.
		Krishnamurthi and Raj, (1991)	Explores how consumers respond to price and its impact on brand preference.	coffee	Logit model		US	For the brand choice decision loyal consumers with high brand preference are less sensitive to price; but are more price sensitive for quantity decision.
		Hayakawa, (1976)	Extend the utility function of measuring brand preference by adding prices and real income.	Theoretical study				Generate the model by adding the price and real income to the utility function.
		Monroe, (1976)	Examine the impact of price and brand familiarity on brand preferences.	Coffee Personal care Detergent	EX		US	Consumers preferences to brands are more sensitive to price decrease then price increase across different product types. The importance of price as an attribute information in affecting purchase decision depends on level of familiarity with the brands.
		Sowter *et al.*, (1971)	Theoretically and empirically study the impact of price on consumer brand preferences and choices.	4 products groups	EX		UK	Brand preferences are the same when prices are equal and will change due to differential in prices. Brand loyalty is directly affected by consumer preferences.

Continued

	Factor	Author	Description	Methodology PRT/SRV	Methodology QN	Methodology QL	CON	Major Findings
Brand-oriented factors	Appearance	Hoyer and Stokburger-Sauer, (2012)	Conceptualise and develop a conceptual framework of consumer aesthetic taste for consumer decision making DM.	Theoretical paper				Consumer aesthetic taste conceptualised as the consumers responses to the object aesthetics observed using any of the five senses. Both knowledge and taste are important determinants of consumer preferences and decision making. Accordingly, a framework is proposed classifies products into three categories based on relevance of expertise and taste in consumer DM: cognition, cognition and affect, and affect.
		Creusen and Schoormans, (2005)	Explore the role of product appearance on consumer evaluation and choices.	Answer machine		√		Consumers are having different aesthetic preferences exhibited in six roles affecting their choices. Appearance is an important differentiation tool in drawing consumers attention, it also serve on the basis of showing the functionality and usability of the product; however, it is viewed more as a symbolic aesthetic value.
		Creusen and Schoormans, (1998)	Investigate the impact of product design on brand preference depending on the observation time.	Electronics	EX		Holland	The product design (appearance) significantly influences consumer preferences as an expressive belief or utilitarian beliefs; however, the time of observation has no role in case of expressive beliefs.
		Schoormans and Robben, (1997)	Study the effect of new package design and its appearance on gaining consumer attention and evaluation.	Coffee	EX		Holland	The package appearance can positively affect consumers brand evaluation. But if it deviates from the standard a negative impact can occur. Therefore, if the brand has good image the new package should be congruent with the old on to maintain this preferable image.
		Garber, (1995)	Propose a theoretical framework explore the impact of product visual appearance on consumer decision making and how it can be tested empirically.	Theoretical				The proposed theoretical framework is based on the three stages model of choice of Roberts (1989) adding stage O to it preceding the first stage. At this stage consumers are motivated by certain needs to select a typical brand that satisfies their needs. The more likely the typical brand will be visually novel, the more likely they will be noticed and preferred by consumers.
		Veryzer, (1993)	Conceptualise and discover the nature of aesthetics responses in consumer behaviour.	Electronics personal care	EX		US	Aesthetic responses are related to the design elements; unity and proportions. Also, it can affect consumer perceptions and product evaluations.

PRT: product. SRV: service, QN: quantitative methods, QL: qualitative methods, SR: survey, EX: experiment design, CON: context.

2.7 Importance of Branding in High-tech

Mobile telecommunication services are considered the most high-technological products in the market (Alamro and Rowley, 2011; Lee *et al.*, 2011; Schoenfelder and Harris, 2004). Technology products are those with a shorter product life cycle compared with other products and require a substantial shift in user behaviour (Lee *et al.*, 2011). Phenomenal changes, such as the widespread use of mobile phones, increases in the number of mobile subscribers worldwide, the technological development and updated technological generations (2G, 3G, and 4G) require the focus of the market researcher.

Brands are always underestimated by the high-tech product companies who focus mainly on improving the products in line with the latest technology (Mazur, 1999; Schoenfelder and Harris, 2004; Zajas and Crowley, 1995). However, as high-tech products become accessible to mass consumers, there is a general consensus that branding becomes more important (Reddy, 1997; Ward *et al.*, 1999). Further, the advances in technology changes consumer experiences with high-tech products and increases the similarity between products. Consequently, high-tech products face fierce competition and suffer from commoditisation (Temporal and Lee, 2001).

Currently, consumers use brands to guide their choice of high-tech products, such as computers, laptops, and mobile phones. This is due to the increase of information processing about the product attributes, functionality and latest technology used (Schoenfelder and Harris, 2004; Zajas and Crowley, 1995). Therefore, technology and branding are strongly interrelated. The technology changes the tools of communication and extends the concept of branding to online services. Conversely, brand plays its main fundamental role as a distinguishing tool to guide consumer choices among several alternatives (Petruzzellis, 2008). However, consumers are also unable to differentiate between brands using the rational bases and depending on the brand attribute when making choices (Temporal and Lee, 2001). The changing nature of the technological market increases marketers' interest in understanding the drivers of consumer brand preferences (Sriram *et al.*, 2006).

Presently, consumers have different responses toward brands of mobile phones and experience them differently (Rondeau, 2005). Mobile phones are used to reassure their physical and psychological security. By connecting users with others and enabling them to manage their private lives, organise memories, work and social lives, they feel part of modern life by experiencing a sense of belonging to a group and personalisation (Kolsaker and Drakatos, 2009). Therefore, companies of mobile phones are selling experience to consumers and involve them at a personal level to win their long-term loyalty (Michels, 2001).

Previous Studies on High-tech products - Due to the increased importance of branding in high-technological products a number of studies have been directed to mobile phones (Karjaluoto *et al.*, 2005). Wang and Li (2011) study the relationship between mobile service attributes and brand equity components as defined by Aaker (1991). The results revealed an insignificant impact of usability on brand equity. The perceived enjoyment is found to be the most influential factor on all brand equity components, while Sheng and Teo (2012) demonstrate the significant indirect impact of the product ease-of-use on brand equity mediated by consumer experience.

Petruzzellis (2010) compare the impact of hedonic and utilitarian benefits on consumer brand choices of mobile phones. The author categorises consumers into three groups. The brand huggies refers to those who use mobiles to keep in touch with their distant life. Technology enthusiasts focus on the technology and technical performance more than social life, while pragmatists focus on price. The results of the study demonstrate the importance of hedonic attributes over the utilitarian attributes in mobile choices. The study of Wakefield and Whitten (2006) relates the differentiation between utilitarian and hedonic attributes of Blackberry mobile phone devices to the level of cognitive absorption. The findings reveal that consumers with high cognitive absorption have strong perceptions of the usefulness of the utilitarian device in contrast to those with low cognitive absorption. In the same essence, Lee *et al.* (2011) investigate the impact of high-tech product attributes on affective and cognitive attitude, and, in turn, its impact on behaviour. The results show the importance of the product innovation and self-expression in creating positive attitude towards and pleasure with the technological product.

The study of Tzou and Lu (2009) addresses the impact of brand attachment on the use fashion technology (laptop-Sony Vaio) and the mediating role of utilitarian and hedonic brand attributes. The results support the significant indirect impact of brand attachment on fashion technology usage mediated by the hedonic factors. Moreover, the findings show insignificant impact of the brand usefulness on fashion technology usage and negative impact of the perceived ease of use on behaviour.

In summary, the importance of brand in technological products is increasing. Most of the studies on high-technological products focus on the trade-off between the utilitarian and hedonic attributes and its impact on consumers choices. The results of these studies support the importance and significant impact of hedonic attributes over the utilitarian attributes. The role of brand symbolic factors in stimulating consumer intentions and build long-term relationship is still uncovered (Morgan-Thomas and Veloutsou, 2011). However, comprehensive models elaborate high-technological product attributes and consumers responses are required (Lee *et al.*, 2011). Moreover, little is known about how consumers differentiate between the brands of technological products before making a purchasing decision.

2.8 Conclusions

The aim of this chapter is to provide an overview of consumer brand preferences. Throughout the chapter, a clear conceptualisation of brand preference is given, identifying it as the holistic nature of this concept. Brand preference is concerned with consumers' bias position towards certain brands, resulting from the comparison of available alternatives. Consumers' preferences are represented through affective, cognitive, and behavioural responses. Brand preference is different from other brand constructs. The affective responses of consumer preferences are expressed by degree of liking do not yet build emotional bond with the brand. The cognitive responses denote the combined utilities of the brand among counterparts. Finally, behavioural tendencies are exhibited in preferences by consumers' acts toward favoured brand.

The discussion of consumer behaviour models provides two perspectives to explain consumer brand preferences development. The first view is the traditional models, including expectancy-value models such as the Fishbein model, (1969), and information-processing theories (e.g. Howard and Sheth, 1969 and Bettman, 1979). Consumer beliefs about the brand attributes present the cognitive information processing that affect their preferences and behavioural intentions. These models depend on consumers' abilities to integrate information about the brand in order to arrive at an overall evaluation. This view provides understanding of brand preferences as a uni-dimensional value.

Further, multi-attribute models enable the diagnosis of attribute strength in brand preferences development. However, these models view the brand as an amalgamation of attributes and preferences are posit to reflect the cognitive analysis of brand attributes attached mainly to its utilities. There is a difficulty to trade-off between alternatives based on the utilities derived from brand attributes. To date, multi-attribute models are used commonly to explain brand preferences and measure them based on consumer beliefs about the brand weighted salient attributes. There is no evidence of the validity of these models, issues in operationalisation of the algebraic equation such as attribute number, inclusion of weights, and beliefs measures weakens the validity of the models. The use of computational models is limited to certain product type. In addition, the traditional view models neglect the role of affective responses shaping consumer preferences.

The second perspective, which is the experiential view, considers the irrational side of consumer behaviour. It focuses on subjective meanings of the brand and responses that are subconscious and private in nature. Therefore, the experiential view supplements and broadens the scope of the traditional view to understand consumer behaviour. This view focus on experience has been also extended from consumption experience (Holbrook and Hirschman, 1980) to include all other possible means of experiences resulting from interactions with the brand, either directly or indirectly (Brakus *et al.,* 2009; Gentile *et al.,* 2007; Meyer and Schwager, 2007; Schmitt, 1999). Accordingly, consumer experiential responses are extended from the 3Fs of experience consumption to include other responses induced at various levels of interactions. Brand experience is still a new construct and consumers' responses are not definite; however, Schmitt (1999) defines the bases of these responses.

The first view, traditional models, presents one source of consumer preference learning, which is the information about the brand attributes. However, the role of non-attributes associations related to the brand symbolic and hedonic meaning should be considered in identifying information necessary for building brand preferences. The second source for consumers to learn about their preferences is the experience. While the experiential responses linked to the verbal and nonverbal brand stimuli play a fundamental role in determining consumer preferences and purchasing decision, the role of experience in shaping consumer preferences is limited to the level of experience affecting consumer perceptions. The experiential responses resulting from the interaction between the consumer and the brand have not been considered as a direct source of brand preferences.

The experiential market focuses on the holistic consumer experience. Consumers' internal and behavioural responses to the brand-related stimuli create their holistic experience with the brand. The brand stimuli can be defined from different brand meanings including cognitive, symbolic, economic, aesthetic and hedonic associations embedded in its attributes form the experiential responses. Therefore, in experiential market brands are not only the bundle of attributes but the delivered experience as well. Consumers trading-off between the brands focus on their holistic meaning and delivered experiences.

Prior studies on brand preferences focus either on consumer-related or brand-related factors. The first category of studies demonstrates the impact of consumers' self-concept in shaping their preferences. However, there is no agreement on the significance of the impact of consumer demographics on shaping their brand preferences. The second group of studies examined the impact of factors related to brand such as price, appearance, brand equity, brand personality, self-image congruence. Most of the prior studies focus on a single or two factors to explain brand preferences. However, there is little research directed toward building a model in order to provide better understanding of brand preference development. Even the few attempts of studies concerned with brand preferences depend on brand-related factors that constitute consumer knowledge. This comprises a single source for deriving consumer preferences toward brands; information processing.

Most of the studies address brand preferences using traditional models depending on utilitarian products or low involvement products, such as health and personal care products or beverages. The applicability of these models on hedonic products is questioned, since consumers assign small portions to its utilities. The current study addresses consumer brand preferences for mobile phones, one of technological products, which can be perceived as a high involvement product holding both cognitive and hedonic values. Brands have been underscored by technological products companies. These suffer from commoditisation; therefore, it is difficult to differentiate rationally between brands. The dominant context of most branding studies is developed countries. There is scarcity of brand research conducted in developing countries.

To sum up, the main conclusions from reviewing the literature can be summarised in the following points:

- There remains a lack of understanding of consumer brand preferences development, while brand experience posits to be a driver of consumer preferences. However, most of the research on preferences to date focuses on the information processing of brand attributes and level of experience. The brand experiences induced from various brand-related stimuli suggest that creating brand preferences is still not considered.

- The possible interactions between the cognitive information processing, one source of preference, and experience, the second source, in developing consumer brand preference is still unknown. However, these interactions are considered essential in analysing consumer preference dynamics.

- Few attempts have been made at building a model to provide better understanding of brand preferences. The majority of studies focus on one or two factors. Moreover, there is no agreement among these studies on the significance of consumer demographics on shaping their preferences for brands. In addition, most prior studies address the impact of symbolic associations overlap between the brand personality and self-image congruence and perceived as one construct.

- Brand preferences are considered direct and important antecedent motivating consumer intentions toward brand purchase. The prior studies focus on the antecedents of brand preference, and very little effort is directed towards investigating the possible consequences.

- Despite, the existence of different types of responses that define consumers' brand experiences, there is no set of definite responses to describe consumer experiences with brands.

Despite the growth of the high-technology products market and the recent reliance on brands to achieve competitive advantage, there remains a lack of understanding about how consumers develop their preferences for different high-technological brands. Most of the studies on technological products focus on their attributes and little is known about the delivered experience.

Chapter Three

Theoretical Background and Framework

3.1 Introduction

From the literature review, a theoretical framework can be developed for this study. This model will focus on the brand experience and the brand knowledge factors as the main sources of developing consumer preferences to brands, and, in turn, will illustrate the influential role of preferences on brand repurchase intention. This chapter is divided into three sections: the first section discusses the theoretical background; the second section discusses the theoretical model and the research hypotheses; and the last section provides the conclusions to the chapter.

3.2 Theoretical Background

Brand preference is predicted using an expectancy-value model, as a function of consumer beliefs about the brand weighted attribute (Bass and Talarzyk, 1972). By using this model, consumers' brand preferences are explained using a single factor comprising the utilities of tangible attributes that maximise utilities. The model validity was interrogated due to the inclusion of weights in the multi-attribute equations. The addition of weights to the attributes either makes no difference (Churchill, 1972) or decreases the predictive validity of the model (Bass and Wilkie, 1973; Sheth and Talarzyk, 1972).

Consumer preferences, the predisposition towards a certain brand, can be considered a mediator between perceptions of brand inputs and future consequences. Experience is considered an important driver of consumer preferences in information-processing models (Bettman, 1979; Howard and Sheth, 1969; Sheth, 1968). These models consider preference as a learning construct and define the information processing about perceptions of brand inputs and experience as the main sources of preference learning (Amir and Levav, 2008, Hoch and Deighton, 1989).

These models are criticised for depending on consumers' rationality and the focus on the objective values of the brand to explain consumer preference and choice. The experiential view criticises the hegemony of traditional models, and broadens its view by adding the experiential aspect. Therefore, it can be considered a supplement that goes beyond the brand objective value and verbal cue constituted at the conscious level of cognitions (Hirschman and Holbrook, 1982; Holbrook and Hirschman, 1982).

The experiential view is the initial spark of experiential market, which has become the focal interest of marketers over the past 25 years (Tynan and Mckechnie, 2009). This market defines the brand as experience, rather than a bundle of functional attributes but as rich source of internal and subjective responses (Schmitt, 1999). These responses involve consumers at various levels of interaction in their holistic experience (Brakus *et al.*, 2009; Gentile *et al.*, 2007; Schmitt, 1999). Presently, companies compete by delivering an experience to consumers; embedded within is the value created (Tynan and Mckechnie, 2009).

Further, Zajonc and Markus (1982) suggest the importance of affective factors in preference development. The role of emotions in preference formation has been demonstrated by a number of studies (e.g. Grimm, 2005). However, brand experience is much broader than consumers' emotional responses, as it describes other aspects of irrationality at different levels of interaction with the brand (Gentile *et al.*, 2007).

In order to uncover consumers' brand preference development in today's experiential market, the current study proposes a model that adopts the broader view of the experiential perspective. This model supplements traditional models by defining consumer cognitions at both the conscious and subconscious level. Therefore, consumers' perceptions of the brand objective and subjective meanings will be included. In addition, brand experience presenting consumers internal and subjective responses will be integrated into the model as a fundamental source of brand preferences. This model investigates the interactions between consumer brand knowledge and brand experience developing brand preferences. Repurchase intention is considered as a possible outcome of consumer preferences towards brands.

3.2.1 Experience Holistic Nature

Mathwick *et al.* (2001) state that the experiential values resulting from consumer direct and indirect interactions with the brand provide the basis for his preferences. The importance of the experiential view in explaining consumer brand preferences and purchase behaviour can be illustrated in the following points:

- Experience is not transactional like customer-relationship; however, it is a continuous concept that reflects the irrational aspects of the interactions between the consumer and the product (Gentile *et al.*, 2007). It is a progression of the economic value offered by a product or service (Pine and Gilmore, 199). Therefore, going beyond the classical economic theory and investigating consumer behaviour based on experiential responses plays an important role in the development consumers' preferences and stimulation of their purchasing intentions (Gentile *et al.*, 2007)

- The role of emotional experience in understanding consumer preferences and choices has been verified by a number of studies (Grimm, 2005; Tsai, 2005). Zajonc (1980) suggests the importance of sensorial responses preceding the affective responses before object evaluation. In addition, the hedonic experience describes both the sensorial and affective responses (Hirschman and Holbrook, 1982), and has a significant role in consumer preferences and choices, subject to product type (e.g. Dhar and Wertenbroch, 2000; Overby and Lee, 2006). The brand experience is holistic in nature and includes the subjective, internal and behavioural responses evoked by consumers toward stimuli (Brakus *et al.*, 2009; Schmitt, 1999; 2003).

- According to previous studies, the type and level of experience influence consumers' brand preferences (e.g. Hamilton and Thomposn, 2007; Heilman *et al.*, 2000). The notion of brand experience includes consumers' psychological experiences accompanying the brand usage; thus, the essence of usage experience is embedded in experiential responses (Hirschman and Holbrook, 1982). In addition, the consumers' brand experience includes both direct and indirect interactions with the brand (Brakus *et al.*, 2009; Gentile *et al.*, 2007; Meyer and Schwager, 2007; Verhoef *et al.*, 2009). The multi-dimensional experience includes the value propositions configured from the brand clues at different levels of interactions, by using the basic systems of affect, sensations, cognitions and relational to describe possible responses (Brakus *et al.*, 2009; Carbone, 2004; Gentile *et al.*, 2007; Tynan and Mckechnie, 2009). This interactive experience will build consumer preferences and repeated purchasing behaviour (Carbone, 2004; Holbrook, 2007).

3.2.2 Identification of Brand Knowledge Factors

The holistic perspective for brand was emphasised by the content of brand knowledge described by Keller (1993; 2003). Consumers' perceptions of brand knowledge constitute their experiential responses to the brand (De Chernatony and McDonald, 2003; Keller, 2003). As mentioned in the literature review, brand knowledge is conceptualised based on the meanings consumers learn about and associate with the brand in their mind. Such associations are distinguished in terms of utilitarian and functional attributes/benefits related to the product and symbolic or imagery associations unrelated to product attributes (Erdem *et al.*, 1999; Keller, 1993; Plummer, 2000).

In this study, the cognitive brand associations are defined by the product-related attributes, including the functional and experiential attributes and non-product attributes referring to the symbolic or imagery associations (Czellar, 2003; Keller, 1993). However, Keller (1993) considers the brand price and appearance information as non-product-related attributes. The price is related to the brand value and not to the brand function or performance, and is a particularly important attribute in brand selection. Moreover, in the classical economic theory based on consumer rationality, price is an important constraint in utility maximisation. In making a brand purchase decision, consumers give high weight to price as an important attribute that determines their choice, than assigning its attribute level (McFadden, 1996). Consistently, Zeithaml (1988) supports the view that price is not a lower level attribute, but an important extrinsic brand cue. Earlier, Hayakawa (1976) suggests that price should be included as an independent component in the utility model in order to determine consumer preference. In the multi-attributes model, price perception can be used as a proxy for quality (Erickson and Johanson, 1985) and value perception (Zeithaml, 1988). Also, the product appearance is considered by Keller, (1993) as a non-product-related attribute unrelated to the brand performance or functionality. According to the experiential view, the appearance is considered a non-verbal sensory cue attribute (Holbrook and Hirschman, 1982). The appearance can be perceived as either a functional or expressive beliefs; however, its impact on consumers' product evaluation is based on its symbolic aesthetic value (Creusen and Schoormans, 2005).

In addition, the prior studies on brand preferences have verified the significant role of price (e.g. Krishnamurthi and Raj, 1991) and appearance (e.g. Schoormans and Robben, 1997) among the brand attributes on shaping consumer preferences for brands. Moreover, the importance of self-congruity and brand personality as symbolic antecedents to brand preferences is well-established in the literature (e.g. Aaker, 1997; Sirgy *et al.*, 1997).

3.3 Model Development and Research Hypotheses

According to these conceptualisations, the determination of brand preference drivers requires the experiential holistic approach that facilitates the deciphering of brand meanings embedded in the brand related and non-related attributes. Keller (1993) advocates the brand-related attributes are elicited from intrinsic cues, while the brand non-related attributes can be elaborated by information about price, appearance, brand personality and self-congruity. Therefore, in the proposed model, the brand preference is designated as the outcome of consumer perceptions of the brand meanings, which constitutes their brand knowledge, and the brand experience. The interactions between the brand knowledge and brand experiences in analysing preferences are illustrated. In turn, the role of brand preferences in stimulating consumer repurchase intentions, as possible consequence of preferences, is represented. The model is depicted in Figure 3.1, which outlines the relationships between eight constructs (attribute perception – price perceptions – appearance perception – brand personality – self-congruity – brand experience – brand preference – brand repurchase intention). The relationships between these constructs are proposed in 14 hypotheses summarised in Table 3.1. This table provides a clear conceptualisation of the construct used to build the model, the hypotheses and a sample of questions or measurement items used to measure each construct. In addition, the table shows the research questions addressed by examining the relationships between constructs in each hypothesis.

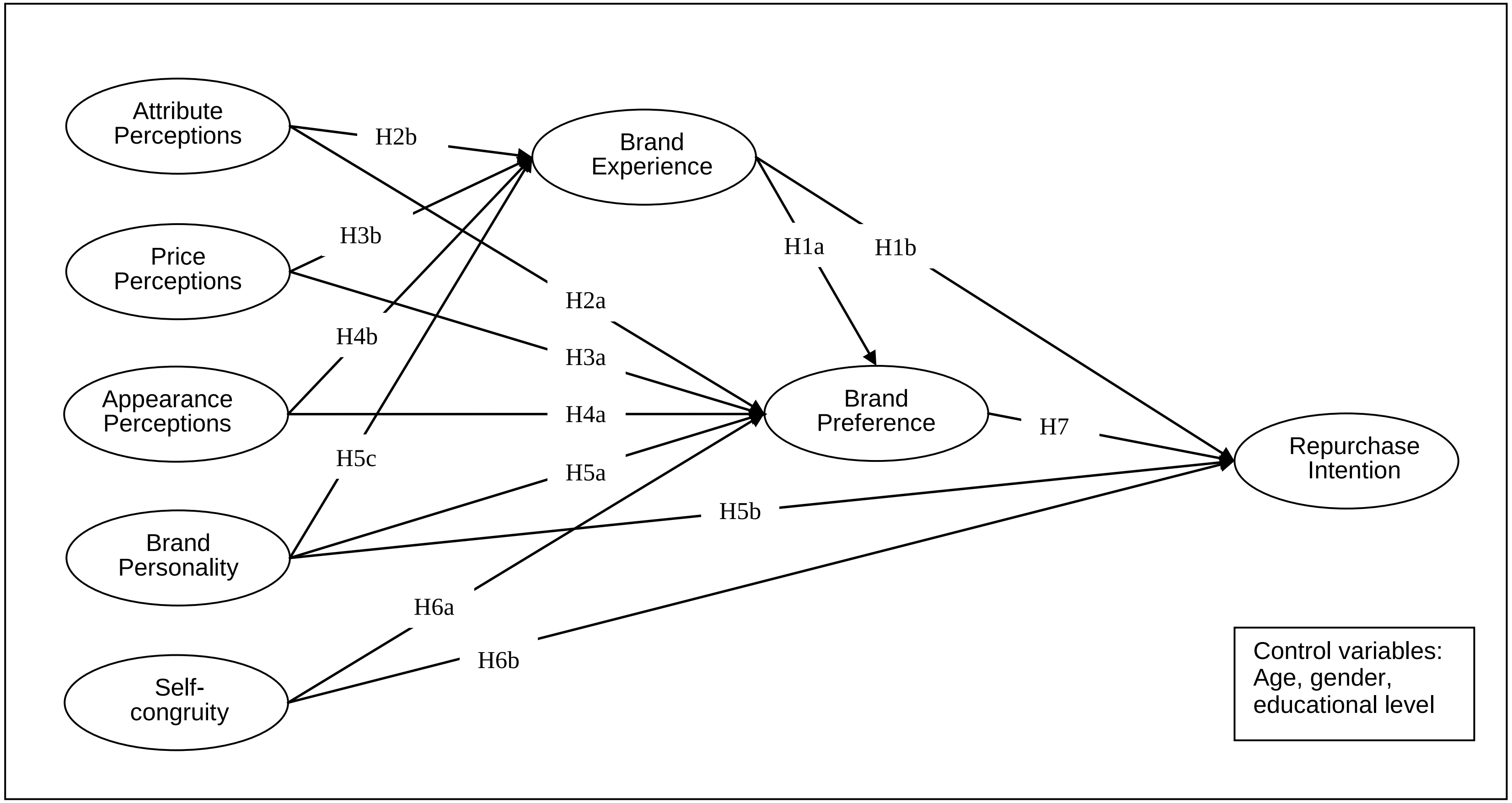


Figure 3-1 The theoretical framework

Table 3-1 Summary of research hypotheses

Questions	Construct	Description	Hypothesis
RQ: Do brand experiences affect consumer brand preferences and repurchase intention?			
Example of questions addressing brand experience: - This brand makes a strong impression on my visual sense. - This brand is an emotional brand. - I engage in a lot of thinking when I encounter this brand - This brand gets me think about my behaviour - I can relate to other people through this brand	Brand experience (BE)	Refers to consumers' internal and behavioural responses evoked due to interacting with the brand.	H1a: BE →PRF H1b: BE →RPI
RQ: What is the impact of different brand knowledge factors on consumer brand preference? How brand experience interacts with the brand knowledge factors in shaping consumer preferences?			
Example of questions addressing attribute perception: - Memory capacity - Ease-of-use - Functionality	Attribute perception (ATT)	Refers to consumers' salient beliefs about the brand utilitarian/functional attributes including product-related characteristics and associated benefits.	H2a: ATT → PRF H2b: ATT → BE
Example of questions addressing price perception: - This brand is reasonably priced - This brand offers value for money - The price of the brand is a good indicator of its quality	Price perception (PR)	Refers to a non-product related attribute, is the price encoded by consumer constituting an important component of monetary value perception	H3a: PR → PRF H3b: PR → BE
Example of questions addressing appearance perception: - This brand is aesthetically appealing - The visual appearance of this brand is attractive - This brand has an appealing design	Appearance perception (APP)	Refers consumer beliefs about the aesthetic appeal of the brand	H4a: APP → PRF H4b: APP → BE
Example of questions addressing brand personality: - Friendly - Efficient - Stable - Creative	Brand Personality (BP)	Refers to the set of human personality traits that are both applicable to and relevant for brands	H5a: BP → PRF H5b: BP → RPI H5c: BP → BE
Example of questions addressing self-congruity: - People similar to my own the same brand - This brand is consistent with how I see myself - This brand reflects who I am	Self-congruity (CON)	Reflects the degree of congruence between the product-user image and the consumer actual self-concept	H6a: CON → PRF H6b: CON → RPI

Continued

Questions	Construct	Description	Hypothesis
RQ: Do consumer brand preferences motivate his repurchase intention?			
Example of questions addressing brand preference: - I like this brand more than any other brand of mobile phones - This brand is my preferred brand over any other brand of mobile phones - When it comes to making a purchase, this brand of mobile phone is my first preference	Brand preference (PRF)	Reflects the behavioural tendencies reflecting the consumer's favourability toward a brand	H7: PRF →RPI

3.3.1 Brand Experience

Brand experience is defined as the consumer subjective, internal and behavioural responses evoked by the brand-related stimuli during direct or indirect interaction (Brakus *et al.*, 2009; Meyer and Schwager, 2007). It is advocated that experience is a main source of preference learning (Simonson, 2008; Howard and Sheth, 1969; Sheth, 1968). Hoeffler and Ariley (1999) posit that experience is the foundation of consumers' preference structure for brands. Consumers trust their personal experiences and consider it the best teacher (Hoch and Deightom, 1989; West *et al.*, 1996). Through experiences, consumers tend to be highly motivated, involved and exercise control over the flow of information. Consequently, experiences promote better memory with vivid and concrete information (Paivio, 1991). They can directly affect consumers' behaviour (Fazio and Zanna, 1961; Smith and Swinyard, 1982) and build well-articulated defined preferences (Payne *et al.*, 1999).

Experience is an important determinant of stable preferences as suggested by (Bettman *et al.*, 1998; Payne *et al.*, 1999), even if it is impoverished (Simonson, 2008), and for constructed preferences, dynamic, shaped in the social interactions and physical settings of the context (Gupta and Vajic, 1999).

In essence, Howard and Sheth (1969) suggest that, when consumers have no or little experiences, they generalise their experiences with other brands from different product categories. They postulate that the greater the experience the stronger the consumer predisposition for brands. Consequently, experience represents the history with the brand stimuli exposure that consumers depend on when developing their preferences. Sensorial and emotional experiential responses created due to exposures to visual stimuli affect consumers' liking and evaluation of the brand (Zajonc, 1980). These experiences can radically change the preferences without the change in the brand utilities or information (Zajonc, 1980; Zajonc and Markus, 1982).

Experiences are acquired by interacting directly with the brand through consumption or trial, and indirectly through passive information from virtual presentation or advertising (Brakus *et al.*, 2009; Daugherty *et al.*, 2008; Hamilton and Thompson, 2007; Hoch and Deighton, 1989; Park and Lessig, 1981). From the experiential perspective, the brand verbal and non-verbal cues define the experiential aspects, including sensorial, emotional and cognitive responses. Such responses define the multi-dimensionality of consumer experience with brands (Brakus *et al.*, 2009; Holbrook and Hirschman, 1982).

Empirically, Heilman *et al.* (2000) postulate that new consumers will not develop their preferences unless they gain experience. Also, expertise consumers tend to follow their own-based strategy to form their preferences and select alternatives (King and Balasubramaninan, 1994). Niedrich and Swain, (2003) utilise the role of experience in order to explain the impact of pioneering advantage on brand preference. The results reveal the direct impact of experience order on brand preferences. Saaksjarvi and Samiee (2007) support the positive impact of brand familiarity by referreing to the level of accumulated experiences (Alba and Hutchinson, 1987) on brand preference. In turn, brand preference mediates the relationship between familiarity and consumer buying behaviour (Baker *et al.*, 1986).

Therefore, it is argued that all aspects of brand experience pave the way and play a fundamental role in determining and building consumers' brand preference (Carbone, 2004; Gentile *et al.*, 2007). Consumers prefer brands that provide meaningful experience (Goode *et al.*, 2010). The experiential clues evoked during consumption can determine consumer preferences (Berry *et al.*, 2002).

Brand experience does not only reflect consumers' prior judgement and evaluation of the brand, but also directs their future purchasing decisions. Most likely, consumers' experiential responses will stimulate their behavioural intentions towards the brand through repurchasing or recommendation to friends, to repeat the brand experiences (Brakus *et al.*, 2009). Schwarz (2004) indicates that consumers rely on their experience as sources of information for judgement and making choices.

Empirically, Gabisch (2011) supports the relationship between virtual brand experience as a kind of interaction between the consumer and the brand and the purchasing intention and behaviour. The impact of experiences on consumer loyalty behaviour have been verified within a service context, such as hospitality (Pullman and Gross, 2004; Isamil *et al.*, 2011), business to business (Biedenbach and Marell, 2010) and brands from different product categories (Brakus *et al.*, 2009). Consumers' brand experiences can also lead to other positive outcomes such as satisfaction and motivation of behavioural intentions (Morgan-Thomas and Veloutsou, 2011), repurchase intention (Rose *et al.*, 2011) and customer-brand relationship (Chang and Chieng, 2006).

The whole experience of the set of interactions between the consumer and the brand plays a fundamental role in determining consumer preferences and future purchasing decisions (Gentile *et al.*, 2007). Based on the previous discussion, it is believed that consumers' preferences for brands and future purchasing decisions are guided by their experiences. As a result, the following can be assumed:

H1a: Brand experience will have a significant positive impact on brand preference.

H1b: Brand experience will have a significant positive impact on brand repurchase intention.

3.3.2 Attribute Perceptions

Attribute perceptions represent consumers' salient beliefs about the brand utilitarian/functional attributes. It includes the product-related characteristics; the important features and characteristics for the product performance and function, and the benefits consumers assign to them (Czellar, 2003; Grimm; 2005; Keller, 1993; Park and Srinivasan, 1994). It represents consumer's objective evaluation at the attribute level (Holbrook and Hirschman, 1982; Keller, 1993; Myers, 2003).

3.3.2.1 Relationship between the Attributes Perceptions and Brand Preference

In the extant literature, the expectancy-value theory supports the positive relationship between the perceived brand attributes and brand preferences (Bass and Talarzyk, 1972; Ahtola, 1975; Erickson *et al.*, 1984; Park and Srinivasan, 1994; Singh *et al.*, 2005). Based on this theory, consumer brand preference is uni-dimensionally measured by the summation of consumers' beliefs of weighted attributes. The economist view supports the evaluation of the brands based on functional attributes, since the preferred brand maximises consumers' utilities (West *et al.*, 1996). Consumers use these attributes as cues to facilitate their choice (Romaniuk and Sharp, 2003). The perceived attributes constitute an important component of brand knowledge and its added value that builds consumer preferences (Park and Srinivasan, 1994; Keller; 1993; 2003). The tangible and intangible attributes contribute positively to the brand equity and preferences (Myers, 2003).

Empirically, several studies verified the significance of the perceived brand attributes in shaping consumer preferences. Romaniuk and Sharp, (2003) differentiate between positioning the brand based on single specific attribute or using a cluster of attributes, and brand loyalty. They demonstrate that unique, single brand attribute does not enhance consumer brand loyalty. Similarly, Romaniuk and Gillard, (2007) advocate that unique brand associations will not build stronger preferences. The multi-attributes brands have strong share in consumers mind affect brand preferences and loyalty.

Consumers believe that the more features a brand has increases its capability and usability (Thompson *et al.*, 2005). Moreover, the common features between alternatives help the consumers confirm their established preferences (Chernev *et al.*, 2001). Consumer preferences for brand are affected positively by the recalled attributes of brands with more favourable advantages to the earlier experienced brand (Niedrich and Swain, 2003). Further, Hsee *et al.* (2009) demonstrate that the attributes specifications, the quantitative description of the attribute, influence the choice preference rather than the liking preference. Grimm (2005) supports the positive affect of attributes perceptions on preference for utilitarian products rather than hedonic products.

For high-tech products, Decker and Trusov, (2010) demonstrate the importance of the product attributes in developing consumer preferences, used in turn for product improvement and development processes. Similarly, Petruzzellis', (2010) study findings reveal the significant impact of the functional attributes on consumer brand preferences and choice of mobile phones. In the service context of telecommunications, Alamro and Roewley (2011) support the positive impact of the service provider attributes on the brand preferences. Consistently, Cobb-Walgren *et al.* (1995) support the positive impact of brand associated attributes, the component of the brand equity, on consumers' preferences for brands.

This traditional view explains consumer brand preferences as part of the attribute, preference and choice chain (Blin and Dodson, 1980). To date, the perceived brand attributes remain important in shaping consumers' brand preferences. Consequently, the following can be hypothesised:

H2a: Consumer attributes perceptions will have a significant positive impact on brand preference.

3.3.2.2 Relationship between the Attributes Perceptions and Brand Experience

Theoretically, the traditional consumer behaviour theories (e.g. Howard and Sheth, 1969) focus on the objective features of the products as inputs to consumer responses and behaviours. While the experiential view criticises these theories and broadens the definition of product stimuli to include other non-verbal and subjective cues, the impact of verbal and objective cues in delivering valuable experiences is still considered (Holbrook and Hirshcman, 1982). The broad sense of consumer expertise includes the cognitive perceptions defined by beliefs about the product attributes (Alba and Hutchinson, 1987). Gentile *et al.* (2007) postulate the creation of experience though the practical use of the brand and consumer expectations about the possible consequences. The functional and utilitarian brand attributes play a significant role in delivering memorable experiences to consumers (Gentile *et al.*, 2007; Tynan and Mckechnie, 2009). Consumer perceptions about the physical attributes of the brand contribute to the direct experience (Rondeau, 2005).

Empirically, the significance of the functional and utilitarian attributes in creating brand experiences has been examined in prior studies in different contexts. Mano and Oliver (1993) examined the impact of product utilitarian evaluation on affective experience. Surprisingly, the results reveal a negative correlation between the product utilitarian evaluation and arousal. However, they relate this negative relationship to the measurement of the product utilitarian dimensions. Unlike Mano and Oliver (1993), the positive significant impact of the attributes perceptions on the emotional responses was demonstrated by Grimm (2005).

Also, for high-technological products, Sheng and Teo (2012) revealed that the utilitarian attributes of mobile phones measured by usability and usefulness have a positive and significant impact on the consumer experience. The positive relationship between the brand usefulness and online brand experience are verified by Morgan-Thomas and Veloutsou (2011). In retail, the physical atmosphere and perceived benefits of the retailers provide experiences to customers in an offline (Verhoef *et al.*, 2009) and online context (Rose *et al.*, 2011; Rose *et al.*, 2012). The intrinsic cues of services are demonstrated as significant drivers of consumer experiences in hospitality (Pullman and Gross, 2004; Walls, 2011; Xu and Chan, 2010) and tourism marketing (Ismail, 2010). Therefore, consumers' perceptions of the brand-related attributes can affect their responses when experiencing the brand; therefore, the following can be hypothesised:

H2b: Consumer attributes perceptions will have a significant positive impact on brand experience.

3.3.3 Price Perception

Price is an important non-product-related attribute necessary for purchasing a product (Keller, 1993). The perceived price is the price encoded by the consumer and constitutes an important component of monetary value perception (Zeithmal, 1988). For economists, consumers assign high weight to price compared with other attributes when evaluating alternatives to make a buying decision (McFadden, 1996). Zeithmal (1998) states that consumers' attention and weighing to price increase with high price products (Zeithmal, 1988). Consumers tend to pay high prices for brands perceived to have high value (Erdem *et al.*, 2004). There is a general belief that consumers perceive price as an indicator of quality. As such, high-quality products are obtained at a high price and vice versa (Sowter *et al.*, 1971). However, this positive link between the price and quality is questioned by Zeithmal (1988).

3.3.3.1 Relationship between Price Perceptions and Brand Preference

Theoretically, price is an important product stimulus that can provide positive or negative cues about consumer behaviour. Prices are related to rational consumers maximising the utility of their choices owing to the economists' view. However, it has been considered an important factor for consumers also seeking hedonic benefits (Lee *et al.*, 2009; Park *et al.*, 2011).

Empirically, prior studies demonstrate that price plays an important role in brand purchase and consideration decision (Erdem *et al.*, 2005). In online shopping, price is related to the hedonic value of online shopping for consumers, who enjoy the bargains and auctions (Park *et al.*, 2011). In the service context of mobile telecommunications, price is an important factor in determining consumer brand preferences (Alamro and Rowley, 2011; Schoenfelder and Harris, 2004). While, for products, Karjaluoto *et al.* (2005) demonstrate the significant impact of price on the choice of mobile phones, consumers' perceptions of price are not homogenous. Price is important for consumers focus on the tangible brand attributes rather than hedonic attributes (Petruzzellis, 2010). Based on this, the following hypothesis is proposed:

H3a: Consumer price perceptions will have a significant positive impact on brand preference.

3.3.3.2 Relationship between Price Perceptions and Brand Experience

Although the experiential view suggested by Holbrook and Hirschman (1982) defines price as a consumer input and part of his monetary resources, these resources are expanded to include time. However, Pine and Gilmore (1998) presume that the price of products contribute to the creation of consumer experiences. The authors suggest that the consumer price-experience can be considered a progression of the economic value (Pine and Gilmore, 1998; Schmitt, 1999). The price paid is the cost of experiences delivered to consumers; therefore, consumer perception of price fairness is part of the experience. Price can determine the type of consumer's experience of the brand (Brakus *et al.*, 2009).

Empirically, Ismail, (2010) examines the impact of price perception on tourists' experiences. The results support the significant relationship between price and consumer experiences. Verhoef *et al.'s* (2009) conceptual study in a retailing context proposes that price is an important antecedent of customer experience. Accordingly, the following can be hypothesised:

H3b: Consumer price perceptions will have a significant positive impact on brand experience.

3.3.4 Appearance Perceptions

Keller (1993) identifies the brand appearance as a non-product-related attribute. Appearance is not part of the necessary ingredients required for product performance. Appearance perception is a symbolic benefit derived from consumer beliefs about the aesthetic appeal of the brand (Chitturi *et al.*, 2008; Lee *et al.*, 2011). The word "aesthetic" refers to the beauty or art of design, and retains the affect and pleasure created from the consumers' responses to the physical features or design of the brand (Veryzer, 1993).

3.3.4.1 Relationship between Appearance Perceptions and Brand Preference

The importance of brand hedonic attributes, besides utilitarian attributes, in affecting consumer choices has been a fertile area of research (e.g. Batra and Ahtola, 1990; Chitturi *et al.*, 2007; 2008; Dhar and Wertenbroch, 2000; Okada, 2005; Voss *et al.*, 2003). The hedonic attributes contribute to consumer evaluation of goods and provide motives for consumption behaviour (Batra and Ahtola, 1990). The aesthetic appeal of the brand is one of its hedonic attribute or benefit (Chitturi *et al.*, 2007; 2008; Dhar and Wertenbroch, 2000; Holbrook and Hirschman, 1982).

Recently, companies are focusing on the aesthetically pleasing appeal of the brands, besides functionality. The aesthetic appeal of the brand is derived from its design, colour and shape (Chitturi *et al.*, 2008). Consumers allocate more importance to the hedonic attributes and are even willing to pay more when they choose between brands with equal utilitarian attributes (Chitturi *et al.*, 2007). The hedonic attributes build strong brands, are distinguishable from those of competitors and induce positive impressions in consumers (Chitturi *et al.*, 2007; 2008; Lee *et al.*, 2011).

Empirically, the positive impact of the brand aesthetic appearance has been demonstrated. Veryzer and Hutchinson (1998) suggest that the aesthetic aspects of products are sources of pleasure for consumers that enhance their preferences. Furthermore, for the technological products, Lee *et al.* (2011) reveal that the visual appeal of the technology products is as important as performance attributes in creating a positive attitude towards the product. The beauty of design and attractive and aesthetic appearance affect positively consumer preferences and brand choice (Decker and Trusov, 2010; Petruzzellis, 2010; Schoenfelder and Harris, 2004). Thus, the following can be hypothesised:

H4a: Consumer appearance perceptions will have a significant positive impact on brand preference.

3.3.4.2 Relationship between Appearance Perceptions and Brand Experience

The sensorial structure of the brand plays an important role in encoding, structuring and retrieving information stored in consumers' memory (Yoon and Park, 2011). These sensorial responses are related to the emotional and cognitive information processing in human brains (Hulten, 2011). The aesthetic aspects are considered among the brand-stimuli that sustain consumers' experience of the brand (Brakus *et al.*, 2009; Hirschman and Holbrook, 1982; Holbrook and Hirschman, 1982; Schmitt, 1999). Pine and Gilmore (1998) identify the most powerful themes in creating experiences as those that stimulate the consumer senses, and the more senses that are engaged the more affective and memorable the experiences. The brand aesthetic and sensory qualities enhance the consumer senses (Hulten, 2011; Schmitt, 1999) and affect their experiential responses

(Gentile *et al.*, 2007). The visual appearance not only increases the aesthetic attractiveness, but also affects the usability as quality indicators (Rondeau, 2005; Sheng and Teo, 2012). Generally, Chitturi *et al.* (2008) find that the brand hedonic attributes, aesthetic, experiential and enjoyment, are the primary sources of the emotional experiences. Similarly, Mano and Oliver (1993) identify that appeal is one of the hedonic attributes, correlated positively with the affective experiences.

Recently, empirical evidence from academic research supports the positive impact of the aesthetic or appearance perception on consumer experiences in a different context, such as online branding (Sheng and Teo, 2012), and hospitality and tourism marketing (Morgan and Xu, 2009; Otto and Ritchie, 1996; Walls, 2011). Pullman and Gross (2004) verified the positive impact of sensorial design on emotional experience, but reject the mediating role of affective experiences between the sensorial and the behavioural loyalty of guests in hospitality marketing. Similarity, Lee *et al.* (2011) support the direct positive significant impact of products appearance on consumers' affective responses. But they verified the mediating role of affective responses between the product attributes and consumer behaviour mediated by the affective responses. Gentile *et al.* (2007) indicate that high value is associated with the sensorial components of brands across different categories; therefore, the following can be hypothesised:

H4b: Consumer appearance perceptions will have a significant positive impact on brand experience.

3.3.5 Brand Personality

Brand personality is defined as the set of human characteristics assigned to the brand (Aaker, 1997), humanising the brand (Swaminathan *et al.*, 2009) or the personification of the brand (Plummer, 2000). However, these definitions are too loose because they overlook the specifications of exact traits evoked from human to brand (Azoulay and Kapferer, 2003; Bosnjak *et al.*, 2007; Geuens *et al.*, 2009). Therefore, this study adopts this definition, "*brand personality is the set of human personality traits that are both applicable to and relevant for brands"* (Geuens *et al.*, 2009, p.99).

3.3.5.1 Relationship between Brand Personality and Brand Preference

Brand personality targets the symbolic meaning of the brand and non-related-brand attributes (Keller, 1993). Consumers use the brand as a value-expressive tool (Aguirre-

Rodriguez *et al.*, 2011). The creation of brand personality is a response to the stereotypical brand user, brand endorsers, the company's employees and CEO and the product-related attributes (Aaker, 1997; Heding *et al.*. 2009). Plummer (2000) suggests that the intrinsic attributes rarely contribute to brand characterisations. Indirect sources of brand personality are related more to communications, advertising, pricing or promotional decisions (Helgeson and Supphellen, 2004).

Brand personality has been viewed by practitioners as an efficient way to differentiate between competing brands. Therefore, it can enhance the marketing effectiveness (Heding *et al.*, 2009), increase consumers' preferences for brands (Aaker, 1997; Biel, 1993; Fournier, 1998) and affect consumer judgements (Biel, 1992). The brand personality metaphor helps managers understand deeply consumer perceptions and attitudes towards the brand (Aaker, 2002). Plausibly, consumers organise the structure of brand knowledge in his mind and recall the functional benefit of the brand using salient brand personality (Zentes *et al.*, 2008).

Aaker (1997) stated that brand personality information can be used as a heuristic cue and influence consumer attitude toward the brand. The appealing personality of the brand emphasises the functional benefits of the brand, and helps consumers to express themselves. Thus, it results in favourable behavioural responses. Evidence from prior studies supports the positive influence of brand personality on consumers' purchase intentions (Wang and Yang, 2008). In addition, brand personality can directly affect the consumer-brand relationship (Chang and Chieng; 2006; Fournier, 1998), attitudinal loyalty (Kim *et al.*, 2011), brand trust and attitude (Folse *et al.*, 2012), brand affect (Sung and Kim, 2010) and brand equity (Folse *et al.*, 2012).

In hospitality marketing, Kim *et al.* (2011) support the significant direct impact of brand personality on customers' preferences for restaurants. Consumer favourable perceptions for the brand personality affect the brand preferences (Phau and Lau, 2000). Based upon these, the following can be hypothesised:

H5a: Brand personality will have a significant positive impact on brand preference.

H5b: Brand personality will have a significant positive impact on brand repurchase intention.

3.3.5.2 Relationship between Brand Personality and Brand Experience

The experiential perspective emphasises the symbols and non-verbal cues derived from the symbolic meanings of the product's subjective characteristics (Holbrook and Hirschman, 1982). Brakus *et al.* (2009) state that brand identity is one of the brand-related stimuli upon which consumers evoke experiential responses. Brand personality is an important component in the brand identity prism identified by Kapferer (2008). Morgan and Xu (2009) postulate that the destination personality, the overall image and total impressions of the destination in consumers mind, influences tourist experiences. Brand personality reflects the consumers' symbolic perceptions of the brand and increases the emotional responses elicited by consumers (Aaker, 1997; Biel, 1993; Phau and Lau, 2000). The personality characteristics of the brand stored in consumers' memory influence the brand experience (Sung and Kim, 2010). Clatworthy (2012) suggests that brand personality provides better understanding of the brand and gives close association to the expected experiences. The visual image and personality of brand are transformed into experiential manifestations.

There is no empirical evidence to verify the impact of brand personality on brand experience; however, recent studies have direct the attention to the role of brand personality on consumer experience (Morgan-Thomas and Veloutsou, 2011). The symbolic traits and self-expressive benefits consumers associate with the brand can affect their experiential responses, since these traits can be related to the emotional linkage in consumers mind (Keller, 1993). Consequently, the following can be hypothesised:

H5c: Brand personality will have a significant positive impact on brand experience.

3.3.6 Self-congruity and Brand Preferences

Self-congruity reflects the degree of congruence between the product-user image and the consumers' actual self-concept (Sirgy, 1982; Sirgy *et al.*, 1997). The actual self-concept is perceived as a reflection of self-congruity theory. This theory implies the psychological correspondence between consumer self-image and brand image, or the perceived brand-user image in consumers' minds. It proposes that consumer behaviour is affected by the degree to which he perceives his self-concept matches the product-user image (Sirgy *et al.*, 1997). In the consumer behaviour literature, consumers buy the products for both their functional and symbolic benefit (Belk, 1988). Based on this level, different facts of consumer behaviour can be predicted, such as consumer preferences, brand loyalty and purchase intentions.

Empirically, the impact of self-congruity on consumer preferences has been proven by several studies. These studies support the role of self-congruity on creating brand preference for different product categories such as jewellery (Jamal and Goode, 2001) and automobiles (Jamal and Al-Marri, (2007). Grimm (2005) also demonstrates the impact of non-attributes cognitions, self-concept, on brand preference for both utilitarian and hedonic products.

The impact of self-congruity is extended to brand loyalty (Kressmann *et al.*, 2006), sponsorship (Sirgy *et al.*, 2008) and purchase intention (Ericksen, 1997; Sirgy *et al.*, 1997). In addition, self-congruity can activate the purchase of new products (Cowart *et al.*, 2008). Based on the previous discussion, the following are hypothesised:

H6a: Self-congruity will have a significant positive impact on brand preference.

H6b: Self-congruity will have a significant positive impact on brand repurchase intention.

3.3.7 Repurchase Intention as Consequence of Preference

Repurchase intention is defined as consumers' motivations for repeating the behaviour of buying the brand (Hellier *et al.*, 2003; Tsai, 2005). The modified versions of the attitude models support the direct link between the attitude and behavioural intention as a mediating variable of the action (e.g. Fishbein and Ajzen, 1975).

In the old economic models, consumers' choices were based on their well-defined preferences for alternatives based on the utility maximisation criteria (Rizvi, 2001). Consumers with high brand preferences have strong cognitive beliefs (e.g. Bass and Talarzyk, 1972) and an affective structure expressed by level of brand liking (Oliver, 1999). The preferences exhibit behavioural tendencies (Zajonc and Markus, 1982), but these are not yet expressed in the act of purchasing (Mellens *et al.*, 1996).

Empirical evidence from the literature supports the positive relationship between the brand preference and the purchasing intentions (e.g. Cobb-Walgren *et al.*, 1995; Chang and Liu, 2009; Tolba and Hassan, 2009). In addition, the influence of preference on the act of repurchasing the brand was demonstrated by Hellier *et al.* (2003) and Tolba and Hassan (2009). Therefore, it can be argued that consumers' predispositions towards brands can be translated into willingness to repeat the buying behaviour. In essence, Kim *et al.* (2011) clarify that consumer bias towards brands helps them retrieve information and recall its properties at the point of purchase. The following can then be hypothesised:

H7: Brand Preference will have a significant positive impact on brand repurchase intention.

3.3.8 Demographic Variables

As mentioned in the literature review, the role of consumer demographics on brand preferences is controversial. Some studies support the significant impact of consumer demographic characteristics, such as the educational level (Bass and Talarzyk, 1972; Jamal and Goode, 2001) and age (Bass and Talarzyk, 1972) on brand preferences. Consistently, Duarte and Raposo (2010) support a significant weak impact of consumer demographics, gender, age and educational level on brand preference.

Others argue the effectiveness of demographic and psychographic in explaining brand preferences (Fennell *et al.*, 2003). These studies verified that demographic variables are poor predictors of preferences, estimated by scanner panel data (e.g. Gupta and Chintagunta 1994; Rossi, *et al.*, 1996), and explain a relatively small portion of the overall variation in preferences (Singh *et al.*, 2005). This is because the predictive power of the information content in demographics variables is insufficient to explain brand preference (Bucklin *et al.*, 1995; Rossi *et al.*, 1996).

However, Lin (2002) found that differences on brand preferences can be related to demographics and/or psychographic variables. Understanding consumers' heterogeneous preference based on their demographic differences is useful in designing effective brand strategies and demo-psychographic segmentation, in order to position the brand and increase its market share (Lin, 2002). Therefore, it is assumed that the consumers' heterogonous preferences can be traced according to their demographics:

H8: Consumer demographics, age, gender, and educational level, are directly related to brand preference

3.4 Conclusions

It is supposed that the proposed model in this study fill the gaps that currently exist in the literature review. The model stems from the theoretical background of consumer behaviour models and brands in the marketing literature. The basis of this model is the psychologists' view of studying consumer behaviour, and their perception of consumer brand preferences as a learning construct. The development of the model depends on the experiential view; it defines consumers' perceptions of cognitive information forming their brand knowledge , and considers verbal and non-verbal brand stimuli. Besides the holistic brand experiences, consumer responses are triggered by brand-stimuli at different levels of involvement, and are considered as a direct source of brand preferences. These experiences emphasise the derivation of value and its holistic nature is distinguished at the three basic systems: affective, sensorial and cognitive. It is assumed that the model is synchronous with the nature of marketing companies, shifting to experiential marketing. Other conclusions can be garnered from the following points:

- The model broadens the view of the uni-dimensional expectancy-value theory by integrating cognitive perceptions and experiential responses in the prediction of consumer brand preferences. Therefore, it supplements the traditional view and expects to increase its predictive power in understanding brand preferences. In addition, the model can be considered an effective tool for multi-faceted market segmentation, based on consumer preference, brand attributes and benefits, experiential value and consumer demographics

- Unlike prior studies on brand preferences, this model shows how consumers trade-off between different attributes representing different brand aspects. It also uncovers the relative importance of each attribute in driving consumer preferences. The importance of an attribute in preference development will not be determined by weight or rank value; however, it will be illustrated by its significance in affecting brand preferences.

- The model considers the holistic notion of experience embedding the essence of usage and category experience and its direct impact on brand preferences. The interactions between brand knowledge and brand experience are analysed in driving consumer preference. Therefore, managers can enlighten important brand attributes with inherent value. In addition, investigate the subconscious responses of total experience affecting consumer preference. Zaltman (2003) argues that the tangibility of brand attributes identified as drivers of preferences in multi-attributes models have far less influence on consumer preference compared with the subconscious responses presenting in total experience. Accordingly, the model goes beyond the cognitive view of experience as knowledge, and its limited impact on comparing users' and non-users' perceptions of brand attributes and preferences.

- The model proposed in this chapter differs twofold from the limited attempts in the literature attempt to investigate consumer preferences.

First. These models consider only the brand knowledge as a source of defining the determinants of brand preferences. However, the current study adopts the experiential view as the theoretical base for understanding consumer preferences. Based upon this, brand knowledge is defined by focusing on both objective and subjective brand features, and making use of verbal and non-verbal cues. Additionally, the different roles of the brand symbolic meanings, expressed by the brand personality and self-congruity, on brand preferences are illustrated.

Second. The proposed model focuses on more than the emotional experience, category experience and experience level; it proposes a consumer holistic experience. The model defines the determinants of preferences based on the consumers' descriptive and inferential beliefs that shape brand knowledge and experiential value responses. Therefore, it is assumed that the model uses a wide lens in order to understand consumer preferences and behavioural intentions.

- The model seeks better understanding of consumer preferences, an exploratory phase is required to validate the framework, support the antecedents of consumer brand preferences antecedents defined in the model and determine consumers' experiential responses. Based on this, the next chapter will discuss in detail the methodological approach adopted to provide answers for the research questions of the current study.

Chapter Four

Research Methodology

4.1 Introduction

This chapter outlines the research paradigm that defines the theory of knowledge embedded in the theoretical perspective; the philosophical assumption that lies behind the research methodology; the research strategy that defines the nature of relationship between the research and theory; and the methods used for data collection and analysis. The detailed discussion of the planned procedures for conducting the study and obtaining valid findings is provided in the subsequent sections of this chapter. Section 4.2 discusses the research philosophy and describes where the research stands in the perception of reality and the development of knowledge. Section 4.3 outlines the research design using a chart and describes the differences between qualitative and quantitative research, and combines them. Section 4.4 defines the qualitative study, constitutes the first phase and presents the exploratory stage of the research. The description of the second phase, quantitative study, is provided at section 4.5. Throughout this section, a detailed discussion of the survey design, sampling techniques, pilot testing and methods of data analysis is provided. Section 4.6 illustrates the ethical considerations, and the final section provides the conclusions.

4.2 The Research Philosophy

Research is the process of acquiring knowledge to find answers to certain problems or issues in order to provide better understanding of the social world (Matthews and Ross, 2010). The philosophy relates to the researcher's perspective of reality, how it is described, explained and its relationship to the developed knowledge (Saunder *et al.*, 2009). The philosophical assumptions refer to the set of basic beliefs that represent the worldview and define the relationship between the world and the researcher. The research paradigm dictates to the researcher in a particular discipline the form and nature of reality, acceptable knowledge and methods of conducting a research (Bryman and Bell, 2011). The research paradigm can be categorised into three main groups: ontology, epistemology and methodology (Guba and Lincoln, 1994; Saunders *et al.*, 2012).

Ontology concerns the nature of reality and has two aspects determined by the role of social actors: objectivism and subjectivism. Objectivism is the ontological position portraying the independency of the social actors from the social phenomenon; while subjectivism (constructionism) is the ontological position that refers to the creation of social phenomenon by the interactions between social actors. The epistemology defines the nature of the relationship between the researcher and the studied phenomenon (Saunders *et al.*, 2012). The methodology defines the methods of collecting and analysing data in order to conduct a research (Creswell, 2009).

The basic set of beliefs of each paradigm is outlined through four philosophical assumptions: positivism, post-positivism, critical theory and constructivism (Guba and Lincoln, 1994). Table 4.1 illustrates the four philosophical assumptions and its corresponding ontological, epistemological, and methodological paradigm.

Table 4-1Basic beliefs of alternative inquiry paradigms

Item	Positivism	Post-positivism	Critical Theory	Constructivism
Ontology	Naïve realism - "real" reality but apprehendable	Critical realism – "real" reality but only imperfectly and probabilistically apprehendable	Historical realism – virtually reality shaped by social, political, cultural, economic, and gender values; crystallised over time	Relativism – local and specific constructed realities
Epistemology	Dualist/objectivist; findings true	Modified dualist/ objectivist; critical tradition/community; findings probably	Transactional/subjectivist; value – mediated findings	Transactional/subjectivist; created findings
Methodology	Experimental/manipulative; verification of hypotheses; chiefly quantitative	Modified experimental/manipulative; critical multiplism; falsification of hypotheses; may include quantitative methods	Dialogic/dialectical	Hermeneutical/dialectical

Source: Guba and Lincoln, (1994, p.109)

Positivism, received view, has been the dominant view over the past 400 years (Guba and Lincoln, 1994). The research aim, following the positivism assumption, is to study a social phenomenon in search of regularities and causal relationships assuming the independency of social actors. It is objective and adopts the deductivist principal, by depending on an existing theory to develop a tested hypothesis. Therefore, the researcher acquires knowledge by gathering facts that lead to further development of the theory (Bryman and Bell, 2011; Saunders *et al.*, 2012).

Post-positivism is the same as positivism; however, it responds to the problematic criticism of positivism and adopts the critical realism as an ontological position (Guba and Lincoln, 1994). This philosophical approach assumes the existence of reality with the acceptance of differences between objects in different contexts. It stands in a critical position from reality to facilitate comprehending it as closely as possible; thus, it can introduce changes to transform the status quo (Bryman and Bell, 2011; Guba and Lincoln, 1994). The methods used should fit the subjects and can include qualitative methods (Saunders *et al.*, 2012).

The critical theory proposes an alternative way to positivism. It shares the view that reality requires a different research approach to reflect the distinctiveness between people. This approach aims to understand human actions by reaching a casual explanation of cause and effects, within the limits of social action being involved rather than including external forces. Unlike the positivism philosophy, this explains human behaviour based on theory (Bryman and Bell, 2011). There is an interactive relationship between the researcher and the studied subjects. This approach adopts the qualitative method in conducting the research, by going in-depth with the studied subjects through dialectical dialogue to understand the subjective meanings behind the phenomenon (Guba and Lincoln, 1994).

The fourth philosophy is that of constructivism. This moves away from the ontological realism position towards the ontological relativism. This approach shares the subjectivism principal with the critical theory. However, the relationship between the researcher and the subjects is linked interactively to the findings. Unlike the critical theory linked with the values of the researcher, methods of conducting the research tend to be dialectical and hermeneutical (Guba and Lincoln, 1994).

Saunders *et al.* (2012) suggest that it is more appropriate for the researcher not to regard these philosophies as separate positions, but to regard them as a multidimensional set of continua. However, the debate was always in choosing between the positivist and interpretivist approach, or between the quantitative and qualitative methods. Baker and Foy (2008) suggest that:

> "*This distinction rests basically on one's personal philosophy concerning the conduct of research with positivists emphasising an inductive or hypothetico-deductive procedure to establish and explain patterns of behaviour while interpretivists seek to establish the motivations and actions that lead to these patterns of behaviour*" (Baker and Foy, 2008).

4.2.1 Deductive vs. Inductive Approach

The research approach selected depends on the research issue or question determined by the nature of relationship between the theory and the research. Based upon this relationship, the clarity of the theory and the reason of collecting the data, whether to test or build the theory, will be signified. Then, the researcher can establish the design of the research project (Bryman and Bell, 2011).

There are two research approaches that define the link between theory and research: deductive and inductive. The deductive approach, or the hypothetic-deductive method (Baker and Foy, 2008), represents the common view of the relationship between research and theory (Bryman, 2008). This approach starts with theory developed from reviewing the academic literature from which hypotheses are deducted. The concepts embedded in the hypotheses are operationalised and data is collected to measure it. By analysing the data, the theory can be rejected or accepted or subject to modifications in order to explain the research inquiry (Bryman, 2008; Saunders *et al.*, 2012).

The inductive approach represents the common-sense view of how scientists discover reality and build theories (Baker and Foy, 2008). Therefore, the research begins by collecting data about the studied phenomenon in order to explore it and then build a theory. This approach allows for the interaction of social actors in interpreting reality and follows a flexible structure. It is conducted by interviewing a small sample of subjects working in the context in which the event under investigation took place; thus, there is less concern about generalisation (Saunders *et al.*, 2012). Therefore, the theory itself is the result of the research (Bryman, 2008).

4.2.2 Justification of the Research Approach

The research philosophy approach adopted should be relevant to the research issue or problem. Saunders *et al.* (2012) suggest that it is difficult to fit the research problem to one particular philosophical position. However, it is still important to determine the research philosophy in order to define the approach the researcher will use to find answers to the research questions.

The current study aims to establish and explains the determinants of brand preferences based on consumers' brand knowledge and brand experiences. Then examine the impact of these preferences on motivating consumer's purchasing intention. To reach this aim, the research employs the deductive approach and follows its sequential steps. It starts with theory representing accumulated knowledge in the marketing, branding and consumer behaviour academic literature, and provides an explanation of how consumer forms their preferences toward brands. The literature provides the theoretical foundation of the proposed model and hypotheses. The model defines the determinants of consumer brand preferences and explores the relationship between them based on the theoretical background of consumer behaviour and branding. However, the research does not maintain completely the deductive approach. The researcher believes that it is important to build on the existing knowledge and take into consideration the interacting role of social actors in shaping their social world. This provides the opportunity of adding important factors to those identified in the extant literature in order to explain the social phenomenon.

Consequently, the adopted approach will overcome the criticism directed to the deductive approach for not considering the role of social actors and the adherence to structured rigid methodology. In practice, it is possible and advantageous that the research will combine the deductive and inductive approaches at some point, which will enrich the investigation of the research problem within the specific context (Bryman and Bell, 2011; Saunders *et al.*, 2012).

4.3 Research Design

The research design is the plan that draws the structure of investigation and the organisation of the research project. It explains and justifies the types and methods of data collection, source of information, sampling strategy and time-cost constraints

(Easterby-Smith *et al.*, 2008). The research design can be classified using a variety of ways, such as the methods of data collection, time dimension, researcher participation and the purpose of the study (Blumberg *et al.*, 2008). However, the most widely-used classification is the one based on the purpose of the study. There are three types of research design based on the study's purpose: exploratory, descriptive and causal (Chisnall, 2001).

The exploratory study provides more insight and ideas to discover the real nature of the issue under investigation. Descriptive study stems from prior knowledge and is concerned with describing specific phenomena; it is a means to an end rather than an end, since it encourages future explanation (Chisnall, 2001; Saunders *et al.*, 2012). Causal or explanatory research explains causal relationships between variables. These three basic designs are interrelated, and the research can combine more than purpose.

The current study is trying to investigate the determinants of brand preferences, and in turn its impact on repurchase intention. Therefore, for this purpose, the research design comprises two phases. By moving on at the research process, each phase can provide answers that contribute to the research problem. The first phase constitutes the exploratory stage, employed to gain more insights about the factors affecting consumer preferences for brands by reviewing the literature and conducting focus groups to clarify concepts. The second phase represents the descriptive-explanatory phase, which describes the characteristics of the respondents of the cross-sectional sample survey. This is conducted to test the hypotheses and explain the relationships between the study constructs. Figure 4.1 shows the research design chart.

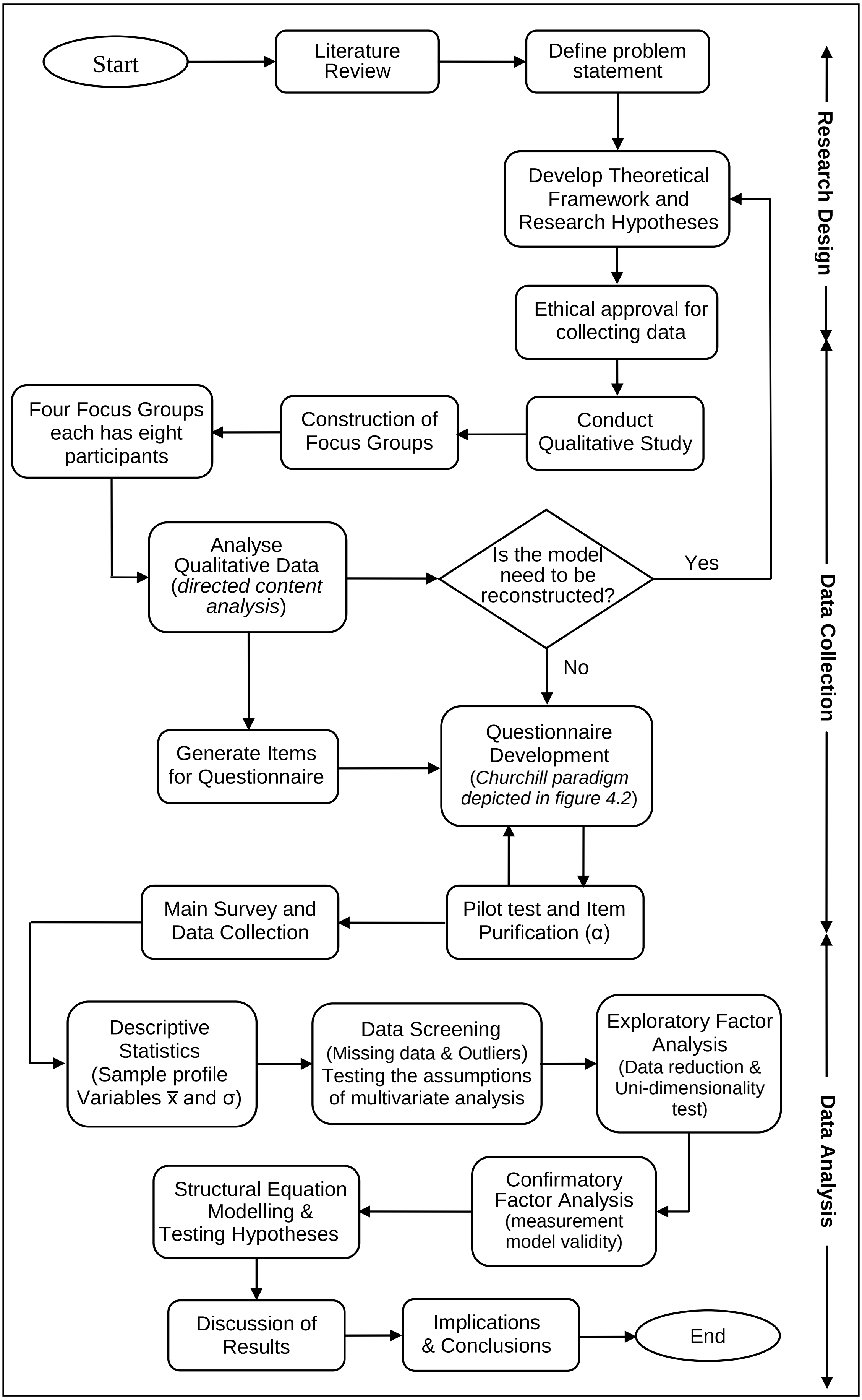


Figure 4-1 Research Design Chart

4.3.1 Quantitative vs. Qualitative Research

The question of the research methods comes directly after defining the research paradigm and its ontological and epistemological view. Each philosophical assumption attempts to answer questions related to research ontological, epistemological positions, and its methodology. The current study adopts the post-positivism philosophical assumption which stands at a critical position of the positivism (Eriksson and Kovalainen, 2008). Therefore, it adopts the belief that reality is interpreted through social actors and focuses on explaining the research phenomenon using modified objectivism within the context. Accordingly, the methodological approach aims to address the elements in their natural settings to discover the meanings and purposes that lie behind their actions (Guba and Lincoln, 1994).

Although, Guba and Lincoln (1994) identified four philosophical positions to frame the research paradigm; however, both the positivism and interpretivism define the two main methodological approaches. The research methodology or the philosophy of methods gives answers to how the research problem can be studied. Broadly, the research methods can be classified into two types: qualitative and quantitative (Eriksson and Kovalainen, 2008).). The following table illustrates clearly the difference between both methods.

Table 4-2 Differences between the quantitative and qualitative methods

Point of Comparison	Quantitative	Qualitative
Nature of reality	Objective, independent of social actors	Subjective, socially constructed
Approach	Deductive: testing of theory	Inductive: building theory
Research design	Exploratory	Descriptive
Research strategies	Experimental and survey research (structured interviews)	Unstructured or semi-structured interviews, case study, ethnography, grounded theory and narrative research
Types of Data	Quantitative; numeric	Qualitative; non-numeric
Sample size	Large sample size in order to generalise conclusions	Small sample size with less concern about generalisation

It thus, can be argued that the quantitative research is inspired with the positivism philosophical assumption while the qualitative research attempts to understand social actors interpretations of their environment (Bryman, 2006). The methodological approach of the positivism philosophical assumption is usually highly structured using large samples and both quantitative and qualitative methods. However, the quantitative methods are commonly used. The interpretivism philosophical assumption depends on small sample sizes and goes into in-depth investigations using qualitative methods. However, mixed or multiple methods design can be used (Guba and Lincoln, 1994; Saunders *et al*., 2012). Therefore, quantitative research is associated with the positivism philosophy, deductive approach, and measures the relationship between variables using quantification for data collection and analysis. Qualitative research is associated with interpretive philosophy, inductive approach, and understands the social phenomenon using non-numeric data collection and analysis (Saunders *et al.*, 2012).

Qualitative research builds a holistic view of the research inquiry and uses a naturalistic approach to understand it in the particular context-settings (Hoepfl, 1997, Patton, 1990). It is concerned with interpreting the non-numeric data in order to access the subjective and social constructed meanings of the studied phenomenon (Saunders *et al.*, 2012). The qualitative data enables the researcher to obtain detailed information from the respondents' perspectives, and describe their experiences, feelings, attitudes, preferences, perceptions and positions (Patton, 1990). Bryman (2006) suggests that this type of research helps to understand relationships between the study variables that do not exist in the survey. Additionally, qualitative research can be used to clarify the concepts and achieve better wording of the scale items to develop the questionnaire (Bryman, 2006; Churchill, 1995; Silverman, 2006). However, qualitative research is criticised as being subjective and difficult to replicate; lacking generalizability (Bryman and Bell, 2011).

Whereas quantitative research is built on the realism approach, it operationalises the concepts deduced from theory to measure it (Baker and Foy, 2008). It examines the relationships between the variables and tests the hypotheses. Therefore, it places great emphasis on the numeric data to achieve conclusions that can be generalized (Saunders *et al.*, 2012). However, the quantitative research is criticised for having low involvement or no contact with the subjects, an arbitrary definition of the variables away from the context-settings, and failure to generate hypotheses from the data (Silverman, 2006). To achieve the research objectives, qualitative research will be used for the first phase of the study, followed by quantitative.

4.3.2 Mixed Method Research

It is common for business and management research to mix the research methods (Saunders *et al.*, 2012). Researchers increasingly recognise the benefits of combining quantitative and qualitative methods in a single study (Creswell, 2009). It is tempting because it provides a holistic view of the studied phenomenon from different perspectives (Silverman, 2006).

Greene *et al.* (1989) proposed five reasons for mixing methods. First is triangulation, which looks for corroboration and the correspondence of results from different methods. Second, complementarity illustrates the results obtained from one method with that from another. Third, development uses the results from one method to develop and build the other method. Fourth, initiation discovers the paradox and new perspectives of frameworks by analysing the results from different methods using different methods. Fifth, expansion seeks to widen the scope of inquiry.

This scheme of five reasons provided by Greene *et al.* (1989) was then extended by Bryman (2006) based on reviewing frequently-used reasons in methodological writings and research articles. This review provides more detailed parsimonious reasons to explain the rationale of mixing methods.

Quantitative and qualitative research methods can be combined at several stages: formulation of research questions, sampling, data collection and data analysis. However, the common stage at which researchers mix methods is during data collection and analysis; the distinguishing features of qualitative and quantitative are clear at these stages (Bryman, 2006).

Moreover, there are several strategies for mixing methods: sequential, parallel and transformative (Creswe1l, 2009). Sequential means the usage of one after another. Parallel is the usage of both methods simultaneously. Finally, the transformative strategy is a theoretical lens, used to provide a framework for topics of interest, methods of collecting data and outcomes or anticipated changes. It is suggested that when using mixed methods sequentially the qualitative methods should precede quantitative methods (Easterby-smith *et al.*, 2008),

This research combines the two methods in order to achieve a complete understanding of the research inquiry on the studied context and develop the survey instrument. It applies the sequential mixed-methods technique, starting with the qualitative methods followed by the quantitative methods. Therefore, data will be collected and analysed in the two phases; qualitative followed by quantitative study

4.4 First Phase: Qualitative Study

There are three methods used for collecting qualitative data: interviews, observations and written document. The data from interviews include direct quotations of interviewees about their experience, opinions, feelings and knowledge. The data from observation is a description of peoples' activities, actions and interactions. The written document yields excerpts from program records, official publications and reports (Patton, 1990). The interview is the qualitative method that will serve the study in achieving its purpose. Interviews allow the researcher to communicate with the subjects to validate the proposed research model, generate the items used in the questionnaire and clarify the wording.

There are three types of interviews: (1) structured interviews; (2) semi-structured interviews; and (3) unstructured interviews. The structured interviews are the questionnaires used to collected quantifiable data. The interaction between the researcher and the respondents is limited to the preliminary explanations before answering the questions. Both the semi-structured and the unstructured interviews are non-standardized; they are often referred to as qualitative research interviews. The researcher or interviewer uses a prepared list of questions in semi-structured interviews, but it is not fixed. He can change the order of the questions, omit, and add questions, based on the nature of the interview. The unstructured interviews have no predetermined list of questions and the researcher goes in-depth with the interviewee, allowing him to talk freely (Saunders *et al.*, 2012). These non-standardized interviews can be conducted on an individual or group basis. The group interviews are the focus groups, which this study is interested in (Saunders *et al.*, 2012).

4.4.1 Focus Groups

A focus group is a group interview concentrating on a specific issue or topic to be discussed with number of participants in a convenient and open setting (Saunders *et al.*, 2012). The focus group is different from other group interviews as it is controlled with a specified focus and allows interactions between participants (Saunders *et al.*, 2012). Churchill (1995) suggests that focus groups are very productive methods for the purposes of generating tested hypotheses, information for questionnaire development, background information about certain product and exploring consumer perceptions and experiences of new concepts.

Focus groups have many advantages. The researcher can explore how the participants construct their perspectives and how they describe them. The analyses of conversational content; the participant language, emotions, tensions, interruptions, is equal in importance to the analysis of the conversation itself. Critical comments are generated when the participants are empowered to talk freely and in collaboration with the researcher (Malhotra and Birks, 2003).

However, focus groups can have several limitations. Some can be avoided, such as the misrepresentation of participants, convincing people to be part of a group discussion, and providing a convenient meeting time and location for all group members, through good planning and organization (Malhotra and Birks, 2003). The nature of people who are not willing to participate or shy from talking in a group, and the open-ended nature of focus group cannot be predetermined and avoided (Eriksson and Kovalainen, 2008).

4.4.2 Justification of Using Focus Groups

Currently, focus groups are among the most frequently-used method in marketing and business research (Churchill, 1995; Saunders *et al.*, 2012). Focus groups have been used extensively in consumer research to examine consumer attitudes (Brsitol and Fern, 1993), discuss consumer behavior, emotional construct and describe people's experiences (Bryman and Bell, 2007). This method is particularly useful to explore how participants organise and describe their thoughts, and uncover important factors and their priorities using their own words (Kitzinger, 1995).

The decision of using focus groups relates to the researcher's interest in uncovering the role of society by shaping individual knowledge and opinions (Morgan and Spanish, 1984). Interviewees or participants are more likely to respond in the group setting than in individual interviews. The interactions between participants and the simultaneous discussions provide the researcher with insights into consumer attitude (Bristol and Fern, 1993). Unlike individual interviews, focus groups help participants to clarify their views in accessible ways (Kitzinger, 1995). Hair *et al.* (2003) indicate that among the benefits of using focus groups are the identification of salient attributes and measurement aid. Moreover, they help introduce the refinement of ideas better than in-depth interviews.

Therefore, using focus group can provide the researcher with important factors related to the discussed topic, missed or not yet observed during the study setting. In addition, focus groups are beneficial in developing survey questionnaire, identifying key themes and items, and becoming familiar with consumer vocabulary (Saunders *et al.*, 2009). Churchill (1979) considers focus groups an effective method at the item-generation stage. Therefore, through focus groups, the second aim of the qualitative study will be achieved. The phase of group interviews can be considered a preliminary step to survey research that provides the contextual basis of the survey design (Bloor *et al.*, 2001).

4.4.3 Focus Groups Requirements

There are several requirements to organise focus groups: the number of groups; the number of participants in each group; time duration and the location of group interviews; and the role of the moderator or facilitator.

4.4.3.1 Number and Size of Focus Groups

Size of focus group - there is no rule about the number of focus groups to be conducted, it is subject to the research purpose and resources (Bryman and Bell, 2011). For some research purposes, one focus group is sufficient but there is a great possibility that the responses are particular to this single group. The large number of groups will ensure diversity, but is considered a waste of time and difficult to analyse. Generally, the minimum number of focus groups is two and there is an agreement that undertaking a range of three to eight groups is sufficient (Bryman, 2008; Eriksson and Kovalainen, 2008). For this study, four focus groups are conducted using the same list of questions. According to Eriksson and Kovalainen (2008), this number is a typical composition of focus groups. In addition, it will fulfil the objectives of the qualitative study according to time and budget constraints.

Homogenous or heterogeneous groups - homogeneity within each group ensures that the participants have common ideas and interest. Homogeneity is considered using the sex, age, ethnicity and religion of participants (Bryman and Teevan, 2005). Diversity within groups can result in clashing ideas and conflict between the participants that can destroy the whole discussion (Bloor *et al.*, 2001).

For the study purpose, the focus groups are composed of homogenous participants within each group, ensuring cross-group heterogeneity, in a manner that represents the sample of the survey. The sampling frame of the survey includes Egyptian respondents of both genders who are over 18 years old and live in large cities. Besides the advantages of homogenous groups, it ensures discussion among participants sharing same ideas in order to reduce the risk of clashing ideas. The researcher has some concerns about achieving the target of focus groups in heterogeneous groups. Participants in the research context are not yet familiar with group discussions. In the homogenous groups, participants will be more confident, and encouraged to express their opinions freely without being self-conscious. This focus group composition will help the researcher to investigate the differences across the groups with regard to the participant demographics. The focus groups are organised according to gender, age and educational level into four groups: graduated males, graduated females, undergraduate males and undergraduate females.

Number of participants - the number of participants can range from 4 to 12. Four is required for an in-depth exploration of the research phenomenon and 12 is difficult to manage. The reasonable number of participants ranges from six to eight participants (Eriksson and Kovalainen, 2008). In the current study, each group includes eight participants; they are recruited using a snowball technique, a common method for recruiting participants. Such that the researcher utilises her social network, contacts cases from the population. Then, these cases identify further cases in their network, give them ideas about the aim of the group discussion, and ask about their willingness to participate.

Length of focus group - the optimal time of group discussion session is between an hour and half and two hours (Eriksson and Kovalainen, 2008). Bloor *et al.* (2001) recommend that from an hour to an hour and half is advisable, since after an hour and half the moderator might face the probability of participants leaving.

4.4.3.2 The Role of Moderator

The person who runs the focus group session is called the group facilitator or moderator. The role of the moderator is a critical one. The high level of involvement and control over the participants will embed the group interaction, which is an advantage of conducting group discussion. Conversely, low involvement may result in a loss of control and too much group discussions will produce a vast amount of irrelevant data (Bryman, 2008).

Therefore, the researcher facilitates the group discussion with minimum control. The moderator avoids interfering during discussions. However, the aims of any interferences are to enhance the participation of all group members, avoid the domination of one participant, clarify the questions and provide illustrative examples if necessary.

4.4.3.3 Limitations of Using Focus Group

Focus groups are criticised for being unreliable; the results cannot be generalised even with the maximum of 12 participants, and they will not reflect the population (Saunders *et al.*, 2012). In this study, the four focus groups are conducted representing the sampling frame. Furthermore, the focus groups are followed by the survey; therefore, the reliability of the results can be assessed.

Other limitations of focus groups arise from organisational issues, such as loss of control over the participants, no harmony between the participants leading to a reluctance to participate and the difficulty of audio-recording and transcribing the data (Bryman, 2008). These are avoidable and accurate planning limits the chances of occurrence. The researcher followed the tip of transcribing the interview as soon as it is conducted to avoid missing, or being overwhelmed by, important data.

Among the limitations facing the moderator during the group discussions is the difficulty of the academic concepts. The participants experience problems with the meanings of academic concepts, such as brand experience and brand personality. Therefore, they have some initial difficulty describing their experiences with different brands of mobile phones. The moderator anticipates such problems and prepares a list of illustrative examples from previous studies (e.g. Brakus *et al.,* 2009; Meyer and Schwager, 2007), and translates the definitions of academic concepts into Arabic. The examples of brand experience given are on brands of different product categories but participants are familiar of it such as: BMW, Crest, and Nike, for example BMW car, "*the symbol of my success*". "*It is just great to drive*". Crest, "*I feel refreshed*", "*I do not really like the smell*", "*Feels clean, fresh, and healthy*". Nike, "*I want to work out*", "*I feel like an athlete*". The other academic construct that many of the participants have difficulty in understanding is the meaning of brand personality. The moderator explains the academic definition and provides an illustrative example; for instance, BMW is smart and successful.

Encouragement of participants to express their opinions is one of the reasons for composing homogenous; however, the moderator faces reluctance from some participants. Those participants are stimulated to become involved through direct questions to express themselves.

4.4.3.4 Data Preparation and Analyses of Focus Group

Qualitative data should be prepared before the analysis. Preparation of the data is the process of transcription. The focus groups are conducted in Arabic; the native language of the participants. Transcribing focus groups is more complicated than one-to-one interviews. The fairly large number of interacting participants in each group can lead to high rates of interruptions. Also, it is difficult to identify the eight participants from their voices with great possibilities of mixing voices; particularly, when more than one participant is speaking at the time (Bloor *et al.*, 2001). The process of transcription is very tiring and time consuming. For a professional touch-typist, transcribing an hour of conversation takes between six and ten hours (Bernard and Ryan, 2010).

To transcribe the audio-recorded group interviews, the researcher first listens carefully to the interviews, then listens to it again and transcribes it. The transcription is written first in the native language, Arabic, then translated into English. Data is cleaned by revising errors in the transcriptions (Bernard and Ryan, 2010). After transcription, interviews are saved as Word files in a dedicated folder, and are ready for analysis. The name of the file reflects the details of the focus group; for example, file "1AMaleFG" means the first focus group with adult male participants.

4.4.3.5 Coding Process

Codes are the labels derived from data using inductive or deductive, and group the data (Saunders *et al.*, 2012). There are three kinds of codes: structural, themes and memos. Structural codes describe the features of the interview, the respondent and the interviewer, such as the topic of the interview or the gender and age of the respondent. Themes codes are the most commonly-used codes; they allocate the codes to the text. Lastly, are the memos, which are notes about the codes (Bernard and Ryan, 2010).

In the coding process, the researcher followed certain steps guided by Bryman and Bell (2011), and Saunders *et al.* (2012). The first step is to develop themes codes from the review of the literature, or proposed conceptual model, guided by the research questions and objectives. Then, read the transcript and any memos attached without any interpretation. Then, another thorough reading of the textual data occurs, taking notes and reviewing the names of the codes. Finally, chunks of data are unitised and attached to the codes. The units of data can be a number of words, sentences or a whole paragraph. The data are analysed manually due to the small, managed number of transcripts.

4.5 Second Phase: Quantitative Study

In this phase, the empirical study is conducted by developing valid and reliable measures of the study's constructs based on both the literature and the qualitative study. From these measures, the study survey will be designed to test the hypotheses.

The two methods of collecting data for quantitative research are experiments and a survey. Experiments are used in marketing studies investigating consumer preferences (e.g. Carpenter and Nakamoto, 1989; Hamilton and Thompson, 2007; Heilman *et al.*, 2000; Hoeffler and Ariely, 1999; Nordgren and Dijksterhuis, 2009). However, it is used for explanatory research to examine cause and effect between two variables in a controlled setting. It is conducted often in laboratory settings with a limited number of variables, which impedes the generalisation of its results (Blumberg *et al.*, 2008; Saunders *et al.*, 2012).

A survey is used for exploratory and descriptive study. The analysed quantitative data can be used to test and give reasons for specific relationships between variables, and produce models based on these relationships (Saunders *et al.*, 2012). Several studies in marketing investigate consumer brand preferences using the survey method (e.g. Carpenter and Nakamoto, 1994; Chang and Liu, 2009; Jamal and Al-Marri, 2007; Kim *et al.*, 2011).

To meet the study purposes in the second phase, a cross-sectional survey design is used to collect data. Cross-sectional design means data is collected from more than one case at a single point in order to collect quantifiable data and examine the patterns of associations with two or more variables (Bryman and Bell, 2011). There are several techniques used to conduct survey, such as structured observations and questionnaires. However, questionnaire is the common technique for survey, as it is suitable for descriptive and analytical research (Saunders *et al.*, 2012).

4.5.1 Survey Design and Questionnaire Development

In designing a questionnaire, there are several necessary requirements to be considered in order to obtain true responses (Chisnall, 2001). Firstly, the researcher should determine the type of information required to be addressed by the questionnaire. The research hypotheses guide the questionnaire and determine the variables that specify the addressed relationship, the type of questions and the respondents (Churchill, 1995). Secondly, the structure of the questions should be phrased using simple language and familiar words specifically related to the investigated topic, not lengthy, and should not place pressure on respondents' memories. The clearer the design of the questionnaire, the more willing respondents will be to answer it (Chisnall, 2001).

The current study follows Churchill (1979, 1995) to develop the questionnaire. According to Churchill's (1979) paradigm, as outlined in Figure 4.2, the first step is to define and specify the domain of constructs by reviewing the literature. The 14 hypotheses in the proposed model examine the relationships between eight constructs (attribute perceptions, price perception, appearance perception, brand personality, self-congruity, brand experience, brand preference, and repurchase intention). These constructs should be translated into operational items.

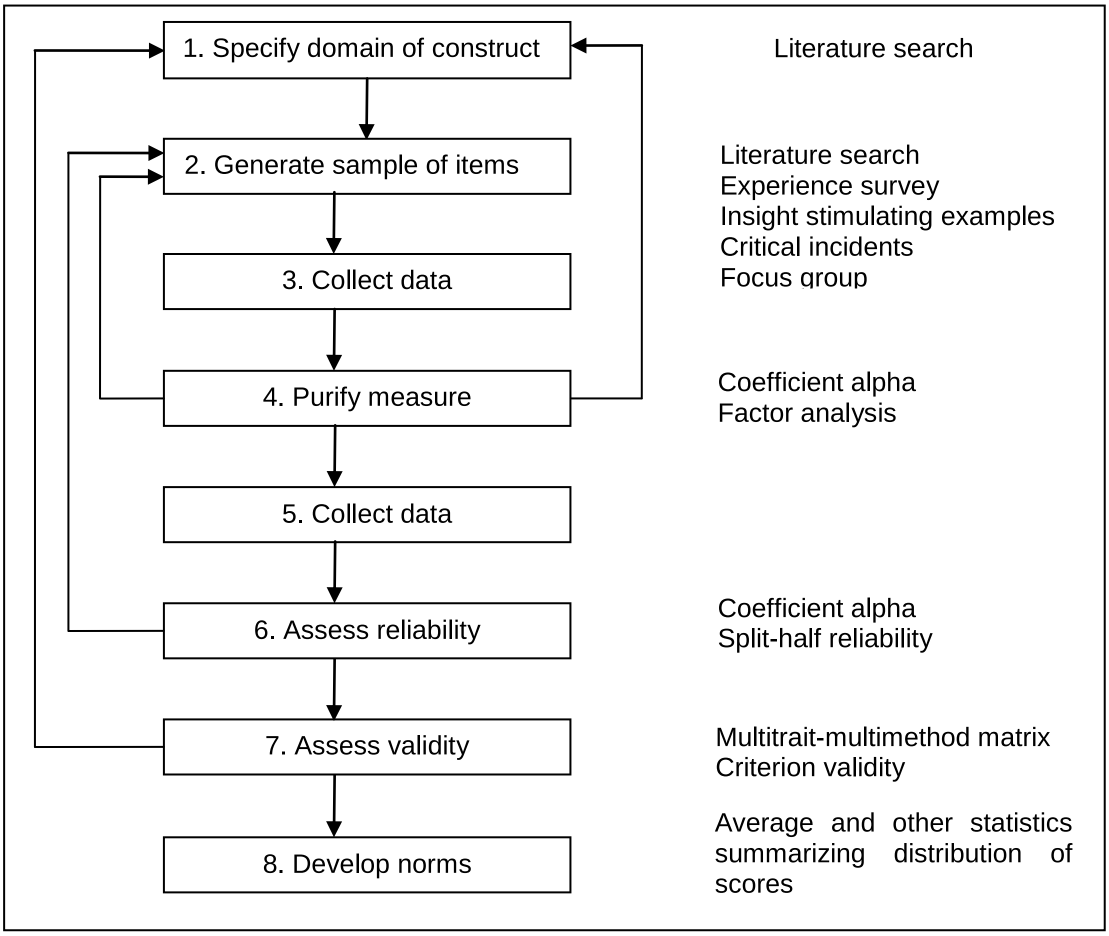


Figure 4-2 Procedures for developing better measures, Source: Churchill, (1979, p.66)

4.5.1.1 Specify and Operationalise Constructs

The first step in Churchill paradigm is to specify the domain of constructs with exact definition and delineate the exact meaning of construct to be measured. Then generate items, capture the specified domain (Churchill, 1979). The first two steps deals with the conceptualisation and operationalisation process. The concept is the name given to the construct to organise its main features (Bryman and Bell, 2011). The process of conceptualisation refers to defining the construct (Churchill, 1995). While operationalisation refers to the process through which the concepts are translated into indicators to be measured empirically (Saunders *et al.*, 2012). The better measures, tapping each construct and dimensions of multi-dimensional constructs are developed by revising the literature thoroughly and using focus groups.

Brand Preference – preference can be measured using variety of methods, classified into two main approaches: survey data-based approaches and behavioural data-based approaches. The former approach is commonly used while the second has limited number of implementation (Decker and Trusov, 2010).

The questions measure consumer preference can follow the ranking or rating scale. The ranking means asking consumers to rank their preferences for brands. Either by allocating points among studied brands (e.g. Niedrich and Swain, 2003; 2008), or ranking them in order from most to least preferred brand (Hughes, 1976; Ross, 1971). The ranking question is analysed using Mplus (Maydeu-Olivares and Bockenholt, 2005), a statistical program performing SEM used for complex applications involving multiple units of analysis in the same model (Hair *et al.*, 2010). The quantitative data for this study is analysed using AMOS a flexible program uses graphical interface instead of syntax commands or computer code.

Therefore, this study depends on the survey data-based approach, use the traditional means of pencil and paper questionnaires and rate on five-point Likert scale to measure brand preferences. The measurement items are adapted from the studies of Duarte and Raposo, (2010); Hellier *et al.*, (2003), Jamal and AL-Marri, (2010), Overby and Lee, (2006), and Sirgy *et al.*, (1997). In addition to, the qualitative study as specified in table 4.3. Item number five is reversed to reduce the response biasness (Field, 2005).

Table 4-3 Operationalisation of brand preference

	Items	**Code**	**Source**
1	I like this brand more than any other brand of mobile phone	PRF01	Jamal and AL-Marri, (2007), Overby and Lee, (2006), Sirgy *et al.*, (1997)
2	This brand is my preferred brand over any other brand of mobile phone	PRF02	Jamal and AL-Marri, (2007), Sirgy *et al.*, (1997)
3	When it comes to making a purchase, this brand of mobile phone is my first preference	PRF03	Overby and Lee, (2006) Qualitative study
4	This brand meets my requirements of mobile phone better than other brands	PRF04	Hellier *et al.*, (2003)
5	I am interested in trying other mobile phone from other brands.	PRF05	
6	I would use this brand more than any other brand of mobile phone	PRF06	Jamal and AL-Marri, (2007), Sirgy *et al.*, (1997)
7	Brand is very important to define my choice of mobile phone	PRF07	Duarte and Raposo, (2010)

Repurchase Intention – is usually measured using one-single item (e.g. Huber *et al.*, 2010; Keaveney *et al.*, 2007; Palmer *et al.*, 2000; Tsai, 2005). Three items are adapted from the study of Hellier *et al.*, (2003) and qualitative study as illustrated in table 4.4.

Table 4-4: Operationalisation of brand repurchase-intention

	Items	**Code**	**Source**
1	In future, this brand will be my first choice	RPI01	Qualitative study
2	I would be inclined to buy the same brand of mobile phone again	RPI02	Hellier *et al.*, (2003)
3	I will probably buy the same brand again	RPI03	

Brand Experience – extensive review of the literature revealed that brand experience is a multidimensional construct (e.g. Brakus *et al.*, 2009; Gentile *et al.*, 2007; Holbrook and Hirschman, 1982; Schmitt, 1999). The dimensions of brand experience are determined in the first phase, qualitative-study, of data collection. The qualitative description of consumer experience is a commonly-used method (Brakus *et al.*, 2009; Gentile *et al.*, 2007; Von Wallpach and Kreuzer, 2012). From the qualitative study, the participant descriptions of their experiences with different brands of mobile phones are consistent with Schmitt's (1999) strategic experiential modules. The five dimensions of brand experience defined in focus groups are sensorial, emotional, intellectual, behavioural and social. Additionally, items are adapted from the studies of Brakus *et al.*, (2009), and Chang and Chieng, (2006). The measurement items of brand experience are illustrated in Table 4.5.

Table 4-5: Operationalisation of brand experience

	Items	**Code**	**Source**
	Sensorial Experience		
1	This brand makes a strong impression on my visual sense	EXS01	Brakus *et al.*, (2009)
2	This brand excite my senses	EXS02	
3	This brand is interesting in a sensory way	EXS03	
4	This brand tries to engage most of my senses	EXS04	Chang and Chieng, (2006)
5	This brand is focused on experience sensory appeal	EXS05	
	Emotional Experience		
6	This brand is an emotional brand	EXE01	Brakus *et al.*, (2009)
7	There is an emotional bond between me and this brand	EXE02	Brakus *et al.*, (2009), Qualitative study
8	I feel peace of mind with no worries using this brand	EXE03	Qualitative study
9	I feel relaxed using this brand	EXE04	
10	I am pleased with this brand	EXE05	
11	This brand tries to put me in a certain mood	EXE06	Chang and Chieng, (2006)
28	This brand engages me with all social networks	EXR05	

Continued

	Items	Code	Source
	Intellectual Experience		
12	I engage in a lot of thinking when I encounter this brand	EXT01	Brakus *et al.*, (2009)
13	I am thinking what the new model of this brand will look like	EXT02	
14	This brand provide solution to communication problems	EXT03	Qualitative study
15	I am always up-to-date with this brand	EXT04	
16	This brand is more than a mobile phone	EXT05	
17	This brand tries to stimulate my curiosity	EXT06	
	Behavioural Experience		
18	This brand is not action oriented	EXB01	Brakus *et al.*, (2009)
19	This brand tries to make me think about lifestyle	EXB02	Chang and Chieng, (2006)
20	This brand tries to remind me of activities I can do	EXB03	
21	This brand gets me to think about my behaviour	EXB04	
22	This brand is part of my daily life	EXB05	Qualitative Study
23	This brand fits my way of life	EXB06	
	Social Experience		
24	This brand tries to make me think about social bonds	EXR01	Chang and Chieng, (2006)
25	I can relate to other people through this brand	EXR02	
26	This brand supports my relationship with others anywhere	EXR03	
27	I am part of the smart community with this brand	EXR04	Qualitative study
28	This brand engages me with all social networks	EXR05	

Attribute Perceptions – in line with the multi-attribute preference (attitude) model, this study captures consumers' perceptions of brand attributes related to the product, by rating their response upon each attribute. Through the focus groups, 13 attributes were determined (interfaces, multimedia features, fun features, memory, battery life, country of origin, language adaptability, ease of use, manufacturing quality, technical assistance, durability, physical characteristics and functionality). The codes of these items are given in Table 4.6. This measuring approach is adapted from Bhat and Reddy, (2001), Bian and Moutinho, (2011; 2009), Grimm, (2005), Kressmann *et al.*, (2006), Singh *et al.*, (2005) and Stoel *et al.*, (2004).

Weights for each attribute are not included. Wilkie and Pessemier (1973) indicate the inaccurate conceptualisation of weights, which can reflect either the prominence or the value of an attribute. Subjects will find difficulty evaluatinng the importance of an attribute and whether weights are given based on a sole attribute or joint evaluation (Hsee *et al.*, 2009). In addition, the inclusion of attribute weights decreases the predictive power of the model and does not contribute to preference development (Bass and Wilkie, 1973; Beckwith and Lehmann, 1975). For the number of attributes to be included in order to evaluate the brand, Fishbein, (1967) indicates that the first five to nine attributes determined by participants should be retained. Moreover, Kempf (1999) indicates that five salient attributes are relevant.

Table 4-6: Operationalisation of attribute perception

	Items	Code		Items	Code	Source
1	Physical characteristics (size/weight)	ATT01	8	Manufacturing quality	ATT08	Qualitative Study
2	Fun features (games, themes, *etc.*)	ATT02	9	Ease-of-use	ATT09	
3	Interfaces (3G, GPRS, Wi Fi)	ATT03	10	Durability	ATT10	
4	Battery life	ATT04	11	Functionality	ATT11	
5	Multimedia features (camera, video, MP3,*etc*	ATT05	12	Technical assistance	ATT12	
6	Memory capacity	ATT06	13	Country of origin	ATT13	
7	Language adaptability	ATT07				

Price Perception - the operationalization of price perception is based on three items adapted from Duarte and Raposo (2010), Park *et al.* (2011), Petruzzellis (2010) and Zeithaml, (1988). Table 4.7 illustrates the construct items, coding and its sources.

Table 4-7: Operationalisation of price perception

	Items	Code	Source
1	The brand is reasonably priced	PR01	Park *et al.*, (2011) Qualitative study
2	This brand offers value for money	PR02	Petruzzellis, (2010), Qualitative study
3	The price of this brand is a good indicator of its quality	PR03	Duarte and Raposo, (2010), Zeithaml, (1988) Qualitative study

Appearance Perception – the operationalization of appearance perception is based on three items adapted from Lee *et al.* (2011) and Petruzzellis (2010), as illustrated in Table 4.8.

Table 4-8: Operationalisation of appearance perception

	Items	Code	Source
1	This brand is aesthetically appealing	APP01	Lee *et al.*, (2011) Qualitative study
2	The visual appearance of this brand is attractive	APP02	
3	This brand has an appealing design	APP03	Petruzzellis, (2010) Qualitative study

Brand Personality – Aaker's (1997) scale for measuring brand personality consists of 44-item but, for simplicity, only 15-items are used reflecting five dimensions: sincerity, excitement, competence, sophistication and ruggedness. This scale is commonly used in most brand personality research (e.g. Folse *et al.*, 2012; Kim *et al.*, 2011; Sung and Kim, 2010). However, criticism is directed to the assessment of its validity due to its loose definition, non-generalizability of the factor structure at respondent level for each brand, and the non-replicability of the five dimensions cross-culturally (Azoulay and Kapferer, 2003; Geuens *et al.*, 2009).

Consequently, the current study depends on the big-five personality items for many reasons. First, brand personality is defined as "*the set of human personality traits applicable and relevant for brands*" (Geuens *et al.*, 2009, p.99). This definition overcomes the loose definition of brand personality and excludes the demographic characteristics that can be included in the definition. This definition is more rigorous and can be applied cross-culturally without confusion. Second, the brand personality developed by Aaker (1997) is based on human personality traits (Aaker, 1997; Fennis and Pruyn, 2007; Geuens *et al.*, 2009; Park and John, 2010; Sweeny and Brandon, 2006). Third, several recent studies on brand personality depend on human personality traits (e.g. Bosnjak *et al.*, 2007; Caprara *et al.*, 2001; Geuens *et al.*, 2009; Hunag *et al.*, 2012; Lin, 2010; Sweeney and Brandon, 2006).

Through focus group sessions, human personality traits were elicited from the big-five inventory that can be used to describe brands of mobile phones. The traits and its codes are presented in Table 4.9.

Table 4-9: Items of brand personality using big-5

	Items	Code		Items	Code
	Extroversion			**Emotional stability**	
1	Active	BP_EX01	21	Patient	BP_EM01
2	Energetic	BP_EX02	22	Calm	BP_EM02
3	Bold	BP_EX03	23	Level-head	BP_EM03
4	Strong	BP_EX04	24	Stable	BP_EM04
5	Happy	BP_EX05	25	At -Ease	BP_EM05
6	Competitive	BP_EX06	26	Emotional	BP_EM06
	Agreeableness			**Openness to experience**	
7	Affectionate	BP_AG01	27	Intelligent	BP_OP01
8	Altruistic	BP_AG02	28	Creative	BP_OP02
9	Genuine	BP_AG03	29	Innovative	BP_OP03
10	Generous	BP_AG04	30	Modern	BP_OP04
11	Friendly	BP_AG05	31	Up-to-date	BP_OP05
12	Faithful	BP_AG06	32	Sophisticated	BP_OP06
13	Pleasant	BP_AG07		**Free elicitation traits**	
14	Modest	BP_AG08	33	Complex	BP_FE01
	Conscientiousness		34	Upper-class	BP_FE02
15	Reliable	BP_CS01	35	Successful	BP_FE03
16	Precise	BP_CS02	36	Masculine	BP_FE04
17	Efficient	BP_CS03	37	Feminine	BP_FE05
18	Practical	BP_CS04			
19	Hard-work	BP_CS05			
20	Neat	BP_CS06			

Self-congruity – there are two methods for measuring self-congruity; the traditional method using discrepancy scores and the new method proposed by Sirgy *et al.* (1997). There are several problems assigned to the use of discrepancy scores; the reliability and the construct validity are questioned. The most important problem is its inability to include any reference to the psychological congruity experience. Additional problems of the traditional method include the possible use of irrelevant images and the use of the compensatory decision rule (Sirgy *et al.*, 1997).

Accordingly, the operationalization of this construct is based on three items developed by Sirgy *et al.* (1997), which have a higher predictive validity than the traditional one. This scale has been used extensively in several marketing research (e.g. Cowart *et al.*, 2008; Jamal and Al-Marri, 2007; Kang *et al.*, 2012; Sirgy *et al.*, 2008). The three items and its code are illustrated in the following table.

Table 4-10: Operationalisation of self-congruity

	Items	Code	Source
1	People similar to me own the same brand	CON01	Cowart *et al.*, (2008), Jamal and Al-Marri, (2007), Sirgy *et al.*, (2008), Sirgy *et al.*, (1997) Qualitative study
2	This brand is consistent with how I see myself	CON02	Jamal and Al-Marri, (2007), Kang *et al.*, (2012), Sirgy *et al.*, (1997)
3	This brand reflects who I am	CON03	Jamal and Al-Marri, (2007), Sirgy *et al.*, (1997)

4.5.1.2 Type of Questionnaire and Scale

The type of questionnaire can be determined using the method of communication (Churchill, 1995), divided into three types; self-administrated questionnaires, personal interviews, and telephone interviews (Blumberg *et al.*, 2008). The self-administrated questionnaires can be sent electronically to respondents (web-based questionnaire), posted by mail (mail-questionnaires), by approaching people in public places, such as shopping malls (intercept or mall questionnaires), or delivered by hand and collected later (delivery and collection questionnaires) (Blumberg *et al.*, 2008; Churchill, 1995; Saunders *et al.*, 2012). The telephone questionnaire is conducted via phone call (Churchill, 1995), or computer-assisted telephone interviewing (Chisnall, 2001). The personal interviews are face-to-face conversations between the researcher and the interviewee (Churchill, 1995). By comparing the types of questionnaire, it was found that telephone interviews are costly and limited in length (Blumberg *et al.*, 2008). The personal interviews can result in a high response rate, but they are also costly and require trained interviewers (Saunders *et al.*, 2012). In addition, both personal and telephone interviews are subject to interviewer bias (Churchill, 1995). In contrast, self-administrated questionnaires are often low in cost and do not require the involvement of the researcher (Blumberg *et al.*, 2008).

There are numerous methods that can be used to send self-administrated questionnaires to respondents. Mail survey requires a long time for responses (Churchill, 1995). In addition, the postal service in Egypt is not speedy and accurate. Moreover, sending the questionnaires via internet or e-mail will limit the respondents to internet users only. Therefore, the intercept or mall questionnaire is used and target respondents are approached at shopping malls, where the interviewer illustrates the aim of the research, and kindly asks for their participation. In Egypt, shopping malls are expanding and flourishing and are an interesting place for Egyptians not only for shopping, but also socialising and spending their leisure time there (Abaza, 2006). Therefore, shopping malls are chosen, also (Abaza, 2001) stated that:

> *"shopping malls entails a multiplicity of operations ranging from shopping for necessities, to shopping around (window shopping) to recreational shopping (spending time in the city, walking in the streets taking in sights, moving in and out of department stores, shops in public spaces*" (Abaza, 2001, p.101).

In marketing research, there are several kinds of scales that have been widely used, such as the Thurstone scale, Likert scale, Semantic differential scale and Guttman scale (Chisnall, 2001). The Thurstone scale is a classic interval scale that requires sophisticated mathematical procedures. The Guttman scale is a cumulative scale that allows respondents to express their agreement on different statements, but it is very complicated and validation problems can occur. The two most popular, easy to use and reliable scales are the Osgood semantic scale and Likert scale (Chisnall, 2001).

Churchill (1995) illustrates that, in marketing, the use of semantic differential scale have been modified to follow the Likert scale rather than the Semantic scale construction. Therefore, its validity has been questioned. Additionally, the Osgood scale is used to investigate consumer attitude toward brand image and corporate image (Chisnall, 2001). Aaker, (1997) suggests the use of the Likert scale over the Semantic scale, because it determines the extent to which a brand can be described by certain human characteristics (i.e. brand personality content and strength), rather than determining when brands are associated with negative versus positive personality characteristics (i.e., brand personality valence). In addition, respondents always find it easier to respond to questions using the Likert scale (Churchill, 1995).

For these reasons, the current study uses the Likert scale. The number of Likert scale points usually ranges from four to seven (Saunders *et al.*, 2012). The four points force the respondents to express their attitude or feelings, while the five points give respondents the chance of being unsure about an implicit negative statement. Moreover, the five points are clearer in appearance and easier to handle than the seven points (Malhotra and Birks, 2003). Based upon these, the Likert five-points scale is used.

4.5.1.3 Language and Translation

Language is defined in the dictionary as "*the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way*". Usunier (1998) illustrates that language is the way by which people interact with each other, observe and describe the world around them, and create ideas saved in their minds, which are then used to make judgments. Moreover, language is a key component of culture, which should be considered when conducting a research. It is also important to consider the language fits the cultural context studied (Usunier, 1998). Since this study is conducted in Egypt and uses Egyptian respondents, the questionnaire should be in the Egyptian native language; Arabic. Therefore, the questionnaire must be translated from English to Arabic.

There are four approaches for translation: direct translation, back-translation, parallel translation and mixed technique. Direct translation means translating the questionnaire directly from its source to the target language (Usunier, 1998). Back-translation means "*what goes in ought to come out*"; first translate from source to target, then retranslate the '*translated form*' to the source language. The two questionnaires; original and translated, are reviewed by comparing them, and the translated form is assessed and corrected (Harknese *et al.*, 2003). Another equivalent approach for assessing the translation is the parallel translation, meaning two or more independent translators are translating from the source language to the target language. The different versions are compared and the final one is then created (Usunier, 1998). The last approach of mixed techniques requires the back translation to be undertaken by two or more translators, and then the different versions are compared for the creation of one (Usunier, 1998).

The direct translation is the easiest approach but there might be differences between the source and the target questionnaire. The back translation can discover differences between the source and target questionnaire, but will demonstrate lexical equivalency rather than meaning (Usunier, 1998). In addition, the success of back-translation depends on the skills of the translator (Green and White, 1976), and does not provide rich detail about the adequacy of translation. Back translation is not an end; it still requires an expert to assess the degree of likeness between the two versions (Harkness, 2003). The parallel translation can guarantee the wording of the questionnaire but not the meaning. The mixed technique is more sophisticated and can lead to better results, but it is costly and demands two or more translators (Usunier, 1998).

Therefore, for the current study, the direct translation approach was used; a common method that is easy to implement, inexpensive and less time-consuming (Green and White, 1976). Punnet and Shnenkar (2004) suggest that pretesting the questionnaire in a pilot study is necessary to assess the reliability and the appropriateness of the translated version. Accordingly, two techniques, direct translation and pretesting, are used to assess the equivalency of the questionnaire.

4.5.2 Users Profile in Egypt

Egypt can be described as one of the developing countries with limited and un-utilised resources. The country's economic policy has undergone several dramatic changes in the last 50 years, starting from the era of Nasser in the late 1950s and 1960s, and following the policy of state capitalism. Egypt then moved to a free-market economy following the open-door economic policy of President Sadat in the 1970s. This policy leads to the increase of inflation, unemployment and the rise of a new social class; *"non- elite, rich class"*.

By the end of the 1990s, Egypt had gone through a period of structural economic adjustment, which led mainly to the liberalization of the economy and privatisation. According to the World Bank in 2008, the Gross Domestic Product (GDP) is 162.3 billion with an annual growth rate of the GDP 5.3% and 3.1% per capita. The Gross National Income (GNI) per capita is $1800, which categorises Egypt as a middle-income country (World Bank).

The structural reforms started in mid-2004 to increase the economic growth rate in Egypt and exceed the economies of advanced countries in the Middle East and Africa. Based upon these reforms, it is anticipated that in the coming years Egypt will witness a period of high merchandise exports, increases in foreign direct investment, establishment of new businesses, and increases in revenues from tourism and the Suez Canal. However, the country will continue to suffer from low savings and high unemployment (Aka, 2010).

Egypt has taken steady steps in communication and information technology (CIT). In October 1999, the country established a new ministry for CIT that emphasises a well-developed telecommunication infrastructure. Among African and Arab countries, Egypt is the largest internet market with the largest number of internet service providers and users (Elbeltagi, 2007). The strategy of the government is to encourage more internet users by offering initiatives such as promoting access to telecommunication services throughout Egypt like "*PC for every home*" at affordable prices, and facilitating internet subscriptions. At the beginning of 2005, it announced the removal of all tariffs, duties and charges on IT imports (El-said, 2005).

Mobile phones launched in 1997, and mobile networks became widespread across Egypt, covering almost all the country and also reached small villages. The number of mobile service providers increased from two to three companies: MobiNil, Vodafone and Etisalat. The emergence of the third company; Etisalat, increased the competition and decreased the market share of the incumbent companies, MobilNil and Vodafone. The price cuts of cost per minute, introduction of pay-as-you-go options with vouchers starting from five Egyptian pounds, and availability of low priced new or refurbished devices. All of these initiatives terminated the limitation of mobile phones usage to elite, rich people. Mobile phones transformed from luxury products to necessity products.

As a result, the number of mobile phone subscribers exceeds that of fixed lines, as illustrated in Figure 3.1. This number is expected to increase in the coming years, by which time, Egypt will be the fastest growing mobile phone market among Arab countries.

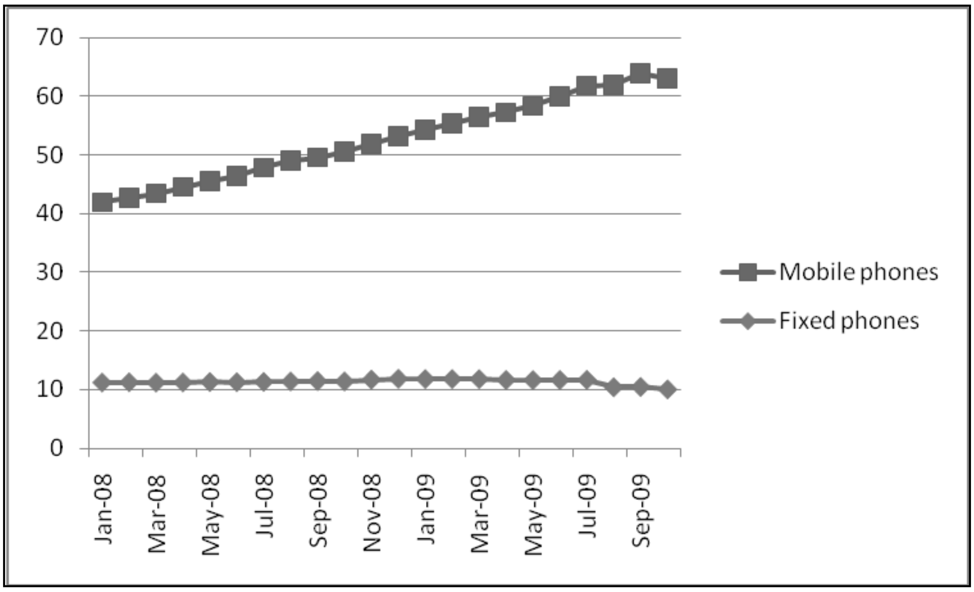


Figure 4-3 Number of fixed and mobile phones subscribers (2008-2009), Source: CAPMAS

Mobile phones make several changes in the society of both developed and developing countries. They save time and money, facilitate social communication and enhance personal privacy. In Egypt and other Arabic cultures, parents are keeping eye on their children, regardless of their age, and are ensuring their personal safety. Mobile phones give young people more freedom by allowing parents to keep in touch with them and track them wherever they go. In addition, people can have access to their bank accounts through their mobile phones either by voice or by text.

By 2007, the three operating companies acquired the license for 3G technology, video calls and mobile television services. They provide several mobile applications that each customer can customise according to his/her usage. Along with the new generation of mobile phones with GPS, Wi-Fi, GPRS, HD video recording, MP3 Player, camera, GPRS, FM radio, the use of mobile phones is increasing. Accordingly, mobile phones are used now more than a handset to make or receive calls, give access to social networks, keep the person in touch with his/her contacts, and make life easier.

4.5.3 Pilot Testing and Items Purification

The main purposes of carrying out the pilot study before the main survey are refinement of the questionnaire; check the clarity of its instructions, ambiguous questions, layout, and length of time to answer it. Purification of the measurement items refers to assessment of the content validity and reliability (Saunders *et al.*, 2012). In order to ensure that the survey questions operate well and the respondents can follow the instructions clearly, they have no problems in answering or understanding the questions (Bryman and Bell, 2011).

The content validity refers to the comprehensiveness of measuring instrument. It is assessed by asking a group of experts to judge the representativeness of questions to desired constructs (Mitchell, 1996; Saunders *et al.*, 2012). A panel of academics in marketing was asked to judge the representativeness of questions to constructs, the structure and the wording of the questionnaire. The comments received are revised and the suitable corrections are made.

The pilot study was conducted in August 2011 by intercepting people at one shopping mall and other public places. The sample size is 66 respondents; this number meets the guidelines of the pilot study sample size. The minimum number of responses for pilot test is 10, and between 100 and 200 for large surveys (Saunders *et al.*, 2012). The respondents were asked about the clarity of meaning, instructions, layout, wording and phrasing, and time required to answer the questionnaire. The respondents reported the ambiguity of the brand personality section. Therefore, an illustration was given and added later to the head of the question in the main survey.

After collecting the pilot data, the items were purified by assessing their reliability (Churchill, 1979). The reliability is assessed by measuring Cronbach's alpha, inter-item correlations, and item-to-total correlation. The inter-item correlation measures the correlation among items while item-to-total correlation measures the correlation of the item to the entire summated scale score. Cronbach's alpha assesses the consistency of the whole scale (Hair *et al.*, 2010). Assessment of the correlation among items is advisable for testing reliability before factor analysis as it is important not to depend on a single measure. Since the value of alpha depends on the number of items then it can result in misleading results (Field, 2005). Therefore, the items are considered reliable with inter-item correlation and item to total correlation more than 0.3 (Field, 2005), and value of Cronbach's alpha exceeding 0.7 (Hair *et al.*, 2010; Kline, 2005). However, in some cases, alpha value of 0.5 or 0.6 is still acceptable (Churchill, 1979; Nunnally, 1978). The results of pilot study are discussed in chapter six.

4.5.4 Sampling Techniques

After determining the methods of data collection, the next step is to determine the element from which the data will be collected (Churchill, 1995).

4.5.4.1 Define the Population and Sampling Frame

Firstly, it is important to define the population and identify the sampling frame (Churchill, 1995; Malhotra and Birks, 2003). Population refers to the universe of units from which the sample is selected (Bryman and Bell, 2011). The target population has to be convenient, serve the research objective and consider the appropriate sampling unit (Aaker *et al.*, 1997, Hair *et al.*, 2003). Malhotra and Briks (2003) specify that the target population should be defined in terms of elements, sampling unit, extent and time. For the current study, the population is the Egyptian consumers/users of mobile phones from both genders, aged over 18 and residing in Egypt. The study adopts the cross-sectional research design; data is collected at single time from the cases defined.

Justification of age group – The reasons behind the choice of this age group (18+) lies first behind the restriction of the Ethical Research Committee that the respondents' age should be above or equal to 18 years old. Unless the research targets children or specific young respondents, in such cases approval from the committee is required. Second, as shown in Table 4.11, the total number of population in Egypt according to the records of CAPMAS (Central Agency for Public Mobilisation and Statistics) in 2006 was 72,798,031, and the percentage of males is approximately equal that of females. The classification based on age, shows that 56% of the population is over 20 years old.

Table 4-11 Distribution of population based on gender and age group

	Male	**Female**	**Total**	**Percentage**
Total	37,219,056	35,578,975	72,798,031	100%
Age group < 20	162,786,68	153,428,02	31,621,470	43.5%
Age group 20 - 45	13,693,170	17,728918	31,422,088	43.1%
Age group > 45	5,077,218	4,677,255	9,754,473	13.4%

Source: CAPMAS, 2006

Justification of context – By the end of 2011, the numbers of mobile users in Egypt reached 76.4 million out of the total population of 80 million, an annual increase of 29.6% from 2010 (CAPMAS: 1/7/2011). Table 4.12 compares the number of mobile phone subscribers in Egypt and other countries worldwide. The table shows the promising market of mobile phones in Egypt.Cairo and Alexandria are selected because they are the two main big cities in Egypt (El-Sayed *et al.*, 2003). The residents of both cities represent more than 15% of the population (CAPMAS: 2006). In addition, the biggest shopping malls are located in these two cities.

The sampling frame refers to the list of all units in the population from which the sample will be selected (Bryman and Bell, 2011). It is not possible to obtain a list of the population (mobile phones consumers/users). Telecommunications companies are considering the personal information of their subscribers as private data and cannot be revealed. Therefore, the request of the researcher to obtain a list of mobile phone subscribers and their mobile numbers was refused. Accordingly, in the light of unavailability of sampling frame the sampling technique is determined.

Table 4-12: Mobile phone subscribers worldwide

Country	2008	2009	2010
Egypt	41,286,662	55,352,233	70,661,005
France	57,972,000	59,600,000	63,200,000
Italy	90,341,000	88,024,000	90,600,000
Jordan	5,313,564	6,014,366	6,620,000
Kuwait	2,907,000	3,876,000	4,400,000
Nigeria	62,988,492	74,518,264	87,297,789
Pakistan	88,019,742	94,342,030	99,185,844
Saudi Arabia	36,000,000	44,864,355	51,564,375
Turkey	65,824,110	62,779,554	61,769,635
United Kingdom	76,735,443	80,255,445	81,115,492

Source: ITU, 2010 World Telecommunication Indicators

4.5.4.2 Sampling Technique

There are two types of sampling techniques: probability and non-probability sampling. The probability sampling means that each element in the population has the chance to be selected, while the non-probability sampling means that probability of selecting an element cannot be estimated (Churchill, 1995). The probability sample includes four types of samples: simple random sample, systematic sample, stratified random sampling, and cluster sampling. While the non-probability includes the convenience sampling, quota sample and snowball sample (Bryman and Bell, 2011).

The current study will depend on non-probability sampling; namely, convenience sampling because the sampling frame is unavailable (Malhotra *et al.*, 1996; Reynolds *et al.*, 2003; Saunders *et al.*, 2012). Convenience sampling "*is one of the most frequently used non-probability sampling methods*" (Hair *et al.*, 2003, p.217), and used commonly in marketing (e.g. Andreasen, 1984; Gallarza and Saura, 2006; Ismail, 2010; Jamal and Al-Marri, 2010; Keillor *et al.*, 1996; Kim *et al.*, 2011; Petruzzellis, 2010; Morgan-Thomas and Veloutsou, 2011). Convenience sampling means the non-random selection of available elements from the study-defined population. It is an easy, quick, and cost-effective technique, but the main drawback is that it is unrepresentative of the population (Churchill, 1995; Saunders *et al.*, 2012).

4.5.4.3 Sample Size

Determining the sample size is very complex as it depends on other factors, such as the margin of error, degree of certainty, size of population, and the statistical techniques (Saunders *et al.*, 2012). Large samples are representative of the population; however, they are expensive, difficult to obtain and affect results (Saunders *et al.*, 2012). Some statistical software set the threshold for the sample size. The current study relies on SEM to analyse the relationships between constructs in the proposed model. The SEM requires larger samples compared with other multivariate approaches. The required sample size for SEM depends on five factors (Hair *et al.*, 2010). First, multivariate normality, one of the assumptions of SEM is the normality of data. It minimizes the problems associated with the-deviation from normality the ratio between the number of respondents and parameters should be 15 to 1. Second, estimation technique, the commonly used method is maximum likelihood estimation (MLE), it suggests a sample size starts from 200 respondents. Third is model complexity, which is determined by the number of constructs, indicators variables and multi-group analyses. Complex models require larger samples. Fourth, missing data confound the model testing and reduce the sample size; therefore, it should be considered before determining sample size. Fifth, average error variance of indicators, large sample sizes are required for smaller communalities less than 0.5 (Hair *et al.*, 2010). For complicated model, a sample size of minimum 200 is considered acceptable (Kline, 2005). While Hair *et al.* (2010) increase the minimum requirement to 300 and reduces the acceptable communality level to 0.45 and for under-identified constructs. For the current study, sample size of 200 is accepted and meets all the requirement of the analysis technique but the researcher targets a sample size of 300 valid responses.

4.5.5 Analysing Quantitative Data

The data analysis is conducted in two steps: data cleaning and factor analysis. The first step is to clean the data by checking for missing data and outliers, and testing the assumptions of multivariate analysis using SPSS v.19. Descriptive statistics are used to provide an overview about the sample, describing variables numerically by calculating mean and standard deviations (Saunders *et al.*, 2012). In the second step, factor analysis is conducted, along with exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Table 4.13 presents a summary of the statistical techniques used to analyse quantitative data for the main survey.

Table 4-13: Summary of used statistics techniques in main survey

Analysis	Purpose	Technique	Software	Cut-off point	Source
➢ **Data Screening**					
Missing data	Checking the pattern, extent of missing data and possible ways of remedies	Little MCAR test	SPSS	Randomly Missing data <10%	Hair *et al.*, 2010)
Outliers	Univariate refers to extreme values on single variable.	Standardised scores (ҁ)	SPSS	ҁ < ±3.29	Tabachnick and Fidell, 2006
	Multivariate refers to extreme values on more than two variables	Mahalanobis D^2	SPSS	D^2/df < 2.5	Hair *et al.*, 2010
➢ **Testing the Assumptions of Multivariate Analysis**					
Normality	Univariate normality	Trimmed mean	SPSS	Slight difference from mean	Pallant, 2010
		K-S test		Significant value >0.05	
		Skewness & kurtosis		Values≤ ±2.58	Hair *et al.*, 2010
	Multivariate normality	Normal P-P plot	SPSS	Reasonable straight line	Pallant, 2010
		Mardia's coefficient	AMOS	Significant value ≤ 0.05	Mardia, 1970
Homoscedasticity	Dependent variable has equal levels of variance among predictors.	Levene's test	SPSS	Insignificant value > 0.05	Pallant, 2010
Multicollinearity	High correlation between independent variables	Tolerance	SPSS	Tolerance >1	Hair *et al.*, 2010
		VIF		VIF< 10	
➢ **Factor Analysis**					
Exploratory factor analysis	Factorability of data	Bartlett's test	SPSS	Significant < 0.05	Pallant, 2010
		KMO		Value > 0.6	
	Factor extraction	Eigenvalues	SPSS	Eigenvalue ≥1	
		Scree test		Factors before inflection point	Hair *et al.*, 2010
	Factor rotation	Communality	SPSS	Communality ≥ 0.5	
		Factor loading		Factor loading ≥ 0.4	

Continued

Analysis	Purpose	Technique	Software	Cut-off point	Source
➢ **Structural Equation Modelling (SEM)**					
Confirmatory factor analysis	Measurement model goodness of fit	Absolute fit indices	AMOS	χ^2 – insignificant value χ^2:df ≤ 3:1 GFI ≥ 0.9 RMSEA ≤ 0.08 SRMR ≤ 0.08	Hair *et al.*, 2010
		Incremental fit indices		TLI ≥ 0.9 CFI ≥ 0.9	Kline, 2005
		Parsimony fit indices		AGFI ≥ 0.9	
	Measurement model validity	Convergent validity	AMOS	AVE ≥ 0.5 CR ≥ 0.7	Hair *et al.*, 2010
		Discriminant validity		AVE > (correlation between two constructs)^2	
Structural model	Hypotheses testing	Level of significance	AMOS	Level of significance $P < 0.001$ $P < 0.01$ $P < 0.05$	

4.5.5.1 Preliminary Analysis

The data is first screened by checking and correcting errors (Pallant, 2010). This includes checking the accuracy of entering the data, looking for the out-of-range values; values falling outside the defined range (Pallant, 2010; Tabachnick and Fidell, 2006). Next, checks are carried out for missing data and outliers.

Missing data describes the unavailable values on one or more variables (Pallant, 2010). The impact of missing data ranges from reduction in the sample size to serious impact causing distortion in the data, leads to biased results, and affects the generalizability (Tabachnick and Fidel, 2006). Hair *et al.* (2010) suggest four steps for checking missing data and applying a remedy: (1) determine the type of missing data; (2) assess the extent of missing data; (3) diagnose the randomness of missing data; and (4) apply the remedy. Missing data occurs randomly, if it is below 10% for each case (Hair *et al.*, 2010), or under 5% (Tabachnick and Fidell, 2006). Then, the problem is less serious and any possible way of remedy can be applied and yield the same results.

Outliers are "*observations with a unique combination of characteristics identifiable as distinctly different from the other observation*" (Hair *et al.*, 2010, p.64). There are four reasons for the occurrence of outliers: incorrect data entry, inspected missing values, and the case is not a member of the population, or a member but used extreme values differ than the normal distribution (Tabachnick and Fidell, 2006). The extreme scores can occur on a single variable, univariate; or on more than two variables, multivariate (Kline, 2005). Univariate outliers are detected by converting data values to standard scores, while the multivariate outliers are addressed by Mahalanobis (Hair *et al.*, 2010). The most difficult part after the detection of outliers is deciding whether to retain or delete them.

The relationships between the variables in the proposed theoretical model are tested using structural equation modelling; a multivariate technique. Accordingly, assumptions of multivariate techniques should be tested; these assumptions are normality, homoscedasticity, and multicollinearity (Hair *et al.*, 2010).

Normality refers to the extent to which the distribution of the collected data follows normal distribution (Hair *et al.*, 2010). The shape normality of variables can be measured by two components: skewness refers to the symmetry of distribution; and the kurtosis, which refers to the peak of the distribution (Tabachnick and Fidell, 2006). A normal distribution has zero skewness and kurtosis; however, slight deviations are acceptable within the range of -2.58 and +2.58. Univariate normality can also be detected by Klomogorov-Smirnov and Shapiro-Wilk (K-S test denoted by D) (Field, 2005) and the difference between trimmed mean and mean value multivariate normality means the normality of combinations of variables; it is difficult to assess and requires the normality of each variable (Hair *et al.*, 2010). It can be detected graphically using normal P-P plot and/or Mardia's coefficient (Mardia, 1970). In case of violation of normality assumption, the data can be transformed to remedy the non-normality (Hair *et al.*, 2010).

Homoscedasticity means that *"the variability in scores for one continuous variable is roughly the same at all values of another continuous variable" (*Tabachnick and Fidell, 2006, p.85). It is an important assumption related to normality (Tabachnick and Fidell, 2006); because *"the variance of the dependent variable being explained in the dependence relationship should not be concentrated in only a limited range of the independent values"* (Hair *et al*, 2010, p.74). Homogeneity of variables is assessed by Levene's test. The failure to achieve homosedasticity results in heteroscedasticity, caused by non-normality of any of the variables (Tabachnick and Fidell, 2006).

Multicollinearity means the high correlation between variables exceeding 0.9 (Tabachnick and Fidell, 2006), or 0.85 (Kline, 2005). Multicollinearity can confound the predictive ability of regression model, estimation of regression coefficient and statistical tests (Hair *et al*, 2010). It is assessed by tolerance and variance of inflation (VIF) (Hair *et al*, 2010; Tabachnick and Fidell, 2006).

4.5.5.2 Factor Analysis

The factor analysis technique is different from other statistical methods, such as regression (Pallant, 2010). It is used to reduce data and classify variables into a set of factors by identifying the underlying structure among variables (Hair *et al*, 2010; Pallant, 2010). The two main approaches of factor analysis, they are EFA and CFA (Pallant, 2010). The current study relies on the exploratory analysis at early stages of data analysis to summarise the data and group the variables together into set of factors. The CFA is used later in an advanced stage of data analysis through the structural equation modelling, to test the measurement theory.

The main distinctive features that distinguish EFA from CFA are the EFA explores the data, determines the factor structure, and the number of factors based on the statistical results rather than theory. The CFA specifies the number of factors and related variables used by the researcher, based on theory. CFA is a statistical tool used to accept or reject the measurement theory (Hair *et al*, 2010).

The EFA is conducted in three steps: suitability of data, factor extraction and factor rotation. The suitability of data is determined by the sample size and the strength of the relationships between items (Pallant, 2010). Tabachnick and Fidell (2006) suggest that the sample size of 300 cases at least is good for factor analysis. Others suggest that it is not the overall sample size but the ratio between participants and items (Pallant, 2010). Field (2005) suggests a ratio of at least 10:1 between the participants and items, while others suggest only five cases for each item (Hair *et al*, 2010; Palllant, 2010). The factorability of data is measured by two statistical measures: Bartlett's test of sphericity and Kaisr-Meyer-Olkin (KMO) (Pallant, 2010).

The second step is the factor extraction, determining the number of factors that describe the structure of the variables in the analysis (Hair *et al*, 2010). There are two methods of factor extraction: component analysis and common factor analysis. The component analysis or the principal component analysis (PCA) "*considers the total variance and derives factors that contain small proportions of unique variance and in some instances error varianc*e" (Hair *et al*, 2010. p.107). Whereas, the common analysis "*assuming that both the unique and error variance are not interest in defining the structure of the variables*" (Hair *et al*, 2010, p.107). The current study depends on the principal component analysis, commonly-used method (Pallant, 2010), and appropriate for data reduction (Hair *et al*, 2010). The number of extracted factors is determined by eigenvalue and scree test (Pallant, 2010).

Finally, is the factor rotation, for which there are two main approaches; orthogonal and oblique rotation. There are no guidelines for selecting between approaches; however, Hair *et al* (2010) suggest the orthogonal rotation for data reduction. Varimax rotation is the commonly-used approach of orthogonal rotation (Pallant, 2010).

4.5.5.3 Structural Equation Modelling

SEM is a multivariate technique that combines the aspects of factor analysis and regression to examine the interrelationships among constructs (Hair *et al*, 2010). SEM is selected for number of reasons:

- It has the ability to measure the multiple interrelate dependence relationships and examine the impact of several independent variables; with different impacts on a dependent variable. The dependent variable can be independent in another equation; therefore, it examines a series of multiple and interrelated dependence relationships (Hair *et al*, 2010). In defining the model, SEM tests the theory and the hypotheses (Tabachnick and Fidell, 2006). Therefore, it can investigate the relationships between the set of brand knowledge factors and brand experience, independent variables on brand preference as a dependent. Then, it measures the impact of brand preference as an independent factor on brand repurchases intention.

- SEM improves the statistical estimation of relationships between constructs by incorporating latent variables, which reduces the measurement errors (Hair *et al*, 2010). The statistical software used to perform the structural equation modelling is the AMOS v.18. Therefore, the measurement and the structure are presented using the graphical interface. Although LISREL is the most widely-used program and is regarded as synonymous with SEM, AMOS is gaining popularity since it uses graphical interface for all commands instead of syntax or computer codes; therefore, it is user friendly (Hair *et al*, 2010).

4.5.5.3.1 Measurement Model

The measurement model specifies the indicators for each construct and assesses the model validity using CFA. The measurement model validity depends on achieving acceptable levels of goodness of fit and assessment of construct validity (Hair *et al*, 2010). The question of model fit came after the model specification and estimation to indicate the similarity between the observed covariance matrix and estimated covariance matrix (Tabachnick and Fidell, 2006). The goodness of fit indices are classified into three groups: absolute fit indices, incremental measures and parsimony measures (Hair *et al*, 2010).

Absolute fit indices are a direct measure of the fit between the specified model and observed data (Hair *et al.*, 2010). Table 4.14 illustrates some of the widely-used measures of absolute fit indices used in this study.

Table 4-14: Absolute fit indices

Absolute Fit Indices	Illustration
Chi-square (χ^2)	The fundamental statistically based SEM measure calculates the difference between the observed and estimated covariance matrices (Hair *et al.*, 2010)
Goodness-of-fit (GFI)	A fit measure sensitive to sample size, with value ranges from 0 to 1, the higher the value means better fit (Hair *et al.*, 2010)
Root mean square error of approximation (RMSEA)	It is a parsimony adjusted index that approximates the non-central chi-square distribution. RMSEA estimates the amount of error and takes into account the sample size. It is a badness of fit index; therefore, the lower values close to zero mean good fit (Kline, 2005).
Standardised root mean residual (SRMR)	SRMR transforms both the observed and estimated covariance matrices into correlation matrices. It measures the mean absolute correlation residual as the difference between the observed and estimated correlation. Like RMSEA it is a badness of fit index (Kline, 2005).
Normed Chi-square	It is the ratio between the chi-square to degree of freedom, χ^2/df. The ratio of 3:1 or less indicates a good fit model (Hair *et al.*, 2010).

Incremental fit indices assess the estimated model by comparing it with a null model; an alternative baseline model (Hair *et al.*, 2010). Table 4.15 illustrates some of the widely-used measures of incremental fit indices used in this study.

Table 4-15: Incremental fit indices

Incremental Fit Indices	Illustration
Tucker-Lewis index (TLI)	It considers the model complexity and compare between the normed chi-square for the estimated and null model. Its value ranges from 0 to 1, with higher values close to 1 indicates good fit model (Hair *et al.*, 2010).
Comparative fit index (CFI)	It employs non-central chi-square distribution with non-centrality parameters. It is a normed index with values range from 0 to 1 and higher values close to 1 suggest a better fit model (Tabachnick and Fidell, 2006).

Parsimony fit indices are the ratio between the degrees of freedom of a model to the total degrees of freedom of the used model (Hair *et al.*, 2010). Table 4.16 illustrates some of the widely-used measures of parsimony fit indices used in this study.

Table 4-16: Parsimony fit indices

Parsimony Fit Indices	Illustration
Adjusted goodness of fit index (AGFI)	It considers the model complexity by adjusting the GFI by the ratio of degrees of freedom of a model to the total degrees of freedom of the available model (Hair *et al.*, 2010).

Once the model is specified and the fit indices indicate its good fit, the construct validity should be assessed. Construct validity is assessed by convergent validity, and discriminant validity (Hair *et al.*, 2010). Convergent validity means assigned indicators to measure certain factor are loading relatively high it (Kline, 2005). Discriminant validity refers to the degree of distinctiveness between two constructs (Hair *et al.*, 2010).

4.5.5.3.2 Structural Model

After the assessment of the measurement model validity, it is converted to the structural model by assigning the relationships between constructs based on theory. The hypotheses are represented by the specified relationships among constructs. The structural model moves from the stage of specifying the relationship between the latent constructs and measured variables in the measurement model to an advanced level; at which the nature and strength of the relationships between constructs are determined (Hair *et al.*, 2010). In other words, it moves from using CFA to the use of SEM to test the hypotheses.

4.6 Ethical Considerations

Ethics in business research refers to the set of behavioural principles and norms beginning with the research from the first phase of the study (Sekaran, 2003). The ethical code of conduct should reflect the behaviour of everyone participating in the research project; researcher, participants or moderator (Sekaran, 2003). Churchill (1995) differentiates between the ethical and legal considerations. Ethics are more proactive and comprehensive than law; some actions can be legal but not ethical. The moral principles, social responsibility, anticipation of harm and preserving people from harmful actions all underline the ethics.

Accordingly, the ethical principles for this study were considered at every phase along with the participated parties in each phase.

- *Before starting the research* – this is the phase of writing the proposal which concerns the researcher's plan to follow the scientific practices to answer the research questions. It also involves drawing estimates about the research cost and time limitations, novelty and benefits of the topic, and availability of information (Hair *et al.*, 2003). Accordingly, the researcher spent time preparing for the research and reviewing the literature using the available databases provided by Brunel University.

- *During and after the research* – after the phase of preparing for the research design, determining the research methodology, the data collection phase starts. During this phase, the researcher considers the ethical relationship with participants; there are specific ethical principles that guide the researcher in this relationship (Bryman and Bell, 2011). These principles are classified into four areas: (1) cause no harm to the participant; harm to participants includes physical harm, prohibited acts and their future careers; (2) lack of informed consent; the researcher should declare clearly the purpose of the study and give the participants the opportunity to accept or reject their participation voluntarily; (3) no invasion of privacy; the researcher has no right to intrude the privacy of participants and this should also declared before deciding to cooperate; and (4) no deception; the deception refers to altering and hiding the main purpose of conducting the research. As a university rule, it is important to obtain formal Research Ethics Committee approval before starting the field study. Accordingly, the researcher filled in the required ethical form to get the approval of the research ethical committee before collecting the data. The university's ethical codes guarantee the safety of participants regarding these areas and more; for example, there are restrictions for using participants aged less than 18 years. For the purpose of the current study, the data is collected using focus groups and a survey. Consequently, the researcher follows the protocol of conducting focus groups; for example, convenient time and place, and permission for audio recording. In addition, the cover page of the questionnaire contains: a declaration of the study main purpose, the commitment of the researcher to keep the data and information private and use it for the research purposes only. Moreover, the participants were informed that they are not obliged to participate or provide their personal details; however, they were informed that the personal details will be used in statistical percentages for the whole sample, but not at the individual level.

The ethical considerations continue throughout the research process, even after the data collection and analysis. They are extended to the writing and dissemination; data should be interpreted and reported after analysis without contamination (Bryman and Bell, 2011). Finally, before submission, issues relating to plagiarism and referencing should be checked.

4.7 Conclusions

This chapter outlines clearly the research design planned to conduct this study. The research follows the post-positivism philosophy since it is based on theory and holds the belief that social actors have roles in shaping reality. This philosophy allows the researcher to get closer to reality, it is still objective but interprets reality using social conditioning to overcome the status quo. It focuses on explaining the phenomenon in a given context and is open to critical realism. The methodological approach readdresses the studied phenomenon in the natural setting to validate the theoretical hypotheses. Therefore, this philosophy utilises qualitative as well as quantitative methods.

A mixed-method approach is used for this study, combining sequentially qualitative and quantitative methods at the data collection phase. The first phase constitutes the qualitative study, an exploratory stage to validate the proposed model and develop the questionnaire. Focus groups are conducted, an effective method used to provide a clearer picture and explore consumers' beliefs, experiences, preferences and their responses. In addition, focus groups are beneficial in generating items used in questionnaire development. Therefore, four focus groups are conducted; each has eight participants and lasts for 90 minutes on average. Participants are selected using snowball techniques within the sampling frame of the main survey.

For the second phase, quantitative research, a cross-sectional survey design is used to collect data. Assessment of content validity and reliability of the survey instrument is conducted in a pre-test study. A non-probability, convenience sample technique is used due to the unavailability of sampling frame. Data is collected from respondents using self-administrated questionnaires by intercepting people at shopping malls. The sample size is a minimum of 300, determined by using the requirements of the statistical technique to analyse the data.

The phase of data analysis is composed of two steps. The first includes data cleaning, verifying the assumptions of multivariate techniques, factor analysis and descriptive statistics. SPSS v.19 is the software used to analyse the data at this step. The second step, hypotheses testing, is carried out by structural equation modelling, using AMOS software. Through CFA, the measurement model validity is assessed and converted to structural model for hypotheses testing.

Accordingly, this chapter acts as a clear systematic guide for identifying methods of data collection and analysis, the time frame and context of the study, and justification for selection. Several conclusions can be drawn from this chapter:

- While, the mixed-methods approach is a common approach in most marketing research and it provides answers for the research questions, most of the prior studies on brand preferences depend on quantitative methods only to uncover consumer brand preferences. In addition, there is a belief that consumers express their preference generally in a qualitative way. Therefore, it is believed that this approach will provide better understanding of consumer preferences development. Also, this approach will overcome the methodological limitations of prior studies. In addition, the inherited bias forms a particular method that is cancelled due to the conjunction use of both methods. Moreover, the strengths of both methods are attained and each will offset the weakness of the other. Accordingly, it is perceived that this strategy will improve the validity of research findings.

- The study considers the contextual understanding, with regard to the operationalisation of the constructs, the language used in the questionnaire and the approach used to intercept participants. These considerations expect to add to the robustness of the study, enhancing the generalisability and increase the validity and the reliability of the measures.

- To overcome the limitations of the convenience sample, the study considers the relevance of the sample to the topic under investigation and the adequacy of the sample size for analytical purposes. For the representation of the sample to the population, the characteristics of the population are compared with the distribution of the sample.

- The two-step approach of the structural equation modelling permits the test of all patterns of coefficients. The model re-specification enables the improvement of the model fit. Thus, the data analysis technique offers great potential for theory development and verification, and construct validation.

Chapter Five

Qualitative Study Findings

5.1 Introduction

As mentioned in the previous chapter, the current study applies the mixed-method technique, combining qualitative and quantitative methods. This chapter discusses the first, qualitative phase of data collection. Its aim is to consider consumer perspectives in the development of brand preference. Focus groups were used during this phase of the study to collect data. Moreover, this phase is essential to the development of the questionnaire used during the second quantitative phase of the study. This chapter provides a detailed discussion of the qualitative phase and is organised in two main sections: Section 5.2, which deliberates the research protocol for conducting the focus groups; and Section 5.3, which discusses the main findings yielded from the group sessions. Section 5.4, explains the difficulties encounter the moderator during focus group sessions. Section 5.5, refines the qualitative data findings in order to proceed to the next phase of data collection. Finally, section 5.6 provides conclusions for the chapter.

5.2 Focus Group Protocol

Focus group interviews or group discussion are conducted with a small group, ranging typically from six to eight participants, for between hour and two hours. Interactions between participants are permitted and, indeed, desirable for raising new themes (Saunders *et al*, 2012). Patton (1990, p. 335) indicates that the use of focus groups is not new, having been used in marketing research since 1950 "*as a way of simulating the consumer group process of decision making in order to gather more accurate information about consumer product preferences*". Focus groups are also used at the early stage of item generation for the development of the measurement scale used for collecting data in the field of study (Churchill, 1979). The rationale for using focus groups is discussed in the previous chapter.

A focus group is not an informal interview; however, there are several requirements for its organisation and construction. In order to define these requirements, the current study is inspired by Yin (2003) in terms of defining the research protocol of the qualitative data. Protocol refers to the agenda of procedures and general rules that guide the conduct of a focus group. Further, it defines the purpose and main objectives, sets the questions, organises the group discussion, and collects and analyses data. The following sections outline the research protocol for the focus groups.

5.2.1 Overview of the Qualitative Study

The current study investigates how the development of consumer brand preference is shaped by brand knowledge and experience. By reviewing the literature, brand preference formation is predicted by the expectancy value theory and can be measured using multiattribute models. The brand associations, or the set of perceptions linked in consumers' minds to the brand, define the brand knowledge or meanings. The respective attributes and benefits, alongside symbolic associations, are determined by the consumers or brand users. Brand experience describes consumer responses induced by direct and indirect interactions with the brand. Numerous dimensions describe consumer experiences with the brand. The post-positivism philosophy adopted by the research, critical realism, believes in the role of social actors in shaping their reality. Therefore, at this stage, the research objectives are:

- To validate the proposed theoretical model and explore the determinants of consumer brand preferences within the research context.
- To identify the dimensions describing consumer experiences of brands within the studied product category.
- To identify the important attributes/benefits consumers assigned to the studied product.
- To identify the possible traits of the big-five inventory associated with brands.
- To explore any differences between the focus groups.

The fulfilment of these objectives will provide robust understanding of how consumers develop their preferences for brands. It will also validate the proposed model and develop the measurement scale for the survey.

5.2.2 Construction of Focus Group

There are several factors to consider when arranging focus groups (FG). These include the number of groups and number of participants in each; the time, duration and location in which to conduct the FG; the selection of participants; and the role of the moderator.

The construction of FGs is done by organising four heterogeneous groups according to the demographics of the participants; however, the characteristics of the participants in each group are homogenous. In other words, the heterogeneity exists across the FGs, while homogeneity is concentrated within each group. This enables the discovery of differences among groups and confirms the common experiences shared by participants within each group.

The selection of participants should be relevant to the topic. Bryman and Bell, (2011) suggest that participants can be either unknown to each other or form natural groups. There are no restrictions for the research topic; the appropriate participant is a mobile phone user. Participants can be selected randomly or by snowball method. The latter is commonly used and is adopted to select the participants for each group. Thus, the researcher utilised her social network to approach an eligible person to act as a contact point for recruiting others. This task was assigned to more than one person for each group as the researcher was unsure of people's willingness to participate. The contact cases were given the choice of attending the FG, and they chose to do so as it was a new experience for them.

The FGs were organised on weekly basis; one per week, taking place at the weekend. This was beneficial to the researcher in terms of transcribing the interviews immediately after the session, and making modifications, such as adding or removing questions. Conducting sessions at the weekend increased people's willingness to participate, as they had more availability. For the location, several requirements are considered, such as accessibility and convenience for the participants, and the ability for the researcher to tape-record the discussion. Also, the participants are given the option of choosing the location. The contact case, acting as an intermediary, then informs the participants of the time and location of the group discussion. The duration of each group did not exceed two hours, and the average time of each session was 90 minutes.

The researcher runs the FGs, adopts the role of moderator, asks questions and guides the sessions with reasonable involvement. However, the researcher does not lead the interview, but rather encourages participation and keeps the interview within the boundaries of the topic.

The start of the FG is important. The moderator begins by introducing herself to participants, outlines the aim of the group discussion and requests the participants' permission to audio-record the discussion. Participants are informed of the privacy of the audio-recording and its use in the context of the study. The moderator then invites participants to introduce themselves. The discussion is started by general questions about brands, brands of mobile phones, participants' usage rate and duration, and number of mobile phones they own. Then, the discussion becomes more concentrated on the topic being researched. At the end of the session, the moderator thanks all the participants and expresses appreciation for their participation.

5.2.3 Focus Group Designated Instrument

Central to protocol are the questions addressing the research objectives. Bryman and Bell (2011) suggest either using of one or two general questions with little intervention from the moderator, or being more structured and preparing a list with which to guide the interview. The latter is used for this study, as it helps the researcher to move between topics. A topic agenda is prepared, as shown in Appendix B. Additionally, two lists were prepared: one for brand personality traits and one for brand attributes and benefits.

The first list includes mobile phone attributes and benefits developed from a number of prior studies (Decker and Trusov, 2010; Karjaluoto et al, 2011). This list was helpful for the researcher in terms of becoming familiar with mobile phone attributes and functionalities, and to ask the participants about other unmentioned attributes or benefits. The second list includes the human personality traits adopted from the big-five scale dimensions created by Goldberg (1990).

5.2.4 Analysing Findings (role of theory and coding process)

The discussion is transcribed after each FG session, which helps the researcher to retain and record the notes and avoid the reoccurrence of problems in subsequent sessions. Saved clean transcriptions are prepared for analysis. Transcribing FGs is more complicated than for one-to-one interviews. The large number of interacting participants in each group causes interruptions and mixed voices (Bloor *et al*, 2001).

Up to this point, there are no acceptable and well-defined rules or methods for analysing qualitative data (Bryman and Bell, 2007). Saunders *et al* (2012) classified qualitative analytical procedures based on the role of theory. There are two approaches to analyse the qualitative data; inductive and deductive. However, flexibility is required to move from a deductive approach to an inductive approach in case the proposed model does not supply sufficient answers to the research questions. The inductive approach means that a new theory will be built, while the deductive implies an existing theory that will be validated by the qualitative study. The analytical methods of the inductive approach involve template analysis, analytical induction, grounded theory, discourse theory and narrative analysis (Saunders *et al*, 2012). The deductive analysis adopts Yin's (2003) procedures of pattern matching and explanation building. He suggests utilising the existing theory, proposed model and theoretical propositions to explain the data patterns that match expectations.

To analyse the data, qualitative content analysis is used. As defined by Patton (1990, p.381), "*the process of identifying, coding, and categorising the primary patterns in the data*". Content analysis used as a quantitative method based on the simple counting of words. It is used to quantify and systematically analyse documents, such as newspapers or communication content (Bryman, 2008). Despite its weakness among other effective quantitative analytical methods, content analysis continues to be utilised currently as either a qualitative or quantitative method. Further, it serves both the deductive and inductive research (Tesch, 1990).

The basic idea of qualitative content analysis is the objective, systematic analysis and evaluation of the documents, interviews or observations, and dropping the quantifications of data (Flick *et al*, 2004). Objectivity refers to defining clearly the categories, while systematically refers to the guidance of the research problem, questions or hypothesis in allocating the data to codes (Kassarjian, 1977). Moreover, in deductive studies, it allows the addition of new categories from the collected data, rather than being limited to those identified in the literature and guided by the conceptual framework (Althedie, 1987). Deductive content analysis is convenient for testing theory applied in a new context (Patton, 1990).

There are three approaches to qualitative content analysis. First, the conventional approach refers to coding the categories inductively from the data. Second, the directed codes are developed initially from the theory or model given the probability of new themes emerging from the data. Third is the summative approach, which is numerical like quantitative content analysis, but inductively explores and reflects the meaning of indicators (Hsieh and Shannon, 2005; Zhang and Wildemuth, 2009). The directed qualitative data is used as it is compatible with the purpose of qualitative study; it seeks the validation of the model.

Zhang and Wilemuth (2009) suggest eight sequential steps for analysing qualitative data. Step (1): prepare for the data, transcribe the data. Step (2): define the unit of analysis; the current study uses themes expressed in words, phrase, sentences or paragraphs. Step (3): develop categories; the proposed model is the base of inquiry from which all possible categories are generated, with allowance for modification by the emergence of new categories. Step (4): test the coding scheme; check consistency between the scheme definition and the assigned text. Step (5): code all the text. Step (6): recheck the coding consistency. Steps (7 & 8): draw conclusions and report the findings.

5.3 Results of Group Discussion

The FG discussion session is divided into two levels: the first focuses on model validation and asks participants about the factors underlying their brand preferences; and the second is directed at the scale development. The findings resulting from the qualitative data are reported in the following sections.

As planned, four FGs are conducted and all participants are recruited to fit the demographic profile of the study population. Each group comprises eight participants, except for the female group, which has only seven. One of the participants in the female postgraduate FG acknowledges her inability to attend and she participates at the last minute. The profiles of the participants in the four FG are illustrated in Table 5.1.

Table 5-1: The profile of FG participants

Group	Gender	Age		Educational level		Occupational status		No. of participants
		Range	**Rate**	**Degree**	**Rate**	**Status**	**Rate**	
First	Male	25-35 36-45 >46	4 2 2	MBA Bachelor Secondary	1 6 1	Private Gov.*	3 5	8
Second	Female	25-35 36-45	2 5	Bachelor	6	Emp.* HW*	3 4	7
Third	Male	18-25	8	Studying in Universities		Private Unemp.	2 6	8
Fourth	Female	18-25	8	Studying in Universities				8
*Gov – employed in governmental institutional, Emp. - employed, HW –housewife, Unemp. -unemployed								

5.3.1 Model Validation

As specified, the analysis of the raw data is based on coding schemes deducted from the model and literature. Based on the model, consumers build their brand preferences in line with their brand experiences and knowledge. Brand knowledge constitutes the different meanings consumers associate with the brand, including attributes/benefits and symbolic associations. Appendix B outlines the coding schemes and descriptions.

5.3.1.1 Brand Experience

Consumers experience brands by interacting with them during usage, trial, shopping or searching; in other words, they make physical or visual contact. The stimuli or inputs of the brand, such as attributes, identity or packages, form a range of personal impressions. These impressions or responses used to interpret the input data are stored in the consumer's long-term memory. These psychological responses created at different levels of involvement influence consumer behaviour (Brakus *et al*, 2009; Gentile *et al*, 2007: Meyer and Schwager 2007). The experience forms the cumulative knowledge of repeated exposure to the brand based on two trends: ordinary economic consumption and the extraordinary creation of a memorable and unforgettable experience (Carù and Cova, 2003). The findings of FG demonstrate that brand experience plays a fundamental role in motivating consumer preference for one brand over another. By experiencing the brand, consumers make subjective judgments that affect their preferences and choices:

"*I am experiencing Apple for all my gadgets, it is number one*."

> *"I have used many mobile phones but after experiencing Apple iPhone, I felt the difference and learnt mobile phones should be. After a week of experience realised that I have never had one before. Other brands should name their products something else but not mobile phone"* (FG2)

This experience can result directly from usage or trial: "*…cause you did not try Samsung, I was like you but after experiencing it I think it is better than Nokia*" (FG2); or indirectly from exposure to the brand: "*I did not try Sony Erickson before but I saw it with a friend and asked him if I can look at it, I liked it and decided to buy it*." (FG3),

> "*My cousin lives in America and he will buy me a new mobile phone when he is back. Thus, I searched online looking for a mobile phone and I asked him to buy me this HTC. I looked for many brands but at the end I prefer this one………………….no I did not like the Apple iPhone, why should I?*" (FG1)

> "*This mobile is a gift from my husband, it is expensive with the latest technology but every time I saw the Apple iPhone I wish if he asked me first. Of course, I thanked him… it was a lovely gift anyway. I kept it in the box for a week or more unsealed, then I opened it and used it because he began to feel that I did not like his gift. I like the gift and I was in need for new mobile phone but not this brand.* " (FG3)

The experience is created from repeated exposure to the brand, thereby forming cumulative information and supporting the idea that consumers learn from their experiences: "*I am more familiar with this brand than others….I do not think I can try other*." (FG4). Emotions play an important role in building consumer preferences and impacting future purchases. For example:

> "*I prefer Nokia over other brands, my first experience since mobile phone launched was with this brand. Even more, every time I am thinking of buying a new mobile phone with intentions of trying other brands I found myself attached to this brand and buy it again. Even more, I have two mobile phones one for personal usage with private number for family and friends and the other for business. The second mobile phone is work phone and is Nokia*." (FG1)

In addition, participants indicate that their preference is affected by experiencing the brand that reflects the brand meanings in experiential memorable responses: "*I have good memories with this brand of mobile phone*"; fun and enjoyment clues: "*I have many photos for my family, reminding me of good time*", "*I am enjoyed with this brand"*; emotional bond: "*I love this brand*"; sensorial response: "*Nokia tone*", "*Samsung shinny colours*", "*high resolution of pictures*"; and behavioural responses:

"*it is part of my daily life; waking me up, entertain me while driving, exercising, reading.* ".

5.3.1.2 Brand Attributes

In the literature review, the expectancy value theory and the multiattribute models focus on consumer perceptions of the brand salient utilitarian attributes in predicting and measuring brand preferences. By asking participants for the factors that develop their preference for certain brands, most reveal that the brand attributes influence their preferences. All participants cited brand attributes as influencing their preferences and elevating the brand. For example: "*I found Nokia has the easiest software comparing with other brands, I could not use different brand*." (FG1). "*…with this brand you can get all the attributes you may or may not need*." (FG1). Similarly, "*there are certain attributes I look for when buying a mobile phones such as the ease of use, language adaptability, and battery life. This brand satisfies me regarding my requirements."* (FG2). "*I love taking photos, and look for the mobile phone having camera with high resolution…the camera of Sony Erickson help me capturing memorable moments*." (FG3). "*This brand (talking about Nokia) meets all your requirements of a mobile phone, it has Bluetooth and Wi-Fi you can find other brands having either a Bluetooth or Wi-Fi, most of its models have good camera and accept the photos from other mobiles unlike the Samsung is limited, its battery life is long, its models are in different sizes and shapes; in addition, it has the easiest software*." (FG4).

The group discussion supports the importance of brand attributes in developing preferences for certain brands. Participants'' perceptions of the associations of the set of attributes they considered important or salient affect their preferences and motivate their purchase intention. In addition, the participants' responses support the argument that consumers form their preferences by evaluating and trading-off the attribute values offered by alternatives. Consumers prefer the brand alternative that offers multi-attributes and its choice will maximise utility.

5.3.1.3 Price

Economic rationality supports that price information is an important factor in determining consumer choice (McFadden, 1996). Price contributes differently to consumer decisions; it can be used as a guide to product quality when consumers are uncertain about the product (Sowter *et al*, 1971), value judgement, and the sacrifice consumers make in order to obtain the product (Zeithaml, 1988). The different meanings of price are revealed in the discussions as important in shaping consumer brand preferences. Participants explain the reasons underlying their brand preferences. First, their perceptions of the price fairness and how they encode the objective price acts as a cut-off point for their brand preference. The following statement is typical of at least one respondent in each group: "*I prefer this brand since it has all the features I require and even more and has the lowest price comparing to other alternative."* The fairness of price may be a reason to reject the brand, for example: "*Yes, I know that Apple iPhone can be the best and number one, but I do not see a reason for its price. It is too expensive; I do not like it…… I prefer Nokia more.*" (FG1). Consistently, *"I do not like the brand that is overpriced."* (FG4). In addition, a reasonable price is perceived as a low and affordable price, for example: "*these brands have many models and you can buy a new not the latest with affordable price*" (FG2).

Second, the value of money is an important indicator; however, value is a subjective concept. Some consumers perceive a brand of good value as the difference between what he gives and what he gets, for example: "*this brand worth every pound you paid*." (FG1). Meanwhile, the brand is considered good value when it does not lose money when buying a second-hand device: "*I prefer Nokia more because it has good value of money, when I sell it as second hand device I will not lose much. Unlike, the Blackberry you pay a lot and after short period of time even with light usage it loses more than half of its price*." (FG1).

Third, price can be an indicator of quality, for example: "*there are many models of these brands with different prices, but the expensive models are with latest technology and highest quality*." (FG2). Similarly: "*Many people do not prefer the Sony Erickson, may be because it is expensive comparing with other brands, but after I experienced it is a brand of high quality*." (FG3).

However, for other participants, price is not considered important and does not influence their preferences. For example: "*No price is not important.. I know the brand I like and its price range…I am willing to pay this price to get it.*" (FG3). Interestingly, one participant from the second FG stated: "*When my son asked for Blackberry torch I tried to negotiate with him and buy another cheaper device. He refused and what surprised me that he even refused other expensive brands like Apple iPhone or Samsung Galaxy. I realised that he really loves this brand and bought it for him*." (FG2)

In summary, the responses elicited from the group discussions reveal that price is an important factor, not only at time of purchase, but also in developing consumer brand preferences. Consumers prefer brands that are reasonably priced and good value. This supports the importance of the economic meaning of brands and the economist view of consumer rationality.

5.3.1.4 Appearance

The literature review revealed that brand appearance is a non-product related attribute; however, it is perceived as an important motivator of consumer preferences. Consistently, participants support the significant relationship between their preferences and the brand appearance. During the FG sessions, participants' perceptions of the beauty of the brand and its aesthetic appearance increased their favourableness towards certain brands. For example: "*this brand considers the importance of the device appearance unlike other brands*. *Not only the colours but the brightness of its colours, its design, an appearance that attracts my sight*" (FG2), "*You can feel the art in its curves*." (FG4), "*May be if it pays an attention to the appearance of its mobile phones consumers can like it*." (FG1). The appearance of the brand can also inhibit consumers: "*I do not know why everybody like this brand it has an abstract design*." (FG1), "*It looks ugly."* (FG1). While, for others, the appearance of technological product brands is not significantly important. For example: "*It has to be of good design, but I found all looks the same only different sizes*." (FG1).

According to the literature, consumers can have different perceptions of how appearance affects their preferences; however, most of the participants consider appearance as a symbolic aesthetic belief. Their responses focus on the aesthetic, attractive appeal and design.

5.3.1.5 Brand Personality

The impact of symbolic associations on consumer preferences is supported by the literature (e.g. Aaker, 1997). In the proposed framework, brand personality is one of the independent factors hypothesised as having significant impact on consumer preferences. The brand personality affects consumer preferences by encouraging self-expression and having favourable perceptions of the type of personality assigned to the brand. The salient brand personality can affect consumers brand preferences. During the FGs, the participants explained the underlying reasons for their preferences by assigning human personality traits to the brand. Based on these traits, the degree to which they favour the brand is determined. Some traits are common across the four FGs, and these motivate consumer preferences towards certain brands, such as those that are friendly, smart, patient and reliable. In contrast, other traits are unfavourable for consumers, such those of stupidity and complexity (uneasy). For example: "*I like Nokia it is more like a modest, friendly person*." (FG"), "*This brand is like a friend*" (FG4), "*I do not like this brand it is like a stupid person who needs extensive explanation to do a simple job*." (FG1), "*It is a brand that suits both male and female.*" (FG3).

In addition, personality traits can be used as an indicator of consumers' evaluations of the brand attributes or benefits. For example:

> "*This brand is patient it suffers a lot from me… I am not the kind of person who cares about their mobile phones; it always fall from my hand on floor, drop it in water two times and it is still working. I care about the mobile phones when it is new, but after a week or more. I am back to my usage habits.*" (FG4)

Brand personality can have a positive or negative impact on consumer preferences, depending on the degree of likeness to the personality type. Consumers can have different perceptions of brand personality.

5.3.1.6 Self-congruity

The last independent factor in the proposed model is self-congruity refereeing of the relationship between the consumer self-image and the brand-image in terms of congruence. Prior studies support the significant impact of self-congruity on consumer preferences (e.g. Jamal and Al-Marri, 2007; Sirgy, 1982; Sirgy *et al*, 1997). These studies reflect that the higher level of congruence between the self-concept and consumer perceptions, or mental representations assigned to the brand-user, the higher their preferences for this brand. During the group discussion, participants' responses are consistent with the results of previous studies. Clarifying the role of self-congruity theory developed by Sirgy, (1982) the brand image produced by the brand cues activates consumers' self-schema having the same image and the existence of a link between his self-concept and the brand-image. For example: "*you feel that this brand is one of us*." (FG1), "*I am not the kind of Blackberry user*." (FG1), "*there are lots of commonalities between me and Blackberry, I love it*." (FG2),

> "*I do not have a favourite brand for mobile phone, I buy Nokia, but I cannot say that it is my favourite. I do not feel myself in any of these brands. My husband will buy me an Apple iPhone in our anniversary; I did not see myself in it before, but in white colour…it will suit me*."(FG2).

Accordingly, the symbolic associations of the brand represented by the brand personality and the self-congruity contribute significantly to building consumer preferences for brands. However, these associations do not constitute the salient factor influencing preferences. In addition, the differences between the symbolic associations of the brand as a person and self-congruence are clarified in the group discussions.

5.3.2 Scale Development

The second aim of conducting FGs is to identify the items used in the development of the questionnaire. At this level of discussion, the questions directed to the participants asked them to describe their experiences of different brands of mobile phones, define the salient attributes of mobile phones and the human personality traits that can be used to describe different brands of the product type. The findings are reported in the following three sections.

5.3.2.1 Brand Experience Dimensions

Brand experience is a multi-dimensional construct reflecting consumer responses to brand inputs using different dimensions. Again, the coding schemes that define consumers experience with brands are developed deductively based on the literature; experience has various dimensions as illustrated in Chapter two, Section 2.6.1. Figure 5.1 gathers all of the defined dimensions presenting consumers' subjective, internal and behavioural responses to describe their brand experiences (Brakus *et al*, 2009; Gentile *et al*, 2007; Schmitt, 1999). The coding schemes and the description used in qualitative data analysis to describe consumer brand experience are illustrated in Appendix B.

The analysis and coding of the themes from participants' responses indicate that users' experiences of different brands of mobile phones can be described using five dimensions; sensorial, emotional, intellectual, behavioural and social.

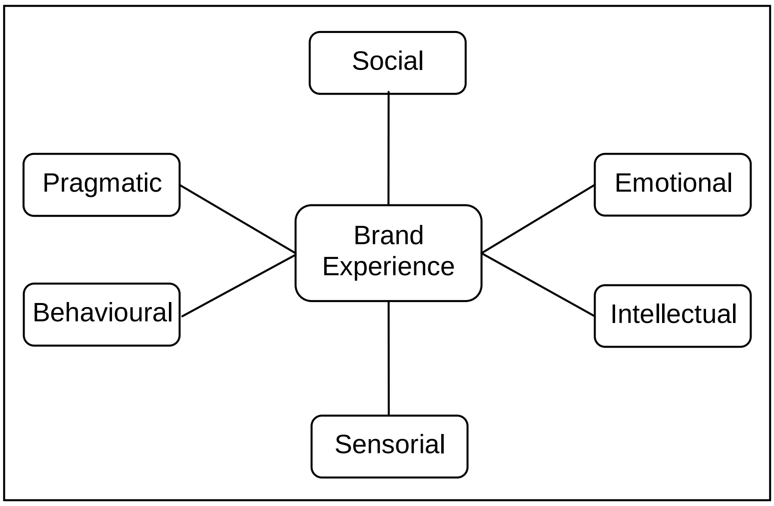


Figure 5-1 Brand experience dimensions

5.3.2.1.1 Sensorial Experience

Sensorial experience refers to the consumer's perception to the brand according to sight, smell, taste, sound and touch (Schmitt, 1999). These senses are the basic channels through which the brand can reach the consumer mind, thereby forming the perceptions and the value outcome (Hulten, 2011). The consumer receives these multi-sensory impulses from different brand-related stimuli, such as colour, design and shape, and generates a sensorial image of the brand (Hirschman and Holbrook, 1982). These inputs can be either interpreted cognitively or affectively, resulting in other experiential aspects that form consumer preferences (Brakus *et al*, 2009; Zajonc, 1980).

The study focuses on brands of mobile phones, so the senses of smell and taste generated from the atmospheric and gastronomic brand settings are missing. Mobile phones can stimulate only three senses: sound, sight and touch. Through these sensorial imprints, the consumer creates his brand experience.

All FG participants reported sensorial experiences with different brands of mobile phones. The brand can stimulate the user's senses. The appearance of the brand, its design, colours, and material deliver value by appealing to consumers sights. For example: "*this brand has good appearance*", "*Samsung attracts my sight", "its appearance is so elegant*", "*looks classy*". In addition, the resolution of the photos and video recording create sensorial experience, for example: "*camera with high resolution…the camera of Sony Erickson helps me capturing memorable moments*." Participants describe how the quality and clarity of sound, and the default or downloaded ringtones affect their experiences. For example: "*I like Samsung default ringing tones and its clarity of sound, but the volume of sound of Nokia phones is* *higher*.”, “*I am familiar with Nokia tones, it is well-known than other brands….I do not know the default tone of other brands*”. Sometimes, consumers experience a brand stimulus negatively through their senses, for example: “*Ohh I hate all of its ringing tones, its bother me, it is loud, noisy like ambulance siren*” (FG1). Mobile phone brands can also create an experience for the users through touch. For example: "*I had many models of Nokia, but after I experienced the feeling of the touch screen I do not think I can use the keypads again. I love the feeling of the touch screen*". (FG1), “*My phone is touch screen, but when I used my friends phone I found it different and could not use it*.”(FG2), “*I can carry and use my mobile phone with one hand.*” (FG4)

From the FG discussions, it was revealed that participants induce responses to brand inputs through their senses. Some brands create experience through a single sense, while others appeal successfully to consumers through multiple senses. Consistent with Pine and Gilmore, (1998) there is a suggestion that consumers engage with the brand through many senses, which creates effective and memorable experiences.

5.3.2.1.2 Emotional Experience

Emotional experience refers the brand’s stimulation of the consumers' affective responses explicit in the form of positive moods and/or strong emotion (Schmitt, 1999). Emotions are the physiological, expressive and experiential responses, including feelings and moods that alter the state of mind and body (Hirschman and Holbrook, 1982). The emotional responses are not related only to hedonic products; however, Kempf (1999) revealed that the feeling of pleasure is significant for both utilitarian and hedonic products. Even if the brand is utilitarian, its utility can be maximised through both hedonic and functional values. The study focuses on different brands of mobile phone, which is considered a high-tech balanced product with both hedonic and utilitarian values (Robin and Dwayne, 2006). The mobile phone can deliver utilitarian value when it is used to access help during a time of trouble, but when the user chats with his/her friends or listens to songs, it create a hedonic value (Uzma Khan and Wertenborch, 2005).

The participants were asked to describe their emotional experiences with different brands of mobile phones. These are defined through different means, such as inducing feelings towards certain brands that represent the existence of a strong emotional link or bond between the user and the brand. For example: “*The main thing is the emotional link. I can buy an expensive mobile phone like Apple iPhone, but I love Nokia phone.”*

(FG1), *"I love it and pamper it, buying accessories for it that equals almost its price."*(FG2), "*I love this brand more*." (FG4), "*I feel that we are in love with each other*." (FG2), "*My inner feelings direct me towards this brand.*" (FG1).

Participants in the four FGs describe their emotional responses to using the brands in terms of pleasure, happiness and joy. For example: "*I am happy with Nokia*" (FG1), "*You can feel joy and fun with BB*." (FG2), "*This brand joins me my lively experiences*" (FG3), "*the logo is like a smile face makes you happy*" (FG3), "*I am happier when I am using Nokia mobile phone than other brands."* (FG1), "*I feel happy when I look at the photos of my kids set as wallpaper*." (FG2). The brand can also create emotional experiences for the consumers by putting them in a special mood or state of mind. For example: "*With this brand I feel like I am sitting in the living room."* (FG2), "*I feel more relaxed in my life with this brand.*" (FG1), "*I loved the feeling of luxury with the sliding motion experienced with my old phone*." (FG2), "*This brand is like photo album for me and my friends."*(FG3).

Experiencing the brand can create different emotional responses in consumers. These emotions can be induced by using the brand, or as a response to specific input or stimuli. In addition, several responses can be induced from the same stimulus. Participants indicate that they enjoy experiencing the multi-media features of the brand; while, in others it generates a positive mood.

5.3.2.1.3 Intellectual Experience

When consumers engage with the brands in terms of analytical, creative and imaginative thinking, it appeals to their intellect. Brands appeal to the cognitive or intellectual experience for consumers through design, revisions and updated-technology. This experience is not limited to technological products (Schmitt, 1999). Participants' descriptions of their experiences with mobile phones revealed the importance of this component. This component of experience is described by the associated level, use and type of technology with certain brands. For example: "*People are now thinking what Nokia will do next*." (FG1), "*I experienced the use of camera with this brand; while, other were just mobile phones for usual usage.*" (FG1), "*The rate of development of this brand is very fast, it adds new technology with every edition*."(FG3),*"Unlimited use of technology."*(FG2), "*This brand surprises mobile phone users with the technology of touch screen*." (FG1). "*The exclusive chatting service for brand users.*"(FG3). "*The up-to-date technology with fewer prices*." (FG1)

The brand creates an intellectual experience as well revising the product usage. Mobile phones are a good illustrative example of this type of experience. For example: "*This brand is like a laptop in your hands*." (FG3), "*Mobile phones usages are extended beyond the function of calls and communication.*" (FG4), "*This brand succeeds in introducing more than a mobile phone.*" (FG1). Consumers who engage in analytical thinking and problem-solving experiences are experts and knowledgeable; they are apt to infer new information about the brand and go beyond what is provided (Alba and Hutchinson, 1987).

5.3.2.1.4 Behavioural Experience

Brands can affect consumers physically by introducing new ways of doing things, an alternative lifestyle, and changes in behaviour. Brands of mobile phones succeed in delivering new experiences to users; thus, different behavioural responses are induced by interacting with the brand. Participants' descriptions of their brand experiences reveal that this component can appeal to users through its suitability to their life style. For example: "*This brand fits my lifestyle.*" (FG1), "*I can do my daily exercises.*" (FG2). In addition, participants indicate that new technology alters their behaviour and make their life easier. For example: "*I can concentrate more in the lectures and do not have to write memos by simply recording it.*" (FG4), "*I do not have to take sample slides home I just photo it.*" (FG4), *"I am more organized with Nokia"* (FG2), *"Using Apple iPhone changed much of my behaviour, I am not doing anything the way I use to do."* (FG2).

Similarly, Heilman and De Chernatony (1999) suggest that different patterns of lifestyle themes are created from consumption experience suitable for consumer role transitions. Traditionally, this was explained by rational approaches, such as the theory of reasoned action (Fishbein and Ajzen, 1975) assuming that consumer's behaviour is a function of his attitude towards the act and the social norms. According to the technology acceptance model (Davis, 1989), part of consumer's behavioural experience with hi-tech brands depends on the consumer's acceptance of new technology offered by mobile phones and expressed by behavioural responses towards the brand. Experience of mobile phone technology forms positive attitudes towards accepting the new actions and behaviours. Thogersen (2002) stated that direct experiences are more accessible to the individual memory by guiding mental representations and, thus, affecting personal norms and behaviours.

5.3.2.1.5 Social Experience

The social experience refers to the relationship relating consumers to other individuals and groups (Tynan and Mckechnie, 2009). Interviewing participants in the four FGs show that users can socially experience the brand through communication with others. For example: *"Because of the BBM service in the Blackberry I feel that I am connecting to the whole world."* (FG3), "*My family can contact me whenever and wherever I am and they are not worried about me like before."* (FG3).

In addition, brands can also appeal socially to the consumer by expanding his/her private individual context to a group context. Participants describe this component of experience as the sense of belonging to another reference group, positive perceptions by group members, and having strong bonds and relationships. For example: "*We are like Nokia Team*." (FG4), "*I have different brand so I am not member.*" (FG4), "*My entire group is using the same brand and the same model, we are known the group of communicator*." (FG1), "*My son feels odd because he is the only person in the class not using Blackberry.*" (FG2), *"I am connected with my family members 24/7 and the bill is just the monthly subscription*." (FG2), "*If my mobile phone is well-known brand and new I will feel more confident showing it to people*." (FG3).

McAlexander *et al* (2002) indicate that building relationships between the brand and its users is inherited from their experience and not a characteristic assigned to the brand. Communities sharing commonalities between its members are more likely to experience the brand socially. As noted in the previous example, consumers of the same age, personal history, who share the same traditions and context knowledge, can experience the brand through a sense of creating social identity in a group.

Accordingly, participants reported brand experiences that occurred during their in/direct interaction with brands of mobile phones inducing several subjective and behavioural responses to brand inputs. Analysis of their responses reveals that brand experiences of mobile phones can be described using five dimensions: sensory, emotional, intellectual, behavioural and social, consistent with Schmitt (1999). Therefore, these dimensions will measure consumer brand experience during the quantitative phase.

5.3.2.2 Attributes Perceptions

To develop the scale for the next phase, the attributes/benefits consumers assign to the product category should be determined. During the survey, consumers will rate their beliefs about brands. This method is considered effective since consumers will retrieve from memory the brand and the linked nodes of attributes and benefits in order to make judgments (Dillon *et al*, 2001).

Accordingly, the moderator used two tools at this stage: *first*, free elicitation; asking the participants to mention the attributes and benefits they believe it is important when choosing or selecting a brand of mobile phones, *second*; their judgment on the attributes and benefits included in the prepared list. Thus, ensuring there is no missing attribute consumers should associate to the brand to develop their preferences and stimulate their purchase intentions.

The list of attributes included in the pre-test questionnaire and used in further analysis, is determined by the dominant or common attributes identified as important by participants within and among the focus groups (e.g. Bhat and Reddy, 2001; Mackay, 2001; Bian and Moutinho, 2009; 2011; Grimm, 2005; Shocker and Srinivasan, 1979). There is no definite criteria to refer to the number of attributes; some studies include 10 attributes or more (e.g. Grimm, 2005; Mackay, 2001; Stoel et al, 2004). Other studies include fewer; Agarwal and Malhotra (2005) include the top seven rated attributes, while, Bhat and Reddy (2001) measure the perceptions using only four dominant attributes. Hansen (1696) demonstrates that many attributes can lead to the same results as including only a few. The average number of attributes included yielded a strong prediction of preferences ranging from three to seven (Wilkie and Pessemier, 1973).

Table 5.2 illustrates the attributes identified by participants in the four focus groups. In each group, not all participants agree on the importance of each attribute. However, attributes can be categorised into three groups: first, the majority of the participants agree on its importance; second, some of the participants consider it an important attribute while others identify it as unimportant; third, agreement among participants on its irrelevancy or unimportance.

Table 5-2 Mobile phones attributes identified by focus group

Attributes	FG1	FG2	FG3	FG4
1- Interfaces (3G, GPRS, Wi Fi)	√/x	√/x	√/x	√/x
2- Multimedia features (camera, video, MP3,*etc*)	√	√	√	√
3- Memory capacity	√	√	√	√
4- Manufacturing quality	√	√	√	√
5- Functionality	√	√	√	√
6- Ease-of-use	√	√	√	√
7- Durability	√	√	√	√
8- Fun features (games, themes, *etc.*)	√/x	√/x	√/x	√/x
9- Battery life	√/x	√/x	√/x	√/x
10- Country of origin	√/x	√/x	√/x	√/x
11- Language adaptability	√	√/x	x	x
12- Technical assistance	√/x	√/x	√/x	√/x
13- Physical characteristics (size/weight)	√/x	√/x	√/x	√/x
14- Two-SIM card	√/x	x	x	x
15- Touch screen /keypad	x	√/x	x	x
16- Security	x	x	x	x
17- Warranty	x	x	x	x
18- FM Radio	x	x	x	x
19- Standby time	x	x	x	x
√ - majority of participants identified as important x - majority of participants identified as unimportant √/x - no dominance on its importance				

Accordingly, the first and second groups of attributes are considered for further analysis in the pre-test questionnaire. The total number of these is 13: seven attributes are perceived as important by the majority of participants in each group, and six have their importance disputed. Only six attributes are identified by participants as unimportant in defining their choices.

The seven salient attributes of mobile phones perceived as important by the participants of the four FG are the interfaces (3G, GPRS, Wi-Fi), multimedia features, such as the camera, video recording, MP3 player, memory capacity, manufacturing quality, ease of use, functionality and durability.

Interfaces (3G, GPRS, and Wi-Fi) – in Egypt, 70% of mobile users are also web users; they depend heavily on mobile phones to access the web, rather than a desktop, laptop or tablet. Comparing this figure with developed countries such as the US or UK with only 25% and 22% respectively are mobile web users can demonstrate the significant difference (Global mobile statistics (2010). Available at: http://www.mobithinking.com/mobile-marketing-tolls/latest-mobile-stats (Accessed: 20 July 2011). The majority of participants in each group identify it as a salient attribute of mobile phones. For example: "*It is important that I can access the web through the mobile phone.*" (FG1), "*The mobile connectivity to the internet via the 3G or Wi-Fi- is important, I can download songs, themes, edit photos*." (FG2), "*Although, the GPS is not accurate in Egypt, but this in the downtown for the main roads I think it works good*." (FG3), "*I download the latest album on my phone.*"(FG4).

Multi-media features – this attribute includes the camera, video recording and media player. The participants identify this as a salient attribute, even if they do not use it frequently. This is evident in: "*I do not use the camera of the mobile phone a lot but I will not buy a mobile phone without camera*." (FG1). None of the participants in the FG mention that he/she could think of buying a mobile phone without a camera. For example: "These features are now one of the essentials attributes in mobile phone." (FG4), "*Of course, a mobile phone must have a camera and video recording; I took photos for my kids daily*." "*All the multi-media features are important the media player, camera, video…….I will not carry more than one gadget when I am going out."* (FG2). "*This is one of the attribute that should be in my mobile phone, I tried many brands of mobile phones looking for the best camera.*" (FG3).

Ease of use – this is an attribute that participants evaluate as important and a key distinguishing feature among different brands. For example: "*The ease of use is important I cannot use any brand of mobile phone but this brand. It is easy and I got used to it*.", (FG1), "*There are some brands I found difficulty in using them.*" (FG2).

Durability – this attribute is mentioned by the participants in the group discussion; however, it is perceived differently. Participants cite durability as one of the salient attributes of mobile phones. Some refer to it as the strength of the phone and its stability. This is evident in the following example: "*It fall down on floor many times, my kids are playing with it, it is with me in the kitchen, and still as good as new*.", "*I dropped it on water, and still working*." (FG2). "*It does not depend if you are care or careless, it is common to drop the phone. Some brands will be set on parts*." (FG1)

While, to other participants, durability also means the robustness of the phone and long life. For example: "*I buy the new edition/model of this brand but I have all the old ones in good conditions*." (FG3).

Functionality – this refers to the good performance of the device; no breakdowns, faults or freezing. This is another important attribute of mobile phones identified by participants. For example: "*It is important to have good performance, because I do not like to send my mobile phones for technical assistance. All my contacts are saved on it, family pictures, cannot go without it*." (FG4).

The memory capacity of mobile phones is another important attribute that most of the participants rate as important; either, the default device memory or the extension of its memory capacity using memory card. Lastly, the manufacturing quality is identified as important. Some brands, such as Nokia, can be manufactured in its country of origin; Finland, or in another country like China. Other devices manufactured in other countries have the same features and cannot be differentiated from the original other than by the price. Moreover, some consumers can be deceived and buy it at the same price as the original. These devices are cheap but of poor quality. Additionally, during the group discussion, the participants stated that the manufacturing quality varies among different brands. These differences become clear after a short period of usage.

During the group discussion, the majority of participants among did not agree on the un/importance of some attributes, such as battery life. Some participants consider long battery life to be an important attribute. For example: "*I spent out long time and the battery life is important, if the battery is drained I will not be able to charge it till I am home after two or three days."* (FG3), "*It is important; the battery of some brands of mobile phones do not even last till the end of the day."* (FG1). For others, it is important but they state that no brand of mobile phone has a long battery life; most need to be charged daily. For example: "*With the multiple functions of the mobile phone; I use it for internet browsing, chatting, phone calls….etc. The battery lasts for a day or even less.*" (FG1), "*I do not mind to charge my mobile phoned daily*." (FG4).

Other important attributes not identified by the majority of participants in each focus group are: fun features, such as themes, games and wallpapers, country of origin, physical characteristics and technical assistance. For instance: "*The mobile phone should be small*." (FG2), "*The size of mobile phone is unimportant, it is in my handbag*." (FG2).

The identification of language adaptability as an important attribute is different among the groups. In FG1, the majority consider it important and if it is not an option they will not buy the device. Surprisingly, this attribute is not related to education level. For example: "*I will not be able to use the mobile phone if it is not in Arabic (High school).*", "*I am good at English but I prefer to use it in Arabic, feel more relieved (bachelor degree in Law)*" (FG1). There was no domination of its importance in FG2, for example: "*It is important to be in Arabic*.", "*I tried it once in Arabic and could not use it, suffered till I navigate the menu to reach this option again*". While, in FG3 and FG4, the majority consider it an unimportant attribute. For example: "*I do not even ask about this attribute.*" (FG3).

Besides language adaptability, participants' judgement of two other important attributes, touch screen/keypad and two-SIM cards, are different among groups. The former did not receive importance participants, except for some in FG2. In this focus group, some of the participants indicate their preference for the touch screen over the keypad; while for others it makes no differences. For example: "*At first I was not used to it but after I got used to it I cannot use keypad again*." (FG2). Likewise, the attribute of two-SIM cards is also perceived as important for some participants in FG1 but makes no difference to participants in other groups. For example: "*This attribute is important but unavailable in big brands*" (FG1). Accordingly, these two last attributes are not considered for further analysis.

The majority of participants identify the unimportance of some attributes of mobile phones, such as, warranty, security, FM radio and standby time.

5.3.2.3 Brand Personality Dimensions

Due to the weakness of Aaker's brand personality scale (1997), the current study depends on the big-five human personality traits used in prior studies (e.g. Caprara *et al*, 2001; Geuens *et al*, 2009). To use this scale for further analysis, the applicability to human traits on brands should be examined. This will ensure that the traits used are descriptive and the validity of the scale is assessed (Caprara *et al*, 2001). Therefore, at the last session of the discussion in each group, the questions about the human traits are directed at participants. First, traits are identified using free elicitation; second, participants judge the appropriateness of the human traits given in Table, 5.2. Each dimension of the big-five human personality traits is identified by eight traits based on the findings of Caprara *et al*, (2001), Goldberg, (1992), and Sweeney and Brandon, (2006).

As mentioned in the literature review, the brand and human personality traits can share conceptualisation. However, the differences lie in how individuals perceive the trait and assign it to the brand/human. For humans, personality traits describe his/her attitudes, behaviours and beliefs. While, for the brand, the traits can be assigned directly describing the brand-user, the company itself, employees, and CEO and the brand endorser, or indirectly describing the product-related attributes, type of product, brand name or logo and price.

This part was not easy, as it required the imaginations of the participants. Therefore, the moderator directs the question to the participants by asking them to imagine if the different brands of mobile phone were people, and how they can describe them using human traits. During the free elicitation, participants describe the brands of mobile phones as: friendly, faithful, pleasant, genuine, modest, reliable, efficient, practical, intelligent, creative, innovative, modern, up-to-date and sophisticated.

Table 5-3 Brand Personality traits

Traits	FG1	FG2	FG3	FG4
Extroversion				
1- Active	√/x	√/x	√/x	x
2- Energetic	√/x	√/x	√/x	x
3- Adventurous	√/x	√/x	√/x	√/x
4- Strong	√/x	√/x	√/x	√/x
5- Happy	√/x	x	√/x	x
6- Resolute	x	x	x	x
7- Competitive	√/x	√/x	√/x	√/x
8- Dominant	√/x	x	x	x
Agreeableness				
1- Affectionate	x	x	√/x	√/x
2- Altruistic	x	x	√/x	√/x
3- Generous	√/x	x	x	√/x
4- Friendly *	√/x	√/x	√/x	√/x
5- Faithful *	√/x	√/x	√/x	√/x
6- Pleasant *	√/x	√/x	√/x	√/x
7- Genuine*	√/x	√/x	√/x	√/x
8- Modest*	√/x	√/x	√/x	√/x
Conscientiousness				
1- Reliable *	√/x	√/x	√/x	√/x
2- Precise	x	√/x	√/x	x√
3- Efficient *	√/x	√/x	√/x	√/x
4- Practical *	√/x	√/x	√/x	√/x
5- Hard-work	√/x	√/x	√/x	√/x
6- Neat	x	√/x	x	√/x
7- Regular	x	x	x	x
8- Productive	x	x	x	x
Emotional stability				
1- Patient	√/x	√/x	√/x	√/x
2- Calm	x	x	√/x	√/x
3- Level-head	√/x	x	√/x	x
4- Stable	√/x	x	x	√/x
5- At-Ease	√/x	√/x	√/x	√/x
6- Emotional	x	√/x	x	√/x
7- Relaxing	x	x	x	x
8- Light-hearted	x	x	x	x
Openness to experience				
1- Intelligent*	√	√	√	√
2- Creative *	√	√	√	√
3- Innovative *	√	√	√	√
4- Modern *	√	√	√	√
5- Up-to-date*	√	√	√	√
6- Sophisticated *	√	√	√	√
7- Fanciful	x	x	√/x	x
8- Informed	x	x	x	x
Free elicitation traits				
Complex	√	√/x	√/x	√/x
Upper-class	√	√	√	√
Successful	√	√	√	√
Masculine	√	√	√	√
Feminine	√	√	√	√
√ - majority of participants identified as important, x - majority of participants identified as unimportant, √/x - no dominance on its importance , *Identified during the free elicitation				

The brands that people describe in the free elicitation session are Nokia, Apple, Samsung and Blackberry. Nokia, was described using not only the traits of both agreeableness and conscientiousness dimensions, but also openness to experiences. Both Apple and Blackberry are perceived by participants as openness to experiences personality; described by using traits. In addition, other traits were used that are not on the list, like complex, masculine (Blackberry) and upper-class (Blackberry and Apple). Samsung is perceived by most participants as a feminine brand.

These are evidenced in the following examples: "*Blackberry is a complicated person wearing a suit and a tie."* (FG1), "*Samsung is a feminine brand; it is weak and has shinny colour."* (FG3), "*Apple iPhone is an upper-class brand."*(FG1).

In addition, participants can assign a trait to more than one brand; for example, sophisticated is used to describe both the Apple iPhone and Blackberry. Furthermore, there are some traits that participants reject initally, but when one of the participants accept it as descriptive and illustrate the reasons, then it can be accepted. A calm trait was found to be descriptive for some brands. For example: "*Any mobile phones adjusted on silent mode will be calm, but if calm means a person with low voice then Samsung is calm."* (FG3). "*LG will be calm too, you hardly hear it riming*." (FG3). Other traits, like generous and altruistic, were first identified as non-descriptive but participants convinced each other of the possibility of its usage. This can be evidenced by: "*Why (asking other participants)? Blackberry can be generous with its BBM service."* (FG1), "*If we consider Nokia acceptance to exchange files, and images with other brands of mobile phone, then it can be described as an altruistic or a generous person; unlike, Samsung a selfish person."* (FG4).

Only traits that the majority of participants consider inapplicable and irrelevant to describe brands of mobile phones are excluded. However, other traits that form the majority of participants' opinions in each group or across groups are included in the pre-test questionnaire for further analysis. Accordingly, 32 traits are retained for further analysis in the next stage.

5.4 Problems Encountered by Moderator

Two main difficulties were encountered by the moderator during the group discussion. The first is the difficulty of explaining academic concepts to participants. Participants experience difficulties understanding two main questions; describing their brand experience and brand personality. The moderator explained these academic concepts by illustrating the definition, which helped to some extent but not wholly. In addition, the moderator was expecting such a problem; therefore, illustrative examples for every question were prepared and translated from prior studies (e.g. Brakus et al, 2009; Meyer and Schwager, 2007). It was decided to not provide illustrative examples for the same product category so that participants would not repeat them; however, the participants still should be familiar with the product type. Examples about consumers' experiences with brands such as BMW, Crest and Nike were given. The same was applied to the concept of brand personality.

The second problem encountered by the moderator was the reluctance of some participants to interact with the group. To overcome this problem and gain the benefits of group discussion, the moderator stimulated discussion using direct questions. In addition, it was important to reiterate that the focus is on the brands of mobile phones not the product itself.

5.5 Refined Qualitative Data

The objectives of using FGs during the first phase of data collection are the validation of the proposed model and development of better measures. These objectives were achieved by conducting the group discussions. The proposed model is built based on the literature review in order to determine the antecedents of consumer brand preferences. By reviewing the literature, two main sources are identified as antecedents of brand preferences: brand knowledge and brand experience. The brand knowledge is defined as the meanings consumers glean about the brand that can be distinguished by product-related and non-product-related attributes ((Erdem *et al.*, 1999; Keller, 1993; Plummer, 2000). According to Keller (1993) the brand-related attributes are elicited from intrinsic cues, while the brand non-related attributes can be elaborated by information about price, appearance, brand personality and self-congruity. The brand experience is defined by the subjective, internal and behavioural responses consumers have to any direct or indirect contact with brand-related stimuli. Therefore, the model proposed in Chapter three is composed of six constructs that reflect the determinants of brand preference. The philosophical approach adopted in this study, post-positivism, believes in the role of social actors to interpret and add to existence knowledge, play the role of critical realist (Saunders *et al.*, 2012; Bryman and Bell, 2011; Guba and Lincoln, 1994). Accordingly, this qualitative phase presents an important exploratory stage to define from the research context the antecedents of brand preferences, in order to validate the model and generate items to develop the questionnaire used in the second stage of data collection. The refinement of the qualitative data validates the model by defining the antecedents of brand preferences as follows:

First. Brand experience; the holistic nature of consumer experience with the brand plays an important role in determining preferences. The responses consumers have to direct and indirect contact with the brand are described by five dimensions, sensorial, emotional, intellectual, behavioural and social. Through these dimensions, the consumer defines the value perceived from the brand offerings, features, identity and other related-stimuli.

Second. Attribute perceptions; these present consumer salient beliefs about the brand's intrinsic cues. These include the descriptive features related to the product performance and the personal benefits assigned to it. The objective evaluation of the brand at the attribute levels (Grimm; 2005; Keller, 1993; 2003; Park and Srinivasan, 1994; Myers, 2003). Through the group discussion, the brand attributes constitute an important in consumer preference and brand choices of mobile phones. Then, at the second level, the participants were asked to determine the salient attributes they consider when choosing a brand of mobile phone. The following table presents the common salient attributes across the four conducted focus groups.

Table 5-4 The common salient product attributes and benefits

	Items		**Items**
1	Physical characteristics (size/weight)	8	Manufacturing quality
2	Fun features (games, themes, *etc.*)	9	Ease-of-use
3	Interfaces (3G, GPRS, Wi Fi)	10	Durability
4	Battery life	11	Functionality
5	Multimedia features (camera, video, MP3,*etc*	12	Technical assistance
6	Memory capacity	13	Language adaptability
7	Country of origin (proxy of quality)		

Third. Price perceptions, an extrinsic cue, non-product-related attribute encoded by consumer to constitute an important component of monetary value perception. Consumers account for the price and depend on it when comparing alternatives. Price is an important step in the purchase decision process. Typically, it is not related to the product performance; however, it reflects the economic meaning of the brand that organises consumer knowledge. The participants reflect the importance of price when selecting a brand by fairness of the price, value for money and indicator of quality level.

Fourth. Appearance perception, is a non-product-related attribute, which reflects consumers beliefs about the aesthetic appeal of the brand. By reviewing the literature, appearance is considered an important antecedent of brand preference (e.g. Schoormans and Robben, 1997). During the FG sessions, participants consider appearance an evaluative criterion that defines preferences. Consumers seek a brand with high functionality and utilitarian values; however, the beauty of design is an important aesthetic and symbolic value for preference.

Fifth. Brand personality refers to the set of human personality traits that are both applicable to, and relevant for, brands. Consumers are unfamiliar that they are humanising the brand when citing the reasons of their preferences. To avoid the criticism of Aaker's brand personality dimensions (1997), the study uses the big-five personality traits. Participants were asked to determine the applicability and relevance of these to describe the brands of mobile phones. The following table illustrates this.

Table 5-5 Personality traits approved at this stage

	Items		**Items**
	Extroversion		
1	Active		**Emotional stability**
2	Energetic	21	Patient
3	Bold	22	Calm
4	Strong	23	Level-head
5	Happy	24	Stable
6	Competitive	25	At -Ease
	Agreeableness	26	Emotional
7	Affectionate		**Openness to experience**
8	Altruistic	27	Intelligent
9	Genuine	28	Creative
10	Generous	29	Innovative
11	Friendly	30	Modern
12	Faithful	31	Up-to-date
13	Pleasant	32	Sophisticated
14	Modest		**Free elicitation traits**
	Conscientiousness	33	Complex
15	Reliable	34	Upper-class
16	Precise	35	Successful
17	Efficient	36	Masculine
18	Practical	37	Feminine
19	Hard-work		
20	Neat		

Sixth. Self-congruity reflects the degree of congruence between the product-user image and the consumer actual self-concept. This construct has been demonstrated in the marketing literature as an antecedent of brand preference, reflecting the brand symbolic value (e.g. Sirgy, 1982; Sirgy *et al.*, 1997). During the group discussions, participants considered the brand-image, and the extent to which it matches their self-concept as a determinant of their preferences.

5.6 Conclusions

This chapter presents the findings of the qualitative study using four FGs with brand consumers/mobile phone users conducted in Egypt. This study was directed to fulfil the objectives of validating the research proposed model and development of the measurement scale used in the survey conducted at the second quantitative phase. Each focus group consists of eight participants and lasted for 90 minutes in average. The qualitative data was analysed using the directed content analysis; this is useful for model validation. The coding schemes are developed using the proposed model and the literature review, and no new codes are induced from the data. Several points can be concluded from this phase:

- The research proposed model defines the different elements of brand knowledge consumers used to develop their preferences for brands and capture the importance of brand experience in enhancing these preferences. No new factors are induced for the group discussions; thus, confirming the validity of the model and its ability to develop a robust understanding of consumer preferences.

- The homogeneity within the group helps to conduct good group discussion and enables interaction between participants. In addition, it encourages them to be more relaxed when discussing opposing opinions. The heterogeneity across groups used as a lens to identify the group differences subject to demographics. However, no significant differences are found between groups to support the impact of demographics on brand preferences.

- The four FGs described their experiences with the brand using sensorial, emotional, intellectual, behavioural and social dimensions; thus, supporting the multi-dimensionality of the concept as stated in the literature. Consumer experience can reflect the marketing strategies used by mobile phone companies.

- There are differences between the symbolic meanings consumers associate with the brand. Self-congruity refers to the degree of resemblance between brand and user image; while, brand personality is the image perceived by the consumer for the brand elicited from the logo, attributes or user. Consumers can have different traits assigned to a single brand, but the similarity may exist. Initially, some insights can be drawn on this essence, self-congruity enhance the brand preference focusing on for me concept; while, the brand personality reflects the early symbols characterise the brand from which some traits can meet my self-concept.

- Initially, the big-five human personality traits are applicable and relevant to describe brand personality of this product type. From the group of human traits selected, only eight traits are non-descriptive, thereby making 80% of the big-five personality traits applicable to the brand. Additionally, participants depend on both the direct and indirect sources in assigning human traits to the brand. From participants response, traits are assigned directly from the brand user, the company itself and its overall performance in marketing, and indirectly based on the brand attributes and benefits, logo, appearance and price.

- In determining the list of attributes/benefits defining brand attribute perceptions used to predict consumer preferences, it was important to avoid bias. One main cause of this is the dependence on salient attributes identified by participants across the groups. Therefore, other attributes are considered with regard to the independence of attributes to avoid the double counting effect. In the same manner, the personality traits considered for further analysis is determined. Consequently, the first draft of the questionnaire used in the pre-test study will be considerably lengthy. However, this may be beneficial as the use of factor analysis in the upcoming stage will reduce these attributes/traits to manageable dimensions.

This chapter presents the first phase of data collection. The following chapter details the second, quantitative phase of the study. Chapter six will present the results of the pilot study. In addition, a thorough discussion of the quantitative analysis techniques used to analyse the data is provided, alongside the presentation of the results and hypotheses testing.

Chapter Six

Data Analysis and Survey Results

6.1 Introduction

This chapter presents the analysis of the quantitative data collected in the main survey using the revised questionnaire. The analysis of the data is conducted in four main steps, through which the final results of hypotheses testing are reached. The first two steps are preliminary data screening and testing the assumptions of multivariate analysis techniques. After which, the factor analysis: exploratory and confirmatory, are conducted and, finally, the hypotheses are tested. The organisation of this chapter is as follows. First, the pilot study and its results. Second, a description is provided of the main survey sample profile. Next, the phases of data analysis are presented in five consecutive sections: Section 6.4 describes the results of data cleaning and screening; Section 6.5 tests the assumptions of the multivariate techniques; Section 6.6presents the results of exploratory factor analysis and reliability assessment using the Cronbach's alpha; finally, Section 6.7 presents the results of the structural equation modelling. In Section 6.8, further analysis of the data is conducted showing the results of decomposing multidimensional factors and the differences between groups. At the end of this chapter, conclusions are made about the data analysis

6.2 Pilot Study

As discussed in Chapter four, the pilot test is a crucial step in the scale development process (Churchill, 1979). Among the aims of the pilot study are to judge the items for content and face-validity, and purify the measures by assessing the reliability of the measurement items using Cronbach's alpha (Churchill, 1979; Hair *et al.*, 2010). Often, the face and content-validity are interchangeable without differentiation between concepts; yet, few discrepancies exist between the two. The content-validity refers to *"the degree to which a measure's items represent a proper sample of the theoretical content domain of a construct*, (Hardesty and Bearden, 2004, p.99). For the items to have content-validity, they also need to be face-valid, which refers to "*the degree that respondents or users judge that the items of an assessment instrument are appropriate to the target construct and assessment objective*s, (Hardesty and Bearden, 2004, p.99). Mitchell (1996) differentiates between both based on the panel responsible for the assessment. The content-validity is assigned to a panel of experts for assessment; while, the face-validity is assigned to non-experts for judgment. The most common method of assessing the content-validity is the applied method for the pre-test of questionnaire, guided by a list of definitions for each construct. Consequently, the expert judges the quality of the survey, confirms the items and evaluates the ambiguity of other items subject to deletion (Hardesty and Bearden, 2004; Saunders *et al.*, 2012). The criterion followed is the deletion of any item considered unrepresentative or poor by any judge as recommended by Hardesty and Bearden (2004).

Accordingly, the survey and the list of definitions of the study constructs were sent to the panel of experts, consisting of four judges, to evaluate the items independently. One of the judges has Arabic as his native language; his evaluation is considered important as the respondents are Arabic. The comments were received and revised, and suitable corrections were made.

With regard to the wording and structure of the questions, the panel suggests the correction and deletion of some questions. Some questions of brand experience are recommended to corrections in term of the structure. The item EXS02 was changed to *"This brand appeals to my senses"* instead of excites my senses. Illustrative examples to clarify the meaning of experienced sensory appeal in item EXS05 are suggested, taking into consideration the product type. It was suggested to specify the direction or the type of mood in item EXE06; thus, an indication of positive mood is added by describing it as good instead of certain. The panel suggest that in item EXB01, *"This brand is not action oriented"* does not match the product type and was a candidate for deletion. However, it was suggested to be modified to *"This brand opens me to life"*. There were some concerns about the translation of items

EXB02 and EXB04 and how they will be conceived by the respondents; yet, the respondents raised no queries relating about them.

The scale used to measure brand personality is the big-five human personality traits and, during the focus group sessions, new items were added from the free elicitation. The items BP_FE04 and BP_FE05 were dropped since gender is not a human personlaity trait; however, it can be determined from respondents' scores on different traits describing the types of personality. Moreover, the items BP_FE01 and BP_FE02 were also nominated for deletion because respondents can perceive them differently. Accordingly, the item BP_FE03 is the only added item to the scale of personality traits forming the free elicitation.

In terms of the design and layout of the questionnaire, several suggestions were discussed to make it easier and more appealing for subjects to answer. First, is to add the logo beside the brand name. Second, clarify the headings of questions. Third, the use of shading was not recommended as it can appear dark after printing. Fourth, separate the five points of the Likert scale, each in a box; and lastly, not to use categories to determine respondents' age, but keep it as open question.

The face-validity was then evaluated by a panel of non-experts; actual respondents; asking them about the quality of the questionnaire in terms of the clarity of wording, instructions, questions and layout. The respondents comment on the ambiguity of the brand personality question. Therefore, an illustrative example was suggested to be added in the heading of the main survey; however, it might lead the respondents. The average time to answer the questionnaire ranges from 15 to 20 minutes.

The pilot study was conducted in August 2011 using a self-administrated survey. The total number of the pilot study sample is 66 respondents, which is considered reasonable in line with the guidelines of Saunders *et al.* (2012), which specify a range of 10 to 100. The valid responses are 53, and the remainder are eliminated due to the huge amount of missing data. The pilot study sample profile has 31 male and 22 female respondents, with a percentage of 58.5% and 41.5% respectively. The age of respondents range from 18 to 66 years, with the majority 62.2% ranging from 21 to 35 years. The mean age of the pilot study sample is 30.5 years and 79% of the respondents hold a bachelor degree or higher. In addition, the ratio of those who are employed to unemployed is approximately 5:1. In terms of social status, the percentage of single and married respondents is 41.5% to 54.7% respectively; there were only two widowed and no divorced respondents.

The items were then purified by assessing their reliability; Cronbach's alpha is not the only measure used. The value of alpha is affected by the number of items and can create misleading results (Field, 2005). For this reason, the inter-item correlation and item-to-total correlation are also used to assess the reliability, rather than depending on a single measure (Hair *et al.*, 2010). The inter-item correlation measures the correlation among items with the level of acceptance equals 0.3 (Field, 2005; Hair *et al.*, 2010; Pallant, 2010). The item-to-total correlation measures the correlation of the item to the entire summated scale score. The threshold of item-to-total correlation can be accepted at 0.5 (Hair *et al.*, 2010) or 0.3 (Field, 2005; Pallant, 2010). Cronbach's alpha is used to assess the consistency of the entire scale (Hair *et al.*, 2010). Generally, the value of good alpha is 0.7 or more (Hair *et al.*, 2010; Kline, 2005); however, at the early stages of research, it can be accepted at the level of 0.5 or 0.6 (Churchill, 1979). Therefore, the item is subject to deletion if it does not meet the cut-off point of 0.3 for both the inter-item correlation and item-to-total correlation, or the value of alpha goes below the above specified levels, or if its deletion will increase the value of alpha (Field, 2005).

Accordingly, the results indicate the reliability of six items measuring brand preference measuring items. All values meet the threshold defined, with the exception of item PRF07, which has item-to-total correlation of less than 0.3. Therefore, the item was dropped, increasing the value of alpha to 0.75. The three items measuring the repurchase intentions have good reliability with a value of alpha equal to 0.77.

The brand experience has five different dimensions. Only three of the items measuring sensory experience are met having inter-item-correlation and item-to-total correlation of more than 0.3; while, both items EXS04 and EXS05 are below the threshold, having item-to-total correlation of less than 0.3. Thus, the two items were dropped increasing the value of alpha to 0.78. All six items measuring the emotional, intellectual and behavioural experiences are reliable, with alpha values above 0.78. The item EXR01 measuring the social experience has low item-to-total correlation with the score of the entire summated scale. After dropping this item, the value of alpha is 0.8.

The brand attributes are measured by 13 items; two of which, ATT12 and ATT13, did not meet the requirements, having item-to-total correlation less than 0.3. After the deletion of these items, the value of alpha for the construct is 0.83. Also, both price and appearance constructs have a good reliable scale of three items each and a value of alpha of 0.78 and 0.73 respectively.

The brand personality is a multi-dimensional construct consisting of five dimensions. The first measuring the extroversion personality type has a reliable scale comprising five items with good consistency, indicated by the value of alpha equal to 0.82. However, item BP_EX06 is dropped due to low item-to-total correlation. The agreeableness dimension is measured by seven highly correlated items with good reliability of 0.8, while the item BP_AG08 is dropped having low item-to-total correlation of less than 0.3. Also, only one item of the conscientiousness personality dimension is dropped due to low item-to-total correlation below the specified threshold; BP_CS06. The value of Cronbach's alpha for this dimension is 0.77. Two items of the fourth dimension, emotional stability, are dropped and the four items have high consistency and a good value of alpha above 0.8. All the items of the last dimensions have high correlations; however, dropping the item from elicitation, BP_FE03, will raise the value of alpha to 0.81. Therefore, it is dropped and the measurement scale of openness to experience dimension consists of only six items. The three items measuring the self-congruity construct are reliable, the correlations are above 0.3 and the value of alpha equals 0.8.

6.3 Main Survey

6.3.1 Sample Profile

The data for the main survey was collected over a one-month period beginning on the 1st of September 2011, using the questionnaire in Appendix C. As illustrated in Chapter 4, Section 4.11, due to the unavailability of the sampling frame, the current study is based on non-probability sampling; namely, the convenience sampling, commonly-used management and business studies (Bryman and Bell, 2007). A total of 351 questionnaires were collected from respondents using structured interviews. The questionnaires were distributed by intercepting respondents in local places; for example, shopping malls. The questionnaires were checked carefully before entering the data using SPSS 19.0. Out of the 351 questionnaires collected, only 325 were used; 26 were discarded and considered unusable due to the huge amount of missing data resulting from incomplete sections or missing pages. According to the requirement of the structure equation modelling (SEM) used in the data analysis, the minimum sample size required for this is 300 (Hair *et al.*, 2010; Kline, 2005; Tabachnich and Fidell, 2006). Therefore, this number of usable questionnaire is considered acceptable. The demographic details of the main survey sample show that the majority of the respondents were males, forming 66.2% of the whole sample, while females are represented by only 33.8%. The respondents are of different ages, with a sample mean equal to 30.7 years, and can be categorised into two main groups: the first includes those aged from 18-30 representing, 50.5% of the sample; and the second includes respondents over 30, representing 49.5% of the sample. The majority of respondents hold a bachelor degree, representing 68.6% of the total sample. The occupational status shows that 71.7% of the respondents are working either for private or public employers, or are self-employed. Only 28.3% are unemployed. The mainstream levels of the social status of respondents varied between single (39.1%) and married (56.3%). Table 6.3 shows the demographic details of the respondents in the main survey sample.

Table 6-1 Main survey sample demographic profile

Demographics		Frequency	Percentage
Gender	Male	215	66.2
	Female	110	33.8
Age	< 20	39	12
	21-35	125	38.5
	36-45	146	44.9
	>46	15	4.6
Educational level	Secondary	63	19.4
	Bachelor Degree	223	68.6
	MBA/PhD	39	12.0
Occupation status	Unemployed	92	28.3
	Employed	189	58.2
	Self-employed	44	13.5
Social status	Single	127	39.1
	Married	183	56.3
	Widow	3	0.9
	Divorced	12	3.7
Total		325	100%

6.3.2 Sample Selection Bias

The use of sample is a valid alternative to conducting the survey on the entire population, which is impractical due to the size, time and money constraints (Saunders *et al.*, 2012). Specifically, the use of a census in research is not a guarantee of providing better results. There is great probability of non-sampling errors when using a census, while a sample can provide more accurate results (Churchill, 1979). It is necessary when using a sample to allow for generalisability; therefore, the researcher always seeks a representative sample of the defined population (Saunders *et al.*, 2012).

To achieve this, it is important to evaluate the quality of the sample and assess its bias. Blair and Zinkhan, (2006) define three sources of sample bias: coverage bias, resulting from excluding a segment for the studied population; selective bias, resulting from giving certain groups higher or lower chances for selection than another; and non-response bias, which occurs due to differences between respondents and those who fail or refuse to respond. The authors add that non-response bias is more common for non-probability samples, even with high response rate. However, the non-response bias is only one source of sample bias and is not the only criterion for evaluating the quality of the sample (Blair and Zinkhan, 2006). The missing responses from the respondents due to their refusal, inability or their ineligibility are other possible sources of non-response bias (Yu and Cooper, 1983). The problem of non-response is more common in mail surveys (Armstrong and Overton, 1977). The authors suggest three possible ways to reduce the effect of non-response bias: minimise the number of non-responses, obtain responses from non-respondents, or measure the effect of non-response. The approach of detecting the effect of non-response bias depends on time trend; that is, compare the earliest and latest respondents. The latter is considered to resemble non-respondents.

Non-response bias can be reduced early in the process by improving the research design and reducing the number of non-respondents (Churchill, 1979). Yu and Cooper (1983) consider this an effective way of testing its impact. There are several criteria suggested to increase the response rate, including: the characteristics of the target population, questionnaire design and length, and the method of contact.

Among the methods of contact, the personal interview generates the highest responses, compared with telephone and mail surveys (Yu and Cooper, 1983). Saunders *et al.* (2012) suggest that both telephone and personal interviews can result in reasonable responses in the range of 50-70%.

The current study relies on a self-administrated survey; thus, the researcher has an opportunity to enhance the participants and guide them while answering the questionnaire (Saunders *et al.*, 2012). In addition, the researcher can motivate and encourage the respondents. Sekaran (2003) indicates the main advantage of this type of survey is the high response rate, completion of all the required questionnaires, within a short time. The target responses are not fewer than 300 owing to the requirements of the data analysis techniques; structural equation modelling. During the data collection period, the total number of collected questionnaires are 351 above the minimum limit and only 26 were discarded; thus, leaving a number of 325 valid usable questionnaires for conducting the analysis.

In this study, the quality of the sample was considered through the phase of data collection even before the field study to minimise the sample bias. The questionnaire design was appealing to respondents and the length of the questionnaire was also considered. During the data collection, the researcher follows the guidelines of Churchill (1995) to increase the response rate and reduce the refusals. After collecting the data, the quality of the sample is assessed by evaluating the sample selection bias; comparing the frequencies of respondents demographic on the current study with the real figures of the census. Based upon this, table 6.2 reflects the difference between the age groups of respondents in the sample and those in the census. Because the age of the respondents starts from 18 and no information is available starting from this age, but from 15; therefore, the comparison begins at the age of 20. The results show the ideal representation of some age groups and the difference in others. The other age groups are still well presented in the sample with percentages exceeding 10%, except for those above 45 years who represent only 5% of the sample. However, this can be explained by the reluctance of older people to participate in research survey. Another reason might be the type of product itself, since it is common that respondents above 45 years in research studying technological products are represented by less than 10% of the total sample size (e.g. Lee *et al.*, 2012; Petruzzellis, 2010; Sheng and Teo, 2012).

Table 6-2 Comparison between the age frequencies in sample and census

Age group	**Census**		**Sample**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
20-24	8696	22.8	56	18.2
25-29	7061	18.5	71	23.1
30-34	5229	13.7	73	23.7
35-39	5145	13.5	56	18.2
40-44	4520	12	36	11.8
>45	4058	19.5	15	5
Total	38088	100%	307	100%

Source: CAPMAS, 2011

6.4 Data Screening

The data collected for the main survey needs to be examined before running any analysis. The process of checking and remedying the errors from entered data is known as data screening or data cleaning. This process checks the errors created by missing data and outliers.

6.4.1 Missing Data

Missing data describes the unavailable values of one or more variables (Pallant, 2010). The impact of missing data ranges from reduction in the sample size to serious impact causing distortion in the data leading to biased results and, thus, affecting the generalizability (Tabachnick and Fidel, 2006). Hair *et al.* (2010) suggest four steps for checking missing data and applying a remedy: (1) determine the type of missing data; (2) assess the extent of missing data; (3) diagnose the randomness of missing data; and (4) apply the remedy. There are two types of missing data: ignorable missing data, which is expected due to the specific design of the data collection process; and non-ignorable. The design of the survey instrument for the current study does not include any skipped sections of questions. Therefore, the missing data identified will be classified as non-ignorable. The next step is to determine the extent and pattern of the missing data per item, case and for the overall set of data. Assessing the amount of missing data shows that at the per item level, the missing data ranges from 0.0 to 0.6%., and at the case level only 10 cases have missing data with an extent ranging from 1 to 5%. Tabachnick and Fidell, (2006) suggest that missing data is less than 5% and at a random pattern is not serious. While Hair *et al.* (2010) posit that with missing data under the 10% for a variable or case is low to affect the results if it occurred randomly. In the current study, the extent of missing data is very low and occurs at a random pattern determined by the insignificance of the Little MCAR test (Chi-Square= 888.841, *DF*=893, Sig. 0.533). Accordingly, any method of remedy can be applied; there are two basic approaches of imputation of data missing completely random ranges: simply consider the valid data only and the replacement of missing values. The method of completion case is simple and direct, but it reduces the sample size (Hair *et al.*, 2010; Tabachnick and Fidell, 2006). Therefore, the replacement of missing values is considered a remedy of missing data to include all the observations in the analysis. Among the specified method of this approach, the missing values were substituted by the mean values of the variable calculated from valid responses.

6.4.2 Outliers

The second step in data cleaning is to check for outliers; different score(s) from the rest of the data (Field, 2005). Extreme scores can occur on a single variable (univariate) or more than two variables (multivariate) (Kline, 2005). Tabachnick and Fidell (2006) suggest the importance of detecting the univariate and multivariate outliers for data analysed by structure equation modelling. Univariate outliers detect the cases that fall outside the maximum and minimum ranges, by examining the observations per each variable (Hair *et al.*, 2010). The primary step in detecting univariate outliers is to convert the actual scores in the data set to standardised scores (Pallant, 2010). The rule of thumb suggested by Hair *et al.* (2010) identifies a standard score value of exceeding 2.5 as a univariate outlier for small samples less than 80, and raised it to 4 for larger samples. According to Tabachnick and Fidell (2006), cases with standardised values exceeding ±3.29 are outliers, depending also on the sample size. For the current study, standardised scores were calculated by SPSS descriptive for detecting univariate outliers using a cut-off point of ±3.29; the results are presented in Table 6.3. They show that 17 cases have extreme values exceeding the threshold, and only four cases (96, 163, 192, and 288) are reported as outliers on more than one variable. However, the extremeness of this value did not affect the results, such as the mean and standard deviation. Univariate outliers can also be detected graphically using box plots; the graphical representation of outliers. Accordingly, no transformation is required for univariate outliers to pull it to the centre of distribution (Tabachnick and Fidell, 2006).

The second method is the multivariate outliers detection addressed by Mahalanobis D^2 measure. The Mahalanobis assesses the influence of each case by measuring the distance in multidimensional space between the case and the sample mean of all variables (Centroids) (Kline, 2005). The main drawback of this method is the overall assessment without specifying the variable that increases the value of D^2 (Hair *et al.*, 2010). The criterion for detecting multivariate outliers is the value Mahalanobis distance evaluated by the degree of freedom at conservative levels of significance $p<0.001$, that is D^2/df, given that D^2 is the Mahalanobis score and df is the number of variables included (Tabachnick and Fidell, 2006). Determining a cut-off point for detecting multivariate outliers using the Mahalanobis distances is not easy, since it is affected by both the sample size and the number of variables (Field, 2005). However, Hair *et al.* (2010) suggested the value of 2.5 in small samples and 3 to 4 for large samples as threshold levels. Others develop tables depending on the number of variables and sample size (Barnett and Kewis, 1978), or based on the degrees of freedom and level of significance determining the critical values of chi-square. By comparing the cases scores of Mahalanobis distance with the critical values determined in the table, any case with a greater value is considered a multivariate outlier (Tabachnick and Fidell, 2006).

In the current study, multivariate outliers are first detected by measuring the Mahalanobis D^2 distance using a threshold value of D^2/df exceeding 2.5. As a result, four cases were identified as multivariate outliers, and it is important to note that five cases did not appear as univariate outliers. These cases are not unique on a single variable level, but they have unique combinations. Moreover, the value of D^2 for these cases exceeds the critical value of 39.252 at $p<0.001$ specified by Tabachnick and Fidell, (2006, p.949). The results of multivariate outliers are given in Table 6.3. To provide demonstrative proof of the outliers' deletion, their influence was examined by Cook's distance. The extreme cases have values lower than one; therefore, they are not subject to deletion (Pallant, 2010). According to Hair *et al.* (2010), outliers should be retained; otherwise, there is a proof of deletion that certifies their aberrant and being unrepresentative of any observations in the population. Moreover, outliers can still be retained and accommodated in the analysis in a non-distorting manner. Therefore, the outliers were retained in the current study for further analysis.

Table 6-3 Univariate and multivariate outlier detection results

Univariate Outliers			Multivariate Outliers		
Variables	**Cases with Standardised Values Exceeding ±3.29**	**Standardised score (*z*)**	**Cases**	**Mahalanobis (D^2)**	**D^2/df**
PRF	192 99 288	-5.21738 -3.83498 -3.55850	160	45.73281	2.86
RPI	242, 304, 163	-3.45850	109	45.73271	2.86
EXS	192, 96 114	-3.75988 -3.32143	21	41.58908	2.60
EXE	192	-4.61303	20	39.92693	2.50
EXT	192	-3.95525	288	38.73170	2.42
EXB	192, 96	-3.34106	4	37.23121	2.33
EXR	96, 160, 109	-3.41895	204	37.21492	2.33
ATT	96	-3.90601	1	36.29060	2.27
APP	199	-3.68480	100	35.67287	2.23
PR	272, 234	3.40424	129	35.14428	2.20
BP-EX	No cases		23	34.63807	2.16
BP-AG	No cases		161	33.66673	2.10
BP-CS	303, 288	-3.59914	17	33.48180	2.09
BP-EM	No cases		222	32.59958	2.04
BP-OP	303, 222, 100	-3.36260	64	31.91045	1.99
CON	23 163	-3.98671 -3.47009	136	31.84115	1.99
			192	31.09402	1.94
			96	30.89330	1.93

6.5 Testing the Assumptions of Multivariate Analysis

There are four assumptions required for the multivariate analysis techniques: normality, homoscedasticity, linearity and multi-collinearity.

6.5.1 Normality Assumption

Screening the data for assessing the normality of variables is a crucial step in multivariate analysis (Hair *et al.*, 2010; Kline, 2005; Tabachnick and Fidell, 2006). Normality refers to the shape of normal distribution of the metric variable and its correspondence (Hair *et al.*, 2010). Normality of a single variable can be assessed graphically or statistically (Coakes *et al.*, 2009; Pallant, 2010; Tabachnick and Fidell, 2006). Invalid statistical tests can result from the failure to achieve normality; the deviation from normal distribution is extremely high. The easiest and simplest way is through the visual inspection of the shape of normal distribution and/or the normal probability plot. The histogram is used to examine the normality of distribution; if a normal bell curve is placed over the distribution covering the middle of the histogram and the two tails, it indicates normality (Pallant, 2010). Although this method seems easy, it is problematic in assessing normality of a small sample. A more reliable graphical representation is the normal probability plot, which compares the cumulative distribution between the actual data values and normal distribution (Hair *et al.*, 2010). The normal probability plot can be assessed by P-P plot; if the cases falls around a straight line then it is normally distributed (Coakes *et al.*, 2009).

The visual inspection of the graphical representations using the P-P plots of the variables in the current study shows that the values of all variables are clustered around the straight line. However, to be more confident with the normality of the data, more statistical tests for normality were used. Pallant (2010) suggests three statistical tests for normality: 5% trimmed mean, Kolmogorov-Smirnov and Shapiro-Wilk statistic, and skewness and kurtosis. The 5% trimmed mean is a measure of the central tendency unaffected by the extreme values. It measures the mean of the distribution by excluding 5% of the top and bottom scores (Coakes *et al.*, 2009). By comparing the 5% timed mean with the mean big difference, further tests of normality should be detected (Pallant, 2010). Only slight differences were found between the 5% trimmed mean and the mean for any variable; the values were almost equal.

The Klomogorov-Smirnov and Shapiro-Wilk (K-S test denoted by D) test normality *by "comparing scores of the sample to a normally distributed set of scores with the same mean and standard deviation"* (Field, 2005; p.93). The insignificance of the test is an indicator of normality; however, Coakes *et al.* (2009) posit that the Shapiro-Wilk test is calculated for small sample sizes of less than 100. The main drawback of using this test is the high possibility of obtaining significant results in large samples indicating the non-normality of the data due to a slight deviation from normality (Field, 2005). However, the K-S test is detected for each variable. The results show that D(325) ranges from 0.094 to 0.177 at significant level, $p<0.001$, as shown in Table 6.4. Therefore, the significance of the K-S test does not meet the assumption of normality (Shapiro and Wilk, 1965). This result is quite common in large samples (Pallant, 2010). According to Field (2005), this non-normality may be due to small deviations from normality that can fall within the accepted range; therefore, skewness and kurtosis are used to assess normality by describing the shape of distribution.

Table 6-4 Results of K-S test for normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*df*	Sig.	Statistic	*df*	Sig.
PRF	.102	325	.000	.936	325	.000
RPI	.137	325	.000	.959	325	.000
EXS	.168	325	.000	.937	325	.000
EXE	.095	325	.000	.962	325	.000
EXT	.117	325	.000	.958	325	.000
EXB	.108	325	.000	.960	325	.000
EXR	.156	325	.000	.932	325	.000
ATT	.094	325	.000	.955	325	.000
APP	.130	325	.000	.938	325	.000
PR	.177	325	.000	.886	325	.000
BP_EX	.141	325	.000	.956	325	.000
BP_AG	.107	325	.000	.969	325	.000
BP_CS	.147	325	.000	.922	325	.000
BP_EM	.117	325	.000	.963	325	.000
BP_OP	.167	325	.000	.905	325	.000
CON	.156	325	.000	.902	325	.000
a. Lilliefors Significance Correction						

Skewness refers to the symmetry of distribution; if the distribution is unbalanced or shifted to one side (Tabachnick and Fidell, 2006). There are two types of skewness: positive skewness, if the distribution is shifted to the left; and negative skewness, if it is shifted to the right (Hair *et al.*, 2010). Kurtosis refers to the Peakness of the distribution (Tabachnick and Fidell, 2006). Tall or peaked distributions are termed leptokurtic, while, flatter distributions are termed platykurtic. For variables with normal distributions, the values of skewness and kurtosis are zeroes. Accordingly, if they are given positive or negative values, this indicates a deviation from normality. The range of values for acceptable deviations is affected by sample size; slight deviations can be serious in small samples less than 30, while with large sample sizes more than 200 it can be ignorable (Hair *et al.*, 2010). Kline (2005) suggests accepting the variables deviated by ±3 on the skewness and/or kurtosis as having normal distribution. However, the most commonly acceptable critical value for ***z*** (kurtosis/skewness) distribution is ±2.58 (Hair *et al.*, 2010). The skewness and kurtosis of variables; calculated at both the construct level as shown in Table 6.5, and item level as shown in Appendix D, indicate that they fall within the acceptable range.

Table 6-5 Skewness and Kurtosis at the item level

	N	Min	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
PRF	325	1.00	5.00	4.1451	.60282	-.898	.135	2.296	.270
RPI	325	1.00	5.00	3.5692	.74287	-.588	.135	.626	.270
EXS	325	1.00	5.00	3.8585	.76025	-.562	.135	.605	.270
EXE	325	1.00	5.00	3.9564	.64088	-.532	.135	1.066	.270
EXT	325	1.33	5.00	3.9810	.66941	-.616	.135	.463	.270
EXB	325	1.00	5.00	3.6974	.80736	-.690	.135	.527	.270
EXR	325	1.00	5.00	3.8685	.83899	-.768	.135	.606	.270
ATT	325	2.27	5.00	4.2347	.50229	-.729	.135	.461	.270
APP	325	1.33	5.00	3.9221	.70254	-.757	.135	1.005	.270
PR	325	1.00	5.00	2.1087	.84932	1.141	.135	.910	.270
EX	325	2.00	5.00	3.9729	.65584	-.521	.135	.117	.270
AG	325	2.00	5.00	3.8923	.62443	-.532	.135	.241	.270
BP_CS	325	2.00	5.00	4.2111	.61434	-.731	.135	.259	.270
BP_EM	325	1.75	5.00	3.7431	.66995	-.257	.135	.276	.270
BP_OP	325	2.00	5.00	4.2015	.65471	-.990	.135	.793	.270
CON	325	1.67	5.00	4.2390	.64522	-.897	.135	.938	.270
Valid N (listwise) 325									

Although, at the construct level, the PRF construct has leptokurtic with kurtosis value 2.296, but it still falls within the acceptable range at less than ±2.58. Also, at the item level, item PRF06's normal distribution is lightly peaked with a kurtosis value 2.162; however, it is still acceptable to have less than the critical value of ±2.58. In addition, all the results show the univariate normality of the variables.

It is still important to assess the normality of the combinations of two or more variables, even if they have univariate normality. There is an assumption that the variable has univariate normality if it has multivariate normality, but not the opposite (Hair *et al.*, 2010). In order to assess the multivariate normality, it is required first to assess the univariate normality and then check the normality of distribution of the combinations of single variables (Kline, 2005). Assessing the multivariate normality is more difficult than assessing univariate normality (Hair *et al.*, 2010). In this essence, the shape of the P-P normality probability plot (Figure 6.1) shows that all the points lie in a straight line with no deviations from normality. Mardia's coefficient can be used to assess the multivariate normality (Mardia, 1970); using AMOS.18, as shown in Appendix E, it was found that the multivariate normality assumption is violated. The results also show the existence of multivariate outliers providing a reason for the existence of multivariate non-normality (Byrne, 2001). Byrne (2001, p.268) indicates that *"most of the data fail to meet the assumption of multivariate normality".*

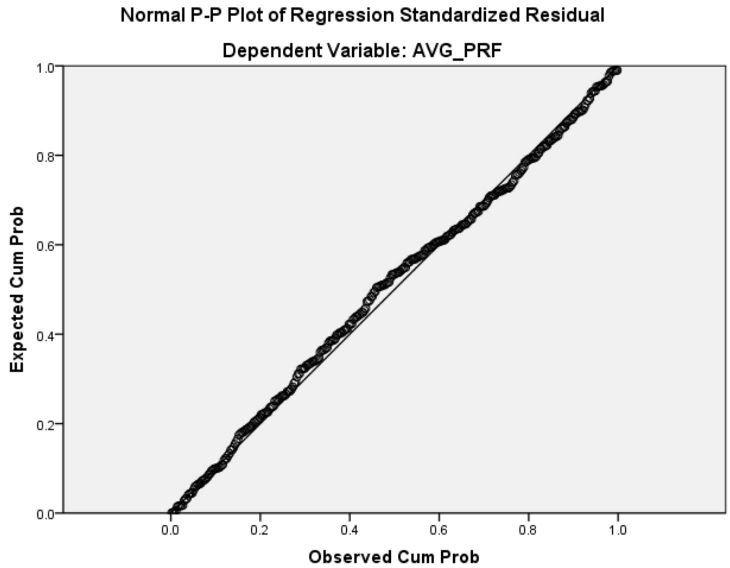


Figure 6-1 Multivariate normal P-P plot of regression standardised residual

6.5.2 Homoscedasticity Assumption

The second assumption of multivariate techniques is the homoscedasticity, checking the dependency of the relationships between variables (Hair *et al.*, 2010). Homoscedasticity is related to the assumption of normality (Tabachnick and Fidell, 2006); that is, the dependent variables display equal levels of variance across the range of predictors. In order to ensure the fulfilment of the relationship between the independent and the dependent variables, the variance of dependent variable values must be equal at each value of the independent variable (Hair *et al.*, 2010). The heteroscedasticity of relationships; unequal variance across the independent variables, can result from the non-normality (skewed distribution) of variables or random error (Kline, 2005) or due to the type of variable (Hair *et al.*, 2010). The statistical test for assessing the homogeneity of variance is Levene's test (Tabachnick and Fidell, 2006). The null hypothesis of Levene's test assumes that the difference between variances is zero; therefore, the insignificance of Levene's test at $p \geq 0.05$

means the assumption is tenable and the variances are equal (Field, 2005). In the current study, all the variables have insignificant levels, $p \geq 0.05$ of Levene's test for equality of variance, as shown in Table 6.6. Therefore, the assumption of homoscedasticity is tenable.

Table 6-6 Results of Levene's test of homogeneity of variance

	Levene Statistic	*df*1	*df*2	Sig.
PRF	.003	1	323	.960
RPI	.597	1	323	.440
EXS	.204	1	323	.652
EXE	.633	1	323	.427
EXT	1.917	1	323	.167
EXB	3.648	1	323	.057
EXR	2.504	1	323	.115
ATT	1.153	1	323	.284
APP	1.383	1	323	.241
PR	.079	1	323	.778
BP_EX	.087	1	323	.768
BP_AG	2.508	1	323	.114
BP_CS	.081	1	323	.776
BP_EM	1.189	1	323	.276
BP_OP	.029	1	323	.864
CON	.092	1	323	.761

6.5.3 Multicollinearity Assumption

Multicollinearity appears with the high correlation between variables greater than 0.85; this means that the variables are measuring the same thing (Kline, 2005). The statistical method used to calculate the multicollinearity is the squared multiple correlation (SMC) between each variable, and all other variables with a value of >0.90 indicate the existence of multicollinearity (Tabchnick and Fidell, 2006). As suggested by Hair *et al.* (2010), to assess multicollinearity two components are used to test the pairwise and multiple variable correlation: tolerance and VIF. Tolerance refers to the amount of variability of independent variable not explained by the other independent variables (Hair *et al.*, 2010). It is measured by (1-SMC) with an acceptable value equal to 0.1; that is, the other independent variables explain 90% of the measured variable (Hair *et al.*, 2010; Tabachnick and Fidell, 2006). The second measure of multicollinearity is the variance inflation factor (VIF), which refers to the degree of standard error result from multicollinearity. It is measured by the inverse of tolerance (1/tolerance); thus, a value of 10 is acceptable means that the tolerance equals 0.1. Accordingly, following the rule that tolerance value should be lower than 0.1 and VIF more than 10 to diagnose multicollinearity, the results shown in Table 6.7 outline the maximum VIF is 3.317 with tolerance value equal to 0.3020. Therefore, there is no multicollinearity between the independent variables of the current study.

Table 6-7 The collinearity diagnostic

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.079	.305		-.259	.796		
	RPI	.040	.034	.049	1.159	.247	.886	1.129
	EXS	.100	.049	.126	2.042	.042	.418	2.393
	EXE	.298	.057	.317	5.210	.000	.429	2.331
	EXT	.006	.057	.007	.103	.918	.395	2.534
	EXB	-.042	.051	-.057	-.830	.407	.339	2.954
	EXR	.078	.046	.108	1.704	.089	.392	2.549
	ATT	.241	.066	.201	3.625	.000	.519	1.929
	APP	.093	.039	.109	2.425	.016	.787	1.271
	PR	.065	.030	.092	2.189	.029	.903	1.108
	BP_EX	-.106	.066	-.115	-1.611	.108	.311	3.212
	BP_AG	.008	.070	.008	.110	.912	.302	3.317
	BP_CS	.180	.067	.183	2.702	.007	.344	2.904
	BP_EM	.002	.047	.003	.048	.962	.575	1.738
	BP_OP	.034	.066	.037	.519	.604	.314	3.189
	CON	.073	.040	.078	1.828	.068	.880	1.136

After fulfilling the steps of data cleaning and satisfying the basic assumptions for applying multivariate analysis techniques, the data is now ready for further analysis. Following Churchill (1979), it is important to assess the reliability and validity of the data collected at this stage.

6.6 Factor Analysis and Reliability Assessment

6.6.1 Exploratory Factor Analysis

Factor analysis (FA) is a technique used for identifying variables and suggests dimensions (Churchill, 1979; Field, 2005). It identifies the inter-correlation among the measurement items and groups them in sets known as factors; then, by using theory, these factors will correspond to a concept (Hair *et al.*, 2010). Hair *et al.* (2010) specify two main purposes of running factor analysis. The first is to identify the unit of analysis; factor analysis is a general model that examines the correlations between the variables (R-FA) as well as the respondents (Q-FA). Thus, it identifies the structure of both the variables and the respondents. The second purpose is data summarisation/reduction and variable selection; FA summarises the data by defining the structure of variables by placing them in groups, then providing the identification of variables for further analysis; data reduction. The main aim of conducting exploratory FA for this study is data summarisation and reduction.

The exploratory factor is conducted in three steps (Pallant, 2010). The first assesses the suitability of data for FA by the sample size and the inter-correlations among items. For sample size, the ratio between the number of cases and the number of items is greater than 5:1 (Hair *et al.,* 2010). Additionally, the sample size of the current study is regarded as meeting the threshold of Tabachnick and Fidell (2006, p.613), suggesting that *"it is comforting to have at least 300 cases for factor analysis".* For the current study variables, the inter-correlation among items is greater than 0.3, as evidenced by the correlation matrix. The measure of sampling adequacy (MSA) quantifies the inter-correlations among the variables with value ranges from 0-1. Variables with values of 0.5 or above are good variables predicted by other variables without error; while, those falling below 0.5 should be removed (Hair *et al.*, 2010). In the current study, all the MSA values of each item are above 0.5, indicating good inter-correlation between items. Additionally, two statistical tests are used to assess the factorability of the data: Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Pallant, 2010, p.183). Bartlett's test of sphericity, a test of significance of the correlation matrix, a significance level of < 0.5, indicates the existence of sufficient correlations among variables. KMO is the ratio between the sum squared of correlations and the summation of sum squared correlations and sum of squared partial correlations. The appropriateness of FA requires a minimum value of 0.6 (Tabachnick and Fidell, 2006). The results of KMO and Bartlett's test are illustrated in Table 6.8, indicating the significance of Bartlett's test ($p< 0.05$) and the exceeding of KMO index above the minimum value of 0.6; thereby, suggesting the factorability of data.

Table 6-8 KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.810
Bartlett's Test of Sphericity	Approx. Chi-Square	4041.366
	df	406
	Sig.	0.000

Second, in order to determine the factor extraction method, principle component analysis (PCA) was used; this is most common and considered by the majority to be the most suitable approach for summarising the data (Field, 2005; Hair *et al.*, 2010). The factors are extracted based on Kaiser's criterion or eigenvalue; factors of eigenvalue of one or more should be retained. Scree test, a graphical presentation *"plotting the latent roots against the number of factors in their order of extraction"* (Hair *et al.*, 2010, p. 110), is also used to identify the number of factors to be extracted. Using scree plot variables above the inflection point should be included for further investigation. Hair *et al.* (2010) suggest that the factors included should explain at least 60% of the variance. For the current study, seven factors are extracted with eigenvalue of more than one and explaining 69% of the total variance, as shown in Table 6.9. The scree test confirms the retention of the same number of factors; the scree plot of variables is shown in Figure 6.2. Despite the techniques used to judge the number of factors to be retained, it depends mainly on the judgment of the researcher (Pallant, 2010).

Table 6-9 Total number of extracted variable and total variance explained using EFA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.812	25.268	25.268	5.812	25.268	25.268	3.112	13.529	13.529
2	2.477	10.771	36.039	2.477	10.771	36.039	2.831	12.310	25.839
3	2.162	9.402	45.441	2.162	9.402	45.441	2.184	9.496	35.335
4	1.675	7.285	52.726	1.675	7.285	52.726	2.159	9.389	44.724
5	1.380	6.002	58.728	1.380	6.002	58.728	2.148	9.338	54.061
6	1.365	5.933	64.661	1.365	5.933	64.661	2.067	8.988	63.049
7	1.189	5.172	69.832	1.189	5.172	69.832	1.560	6.783	69.832
8	.773	3.361	73.193						
Extraction Method: Principal Component Analysis.									

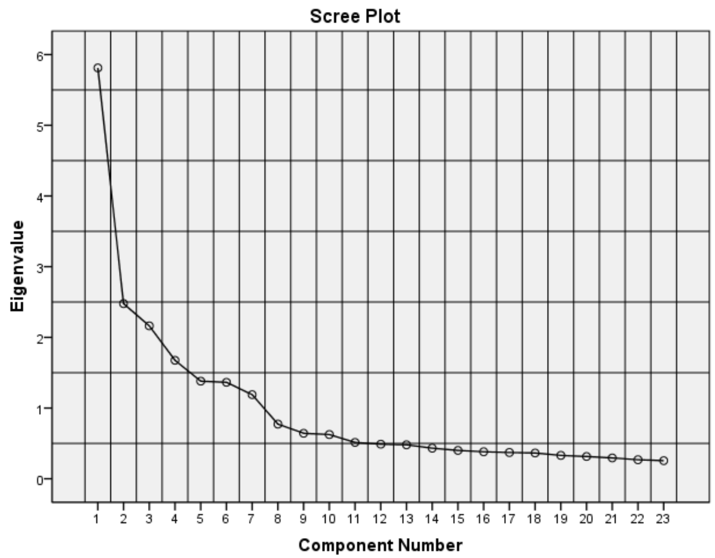


Figure 6-2 Scree plot of all variables

The third step is that of factor rotation; rotation is usually determined after the method of factor extraction (Tabachnick and Fidell, 2006). The rotation method used is in this study is the orthogonal method; the most commonly-used approach suitable for data reduction (Hair *et al.,* 2010; Tabachnick and Fidell, 2006). There are many approaches that can be used to apply the oblique rotation; however, the SPSS v.19 used in the data analysis of the current study has three approaches: QUARTIMAX, VARIMAX and EQUIMAX. The VARIMAX orthogonal technique is proven to be a successful analytic approach to obtain an orthogonal rotation of factors (Hair *et al.*, 2010). In the assessment of factor loading, that of more than ±0.40 is accepted, given the sample size. The amount of variance accounted for the factor by each variable; communality should exceed the value of 0.5. A variable with communality lower than 0.5 should be omitted as it has insufficient explanation (Hair *et al.,* 2010). Field (2005) suggests that variables candidates are those factors with factor loading or communality lower than 0.4 and 0.5 respectively, and with cross-loading of values exceeding 0.4 on more than one factor (Field, 2005). Therefore, items PRF06, RPI01, and ATT01 were eliminated due to a low value of communality of less than 0.5. Also, the three items, ATT04, ATT07 and ATT08, were eliminated due to the high cross-loading of more than one factor with a value greater than 0.4. After the deletion of the six items, all the items of the current study are with acceptable communality values, ranging from 0.57 to 0.80. The number of factors extracted is seven as indicated in Table 6.10 sorted by size. The first factor consists of five items representing the brand preference. The second factor consists of four items representing general attributes of the brand. The third, fourth, fifth and sixth factors each consist of three items representing the price perception, self-congruity, appearance perception and functional benefits respectively. The last factor consists of only two items for repurchase intention.

Table 6-10 The rotated component matrix

	Component						
	1	**2**	**3**	**4**	**5**	**6**	**7**
PRF04	.817						
PRF03	.784						
PRF05	.735						
PRF02	.709						
PRF01	.625						
ATT03		.812					
ATT05		.765					
ATT02		.743					
ATT06		.734					
PR03			.846				
PR01			.846				
PR02			.831				
CON01				.838			
CON02				.819			
CON03				.807			
APP02					.826		
APP03					.795		
APP01					.780		
ATT09						.817	
ATT11						.805	
ATT10						.654	
RPI03							.863
RPI02							.840
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.							

6.6.1.1 Exploratory Factor Analysis of Brand Experience

The same steps of conducting FA are followed to extract the dimensions of brand experience. The test of factorability and adequacy of data for FA are assessed by the inter-correlation among items. The minimum value of inter-correlations between items and MSA is 0.3 and 0.9 respectively, indicating meritorious inter-correlations between items. Also, the results of KMO and Bartlett's test indicate the factorability of data; the value of KMO is adequate at 0.94 and the Bartlett's test is significant (chi-square= 5740.79, *df*= 300, $p < 0.001$). The factors are extracted based on Kaiser's criterion, as shown in Table 6.11; thus, four factors are extracted with eigenvalues of more than one and explaining 71% of the total variance. The graphical presentation of the scree test supports the number of factors extracted, as shown in Figure 6.3. The VARIMAX orthogonal rotation approach is used; the results given in Table 6.12 reveal the loading of 19 items on four components. Each component represents a dimension of brand experience: the first factor represents intellectual brand experience (5 items); the second, behavioural experience (4 items); the third is emotional experience (4 items); and lastly is sensorial experience (3 items). The communalities of the retained items are above the acceptable level of 0.5, ranging from 0.58 to 0.86. All four items of social experience, EXR01, EXR02, EXR03, and EXR04, were dropped because they load highly above 0.4 on two factors. Also, items EXE03, EXE04, EXB01, EXB02 and EXT06 were deleted due to high-cross loading above 0.4 on two factors. The four dimensions of brand experience extracted are similar to those of Brakus *et al.* (2009). Further, Chang and Chieng (2006) experienced the cross-loading of items and the loading of some items on different factors from the corresponding one.

Table 6-11 Total number of extracted variable and total variance explained using EFA of brand experience

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.592	47.452	47.452	7.592	47.452	47.452	7.592
2	1.449	9.054	56.507	1.449	9.054	56.507	1.449
3	1.411	8.821	65.328	1.411	8.821	65.328	1.411
4	1.046	6.535	71.863	1.046	6.535	71.863	1.046
5	.605	3.779	75.642				
Extraction Method: Principal Component Analysis.							

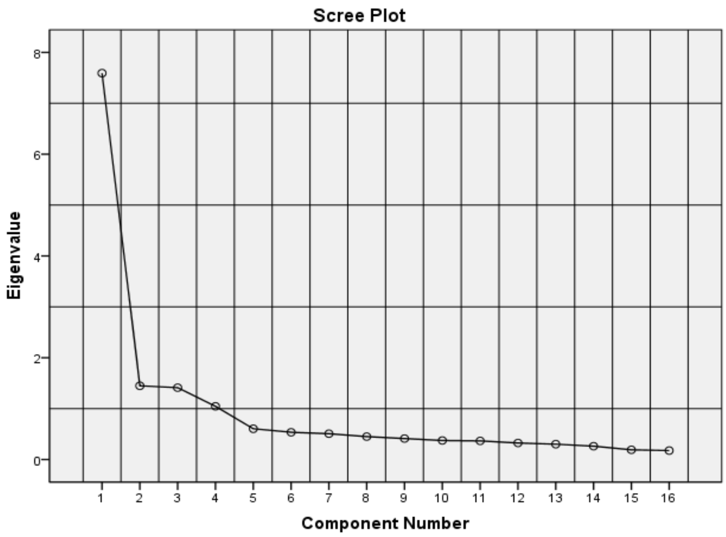


Figure 6-3 Scree test of brand experience dimensions

Table 6-12 The rotated component matrix of brand experience

	Component			
	1	2	3	4
EXT01	.808			
EXT02	.763			
EXT03	.751			
EXT05	.711			
EXT04	.675			
EXB04		.883		
EXB05		.853		
EXB03		.732		
EXB06		.546		
EXE06			.830	
EXE01			.805	
EXE05			.700	
EXE02			.594	
EXS02				.836
EXS01				.781
EXS03				.748

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

6.6.1.2 Exploratory Factor Analysis of Brand Personality

Exploratory FA was conducted to extract the dimensions of brand personality as well. The factorability of the data measured by inter-correlations among items and MSA indicates good inter-correlations among items. The results of the two statistical tests, KMO and Bartlett's test, indicate the adequacy of sample; the KMO index is 0.94 and the Bartlett's test is significant at chi-square = 6024.5 and df = 351. The Kaiser's criterion for factor extraction suggests the retention of four factors having eigenvalues of more than one, explaining 69% of the total variance as shown in Table 6.13. The plotting of eigenvalues of the factors through the scree test supports the number of retained factors, as shown in Figure 6.4. The VARIMAX orthogonal rotation approach is used and the results in Table 6.14 reveal the loading of 19 items on four factors, each presenting a dimension of brand personality. The communalities of all loaded items are above the threshold 0.5, ranging from 0.56 to 0.8. Items with lower communality than 0.5 (BP-AG01) and high cross-loading on more than one factor were dropped (BP-EX02, BP-EX03, BP-EX04, BP-AG03, BP-CS05, BP-OP01, and BP-OP06). The first factor (7 items) represents the agreeableness personality; the second (4 items) represents the conscientiousness personality; the third (4 items) represents the emotional stability personality; and the fourth (4 items) represents the openness to experience personality. Two items of extroversion personality dimension (BP-EX01 and BP-EX05) are loaded on the agreeableness dimension. According to previous studies, the dimension of peacefulness combines the extroversion and agreeableness human personality traits (e.g. Aaker, 200; Aaker *et al.*, 2001).

Table 6-13 Total number of extracted variable and total variance explained using EFA of brand personality

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.337	49.141	49.141	9.337	49.141	49.141	3.996
2	1.599	8.417	57.558	1.599	8.417	57.558	3.343
3	1.238	6.516	64.074	1.238	6.516	64.074	2.965
4	1.003	5.279	69.353	1.003	5.279	69.353	2.873
5	.686	3.610	72.964				
Extraction Method: Principal Component Analysis.							

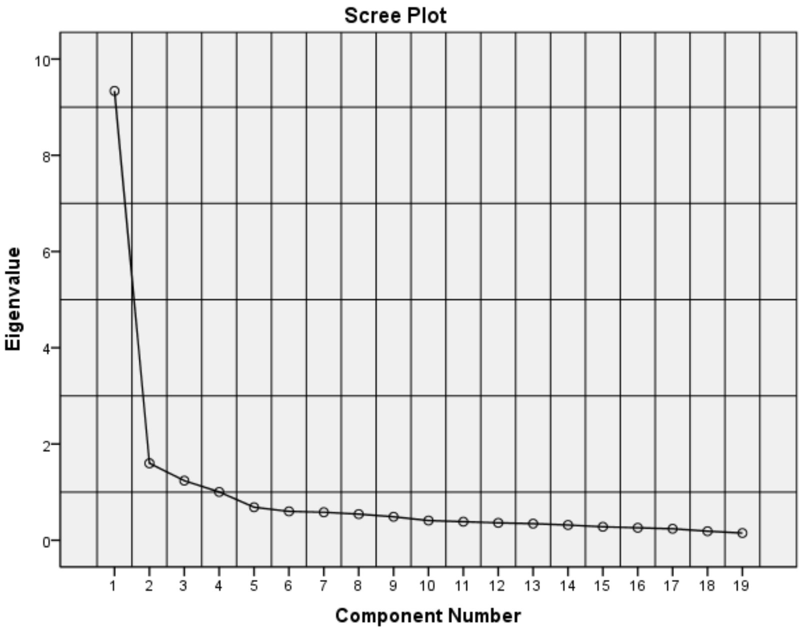


Figure 6-4 Scree test of brand personality dimensions

Table 6-14 The rotated component matrix of brand personality

	Component			
	1	2	3	4
BP_AG05	.749			
BP_AG02	.742			
BP_AG04	.727			
BP_EX05	.677			
BP_AG06	.655			
BP_AG07	.576			
BP_EX01	.571			
BP_CS03		.777		
BP_CS01		.765		
BP_CS02		.753		
BP_CS04		.719		
BP_EM02			.811	
BP_EM04			.781	
BP_EM03			.756	
BP_EM01			.666	
BP_OP03				.774
BP_OP02				.733
BP_OP04				.707
BP_OP05				.702

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

6.6.1.3 Uni-dimensionality using EFA

The proposed theoretical model of this study is composed of two multi-dimensional constructs: brand experience and brand personality. Brand experience is explained by four factors: sensorial, emotional, intellectual and behavioural factors extracted from the exploratory analysis. Also, brand personality is explained by four factors, each representing a different personality composed of a group of traits. Therefore, to include these constructs in the proposed model given the number of observations, composite measures of the four dimensions of brand experience and brand personality are used (e.g. Brakus *et al.*, 2009; Kim *et al.*, 2011). A composite measure or summated scale is formed by combining the indicators into one underlying variable (Hair *et al.*, 2010). It is measured by calculating the average of the items loading together as one factor; thus, giving the advantage of representing the multiple aspects of the construct and reducing the measurement error (Hair *et al.*, 2003). The calculation of the composite measures of each factor results in four factors for brand experience and four factors for brand personality. Hair *et al.* (2010)

specify uni-dimensionality as an essential requirement for creating a composite measure. Test of uni-dimensionality means loading the measurement variables on a single factor. Either EFA or CFA can be used to assess the uni-dimensionality of the measurement variables (Hair *et al.*, 2010). For the current study, EFA is used to assess the uni-dimensionality of both brand experience and brand personality.

Uni-dimensionality of brand experience – the results of conducting EFA for the four factors of brand experience are presented in Table 6.15. The value of MSA for each of the four variables is above 0.7, the value of KMO is 0.8 above the minimum 0.6 and the Bartlett's test is significant; thus, revealing the sampling adequacy. The communalities of the four factors exceed the minimum threshold of 0.5, ranging from 0.66 to 0.71. Only one factor was extracted with an eigenvalue of 2.65, explaining 67% of the total variance.

Table 6-15 Uni-dimensionality assessment of brand experience

	Initial Eigenvalues			**Extraction Sums of Squared Loadings**			**Communality**
Component	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	
1	2.684	67.088	67.088	2.684	67.088	67.088	0.71
2	.502	12.556	79.643				0.65
3	.429	10.725	90.369				0.66
4	.385	9.631	100.000				0.66
Extraction Method: Principal Component Analysis.							

Source: SPSS v.19

Uni-dimensionality of brand personality – the results of uni-dimensionality assessment of brand personality using EFA are given in Table 6.16. The value of MSA for each variable is greater than 0.7, the KMO exceeds the minimum level of 0.6 and the significance of Bartlett's test indicates the sampling adequacy. The four variables have communalities greater than 0.5, ranging from 0.6 to 0.77. All the variables are loaded as one factor with eigenvalue equalling 2.8 and explaining 70% of the total variance.

Table 6-16 Uni-dimensionality assessment of brand personality

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Communality
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	
1	2.829	70.724	70.724	2.829	70.724	70.724	0.77
2	.538	13.458	84.182				0.70
3	.331	8.270	92.452				0.60
4	.302	7.548	100.000				0.75
Extraction Method: Principal Component Analysis.							

6.6.2 Reliability Assessment (Cronbach's alpha)

Reliability refers to the degree of consistency between the measurement items of the variable is stable at any point of time, and free of errors (Kline, 2005). There are three ways of measuring reliability: test-retest, measuring the consistency at two different points; split-half; or Cronbach's alpha, examining the consistency of the whole questionnaire. Applying the split-half is easy, but the results depend on the method of splitting the data (Field, 2005); therefore, Cronbach's alpha is the most widely-used measure to assess the reliability, which tests the internal consistency by applying the consistency to all variables (Hair *et al.*, 2010). It is useful at this stage to measure the reliability of the new data collected from the main survey sample using the purified sample items. Thus, eliminating the probability that the results of the pilot test are due to chance and reducing the errors from sampling items and external factors, such as personal factors, to develop content valid measures (Churchill, 1979). Also, testing the reliability of the scale is a preceding step before assessing the validity (Churchill, 1979; Hair *et al.*, 2010).

The results of the reliability test of the scale used in the main survey are presented in Table 6.17. They reveal that all constructs have good reliable measures; the inter-item correlation and the item-to-total correlation is more than the threshold of 0.3 and 0.5 respectively (Hair *et al.*, 2010). Moreover, the values of Cronbach's alpha for the constructs range from 0.72 to 0.90; thus, they lie within the acceptable range, with strength ranging from good to excellent (Hair *et al.*, 2003). The next step is the assessment of validity using CFA and AMOS software.

Table 6-17 Reliability test (Cronbach's alpha) of the main survey

Construct	Item	Mean	Std. Deviation	Minimum Inter-Item Correlation	Corrected Item-Total Correlation	Cronbach's Alpha if item deleted
Brand Preference - PRF α = 0.85	PRF01	4.14	0.83	0.42	0.60	0.83
	PRF02	4.22	0.72	0.44	0.68	0.81
	PRF03	4.24	0.73	0.51	0.73	0.79
	PRF04	4.08	0.81	0.51	0.69	0.80
	PRF05	4.06	0.82	0.41	0.58	0.83
Brand Repurchase Intention - RPI α = 0.72	RPI02	3.43	1.06	0.56	0.56	-
	RPI03	3.90	1.05	0.56	0.56	-
Brand Experience – BE α = 0.83	EXS	3.85	0.76	0.57	0.70	0.77
	EXE	4.02	0.64	0.51	0.64	0.80
	EXT	3.98	0.68	0.53	0.66	0.78
	EXB	3.57	0.87	0.51	0.66	0.79
Attribute Perception 1 - ATT1 α = 0.85	ATT02	4.33	0.79	0.40	0.60	0.80
	ATT03	4.31	0.77	0.53	0.70	0.75
	ATT05	4.25	0.78	0.50	0.70	0.75
	ATT06	4.25	0.78	0.40	0.60	0.80
Attribute Perception 2 – ATT2 α = 0.76	ATT09	4.34	0.76	0.50	0.63	0.67
	ATT10	4.36	0.68	0.50	0.60	0.67
	ATT11	4.17	0.77	0.50	0.58	0.70
Price Perception - PR α = 0.80	PR01	2.18	0.55	0.55	0.62	0.76
	PR02	2.10	1.01	0.55	0.66	0.72
	PR03	2.03	0.97	0.56	0.67	0.71
Appearance Perception -APP α = 0.77	APP01	3.97	0.82	0.46	0.60	0.70
	APP02	3.99	0.84	0.54	0.66	0.63
	APP03	3.79	0.87	0.56	0.56	0.74
Brand Personality – BP α = 0.87	BP-AG	4.18	0.78	0.58	0.72	0.84
	BP-CS	4.11	0.75	0.54	0.70	0.84
	BP-EM	4.28	0.70	0.67	0.80	0.80
	BP-OP	4.33	0.74	0.54	0.68	0.85
Self-congruity CON α = 0.78	CON01	4.24	0.77	0.52	0.64	0.67
	CON02	4.20	0.80	0.51	0.63	0.68
	CON03	4.26	0.74	0.51	0.58	0.74

6.7 Structural Equation Modelling

As mentioned in Chapter four, structural equation modelling is the multivariate analysis method used in this study to explain the relationships among specified variables in the theoretical model. There are several techniques to identify estimates for each free parameter, such as the ordinary least squares (OLS), generalised least squares (GLS) or the maximum likelihood estimation (MLE). The OLS was the common technique used during early attempts of using SEM, but, it was subsequently replaced by MLE. Other estimation techniques, such as GLS and weighted least squares, are now available. However, the MLE became the default approach of SEM due to its flexibility and robustness at the violation of the normality assumption. (Hair *et al.*, 2010). All the assumptions of applying multivariate techniques examined at the preliminary phase of data analysis were tenable, except for the multivariate normality. Due to the violation of normality assumption, the estimation technique used in this study is the MLE; the best fit to the data missing the assumption of multivariate normality (Tabachnick and Fidell, 2006). AMOS (Analysis of Moment Structures) v.18 is the statistical program used, having the feature of providing clear output, estimating missing data and analysing data with the multi-groups (Tabachnick and Fidell, 2006).

The process for structural equation modelling includes two types of models: the measurement model, which is then converted to the structural model. The measurement model specifies the indicators for each construct and assesses the construct-validity using CFA. The structure model represents the interrelationships of variables between constructs to test the hypotheses (Hair *et al.*, 2010).

6.7.1 Measurement Model

The validity of the measurement model depends on the assessment of the model's goodness of fit and the assessment of validity. Therefore, the assessment of measurement-model validity was conducted in two steps: goodness of fit and validity evaluation.

6.7.1.1 Fit Indices

The first run of the measurement is depicted in Figure 6.5, with initial results yielding acceptable standardised loading of all factors above the threshold of 0.5, as recommended by Bagozzi and Li (1988) and Hair *et al.* (2010). The values of chi-square (χ^2=708.42), degrees of freedom (df = 398), normed chi-square (χ^2/df = 1.7), goodness of fit (GFI) = 0.88, adjusted goodness of fit (AGFI = 0.85), incremental fit index (IFI = 0.93), comparative fit index (CFI = 0.93), root mean square error of approximation (RMSEA = 0.05), and standardised root mean residual (SRMR = 0.05), are summarised in Table 6.18. The absolute fit indices, such as chi-square and GFI, are sample-based (Kline, 2005). It is difficult to achieve the statistical insignificance of the model with a large sample size and large number of observed variables. This potential problem of χ^2-test increases the likelihood of rejecting the model (Bagozzi and Yi, 1988). Although the GFI was created early to provide a fit index less sensitive to sample size, it is still sensitive to sample size due to the effect of N on sampling distributions. Accordingly, it is less frequently used to support the model fit (Hair *et al.*, 2010). The normed chi-square, adjusted chi-square to degrees of freedom, is 1.7 less than the threshold of 2, as specified by Tabachnick and Fidell (2008), and the ratio of 3:1 establishes by Hair *et al.* (2010) and Kline, (2005). The badness of indices RMSEA, the most widely-used that represents the model fit relative to the population and not just the sample (Hair *et al.*, 2010), has an acceptable value. The values of RMSEA, ranging from 0.05 and 0.08, indicate a good fit (Hair *et al.*, 2010). Moreover, the value of SRMR, badness of fit index, is less than 1.0; thus, it is considered favourable (Kline, 2005). The incremental fit indices are widely used in SEM. The CFI is the improved version of normed fit index (NFI); while IFI is the improved version of non-normed fit index (NNFI) overcoming the variability of NNFI with values ranging from 0-1 (Tabachnick and Fidell, 2008). The rule indicates that values of IFIgreater than 0.9 indicate good fit (Bagozzi and Yi, 1988; Hair *et al.*, 2010; Kline, 2005). Moreover, Lacobucci (2010) states that if the model IFI (CFI, IFI, or TLI) are greater than 0.9, this is evidence of the acceptable fit of the model. Finally, the AGFI is an independent measure of sample size; however, owing to its distribution it used only as a guideline to fit, rather than as a statistical test. Values that surpass the 0.9 cut-off for AGFI are only a rough guideline (Bagozzi and Yi, 1988).

There is an agreement on the sufficient of normed chi-square, CFI and SRMR as fit indices of structural equation modelling for several reasons. First, although a large sample is a general requirement for precise parameter estimation, the χ^2 is always significant with a large sample, indicating poor fit. It is quite probable that χ^2 is insignificant for sample sizes of 50 or more. Therefore, the normed chi-square, chi-square value adjusted by degrees of freedom but less than 3, indicates a good model. Second, the SRMR is a badness of fit index with lower values that will enhance the fit of the model and the high factor loadings. It is also less sensitive to the violations of normality assumptions and sample size, but places great sensitivity on misspecification of the model. SRMR values close to 0.09 or less represents a reasonable fit. Third, the CFI is an improved IFI than NFI sensitive to sample size; the performance of CFI is strong and robust. Good CFI has a value of 0.95 or thereabouts (Lacobucci, 2010).

Table 6-18 Summary results of measuremnt model fit

	X^2	***df***	**X^2/df**	**GFI**	**AGFI**	**CFI**	**IFI**	**RMSEA**	**SRMR**
Criteria			3:1	≥ 0.9	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.05	≤ 0.05
Model GOF	708.42	398	1.7	0.88	0.85	0.93	0.93	0.050	0.050

χ^2: chi-square, *df*: degrees of freedom, χ^2/df: normed chi-square, GFI: goodness-of-fit, AGFI: adjust goodness-of-fit, CFI: comparative fit index, IFI: incremental fit index, RMSEA: root mean square error of approximation, SRMR: standardised root mean residual.

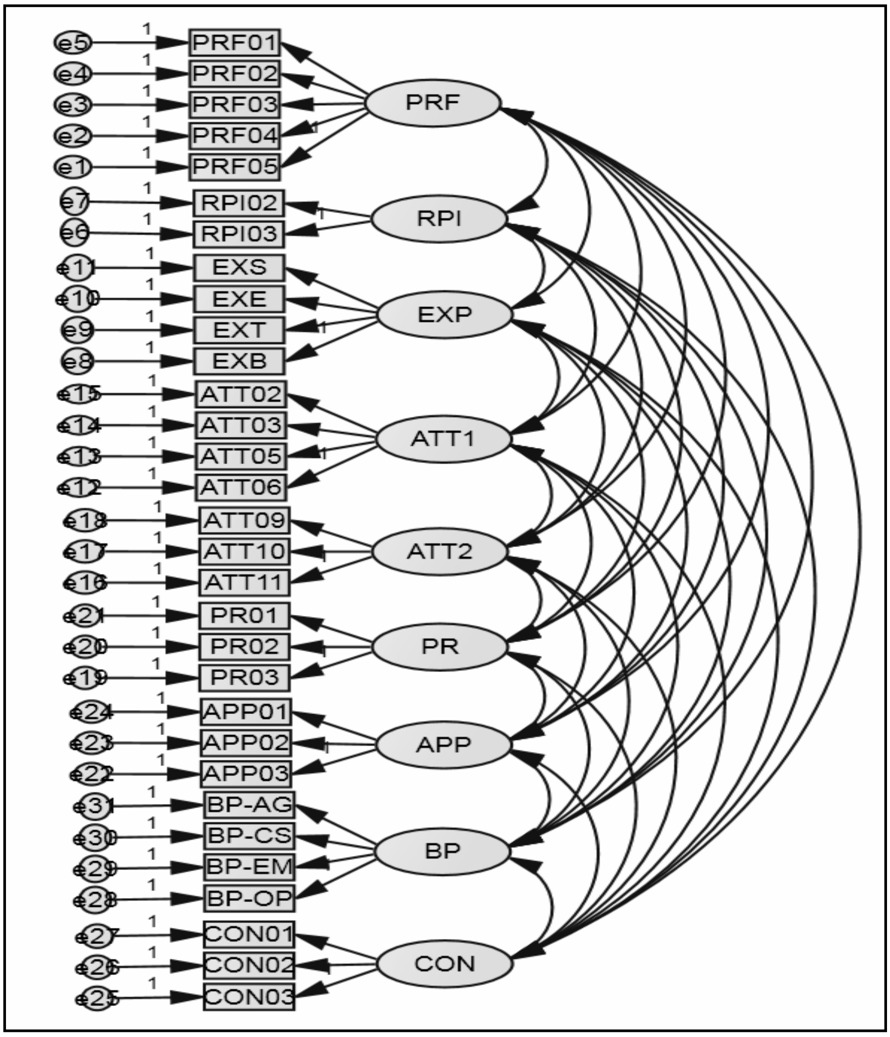


Figure 6-5 First run of the measurement model using CFA

While the main goal of using CFA is to assess the fit and validity of the measurement mode, model re-specification is sometimes required. Anderson and Gerbing (1988) recognise the need of measurement model re-specification, but stress the need of support by theory and content consideration. The results of the initial measurement model indicate the adequate fit of the model, but the re-specification can result in better fit. According to Anderson and Gerbing (1988, p.416):

> *"Sometimes, the first re-specification necessary is in response to non-convergence or an improper solution. Non-convergence can occur because of fundamentally incongruent pattern of sample covariances that is caused either by sampling error in conjunction with a properly specified model or by a misspecification. Relying on content, one can obtain convergence for the model by re-specifying one or more problematic indicators to different constructs on or more problematic indicators to different constructs or by excluding them from further analysis."*

The dropping of items at this stage may sound unfamiliar; however, Hair *et al.* (2010) allow minor modifications and dropping of items in no more than 20% of the measured items. There are several alternatives suggested by Hair *et al.* (2010) to check for possible ways of model improvement; these are the standardised residuals, modification indices and specification searches.

Standardised residuals are the difference between the observed and estimated covariances (Kline, 2005). Residuals can be considered as the error in the predication of covariance and can have either positive or negative values. Hair *et al.* (2010) suggest that normal values of standardised residuals should be less than ±2.5, values ranging between $|2.5|$ and $|4|$ might cause problems, while those of more than $|4|$ represent an unacceptable degree of errors and should be dropped. The results show that all of the standardised residuals values fall within the acceptable range and no items are candidates for deletion. The second alternative is the modification indices are calculations of all non-estimated parameters; therefore, it provides information with which to diagnose the correlations between the error terms and the constructs. Modification indices of values greater than 4 suggest possible means of model improvement. After the investigation of modification indices, the three items ATT02, PRF04, and PRF05 had high correlated measurement errors.

Anderson and Gerbing (1988) suggest four possible solutions to deal with items: relate the indicator to a different factor; delete the indicator from model; relate the indicator to multiple factors; or use correlated measurement errors. The indicators have within-construct error covariances so cannot be related to other items; thus, they were subject to deletion in order to preserve the potential of uni-dimensionaltiy, as recommended by Anderson and Gerbing (1988). The last alternative is the specification search based on trial and error; specifying a new set of relationships by freeing the non-estimated relationships with highest modification indices based on the model diagnostic. However, this is not recommended by Hair *et al.* (2010). After dropping the items with high error term covariances, the second run of re-specified measurement model results in slight improvements of the model fit, as shown in this figure 6.6.

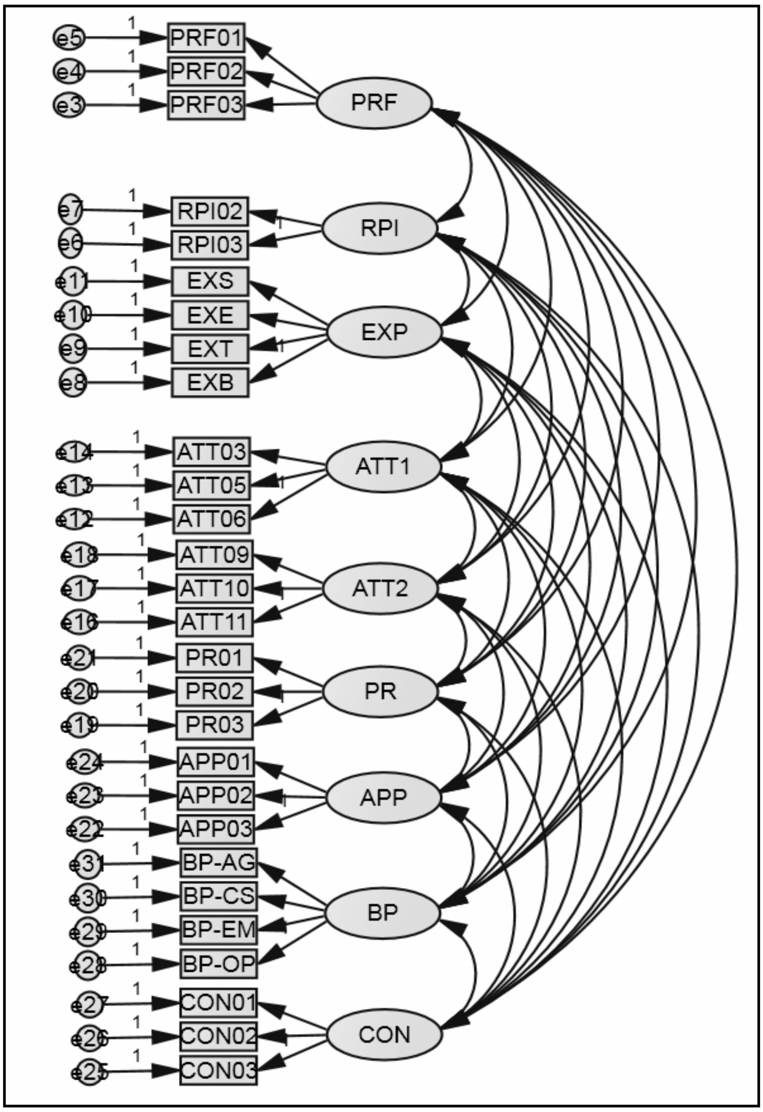


Figure 6-6 Re-specified measurement model

The results of the re-specified measurement model are summarised in Table 6.19. The improved results of re-specified model yield values of chi-square (χ^2=523.60), degrees of freedom (*df* = 314), normed chi-square (χ^2/df = 1.6), goodness of fit (GFI) = 0.90, adjusted goodness of fit (AGFI = 0.88), incremental fit index (IFI = 0.95), comparative fit index (CFI = 0.95), root mean square error of approximation (RMSEA = 0.045), and standardised root mean residual (SRMR = 0.048), are summarised in Table 6.19. Although the chi-square remains significant and the adjusted goodness-of-fit (AGFI) does not meet the minimum threshold of 0.9, the other modification indices were improved and meet the satisfactory rule of thumb.

Table 6-19 Summary results of re-specified measurement model

	X^2	***df***	**X^2/df**	**GFI**	**AGFI**	**CFI**	**IFI**	**RMSEA**	**SRMR**
Criteria			3:1	≥ 0.9	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.05	≤ 0.05
Model GOF	523.6	314	1.6	0.90	0.88	0.95	0.95	0.045	0.048
χ^2: chi-square, *df*: degrees of freedom, χ^2/df: normed chi-square, GFI: goodness-of-fit, AGFI: adjust goodness-of-fit, CFI: comparative fit index, IFI: incremental fit index, RMSEA: root mean square error of approximation, SRMR: standardised root mean residual.									

6.7.1.2 Validity Assessment

One of the main objectives of using CFA is to assess the construct validity; the ability of the measurement items to reflect the latent constructs (Hair *et al.*, 2010). Construct validity is evaluated by assessing the convergent validity and the discriminant validity (Hair *et al.*, 2003). The convergent validity means the indicators measuring certain construct share the high proportion of variance in common (Hair *et al.*, 2010). The convergent validity is assessed by factor loading, average variance extracted and composite reliability.

Factor loading – as a rule, the significant factor should not be less than 0.5. The results indicate that all the standardised loading estimates are higher than 0.5, with the lowest value equalling 0.58. All the critical ratios (*t*-value) were significant above the threshold of ± 1.96 (p < 0.001).

Average variance extracted (AVE) is calculated by the mean variance extracted from factor loading using this equation. The rule of thumb indicates that good AVE starts from the value of 0.5 (Hair *et al.*, 2010). .

$$\mathbf{AVE} = \frac{\sum_{i=1}^{n} L_i^2}{n}$$

Where*: L*: the standardised factor loading,

i: the number of items.

Construct reliability (CR) or composite reliability (Bagozzi and Yi, 1988) measure internal consistency. There are many alternatives to compute the construct reliability; there are slight differences between different reliability coefficients. The CR is computed using SEM from the squared sum of factor loadings per construct and the sum of the error variance terms for constructs, by using this equation (Hair *et al.*, 2010). Reliability of 0.7 or more is considered good; however, a construct of 0.6 reliability value can also be accepted if the other constructs in the model have good reliability (Hair *et al.*, 2009). Bagozzi and Yi (1988) consider composite reliability to be good, starting from the value of 0.6.

$$\mathbf{CR} = \frac{\left(\sum_{i=1}^{n} L_i\right)^2}{\left(\sum_{i=1}^{n} L_i\right)^2 + \left(\sum_{i=1}^{n} e_i\right)}$$

Where:
L: the standardised factor loading.
i: the number of items.
e: error variance

The following table 6.20, provides evidence that the all the constructs in the measurement model are having convergent validity.

Table 6-20 Summary results of convergent validity

Construct	Item	Factor loading	Critical Ratio *t*-value (***)	AVE	CR
PRF	PRF01	0.67	------------------	0.59	0.80
	PRF02	0.82	11.67		
	PRF03	0.80	11.71		
RPI	RPI02	0.96	3.74	0.64	0.77
	RPI03	0.60	------------------		
EXP	EXS	0.82	12.77	0.56	0.83
	EXE	0.75	11.84		
	EXT	0.72	11.73		
	EXB	0.70	------------------		
ATT1	ATT03	0.74	------------------	0.58	0.80
	ATT05	0.81	11.77		
	ATT06	0.73	12.63		
ATT2	ATT09	0.66	9.83	0.51	0.76
	ATT10	0.81	9.95		
	ATT11	0.67	------------------		
PR	PR01	0.70	11.25	0.59	0.81
	PR02	0.80	11.15		
	PR03	0.80	------------------		
APP	APP01	0.71	9.95	0.54	0.77
	APP02	0.84	10.21		
	APP03	0.64	------------------		
BP	BP-AG	0.82	------------------	0.60	0.86
	BP-CS	0.78	15.32		
	BP-EM	0.65	12.65		
	BP-OP	0.85	16.74		
CON	CON01	0.80	10.05	0.55	0.78
	CON02	0.75	10.22		
	CON03	0.67	------------------		

The results presented in the previous table validate the convergent validity of the constructs in the measurement model. The standardised factor loading was above the minimum of 0.5, with significant t-values. Also, the average variance extracted was above 0.5 for all constructs, suggesting good convergence. The reliability of the constructs was above 0.7, ranging from 0.76 to 0.86, indicating good reliability.

Discriminant validity – the extent that constructs are distinct and the measures of each construct are not correlated to other constructs measures (Hair *et al.*, 2003). It can be assessed using a rigorous test by comparing the average variance extracted values for any two constructs with the square of the correlation estimate between these two constructs. The rule that verifies discriminant validity is: AVE > squared correlation estimate. Therefore, the AVE calculated will be compared with the square of the correlation estimate between constructs, as depicted in Table 6.21.

Table 6-21 Discriminant validity

	AVE	EXP	BP	CON	APP	PR	ATT2	ATT1	RPI	PRF
EXP	0.56	1								
BP	0.60	0.46	1							
CON	0.55	0.00	0.01	1						
APP	0.54	0.19	0.20	0.00	1					
PR	0.59	0.07	0.01	0.00	0.03	1				
ATT2	0.51	0.25	0.37	0.00	0.15	0.03	1			
ATT1	0.58	0.40	0.36	0.00	0.10	0.06	0.30	1		
RPI	0.64	0.04	0.05	0.08	0.04	0.00	0.06	0.02	1	
PRF	0.59	0.50	0.34	0.01	0.21	0.01	0.336	0.37	0.11	1

The results of the previous table support the existence of discriminant validity between constructs since the AVE between any two constructs is greater than the squared correlation estimate.

6.7.2 Structural Model and Hypotheses Testing

The aim of conducting CFA to the measurement model supports the validity of measures by providing evidence for model adequate fit and construct validity. In order to test the relationships between constructs as hypothesised in the proposed theory, the measurement model is transformed to the structural model (Hair *et al.*, 2010). SEM is specified by the transformation of covariances between constructs and into path estimates; the hypothesised causal relationships. Exogenous constructs, independent predictors, are identified and the relationship between them is fixed at zero; while, for endogenous constructs, outcomes are identified, and Error terms are added to them since they are not fully explained. The SEM is specified by 16 correlational relationships between the six exogenous constructs (brand attribute1, brand attribute2, price, appearance, brand personality, and self-congruity), and 16 structural relationships depicted by 16 path estimates linking the relationships between the exogenous constructs and endogenous constructs (brand experience, brand preference and brand repurchase intention). The specified SEM can now be used for hypotheses testing.

By running the SEM, the results yield an adequate level of fit, as illustrated in Table 6.22. The chi-square (χ^2 = 535.67), with degrees of freedom (*df* =320), significance level ($p < 0.005$), indicates acceptable normed chi-square (χ^2/df = 1.6) less than 2, as recommended by Tabachnick and Fidell (2006). The other goodness-of-fit is within a range that would be associated with good fit; the goodness-of-fit (GOF = 0.9), the incremental fit indices values exceed the minimum value of 0.9 (IFI = 0.94, and CFI= 0.94). The root mean square error of approximation (RMSEA) and the standardised root mean residual (SRMR) are acceptable at 0.045 and 0.05 respectively. There is a slight difference between the structural model and the measurement model; however, the model is still acceptable.

Table 6-22 Structural equation model goodness-of-fit

	X^2	***df***	**X^2/df**	**GFI**	**AGFI**	**CFI**	**IFI**	**RMSEA**	**SRMR**
Criteria			1:3	≥ 0.9	≥ 0.9	≥ 0.9	≥ 0.9	≤ 0.05	≤ 0.05
Model GOF	531.37	319	1.6	0.90	0.86	0.94	0.95	0.045	0.049
χ^2: chi-square, *df*: degrees of freedom, χ^2/df: normed chi-square, GFI: goodness-of-fit, AGFI: adjust goodness-of-fit, CFI: comparative fit index, IFI: incremental fit index, RMSEA: root mean square error of approximation, SRMR: standardised root mean residual.									

6.7.2.1 Results of Hypotheses Testing

Hypotheses are tested by diagnosing the path estimates using critical value t-value. The hypothesis is supported by critical values lower than the 0.05 level of significance at t-value = 1.96. The critical values lower than 1.96 are insignificant; therefore, the hypothesis is not supported (Hair *et al.*, 2010). The results of hypotheses testing reveal the support of 10 hypotheses out of 13 being tested. Table 6.23 presents the results of hypotheses testing.

Table 6-23 Results of hypotheses testing

Constructs	Hypotheses	Standardised Path Estimate	Critical Value	Significance
Brand Experience (EXP)	H1a: Brand Experience → Brand Preference	0.45	4.726	0.001 Supported
	H1b: Brand Experience → Brand Repurchase Intention	0.096	0.850	0.395 Rejected
Attribute Perceptions (ATT)	H2a: General Attributes → Brand Preference	0.192	2.338	0.019 Supported
	Functional Benefits → Brand Preference	0.208	2.627	0.009 Supported
	H2b: Functional Attributes → Brand Experience	0.320	4.013	0.001 Supported
	Functional Benefits → Brand Experience	0.014	0.182	0.855 Rejected
Price (PR)	H3a: Price Perception → Brand Preference	0.128	2.638	0.008 Supported
	H3a: Price Perception → Brand Experience	- 0.112	- 2.042	0.041 Rejected
Appearance (APP)	H4a: Appearance Perception → Brand Preference	0.147	2.320	0.020 Supported
	H4b: Appearance Perception → Brand Experience	0.130	2.104	0.035 Supported
Brand Personality (BP)	H5a: Brand Personality → Brand Preference	0.006	0.066	0.889 Rejected
	H5b: Brand Personality → Brand Experience	0.398	4.714	0.001 Supported
	H5c: Brand Personality → Brand Repurchase Intention	0.176	1.808	0.071 Rejected
Self-congruity (CON)	H6a: Self-congruity → Brand Preference	0.110	2.062	0.039 Supported
	H6b: Self-congruity → Repurchase Intention	0.296	2.298	0.022 Supported
Brand Preference (PRF)	H7: Brand Preference → Brand Repurchase Intension	0.245	2.280	0.023 Supported

H1a&b: *Brand experience as an antecedent of brand preference and repurchase intention.*

- The results demonstrate support for the first hypothesis (H1a) for the direct relationship between consumers' experiences with the brand and their preferences. Brand experience exerts a direct significant positive impact on brand preference with a path estimate of 0.45, t-value = 4.726, and a significance level of $p = 0.001$.

- The results reveal the insignificance of the path estimate (0.096, t-value = 0.850, and p = 0.395) between brand experience and repurchase intention. Therefore, hypothesis (H1b) is not supported; rejecting the direct impact of brand experience on repurchase intention.

H2a&b: *Attribute perception as an antecedent of brand experience and brand preference*

- The results indicate that general attributes predict brand preferences positively and significantly (0.19, t-value = 2.338, p = 0.019). Also, the functional benefits predict brand preferences positively and significantly (0.21, t-value = 2.638, p = 0.008). Therefore, the hypothesis (H2a) is supported fully with a significant direct and positive relationship between consumer attribute perceptions and brand preferences.

- According to the results, the general attributes have a significant positive impact on brand experience (0.32, t-value = 4.013, p = 0.001); while the functional benefits have an insignificant impact on brand experience (0.014, t-value = 0.182, p = 0.855). Therefore, hypothesis (H2b), which explains the impact of attribute perception on brand experience, is partially supported.

H3a&b: *Price perception as an antecedent of brand experience and brand preference.*

- As expected in hypothesis (H3a), consumers' price perception will influence their brand preferences. The path estimate shows a significant positive and direct relationship between price perception and brand preference (0.13, t-value = 2.317, p = 0.021).

- The results indicate the significance of the path estimate between price perception and brand experience (p = 0.041), but the sign of the estimate value reflects a negative relationship (- 0.11, t-value = - 2.042). Although the relationship between price perception and brand experiences was significant, it was in a negative direction. Therefore, hypothesis (H3b) is rejected.

H3a&b: *Appearance perception as an antecedent of brand experience and brand preference.*

- Consumers' perceptions of the brand appearance predict their preference for brands' therefore, hypothesis (H3a) is supported. The results indicate the significance and positive relationship between price perception and brand preferences (0.15, t-value = 2.320, p = 0.020).

- The appearance perception predicts brand experience positively and significantly (0.13, t-value = 2.104, p = 0.035), so, as anticpated, hypothesis (H3b) is supported.

H5a, b&c: *Brand personality as an antecedent of brand experience, brand preference, and repurchase intention*.

- The results reveal the insignificance of the direct impact of brand personality on brand preference (0.006, t-value = 0.066, p = 0.947), and repurchase intention (0.18, t-value = 1.808, p = 0.071). Therefore, there is no support for hypotheses (H5a) and (H5b).

- The direct impact of brand personality on brand experience was supported, accepting hypothesis (H5c). The results yield a significant and positive relationship between the brand personality and brand experience (0.40, t-value = 4.714, p = 0.001).

H6a&b: *Self-congruity as an antecedent of brand preference, and repurchase intention*.

- Self-congruity predicts significantly and positively consumer brand preferences (0.11, t-value = 2.062, p = 0.039) supporting hypothesis (H6a), and repurchase intention (0.296, t-value = 2.298, p = 0.001) supporting hypothesis (H6b).

H7: *Brand preference and repurchase intention.*

- The results support hypothesis (H7) that brand preference has a significant and direct positive impact on repurchase intention (0.25, t-value = 2.280, p = 0.023).

H8: *Consumer demographic characteristics (age, gender, and educational level)*

With respect to this hypothesis, multiple regression is used to discover the impact of individual differences in predicting brand preference. Table 6.24 shows the results of the impact of consumer demographics (age, gender and educational level) on brand preferences. The results yield the insignificance of the results (F-test = 1.55. p =

0.202). The impact of the three demographic variables: gender (β1gender = 0.009, p = 0.869), age (β1age = 0.010, p = 0.88) and educational level (β1educational level = 0.123, p = 0.057) on brand preferences are significant.

Table 6-24 Regression analysis results of demographic variables predicting brand preferences

Constructs	Standardised coefficient	t-value	Sig.	Model Summary				
				R	R^2	Adjusted-R	F-value	Sig
				0.12	0.014	0.005	1.55	0.202
Constant		21.407	0.000					
Gender	0.009	0.165	0.869					
Age	0.010	0.151	0.880					
Educational level	0.123	1.909	0.057					

The results reveal that brand preference is predicted by the functional attributes (0.19, $p < 0.05$), functional benefits (0.21, $p < 0.01$), price (0.13, $p < 0.05$), appearance (0.15, p < 0.05), self-congruity (0.11, $p < 0.05$) and brand experience (0.45, $p < 0.001$). Together, these constructs explain 62.5% of the total variance in brand preference. Consumer brand experience is affected significantly by the functional attributes (0.32, $p < 0.001$), price (- 0.11, p < 0.05), appearance (0.13, $p < 0.05$) and the brand personality (0.40, $p < 0.001$); all contribute to explain 56.7% of total brand experience. Both the brand preference (0.25, $p < 0.05$) and self-congruity (0.30, $p < 0.05$) have a significant impact on brand repurchase intention, explaining only 19% of its total variance. Figure 6.7 illustrates the significance of each path estimate of the six exogenous constructs and mediators on the endogenous constructs.

6.7.2.2 Testing Mediation

The proposed theoretical model has two mediators: brand experience and brand preference. The brand experience mediates the relationships between consumer perceptions and brand general attributes, price, appearance, and brand personality; while the brand preference mediates the relationship between the brand experience and the brand repurchase intention. In order to determine the existence of mediation and whether it is partial or full mediation, it requires the fulfilment of certain conditions as specified by Baron and Kenny (1986) and Hair *et al.* (2010).

The existence of mediation can be supported by following certain steps:

- The mediation model represents no relationship between the independent and dependent variable, as shown in figure 6.8. If the fit of the mediation is good then it provides the existence of mediator, as shown in figure 6.9 (Hair *et al.*, 2010). For the current study, the mediation model yields an adequate fit with chi-square value (χ^2 = 550.05), degrees of freedom (*df* =326), significance level ($p < 0.005$), the goodness-of-fit (GOF = 0.89), the incremental fit index (IFI = 0.94) and the comparative fit index (CFI= 0.94). The root mean square error of approximation (RMSEA) and the standardised root mean residual (SRMR) are acceptable at 0.046 and 0.051 respectively. Therefore, the results of model fit support the existence of mediating role. The fit of the mediation is then compared with the SEM, including direct paths between the independent variables and dependent variable. The results reveal that the revised model with direct relationships improves the model substantially with a reduction in the chi-square value ($\Delta\chi^2 = 9.6$, *df* =3, $p < 0.005$). However, not all the relationships remain significant, suggesting the existence of full and partial mediation.

- In order to assess the extent of mediation: partial or full. Three links exist: the independent and the dependent variable; the independent and the mediator; and the mediator and dependent variable. The condition of the lower impact of independent variable on dependent variable in the control of mediation is a case of partial mediation (Baron and Kenny, 1986; Hair *et al.*, 2010). However, the case is identified as full mediation if the impact of the independent variable on the dependent variable is not significant with the control of mediator (Baron and Kenny, 1986; Hair *et al.*, 2010).

- As indicated in Table 6.25, comparisons are made between the total effect, and direct and indirect effects. The impact of general attributes on brand preferences is partially mediated by brand experience; since, the impact of general attributes on brand preferences dropped from 0.19 ($p < 0.001$) in direct relationship to 0.14 ($p < 0.05$) with the control of brand experience. Also, the direct impact of appearance perception on brand preference reduced from 0.15 ($p < 0.05$) to 0.06 ($p < 0.05$) in the existence of brand experience; thus, supporting the partial mediation of brand experience. The case of full mediation of brand experience is supported in the relationship between brand personality and brand preference. The inclusion of brand experience in the model impedes the significant impact of brand personality on brand preference. In the mediation model, the relationship between price and brand experience is insignificant, suggesting the inexistence of a mediating role of brand experience for the relationship between price and brand preference.

- To test the impact of brand preference as a mediator between brand experience and repurchase intention, the same steps were followed. The mediation model yields an adequate fit; thus, supporting the existence of a mediating impact. The direct linkage between the independent variable and the dependent variable in the absence of mediator results in improvement in the model with ($\Delta\chi^2$ = 118, *df* =68, $p < 0.005$). In this case, the independent variable is the brand experience and the dependent variable is the repurchase intention. Although the mediation model fit is acceptable, there is no significant direct relationship between the independent and the dependent. Therefore, this defines the existence of full mediation, because there is no significant direct impact on the control of mediator. The indirect impact of brand experience on repurchase intention mediated by brand preference is significant (0.135, $p = 0.036$), as shown in Table 6.25.

- The significance of the indirect effect of independent variables on dependent variables via a mediator is calculated using Sobel's (1982) test. The results show the significance of the three paths of brand experience mediation relationships and brand preference mediation relationship ($p < 0.05$), as illustrated for indirect effect in Table 6.25.

Figure 6-7 Mediation model

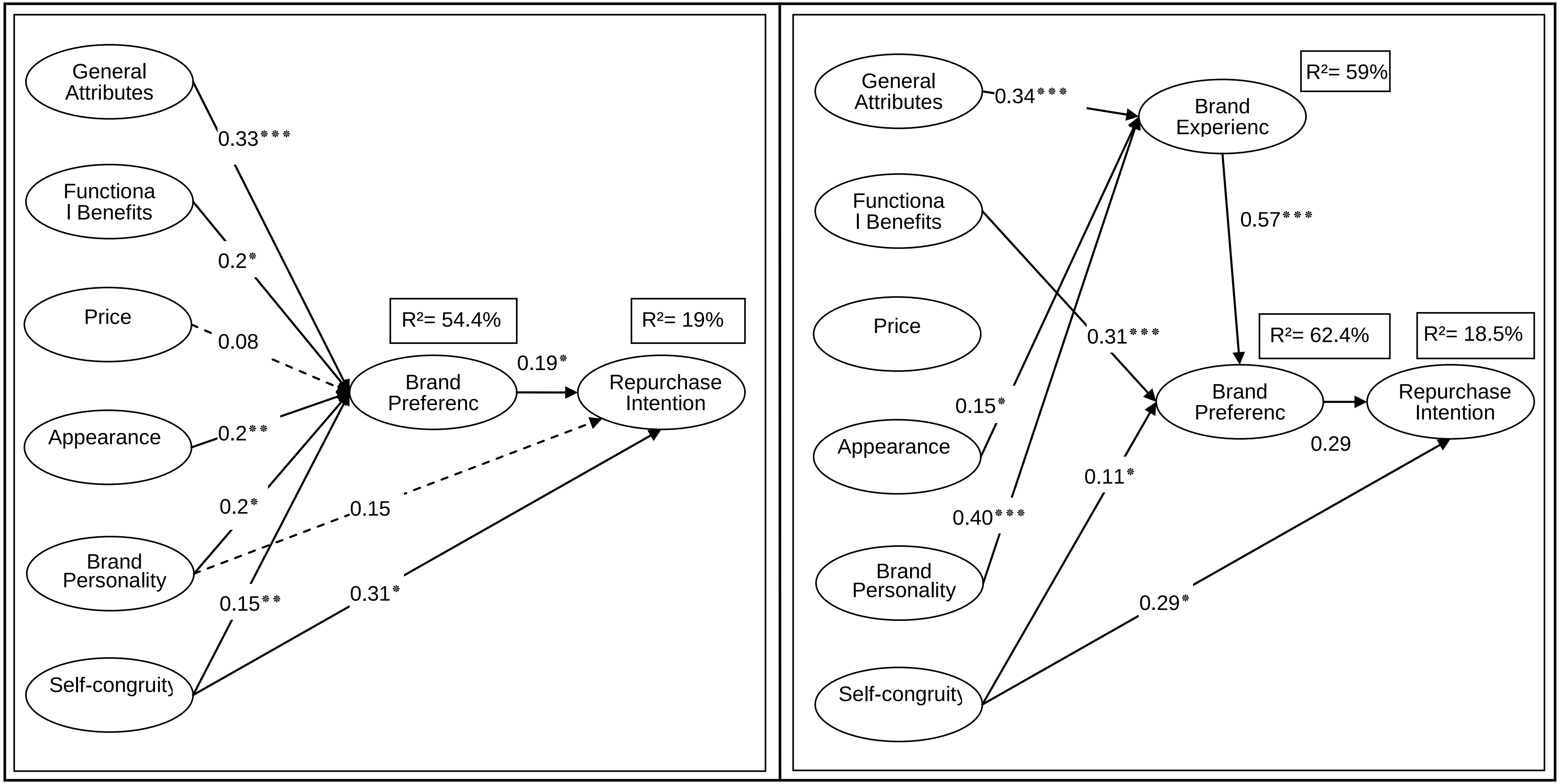


Table 6-25 Decomposition of effect analysis

Direct Path	Direct effect	Significance	Indirect Path via mediator	Indirect effect	Significance	Total effect
ATT → PRF	0.19	0.019	ATT → EXP → PRF	0.14	0.042	0.34
APP → PRF	0.15	0.020	APP → EXP → PRF	0.06	0.033	0.21
BP → PRF	0.012	0.889	BP → EXP → PRF	0.18	0.044	0.18
EXP → RPI	0.19	0.006	EXP → PRF → RPI	0.13	0.036	0.13

6.8 Further Analysis

6.8.1 Dimensional Impact of Brand Experience

The impact of multi-dimensional constructs can be addressed at either aggregate level or by disentangling its dimensional impact. The results reveal the significant impact of brand experience on brand preference. Therefore, in this section further analysis is conducted to determine the relative importance of the different experiential responses in shaping consumer preferences for brands. Several studies have focused on differentiating between the impact of various brand experience dimensions on brand relationship (Chang and Chieng, 2006), online satisfaction and online trust (Rose *et al.*, 2012), consumption of luxury brands (Atwal and Williams, 2009) and attitude behavioural intention (Qi *et al.*, 2009). Accordingly, multiple regression analysis is conducted in order to further analyse the impact of each experiential dimension on consumer preferences.

The results presented in Table 6.26 highlight that both sensorial and emotional experience are significantly related to brand preference. The magnitude of the standardised coefficient shows the importance of emotional experience compared with sensorial experience in affecting brand preferences. Both types of experience can explain 38.45 of the total variance of brand preferences. The intellectual and behavioural experiences have no significant impact on brand preference.

Table 6-26 Impact of brand experience dimensions on brand preference

Constructs	Standardised coefficient	t-value	Sig.	Model Summary				
				R	R^2	Adjusted-R	F-value	Sig
				0.62	0.384	0.376	49.768	0.000
Constant		7.759	0.000					
EXS	0.279	4.531	0.000					
EXE	0.376	6.478	0.000					
EXT	0.092	1.561	0.119					
EXB	- 0.046	-0.790	0.430					

6.8.2 Dimensional Impact of Brand Personality

As mentioned in the literature review, the impact of brand personality can be either at the aggregate level (Brakus *et al.*, 2009; Kim *et al.*, 2011) or by addressing the impact of each type of brand personality (Folse *et al.*, 2012; Lin, 2010; Sung and Kim, 2010). Multiple regression analysis is used to further analyse the impact of each type of brand personality on brand preference and repurchase intention; the results are shown in Table 6.27 and 6.28 respectively. The findings indicate the significant impact of only two brand personality types; the conscientiousness personality ($\beta = 3.603$, $p = 0.000$) followed by openness to experience ($\beta = 2.974$, $p = 0.000$) on brand preference. These two brand personality types can explain 27% of the total variance in brand preference; while the other two types are insignificantly related to consumer brand preferences. For the repurchase intention, only the conscientiousness dimension of brand personality demonstrates a significant positive impact ($\beta = 3.075$, $p = 0.002$). This brand personality dimension can explain only 4.2% of the total variance in repurchase intention.

Table 6-27 Impact brand personality dimensions on brand preference

Constructs	Standardised coefficient	t-value	Sig.	Model Summary				
				R	R^2	Adjusted-R	F-value	Sig
				0.52	0.27	0.26	29.371	0.000
Constant		7.8320	0.000					
BP-AG	0.104	1.390	0.165					
BP-CS	0.021	3.603	0.000					
BP-EM	0.248	0.340	0.734					
BP-OP	0.217	2.974	0.003					

Table 6-28 Impact brand personality dimensions on brand repurchase intention

Constructs	Standardised coefficient	t-value	Sig.	Model Summary				
				R	R^2	Adjusted-R	F-value	Sig
				0.21	0.04	0.03	3.547	0.008
Constant		6.955	0.000					
BP-AG	0.048	0.565	0.573					
BP-CS	0.242	3.075	0.002					
BP-EM	0.055	0.733	0.440					
BP-OP	0.015	0.184	0.854					

6.8.3 Between Group Differences

In order to assess the difference between groups of consumers in developing their preferences based on their demographic characteristics (gender, age, and educational level), the validated SEM model was tested according to group differences. Using AMOS v.19, differences between groups are allocated by comparing the chi-square of the unconstrained and fully constrained models. The significant difference between models indicates the existence of moderators; while, the insignificant difference does not support the existence of moderators (Hair *et al.*, 2010). Accordingly, the comparison between unconstrained and constrained model is based on gender differences; two groups, male and female, for which the results in Table 6.29 indicate the insignificance differences. Therefore, no difference exists between the male and female in the study sample and their brand preferences.

Table 6-29 The results of assessing between group differences based on gender

Model	Unconstrained-model	Constrained-model	Difference	Significance
Chi-square	802.312	827.725	25.413	
df	550	577	27	0.55
CFI	0.93	0.93	-	
RMSEA	0.038	0.037	-	

To assess the differences between consumers based on age, the sample was divided into groups based on age: the first includes all respondents aged 30 or lower, and the second includes all those over 30 years. The comparison of the unconstrained and constrained models yields insignificant differences, as shown in Table 6.30. This suggests there is no difference in consumers’ brand preferences based on age.

Table 6-30 The results of assessing between group differences based on age

Model	Unconstrained-model	Constrained-model	Difference	Significance
Chi-square	947.466	1015.2	29.156	
df	636	684	22	0.03
CFI	0.91	0.90	-	
RMSEA	0.04	0.04	-	

Finally, the comparison between consumers based on their educational level also suggests no difference between the groups. Therefore, consumers' brand preferences are not different according to educational level. The results are illustrated in the following table.

Table 6-31 The results of assessing between group differences based on educational level

Model	Unconstrained-model	Constrained-model	Difference	Significance
Chi-square	631.386	648.5	17.114	
df	428428	450	22	0.75
CFI	0.94	0.94	-	
RMSEA	0.04	0.037	-	

6.9 Conclusions

This chapter provides a detailed discussion of the quantitative data analysis. The pre-test of the survey instrument refined the items by assessing their reliability using Cronbach's alpha and item-to-total correlation. The primary data of the main survey is collected using a self-administrated questionnaire. Several statistical tests are used to analyse the data through four phases:

First. Data screening and testing of multivariate. In this phase, the data was screened by checking the missing data and outliers. The missing data is very low and occurs randomly; therefore, the remedy was to include the observations in the analysis. There is no proof that the outliers are aberrant and subject to deletion; thus, they were retained. Accordingly, the data is cleaned without reducing the sample size. All the assumptions of multivariate techniques were assessed and proved tenable, with the exception of the multivariate normality detected by Mardia's coefficient. To overcome the violation of the maximum, a likelihood estimate approach is used due to its flexibility and robustness in the violation of the normality assumption.

Second. Assessment of reliability and validity. EFA was used to reduce the data and identify the variables. In addition, the uni-dimensionality test of a multi-dimension construct was measured to create composite measures. The load of the dimensions of either brand experience and brand personality on one factor proved the uni-dimensionality. The reliability of the construct was assessed and all the constructs were above the minimum requirement. The CFA indicates that the measurement model has an adequate fit and the re-specification of the model improved the fit indices. In addition, the construct validity was assessed using convergent and discriminate validity. The measurement model is then transferred to the structural model for hypotheses testing.

Third. Further analysis of the data tests the dimensional impact of multi-dimensions constructs on brand preference. In addition, the direct influence of demographic characteristics on brand preferences and the between group differences is assessed.

After going through these steps to analyse data, important conclusions can be drawn to interpret the meaning of the statistical analysis numeric findings:

- The proposed theoretical model is able to provide a good understanding of brand preference development. The model broadens the role of the brand by adding experience to the brand meanings. The results indicate that the consumer considers the brand functional attributes, price, appearance and self-congruity as important criteria from which to determine his preference at the first level. Brand experiences exist at a higher-level; they incorporate consumer sensorial, emotional, intellectual and behavioural responses when thinking about the brand. The high significant impact of brand experience on brand preference relative to the aspects of brand knowledge reflects consumer desirability to the essence of brand than its features. This model validates empirically the fundamental role of brand experience as a direct antecedent, in determining brand preferences.

- The model also defines the brand-related stimuli (general attributes, price, appearance, and brand personality) that evoke consumer brand experiences. These explain more than 50% of brand experience variance. However, there is a great emphasis placed on the role of brand identity, reflected by its personality in shaping consumer brand experience. In addition, the full mediating role of brand experience in the relationship between the brand personality and brand preference draws an important insight into how a consumer perceives the symbolic value of humanising the brand. The partial mediation of brand experience explains its contribution in delivering the value embedded in brand offerings.

- The discriminant validity between the brand personality and self-congruity proves, as hypothesised, that the two constructs reflect different symbolic brand meaning, and have different influences on brand preferences and repurchase intentions.

- Companies target winning consumer brand preferences in order to emphasise the superiority of its brand in comparison with others. Moreover, the significant impact of brand preferences on repurchase intentions reflects that the preferred brand provides a premise for future decisions.

- The absence of the significant influence of consumer demographics characteristics on brand preference reflects that the heterogeneity of consumer's brand preferences is not related to their demographics. Such results confirm the findings of qualitative data that indicate the lack of difference across the four focus groups.

- Important insights can be drawn from brand experience dimensionality. While the social experience was described by participants in focus groups, the generated items were loaded on behavioural experience. This suggests that socially-worded items include strong behavioural aspects. According to Helman and De Chernatony (1999), lifestyle comprises social values. After the deletion of cross-loading items and items loaded with values below 0.4, only four dimensions of brand experience were determined: sensorial, emotional, intellectual and behavioural.

- The big-five personality dimensions were applied to measure the brand personality, identifying four types of brand personality: peaceful, conscientious, emotionally stable and open to experiences. The peaceful factor reflects those aspects of the brands linked to agreeableness and extroversion, and is defined by items such as happy, active, faithful, friendly and pleasant.

Chapter Seven

Discussion of Analysis

7.1 Introduction

In the previous chapter the theoretical model proposed in this study to provide an understanding of how consumers develop preferences for brands was empirically tested. The results from the empirical analysis define the set of significant predictors for consumer preferences and repurchase intention. By using structural equation modelling a final revised model is provided showing the significant links between antecedents shaping brand preferences and in turn, its impact on repurchase intention. The aim of this chapter is to give synthesis on the results of both the qualitative and quantitative results. By discussing the significant and insignificant relationships in the proposed theoretical model through which the research hypotheses were accepted or rejected. The chapter is organised into sections: the first section compares between the results of hypotheses testing and the extant literature; while, the second section discusses how the results obtained can address the research objectives.

7.2 Discussion of Hypotheses Testing

The final revised model constitutes of nine constructs and twelve significant relationships, as shown in figure 7.1. Through the findings it was revealed that consumers brand preferences are affected by brand experience and brand functional attributes/benefits, appearance, price, and self- congruity. In turn, brand preferences and the symbolic impact of self-congruity influence the repurchase intention. In addition, the results identify the elements of brand knowledge upon which consumer evoke their experiential responses are identified namely (functional attributes, price, appearance, and brand personality). No significant impact exists between consumer demographics and brand preferences.

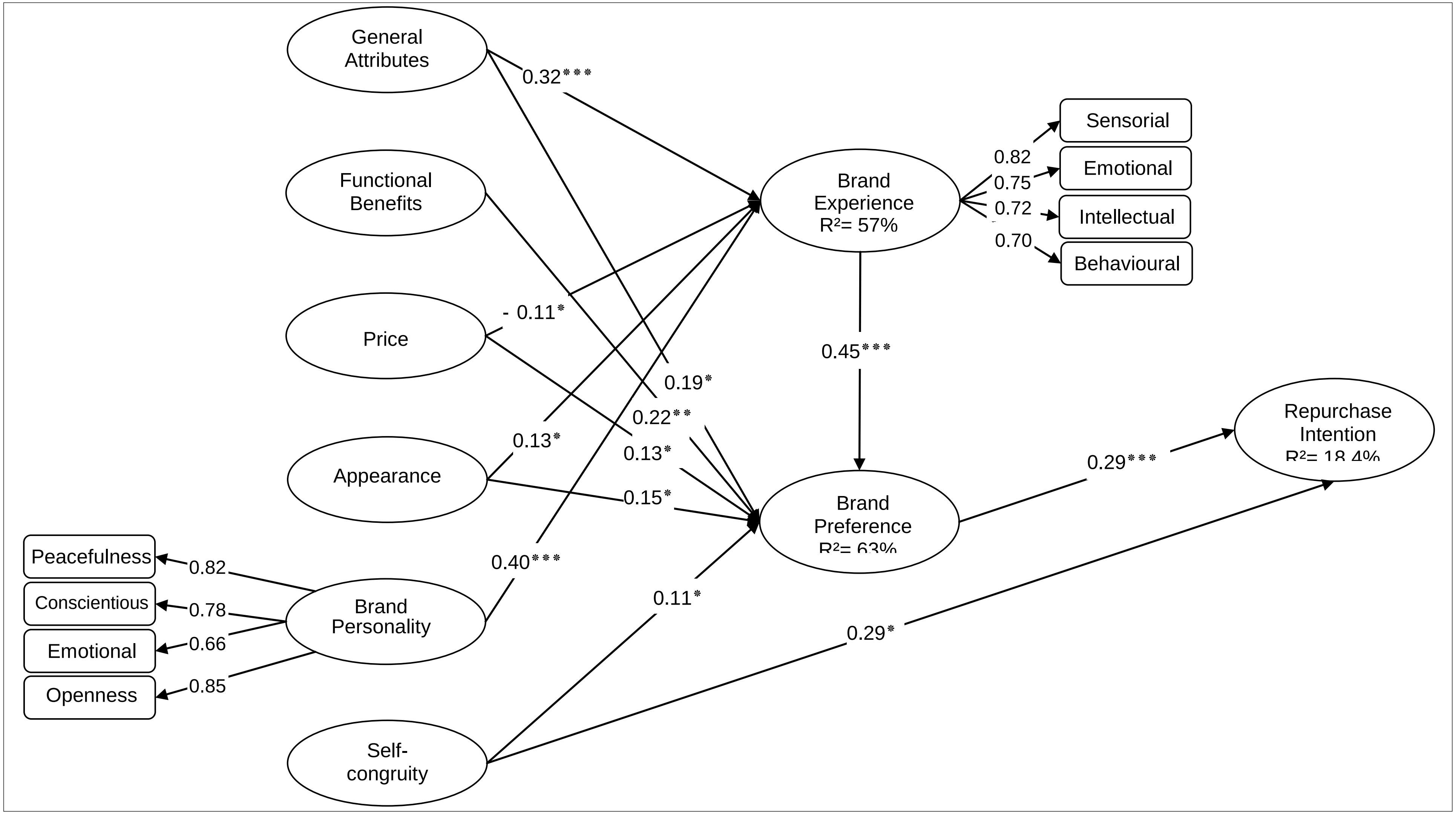


Figure 7-1 Final revised model

7.2.1 Brand Experience and brand preference

In the first hypothesis it was expected that the brand experience has a significant positive impact on consumers brand preferences and repurchase intention. Most of the prior studies concern with examining the impact of consumers brand experience on brand loyalty (Brakus *et al*, 2009; Biedenbach and Marell, 2010; Pullman and Gross, 2004), brand relationship (Cahng and Chieng, 2006), satisfaction (Ha and Perks, (2005; Morgan-Thomas and Veloutsou, 2011 Rose *et al*, 2012), and brand value (Tsai, 2005). However, this considers being the first study assuming the direct impact of brand experience on brand preference and repurchase intention. As it was expected brand experience has a significant positive impact on brand preference; however, the direct impact of brand experience on repurchase intention is unsupported.

The prior studies focus on the impact of experience refereeing to the accumulated knowledge (e.g. Heilman *et al*, 2000) or the usage impact on changing consumers perception on the weights or importance of brand attributes or benefits (Hamilton and Thomposn, 2007 Thompson *et al*, 2005). The results provide evidences that the brand experience reflecting consumer response to various brand-stimuli and the acquired knowledge can be a source of preference and generate evaluations or judgements toward a brand. These responses are induced regardless to the type or level of experiences (Brakus *et al*, 2009; Daugherty *et al*, 2008; Gupta and Vajic, 1999; Meyer and Schwager, 2007), ensuring the delivery of the brand value to consumers (Gentile *et al*, 2007; Sheng and Teo, 2012). As explained by Goode *et al*, (2010) that the responses gleaned during experiencing the brand are stored in consumers memory providing an informational base for evaluating the brand. This base represents the holistic view of the brand; reflecting the rational and irrational component of the brand that provide clues for the consumers enhancing their brand preferences (Berry *et al*, 2002). As suggested by Pine and Gilmore, (1998) the experience is the stage of differentiation beyond the classical economic offerings created to increase consumer preferences, identifying this type of experience as successful experience.

The results also came in consistent with Hoeffler and Arilely, (1999) that consumer experiences are the foundation of preferences. Thus, placing controversy perspective of preference formation than the constructive view (e.g. Payne *et al*, 1999), that consumers can have preferences based on their experiences. Simonson, (2008) suggest that experience can constitute the inherent or the dormant preferences. In addition, Dhar and

Novemsky, (2008) point out to the role of experience at the point of decision making forming the bases of new preferences; although, the difficulty to isolate new experience from prior exposure experiences. In either situation, experience plays an important role in constituting consumer preferences; inherent or constructed both are revealed and reflected form brand choice.

Consequently, the study results support empirically the significant impact of brand experience on brand preference postulated by Brakus *et al*, (2009) and Gentile *et al*, (2005), advocate the irrational perspective in consumer behaviour. It also supports the idea that consumers learn from their responses induced either from direct or indirect interactions with the brand (Daugherty *et al*, 2008).

Even more, Hoeffler and Ariely, (1999) emphasise that the type of experience play an important role in the development of preference. By investigating the impact of individual dimensions composing consumer brand experience on brand preferences, the hedonic dimensions account for the significant impact. Brand experience composed of four dimensions: sensorial, emotional, intellectual, and behavioural. The first two dimensions: sensorial and emotional constitute the hedonic experience (Hirschman and Holbrook, 1982) or the individual experience; while, the intellectual and behavioural representing the cognitive analytical experience and physical lifestyle experience (Brakus *et al*, 2009; Schmitt, 1999). Similar to Chang and Chieng, (2006) supporting the significant impact of individual experience on brand attitude and brand relationship. The shared experiences do not show any significant impact on consumers attitude or their relationship with the brand. in addition, Allen *et al*, (2005) and Grimm, (2005) support the significant role of emotional responses in predicting preferences. Moreover, Nysveen *et al*, (2012) demonstrate the significant impact of brand experience affecting brand loyalty on the aggregate level; but not per dimension.

A reasonable justification for this result is that hedonic responses provide the essence of usage experience (Hirschman and Holbrook, 1982). Moreover, Zajonc, (1980) suggest that the subjective affect or liking of an object depend on the sensory inputs followed by affective responses. Although, the timing of sensorial responses differs depending on the level of attention; but, it is the earliest response to the stimuli. The sensory experiences stored in consumer memory tend to be the bases of shaping the inherent preference (Simonson, 2008). Although, the intellectual experience is more related to technological product and consumers curiosity for experiencing a new technology (Schmitt, 1999); but, it is also related to the amount of thinking required from the consumer to deal with the brand (Brakus *et al*, 2009). The behavioural experience describes the action experience and changes in lifestyle. It has been demonstrated that the changes in life style affects consumer preferences through the level of stress due to experiencing certain event (Andreasen, 1984), or the coping behaviour to changes in lifestyle (Mathur *et al*, 2003).

7.2.2 Antecedents of Brand Experience

From the theoretical model proposed in this study the brand-related stimuli upon which consumers evoke their experiential responses are determined. These stimuli are presented by consumers perceptions toward the brand attributes, price, appearance, and brand personality. It was hypothesised that these four constructs constituting the elements of brand knowledge will have a positive significant direct impact on brand experience.

The results reveal the partial support of the impact of consumers attribute perception on brand experience. The brand general attributes are related to brand experience positively and significantly; while, the functional benefits are not related to consumers brand experiences. This finding is in consistent with Sheng and Teo, (2012) demonstrating that the product functional attributes have a significant impact on consumer brand experiences. In this study, consumers induce experiential responses in the brand general attributes, but not on the brand functional benefits. This shows that consumer brand experiences are more subjective representing the hedonic and symbolic consumption, as proposed by Addis and Holbrook, (2001). The brand functional benefits are the personal values consumers assign to the brand attributes, it stand at a higher level than attributes. It reflects the meeting of the brand to consumers fundamental needs and wants; whereas, consumers experiences include the subjective responses. Early, when mobile phones were launched consumers were focusing on the usability and ease of use. Their perceptions about mobile phones were purely functional and can directly affect their behaviour (Wakefield and Whitten, 2006). Similarly, Min *et al*, (2012) find insignificant impact of the service convenience; refereeing to consumers perceptions to the time and effort required to use a mobile phone, on the consumers emotional experience. Also, Lee *et al*, (2011) find out the utilitarian benefits of technological products are not related to consumer emotional responses. Now, users perceptions to new technology and mobile phones usages are different. Therefore, the basic functional benefits will not result in memorable experiences to users, yet, this does not imply that the functional benefits are not important. They are more like the basics required standard that will not induce experiential feelings or emotions. Then, for the general attributes consumers can induce different subjective responses to them. This support Holbrook and Hirschman, (1982) argument about consumers irrationality assumption; experiential view, that their cognitions are subconscious and imaginary and private in nature. That is, substituting the objective features and tangible benefits with the subjective features and symbolic benefits.

By staging into the experience economy, prices do not reflect the economic value of the brand only, but reflect also the cost of delivered experiences (Pine and Gilmore, 1998). Providing consumers with brands that deliver enjoyment and fun experiences should not come at a cost of higher prices. However, delivering an enjoyable value brand at lowest price is also a memorable experience. Consumers can induce responses to the price perception; monetary value, its fairness, or as an indicator of quality. Therefore, it was expected that consumers price perception can create positive experiences with the brand. The results yield a significant impact of price perception on brand experiences but in a negative direction. This reflects the negative impact of consumers price perception on their experiences with brands of mobile phones. It means that consumers perception to higher prices will not create positive experiences with the brand. Wald, (1999) suggest that consumers have misconception of consumers for the price of high-tech products. It is not clear if consumers perceive price as cost, or value. That is consumers may relate the high prices with quality or performance. On the other hand, they pay high prices for technological products instead of paying less and have poor performance. Therefore, consumer decision to buy a technological product is motivated by value maximisation with a subjective and/or objective view.

Among the brand stimuli that exert a significant positive impact on brand experience is the brand appearance. This finding is consistent with the great vast of studies demonstrating that appearance or the aesthetic design of the brand is among the hedonic attributes that contributes in inducing experiential responses by consumers (e.g. Chitturri *et al*, 2008; Mano and Oliver, 1993). With regard to technological products, Sheng and Teo, (2012) prove that the product hedonic attributes: aesthetic and entertainment have a significant positive impact on consumer experiences. Also, Lee *et al*, (2011) demonstrate the importance of technological products appearance in creating pleasure responses to consumers. Hoyer *et al*, (2012) suggest that consumers responses to the brand aesthetics, beauty of design, and appearance stimulate the five senses and define a great portion of the hedonic consumption.

The last brand meaning constituting the stimuli upon which the consumers evoke their experiential responses is the brand personality. The results reveal that brand personality is positively related to consumers brand experiences. This study is considered one of the first that measures the impact of brand personality on brand experiences. The prior studies provide evidence for the invers impact of brand experiences in brand personality (Brakus *et al*, 2009; Chang and Chieng, 2006). However, this study postulate that the brand personality refer to the brand symbolic meaning is one of the brand attributes upon which consumers can evoke subjective and behavioural responses. The results support one of the basic assumptions of the experiential view; consumer experiences reflect the symbolism consumption (Holbrook and Hirschman, 1982; Addis and Holbrook, 2001). In addition, the impact of the brand symbolic meaning depicted by self-expression on emotional experiences has been proved recently by Lee *et al*, (2011). The brand personality is one of the brand identity dimensions representing a brand-related stimulus affecting consumers experiences with the brands.

7.2.3 Antecedents of Brand Preference

The theoretical model is based on the hypothesis that the brand elements constituting consumers knowledge shape their preferences for brands. Such elements includes the brand related attributes and non-related attributes; thus, signify the different meanings associated to the brands; functional, economic, hedonic, and symbolic. Analysis of the empirical study gives results for hypotheses testing supporting the significant impact of brand knowledge on developing brand preferences. Also, new results are revealed add to the understanding of how consumers shape their preferences.

The results yield strong support to the impact of consumers attributes perception on brand preferences. The general attributes and the functional benefits are positively related to consumer preferences. Nevertheless, the level of impact of brand functional benefits on brand preferences comes before the general attributes, judged by the value of standardised coefficient. The findings are in consistent with the basic traditional view of multi-attribute models predicting consumers preferences based on their cognitive beliefs about the brand attributes/benefits and similar to the results of prior studies investigating this relationship (e.g. Grimm, 2005). It also, support that the importance of brand-related attributes and its functionality in driving consumer preferences. For the product category, technological products, the significant impact of brand functionality and utilitarian attributes in affecting consumer preferences have been demonstrated by Petruzzellis, (2010). Corresponding, to Wald, (1999) postulating that the first level in building powerful technological brand is to have the core tangible and objective characteristics.

There is support for the significant impact of price as a non-product related attribute in driving brand preferences. The price reflects the economical meaning of the brand and as predicted it is an important factor when consumers trade-off between brands. This finding is consistent with Alamro and Rowley, (2011) demonstrating the significant impact of price on brand preferences. Although, price is a non-product related attributes defines an external brand aspect concerns with the brand purchase and reflects the consumers rationality in brand choice and setting preference. When consumers trade-off among various alternatives based on price they seek to maximise the value in terms of buy a brand with good value of money and reasonable price. The value can be maximised by paying more for life-time or by paying the lowest price among other alternatives. For high-technological products consumer relate the price with the brand quality and performance (Wald, 1999). It is a factor that predicts the functionality of the brands of high-technological products. Petruzzellis, (2010) describe the group of consumers focus on the price and brand tangibles as pragmatism.

The results of the study shows support to the positive impact of consumers perceptions to brand appearance in driving their preferences. The brand appearance is another non-product related attributes delineate for the brand consumption not an important factor for the brand performance or functionality (Keller, 1993). Appearance perception reflects consumers aesthetic response to the brand design capturing their beliefs about the beauty and attractiveness. Similarly, Veryzer, (1993) provide empirical evidence of the positive impact of consumer aesthetic responses on product evaluations and enhancing preferences. The visual appeal of the brand can generate positive attitude toward the brand (Lee *et al*, 2009). This attitude can be formed from any of the different roles played by the appearance. The aesthetic response is considered as hedonic aspect related to consumer senses and affective responses (Hirschman and Holbrook, 1982). The aesthetic responses can be drawn from the appearance; colour, proportionality of the design, shape or size reflecting the beauty or the appeal of the brand appearance (Creusen and Schoormans, 2005; Pertruzzellis, 2010). Yet, it can have symbolic value, functional value, and ergonomic value (Creusen and Schoormans, 2005). The brand appearance and physical characteristics can tell about the brand image or personality (Creusen and Schoormans, 1998) and reflect the functionality of the brand. However, the main role of appearance is the indication of symbolic aesthetic value (Creusen and

Schoormans, 2005). Reimann *et al*, (2010) suggest that the appearance is an important core product attributes like quality and functionality that play a major role as a differentiating intangible attributes in consumer preferences and choices. Pertruzzellis, (2010) empirically support the importance of appearance and brand aesthetics in shaping consumer preferences toward technological product namely, mobile phones.

The symbolic aspects of the brand are denoted in this study by two construct: brand personality and self-congruity. It was hypothesised that the brand personality and the self-congruity to positively predict consumers preferences. The results came to support the significant positive impact of self-congruity on brand preference but, do not support the ability of brand personality to predict consumer preference.

For the self-congruity the results are analogous with the vast majority of empirical studies (e.g. Jamal and Al-Marri, 2007; Ericksen, 1997; Sirgy *et al*, 1997). The self-congruity assesses the matching between the brand image and the consumer self-concept. The greater self-congruity reflects small discrepancies between the consumer self-concept and brand-user image. This relationship is explained by the self-congruity theory reflecting the importance of consumer self-concept and the value-expressive, social distinction, and functional benefit embedded in the brand (Sirgy *et al,* 1997). The study findings support assertions that self-congruity can explain and predict consumer pre-purchase evaluation; brand preference.

Furthermore, the results do not confirm the brand personality relationship to either brand preference. The findings differ from the previous studies studying the direct impact of brand personality on facets of consumer behaviour such as the brand preference (Kim *et al*, 2011). However, there are possible justifications can explain the divergent results. First, the theoretically, brand personality means humanising the brand and assigning human traits that best describe it (Aaker, 1997; Keller, 1993; Swaminathan *et al*, 2009). Thus, the main aim of this concept is to reflect the possibility of brand characterisation (Plummer, 2000). In this essence, Freling and Forbes, (2005) posits that the impact of brand personality depends on consumer perception to the favourableness of the personality type describes the brand. The possible outcomes of brand personality on consumer behaviour such as attitude, purchase intention, loyalty, or preference are generated form positive and strong perceived personality. Second, the study measures the impact of brand personality on brand preference and purchase intention based on the aggregate level; without differentiating between the impact of different dimensions describing the brand personality. The impact of the aggregate level of brand personality have been examined before on brands from different product categories (Brakus *et al*, 2009; Valette-Florence *et al*, 2011), hospitality industry (Kim *et al*, 2011). The findings of these studies support the positive influence of brand personality on brand loyalty (Brakus *et al,* 2009), brand preference and attitudinal loyalty (Kim *et al*, 2011), and brand equity (Valette-Florence *et al,* 2011). However, the results of Valette-Florence *et al*, (2011) do not support the significant relationship of brand personality on brand equity across the three segments of consumers. The significant positive impact is supported in two segments defining symbolic and neutral consumers; while, the non-symbolic segment shows insignificant impact between the brand personality and brand equity.

Third, the current study depends on the big-five personality scale to avoid the weakness of Aaker's brand personality scale when conducted outside the American context. The prior studies measure the aggregate impact of brand personality using Aaker, (1997) (Brakus *et al*, 2009; Kim *et al,* 2011) and conduct the study in American context. Even more, the study of Valette-Florence *et al*, (2011) is conducted in France using the scale of Ambroise, (2006) that reflects the French context. Fourth, the results of examining the impact of each dimension, personality type, on brand preference and repurchase intention reveal significance of impact on dimensional level. The findings show assertions on the importance of conscientiousness on brand preference and repurchase intention. This dimension is equivalent to competence in Aaker's scale, (1997). In addition, the findings of prior studies examining the impact of brand personality based on each dimension (Lin, 2010; Sung and Kim, 2010) support the significant impact of the competence dimension among others on affective and action loyalty, and brand trust and brand affect. The openness to experience dimensions refers to the tolerance for new idea and thoughts, intellectual curiosity, and open to imagination (Costa and McCrae, 2001). Lastly, Ang and Lim, (2006) demonstrates consumers different perceptions to brand personality depending on the product type.

7.2.4 Consumer Differences

It was hypothesised that consumer demographics have significant impact on brand preferences. By testing the hypothesis using regression the results support the insignificant impact of consumer demographics on brand preferences. The results came in consistent with one group of studies consider the demographic characteristics as poor predictive of consumer preferences holding insufficient to explain how preferences are developed (e.g. Bucklin *et al*, 1995; Fennell et al, 2003; Singh *et al*, 2005). However, for other studies consumer demographics are considered significant, while weak but can contribute in explaining consumer preferences for brands (e.g. Duarte and Raposo, 2010). Bass and Talarzyk, (1972) indicate that older and less educated respondents have high correlations with the probability of incorrect preference prediction. The study of Jamal and Goode, (2001) reveal the significant of consumers educational level and their preferences in jewellery market. All the tested demographics; gender, age, and educational level, are found to be insignificant.

In addition, no significant differences are found between consumer perceptions of different brand meanings on constituting favourable dispositions for certain brands among their demographic characteristics (age, gender, and educational level).

7.2.5 Antecedents of Repurchase Intention

The antecedents of repurchase intentions are predicted by four drivers. Four hypotheses are expecting the positive and significant impact of the constructs: brand experience, brand preference, brand personality, and self-congruity, on consumers repurchase intention. The results reveal as predicted that both brand preferences and self-congruity predicted repurchase intentions positively and significantly. While, the brand experience and brand personality have no significant direct impact on the repurchase intention. From the further analysis, significant results support the significant impact of brand experiences on repurchase intentions fully mediated by brand preferences.

The repurchase intention refers to consumers decision about repeating the purchasing action of the brand. Consumers desire to repeat their experiences with the brand might a motive to consider purchasing the brand again. It can be argued that there are two groups of studies explaining the relationship between consumers experiences and their behavioural consequences. The first group support the direct impact of brand experience and brand loyalty (Brakus *et al*, 2009; Rageh, 2010), or behavioural intention toward the usage of online search engine (Morgan-Thomas and Veloutsou, 2011). The second group of studies do not support significant direct relationship between consumers experiences and the repetition of behavioural action. Iglesias *et al*, (2011) find not direct impact of consumers experiences on their loyalty behaviour for three products: cars, laptops, and sneakers. However, the authors support the indirect impact of brand experience on consumers loyalty behaviour toward brands mediated by their affective commitment. Also, consumers experience either the cognitive and affective do not influence their repurchase intention from online retailers directly, but, through satisfaction (Rose *et al*, 2012). Even, Tsai, (2005) suggest that the impact of emotional experience will not be utilised to stimulate consumers repurchase intention, if not consumer perceive the value of the brand. Therefore, it can be concluded that for brand experience to result in a behavioural consequences such as stimulating repurchase intention; consumers have to evaluate these experiences first. This evaluation can be through level of satisfaction result from experiencing the brand (Rose *et al*, 2012), or the value delivered from experiencing the brand (Tsai, 2005), or by creating string emotional bond with the brand (Iglesias *et al*, 2011).

Accordingly, in the current study consumers experiences with different brands of mobile phones do not directly impact their intentions towards repurchasing the brand. Brand preferences play a significant role by fully mediating this relationship. That is, brand experiences influence repurchase intention by affecting consumer preferences for brands, in turn, brand preference directly stimulate repurchase intentions. Consumers experiential responses induced from certain brand building biased position toward it comparing with other brands, providing an important source of preference learning enhance their purchasing decision in the long run.

The current study finds significant relationship between the brand preference and the repurchase intention. The findings of the current study are consistent with those of Hellier et al, (2003) who confirm the significant impact of brand preference on repurchase intention. Several studies have assert that brand preferences have a positive impact on consumers purchase intention (Cobb-Walgren *et al*, 1995), Chang and Liu, 2009, Overby and Lee, 2006; Tolba and Hassan, (2009). However, Tolba and Hassan, (2009) support the impact of brand preferences on purchase intention for only two groups of consumers; those who never tried and those who tried the brand. The authors reject the ability of preference to create loyal consumers for those who owned the brand. Also, Kim *et al*, (2011) support the impact of brand preference on creating attitudinal loyalty, the emotional commitment that will result in repeating action. The significance of this relationship corroborates the idea of Zajonc and Markus, (1982), that preference do not only reflect the consumers thoughts or feelings towards an object, but also, it holds a prediction of the coming approach or act. Consumer preferences toward brands or their favourableness of one brand over another is most likely to be translated into a purchase decision.

The logic behind this is that preference can be regarded as a combination between consumer responses to perceptions and his overall evaluations of various alternatives able to satisfy their needs. These preferences are direct antecedent of their intentions translated to choice and behavioural action in the long run (Bagozzi, 1983). On the other hand, intentions are particular type of desires reflecting the transformation of a psychological state to response. Consumer preferences act like an intention-related stimulus by placing the most preferred brand as the object of intention (Van Kerckhove *et al*, 2012). It is suggested by Van Kerckhove *et al*, (2012) that the consistency between consumer preferences and choices is an indication of preference stability. Erdem and Swait, (1998) demonstrate that the action of repeating behaviour is a consequence of consumer preferences; different tastes or associations attached to the brand expecting its utility or value.

The two constructs brand personality and self-congruity representing the symbolism of the brand. The results indicate the significant impact of self-congruity on the repurchase intention. This came similar to the findings of the studies examine the impact of self-congruity on the purchasing intention such as the studies of Ericksen (1996), Hong and Zinkhan, (1995) and reveal the significant impact of self-congruity based on actual and ideal self. Also, Cowart et al, (2008) supporting the significant impact of congruence between consumer actual self-concept and the brand-user image on the behavioural intentions toward buying home entertainment technological products. The result is in an agreement with Kressmann et al, (2006) revealing the significant impact of self-congruity on brand loyalty. For, the second symbolic construct; brand personality, contrary to expectations the study results indicate the insignificant impact of brand personality on repurchase intentions. However, this result has not previously been described and contradicted with the previous research examine the impact of brand personality on brand loyalty (Kim *et al*, 2011; Lin, 2010), and purchase intention (Freling and Forbes, (2011).

7.3 Restatement of Research Questions

As indicated in chapter one – introduction, the research problem is addressed by three main questions, they are:

1. What is the impact of different brand knowledge aspects on consumer brand preference?

2. Do brand experiences affect consumer brand preferences, and how it interacts with the brand knowledge elements in shaping consumer preferences?

3. Do consumer brand preferences motivate his repurchase intention?

Approaching these research questions were addressed by developing a theoretical framework describes the relationships between the brand knowledge and brand experience as the two main sources of consumer brand preferences, and in turn, the its impact on the repurchase intention. The mixed-method techniques starting with the qualitative at the first phase allow the refinement of the model and the development of questionnaire considering the difference of respondents in the studied research context. The second phase is the quantitative study through which the research hypotheses are tested. The results of hypotheses testing provide various insights to consumer preferences for brands with the regard to the product type; mobile phones, and the context; mobile phone users in Egypt, in which the study is conducted. These insights help in reaching optimal answers to the research questions. The hypotheses testing results can be summed up in the following points:

I. Consumer perceptions to the brand knowledge/meanings and their experiences with the brand defining various subjective and behavioural responses are important drivers for brand preferences.

- All the brand knowledge elements predict brand preferences significantly and positively except for the brand personality has no direct significant impact.

- Brand experiences can be shaped by consumer perceptions of the brand general attributes, appearance, and brand personality.

- The price perception has a significant positive impact on brand preference and significant negative impact on brand experiences; that is, it can act as positive and negative cue.

- The impact of brand knowledge on brand preference is enhanced by the mediating role of brand experience.

II. The brand preference is a basic antecedent of repurchase intentions, but mediates the impact of brand experiences on the behavioural act. Thus, it suggests the following linkage brand experience → brand preference → repurchase intention. the significant impact of brand personality on brand experience suggests its impact on repurchase intention through this linkage; that is, brand personality → brand experience → brand preference → repurchase intention. Self-congruity predicts significantly and positively predicts the repurchase intention; while, the brand personality has no significant impact on the repurchase intention.

III. Consumer demographics (age, gender, and educational level) have no direct impact on building favourable predispositions toward brands. Also, there are no differences among consumers perceptions to the brand knowledge building their preferences.

7.3.1 First Research Question

The first research question seeks the relationships between consumer perceptions on various brand meanings: general and functional attributes, price, appearance, brand personality, and self-congruity and brand preferences. Addressing this question require identification of the different attributes consumers associate to the product type; in addition to, the human traits that can be assigned to different brands of mobile phones. This acts as a preliminary step to operationalize the constructs and test their impact on consumer preferences.

The results of the study indicate the importance of the different brand meanings consumers associate to the brand as antecedents to brand preferences. The relative weight of the brand attribute associations such as consumer attributes perceptions reflecting the brand functionality, is almost equal to that of the non-attribute associations such as price, appearance, and symbolic perceptions. In addition, slight differences can be found between the weights of the non-attribute associations: price, appearance, and self-congruity on consumer preferences, indicating that these attributes stands at the same level of importance in shaping consumer preferences.

One unanticipated outcome finding is the insignificant direct relationship of brand personality on brand preferences. However, it has been demonstrated that the insignificant impact is based on the aggregate level, while, at the level of dimensions the conscientiousness and openness to experiences significantly influence brand preferences. These results can be greatly related to the product category, it is more favourable for the brand of technological product such as mobile phones to be perceived as reliable and efficient; conscientiousness, or as modern and up-to-date; openness to experience. While, the other two dimensions peacefulness; connoting the notions warmth and sociability, and emotionality, encapsulate the notion controlling negative emotions are unfavourable symbolism for technological products.

These results reflect the balancing of consumer perceptions among various brand meanings. In addition, it demonstrates that brand preference is not uni-dimensional focus on the cognitive perceptions of brand attributes; however, it is function to beliefs of the multi-aspects meaning of brands. Thus, assert the importance of brand knowledge addressing the various meanings; functional, symbolic, economic, aesthetic consumers association to the brand in developing brand preferences.

7.3.2 Second Research Question

The second research question seeks an answer about the role of brand experiences in developing consumer preferences for brands. The role of brand experiences is emphasised through its direct impact as an important antecedent to preferences and by mediating the relationship of brand knowledge and brand preference. The response to this question requires first identifying the different dimensions that describe consumers experiences with the brands. at the first phase; qualitative study, consumers brand experiences are identified by five dimensions: sensorial, emotional, intellectual, behavioural, and social. These dimensions were operationalized in the model, the factor analysis shows cross loading between the items of social and behavioural experiences. The deletion of low and cross loading items turns out the dimensions of brand experience into four: sensorial, emotional, intellectual, and behavioural, these results are in consistent with Brakus *et al*, (2009).

The results indicate as expected the predictability of brand experiences to consumers brand preferences. This asserts that the responses evoked by consumers at different levels through different types of interactions creating private experiences at the individual level and ensuring the delivery of value to consumers are fundamental in building consumer preferences and motivate their purchasing intentions.

The decomposition of brand experience gives further justification to the salient responses consumer adheres in developing his preferences. The results confirm the significance of the sensorial and emotional experiences on brand preferences. This shows that the successful brand experience should involve the consumers senses and emotions. This individual subjective judgement refereeing to the actually lived experienced pleasure from the brand is an important memorable clue for eliciting favourable biased position for certain brand over other alternatives.

The brand experiences interact with the brand knowledge by mediating its impact on brand preferences. This type of interaction is drawn from comparing the direct impact model of brand knowledge on brand preference and the indirect impact model mediating by the brand experience the different elements of brand knowledge. The results suggest that consumer perceptions on the brand knowledge elements constitute a significant part of their experiences. Important insights can be deduced from these findings, the importance of the brand symbolic attribute; brand personality, and general attributes followed by the brand appearance and price in inducing consumer responses constituting his experiences.

In addition, testing the mediation model reveal that brand experiences partially mediate the effect of consumers attribute perceptions referring to the general attributes and functional benefits, and the appearance perception on brand preferences. Surprisingly, brand experiences fully mediate the relationship of brand personality on brand preference. Also, no mediating role is detected between the price and the brand preference. In addition, no relationship was expected between the self-congruity and the brand experiences; since, the self-congruity itself is perceived as a subjective experience generated by the congruence between the self-concept and brand-user image (Sirgy *et al*, 1997).

The absence of mediating role of brand experience in the relationship between the functional benefits, price, and self-congruity assert the importance of their direct effect on building a favourable position for certain brand among other alternatives. On the other hand, the partial mediating role of brand experiences suggest that the brand general attributes and appearance perception can directly affect brand preferences and indirectly contributing in creating memorable experiences. The full mediating role of brand experience of the relationship between brand personality and brand preference suggest new role of the brand as self-expressive tool. That is, consumers perception to the favourableness of the brand personality is built by experiencing the brand. Additionally, the results suggest that the brand identity is an important stimulus for enhancing consumer experiences. This result support the idea suggested by Morgan-

Thomas and Veloutsou, (2011) to explore the role of brand personality on shaping consumer brand experiences.

7.3.3 Third Research Question

The third question asks about the predictability of brand preferences to the repurchase intention. The response to this question is provided by testing the direct impact of brand preferences on the repurchase intention.

The results show support to the significance of the link between the disposition of consumer to favour certain brand and his willingness to buy that brand again. This result extends the role of preferences from motivating the consumer intentions to the repetition of the act. In addition, the study findings of the mediating role of brand preference to the relationship between the brand experience and the repurchase intentions add new insights: first, it suggest that consumer decisions to rebuy the brand and repeat their experiences will not occur unless it results in favourable predispositions toward certain brand among alternatives. Thus, brand preferences stand as an evaluation to consumer experiences with the brand interpreting his desires to repeat their experiences and repurchase of the brand. Second, based on the results indication preferences can be considered as a linkage between the informational processing and psychological and experiential responses on one hand, and consumer willingness and volitions on the other hand. Third, the positive impact of preferences on future act might be an indication of consumer intentions to consistent preferences.

7.4 Conclusions

This chapter discusses the research hypotheses and illustrate the main findings of the study that provide answers to the research questions. Arguably, this study suggests that brand preference can be developed from two different sources the brand knowledge and the brand experiences. The brand knowledge presents consumer perceptions of the brand cognitive structure while the brand experience captures the essence of the brand through actual responses. This experience captures the rational and irrational aspects of consumers thinking of consumer as human beings engage with the brand through his senses and emotions in a creative and analytical thinking about acts and behaviours that intrigue and excite him. Through these experiences the embedded value in the brand offerings are delivered. This is clearly demonstrated in the model through the interactions between the general brand attributes, appearance and brand personality constituting consumer brand knowledge that stimulate his experience. Part of the embedded value in the brand general features and the aesthetic value of the brand appearance influence consumer preference by experiencing the brand. In addition, the brand personality is demonstrated to have a significant positive influence on consumer behavioural and attitudinal responses toward the brand. The brand personality provides value as well, which will not influence consumer preferences unless he experiences the brand. Brand experience extracts the essence of the brand and increases its value beyond its functional benefits. Consumers prefer the brand that provides them with experiences that meet their expectations. Therefore, what consumers learn from their knowledge and experience are the bases of their comparative judgment that develop their preferences. A promising outcome of these preferences is the apparent motivation toward favourable repurchase behaviour.

Chapter Eight

Conclusions

8.1 Introduction

This chapter begins by providing an outline of the research, and linking the research findings with the theory through theoretical contributions. Then, it draws managerial attention to possible practices and implications to help gain a competitive advantage. Following these implications, the research novelty is discussed; noteworthy contributions claimed to have been achieved as a result this research. The chapter concludes with a critical evaluation of the research methods applied in this study presented and their limitations, followed by recommendations for future research in the area of branding.

8.2 Research Contributions

8.2.1 Theoretical Implications

The traditional multi-attribute models, such as Fishbein's model (1965), were used to predict brand preferences as a uni-dimensional value based on the cognitive information measured by consumer beliefs on weighted attributes to maximise utilities. Other consumer behaviour theories (e.g. Bettman, 1979; Howard and Sheth, 1969), based on rationality, consider preferences as a bridge between the consumer information processing and psychological reactions. These traditional models were criticised by Holbrook and Hirschman (1980), firstly introducing the experiential view of expanding the brand meaning to become more holistic. It explores the symbolic brand meanings derived from the subjective characteristics alongside the utilitarian and functional meanings elicited from the objective characteristics. In addition, it broadens consumer cognitions to include subconscious and private responses stored in the memory. Unlike traditional models, this research investigates consumer preferences based on the experiential view. The facets of this view are the holistic brand meanings and responses to brand stimuli constituting consumer brand knowledge and experience respectively, and defining the sources of preference learning (Amir and Levav, 2008; Howard and Sheth, 1968; Sheth, 1968; Zeithmal, 1988). Therefore, the research contributes mainly to the existing literature by providing a model that aims to understand consumer preferences from knowledge and experience of the brand. The importance of this research can be exemplified in five points:

First. The research contributes to existing marketing literature. It provides an understanding of consumer brand preferences and its impact on future decision-making. Thus, it covers the scarcity of knowledge in this area and reveals the brand preference determinants (Dhar and Novemsky, 2008; Singh *et al*, 2005; Simonson, 2008). Unlike prior studies focusing on one or two factors, this study concentrates on multiple factors that constitute consumer knowledge and experience of the brand. Thus, this enables the determination of salient factors in preference formation. The results show the importance of the brand knowledge factors and brand experience in developing consumer preferences. The research goes beyond the dominant assumption of rationality of traditional models. It supplements this assumption with the experiential perspective of irrationality. Thus, the study highlights the importance of experiential responses besides the cognitive component of brand knowledge in predicting consumer preferences. The research also provides a balanced perspective to explain consumer preference and future purchasing decisions.

Second. The findings of the study provide insights into the relative importance of consumer perceptions on different brand meanings and in shaping preferences. Previous studies apply multi-attribute models or expectancy value theory to measure consumer preferences as a uni-dimensional value that reflects consumer beliefs in relation to brand attributes (e.g. Allen *et al*, 2005; Agrawal and Malhotra, 2005; Grimm, 2005; Muthitcharoen *et al*, 2011). The research contributes to the existing knowledge by differentiating between the brand-related and non-related attributes in terms of preference. It examines the impact of consumer utilitarian beliefs on the brand functional attributes and perceptions of other attributes unrelated to brand functionality. The price reflects the economic meaning of the brand, unrelated to the functional value of the brand. The importance of this factor is summed in the multi-attribute models. Although the large body of preference depends on the economic rationality theory, it perceives price as an important factor representing the consumer's sacrifice to obtain the product (McFadden, 1996). In addition, the appearance is a symbolic attribute reflecting the aesthetic of the brand. The price and appearance, in addition to other symbolic associations such as brand personality and self-congruity, comprise the non-attributes component of the brand knowledge. Accordingly, the research reflects the functional, economic, aesthetic and symbolic associations of the brand, thereby constituting the subjective and objective meanings that form the brand knowledge. The findings enhance the understanding of consumer cognitive information processing in preferences development. It indicates that the functional, utilitarian attributes are not the focal interest of consumer trade-off between the multiple brand alternatives. The economic factor presented by price plays a significant role. Other symbolic and aesthetic associations are important in developing the biased predisposition of consumers towards certain brands. Theoretically, this implies that the consumer tends to be rational by placing great emphasis on brand functionality and economic meaning; however, other symbolic associations remain, but they do not have the same significance.

Third. The research goes beyond the notion of experience used in prior preference studies; examining its impact on the relationship between the attributes and preferences. These studies focus on the impact of experience level or type changing consumer's preference level. The research considers experience reflected by consumer responses resulting from interactions with the brand. It then focuses on the subconscious private experiences stored in consumer memory, reflecting the holistic responses to the brand stimuli as a source of developing brand preference. This extension of experience meaning contributes to the research significance in several ways:

- The findings show the significant impact of brand experiences as a direct factor that influences consumer brand preferences. Thus, the integration of experiential responses as source of preference besides consumer perceptual biasness to brand attributes is supported. The brand experiences include the subjective, internal and behavioural responses evoked by consumers interacting with the brand. This holistic nature of experience offers insight into the importance of other responses than the emotional experiences investigated in prior studies (Agrawal and Malhotra, 2005; Allen *et al*, 2005; Grimm, 2005). This contributes to preference development.

- The brand experience plays a significant role in delivering the value created by the brand attributes that shape consumer preferences. This role is justified by the partial and full mediation role of brand experience between brand knowledge and preferences. This suggests the importance of experiencing the brand in order to transfer the inherent value of brand attributes into brand preferences.

- The findings reveal the full mediating role of brand experience in terms of the relationship between brand personality and brand preferences. This indicates the importance of experiencing the brand to assign influential symbolic meanings to the brand affecting consumer preferences. Theoretically, this indicates that the importance of the brand as a tool of self-expression is perceived by experiencing it to enhance consumer preference.

- The research defines the components of brand experience: sensory, emotional, intellectual and behavioural. These are evoked by contacting the brand at different levels of involvement. The findings also suggest the importance of symbolism in enriching the experiential sphere.

Fourth. Differences are clarified in the overlapping terms reflecting symbolic brand associations. The research presents the brand symbolism by its personality and self-concept congruity. The extensive research in the field of brand preferences supports the predictability of self-concept congruity to consumer preferences. Accordingly, the brand personality is presumed in the literature to affect brand preference, but there is little empirical support. In addition, both constructs are perceived to be similar Phau and Lau (2001) and Helgeson and Supphellen (2004) have considered both constructs to have positive impacts on consumer preferences. This research conceptually differentiates between both constructs. The self-congruity reflects the degree of matching or resemblance between the consumers' self-concept and the brand-user imagery. The brand personality is the set of human personality traits assigned to the brand. The first symbolic aspect raises consumer self-awareness and predicts preferences and future purchase decisions. The set of human traits should reflect a favoured personality perceived by the consumer experiencing the brand to influence his preferences. Theoretically, the research implies that the symbolic effect of the brand on preference is exerted through its power to reflect or express the favourable identity of the consumer. Consumers perceive this impact either by matching or experiencing the brand, not by describing the brand using human traits.

Fifth. Based on Park and Srinivasan (1994), this model can be extended to estimate the added-value of the brand perceived by the consumers from the endogenous signals.

The model defines the attribute-based and non-attribute based components of brand equity. It also suggests the importance of brand experience in building brand equity.

Sixth. The research stands with the stream of studies in terms of revealing no significant impact of consumer demographics on his/her preferences (Bucklin *et al*, 1995; Rossi *et al*, 1996). Therefore, the findings demonstrate the insufficiency of the information content about the demographics characteristics to explain how consumers form favourable predispositions towards certain brands.

Seventh. The research demonstrates the importance of the experiential view in developing an understanding of consumer brand preferences and future purchasing decisions. This view is applied through the integration of consumer brand experiences, and brand-related and non-related attributes. The research extends the traditional importance of the brand attributes/benefits in preference formation into the realm of experiencing the brand. This corresponds to the type of marketing used presently by companies; experiential marketing.

8.2.2 Methodological Implications

This research can claim to have three methodological implications:

First. The research overcomes the criticism of Aaker's (1997) brand personality scale. Brand personality is measured using the big-five human personality traits and is defined as the set of traits identified as most applicable to the brands through the focus group sessions. Then, using the exploratory factor analysis, the dimensions present personality types and suggest underlying traits. The results suggest four dimensions to describe brand personality: peacefulness, conscientiousness, emotional and open to experiences. The impact of brand personality is measured in this research based on the aggregate level and by decomposing its dimensions. The assessment of the reliability and validity of this scale was satisfactory in exceeding the minimum requirements.

Second. The research defines the components of brand experience through the qualitative study to modify the scale in the literature with the studied context. Although, five components are defined through the qualitative sessions, only four are purified using the exploratory factor analysis. The scale provides a valid and reliable measure of brand experience within the research context.

Third. The context of the research is established in developing countries; little research on branding has been targeted to such markets. Also, the type of product studied in this research, mobile phones, was used to place emphasis on the importance of branding to technological products. Most studies relating to technological products are conducted in American or European countries. Thus, the study discovers consumer brand preferences for mobile phones in a developing country, which is considered a burgeoning market for brands and mobile phones.

8.2.3 Practitioners Implications

Building strong brands able to gain consumer preferences stimulate future purchasing decisions through the brand meanings enhanced by delivered experiences is of noticeable importance to practitioners. Consequently, practical implications can be drawn from the findings suggesting the followings:

First. Building consumer preferences for brands of technological products is not easy. The findings reveal that consumers of high-tech products are rational and irrational in their choices. The value perception stimulating consumer preferences is based on subjective and objective data. The study suggests three levels for building strong high-tech brands; the first represents consumer knowledge of the brand cognitive component related to its functional attributes and benefits. The second is where the brand defines itself in consumers' mind using symbolic attributes. The third level, which is the top level, is where the brand delivers experience to the consumer, distinguishing itself from its competitors by contributing to value creation for consumers.

The first level constitutes the cognitive perceptions about the brand attributes that embody the essential requirements of the brand. At this level, if the brand provides advanced features after a short time, it can be commoditised by other competitors using similar technologies. At the second level, the company can differentiate its brands from competitors using symbolic associations to enhance consumer preferences. The top level is concerned with delivering experiences, creating memorable events that endure in the consumer's memory, resulting in sustainable consumer preferences. These three levels are consistent with Ward *et al* (1999) in relation to a brand pyramid, but it is simplified by integrating levels and adding experiences at the top. These three levels will create brand equity; increasing the value consumers/users endow to the branded product.

Second. Price is critical, it is important in terms of developing consumer preferences for technological brands. Pricing of technological products is one of the company's important decisions. The rapid technological advancement and innovation makes the product life short and volatile; therefore, companies place great emphasis on the pricing decision. This study considers consumer perceptions of price as an extrinsic cue that is unrelated to the brand performance. The findings reveal that price has two roles; the negative impact on brand experience, and positive impact on brand preference. This shows that consumers are price sensitive and rational; comparing alternatives and selecting the brand that maximises their utility. The rational consumer experiences price subjectively as the sacrifice made to obtain the product; thereby, discouraging consumer positive experience with the product. Accordingly, managers need to develop pricing strategies that stimulate consumer irrationality for technological-products; by reflecting the experiential value in the price to reduce consumer consciousness of low prices.

Third. To position the brand based on symbolic associations, practitioners need to differentiate between the construct of self-congruity and brand personality. The findings did not support the direct impact of brand personality on either brand preference or repurchase intention. However, a full mediation relationship of brand personality and brand preference is supported by brand experience. Brand personality cannot directly affect consumer preferences and purchase decisions without emphasising self-congruity evaluations and experiencing the brand. This suggests that practitioners need to define the appeal of brand personality, which is distinct from the general recognition of brand personality. In defining brand personality appeal, the favourability of personality type and novelty attributes that differentiate the brand from others should be apparent and focus on the salient trait.

Fourth. The role of self-concept theory is emphasised by the findings. This suggests an important implication for practitioners in targeting consumers in collectivistic cultures. Unlike Phau *et al* (2001), suggest using a positioning strategy for consumer segment in a collectivistic culture with less emphasis on self. The study, like others conducted in collectivistic cultures (Jamal and Al-Marri, 2010), highlights the importance of consumers' self-expression impact on their preference. It provides the importance of the effect of schema congruity on product evaluations and purchasing decisions in the context of technological products. This implies that marketers need to define the preferred personality of consumers in the target market and transfer explicitly this desired personality to the brand. Accordingly, market research is required to uncover the target consumer self-concept and matched brand-image. The desired personality appeal of the brand can then be built and reinforced in consumer minds using marketing communications. Stereotypical brand users and spokespersons with the desired personality dimensions will be targeted.

Fifth. The objective of branding strategy is to frame consumer perceptions and preferences for certain brands. Through this study, managers can develop an experiential branding strategy; position, build, and conceive the brand in consumers' mind aligning the brand experience. This strategy will allow the company to build the brand meaning in consumers' minds, determine pricing strategy, and position the brand and specify its image target the marketing segment. Then, the holistic consumer experience into brand marketing is considered by creating experiential values to the brand.

Sixth. The de-construction of brand experience; uncover the strategic experiential modules evoke value perception to consumer determining his/her preferences. The significant impact of sensory and emotional experience suggest an important implication for brand managers are:

- Managers need to take advantage of consumer responses induced from the technological product examined characteristics and affecting their preferences. They need to put emphasis on building strong hedonic experiences for consumers. Thus, intensifying consumer subjective and internal responses.

- Managers can benefit from other types of experiences unperceived by the consumers but created by the company itself. Thus, broadening its experiential appeal from sense and feel to think and explore relate and act appeal. Taking advantage of enhancing consumer preferences and purchasing decisions using multiple experiential dimensions. For example, brand marketers can benefit from the think appeal common to technological products through brand creative design.

- The type of experiences influencing consumer preferences differ with different cultures. Chang and Chieng, (2006) indicated the significance of individual vs. shared experience building customer-brand relationship in uncertainty avoidance culture like Taiwan. Hofstede, (1984) defines Egypt among the Arab countries high in uncertainty avoidance; thus, require more sensory experience to enhance consumer preferences to technological brands.

Seventh. The study offers insights on consumer perceptions to different meanings of technological brand. The symbolic attributes (appearance and brand personality) contributes to consumer experiences with the brand than functional attributes. However, the direct impact of functional attributes/benefits related to the brand performance is salient than the direct impact of unrelated attributes that enhance the consumer preferences. These insights are important for technological product design in the mobile domain to show balance between the functional, hedonic, and symbolic attributes.

Eighth. The evidence from this study also suggests managerial implications for enhancing the repeating purchasing decisions of consumers for brands and gaining consumer loyalty in the long-term. Through experience managers can build consistent consumer predispositions toward the brand resulting from the trade-off between various alternatives. This biased position provides the link between the brand experience and repeat purchasing action. Accordingly, brand managers should be cautious and use the accumulated brand experiences as a long-term strategic tool build long-standing preference translating behavioural tendencies into actual repeating behaviour. In the mobile domain brand experience can enhance consumer favourableness toward a brand model in comparison with other alternative models; while, the loyalty toward the brand itself can be gained through cumulative experiences.

8.3 Research Novelty

The novelty of this research is elicited from being the first to build a model that uncovers consumer preferences for brands and examines its impact on future purchase decisions, using an experiential view. This perspective compares the relative importance of the brand objective and subjective characteristics in shaping consumer preferences. It illustrates the relative importance of brand meanings on driving consumer preferences, and investigates the different impacts of symbolic association variables. In addition, the model adds brand experience as a direct source of brand preference. The importance of interaction between consumer perceptions and experiences in shaping their preferences are highlighted. Consequently, this research reveals that both cognitive information processing and experiential value perceptions are the bases for revealing brand preferences, which form the link to future psychological reactions.

8.4 Research Limitations

Every research should have limitations as there is no perfect study. These limitations are derived from several sources: the theoretical foundation of the research, research strategy and sample techniques. From these sources, a number of caveats need to be noted regarding the current study.

First, the theoretical model proposed and validated in the current research relies on the relationship between the consumer and the brand; consumer perceptions and experiences relative to the brand inputs shape preferences and future purchase decisions. Other factors representing the brand signals between the consumers and the company, such as brand credibility, are not considered.

Second, other sources of the study limitations emerge from the research methods. The study adopts the mixed-method approach: successive use of qualitative - focus groups; and quantitative - personal survey. This methodology helps to reduce the constraints of each method. For the qualitative study, the most likely problems relate to the possibility of moderator exercising less control over the proceedings, being overwhelmed by the data, or participants experiencing feelings of discomfort. Careful planning and organisation helps to minimise the considered limitations as far as possible. The quantitative study was conducted using a self-administrated survey with the advantage of obtaining higher response rates than in other methods. However, the limitations relate to the sampling technique and the study's dependence on non-probability sampling; convenience sampling. This type of sample usage is justified but will not prevent its limitations. The main constraint lies in the limited ability to assure the legitimacy of generalising the research results to the population. The relatively large sample size and the demographic representation of the sample allow to a certain extent the assessment of external validity. Additionally, owing to time constraints the study depended on cross-sectional design; collecting data at specific time horizon. Theoretically, consumers preferences are increasingly persistent with their intentions, which in turn are highly likely to be translated into actual purchasing behaviour. The current study demonstrated the positive direct impact of brand preference on brand repurchase intention. The stability of these preferences can create loyal consumers in the long run. Uncovering consumer preferences are critical inputs for most marketing activities, such as marketing segmentation strategies and product development. It is argued that in studying consumer behaviour the consistency of preference gives consumer support and confidence in their decision. Accordingly, it can be suggested the use of longitudinal design in future research in order to assure the enduring value of consumer revealed preferences overtime and uncover the reasons that might lie behind reducing the preference consistency.

Third, the results are narrowed to a single geographical location; data is collected only in Egypt. Therefore, it is recommended that future studies benefit from researching a wider geographical scope. However, the study contributes to the understanding of consumer preferences and purchasing decisions in a non-Western cultural context, and uncovers different cultural conditioning that influences people’s behaviour. Even if, with rapid globalisation and technological advancement, consumer preferences seem to look convergent, the motivations behind these preferences are different across cultures (Malhotra *et al*, 1996).

Lastly, the study addresses consumer preferences to the brands of mobile phones only as one of high-technological products. This type of product is deliberately chosen. By the late 2009, the mobile penetration in Arab countries including Egypt is higher than the internet penetration it reaches 67% (Kavanaugh *et al*, 2011). By August 2012, the number of mobile phones subscribers per 100 inhabitants reaches the values of 112.43 (Egypt ICT indicators (2012), Available at: (http://www.new.egyptictindicators.gov.eg/en/Indicators/_layouts/KeyIndicatorsViewer.aspx, Accessed: (11 November 2012). It is considered a limitation for not including other product of the same product category or from different categories.

8.5 Proposals and Recommendations for Future Research

Directions and recommendations for future research can be suggested:

First. The research is conducted in Egypt; a developing countries. Other future research can address consumers in other countries where people have different perceptions, cultures and characteristics. The testing of the model in a different context is likely to yield further valuable insights. It is also recommended to replicate the research and apply the model to other brands and product types. Additionally, the model can be applied to the service sector, for example telecommunication services. But with little modifications in defining the brand knowledge elements to meet the service attributes.

Second. This study explores the impact of brand preferences on repurchase intentions. It is important to test the model by actual repeat purchasing behaviour by examining the impact of brand preference on loyalty and brand relationship. Thus, it will investigate the ability of consumer preferences to stimulate actual behaviour over time. This will provide important insights into the enduring value of preferences and evaluate the consistency of consumer preferences. The use of longitudinal study tracing consumer perceptions, experiences, preferences and intentions will gauge the stability of these constructs. It is also important to consider the impact of situational factors that might affect preference consistency and the impact on actual future behaviour.

Third. The research proves that brand experience is a multi-dimensional construct. The model measures the impact of brand experience at the aggregate level; the multi-dimensions are considered as latent constructs in the structural equation modelling. Differentiation between the impacts of brand experience dimensions can provide several useful insights. It will explore how consumers engage in affective, cognitive and behavioural processing to respond to the cognitive information incoming from the brand. The social experience is identified by participants to describe their significant responses to the brand stimuli. However, this dimension was dropped later in the quantitative study. Therefore, the scale of brand experience as multi-dimensional constructs needs to be replicated in future studies to revalidate the measurement scale of brand experience.

Fourth. This study is considered one of a small number of research using the big-five personality traits to measure brand personality. A replication of the study will help to validate the measurement scale and its dimensions. Moreover, a moderator measuring the favourability of the brand personality can be added to the model in order to examine the relationship between brand personality and brand preference found to be insignificant in this study.

Appendix A

Table 2.9: The brand personality dimensions and the corresponding human personality dimensions across cultures

Study	A	E	C	ES	O	A+E	A+C	C+E	ES+O	Other
Aaker, (1997) **US**		Excitement					Sincerity	Competence		Sophistication Ruggedness
Aaker, (2000) **Japan**		Excitement				Peacefulness	Sincerity	Competence		Sophistication
Aaker *et al.*, (2001) **Japan**		Excitement				Peacefulness	Sincerity	Competence		Sophistication
Aaker *et al.*, (2001) **Spain**		Excitement				Peacefulness	Sincerity		Passion	Sophistication
Bosnjak *et al.*, (2007) **Germany**	Superficiality	Drive	Conscientiousness	Emotion						
Caprara *et al.*, (2001) **Italy**										
D'Asous and Levesque, (2003) **Canada**	Un-pleasantness	Enthusiasm	Genuineness Solidity							Sophistication
Davies *et al.*, (2004) **US**	Agreeableness Ruthlessness	Enterprise	Competence							Chic
Ferrandi *et al.*, (2000) **France**	Conviviality	Dynamism Robustness					Sincerity			Femininity

Continued

Study	A	E	C	ES	O	A+C	A+ES	C+E	E+O	Other
Geuens *et al.*, (2009) **Belgian**	Aggressiveness	Activity	Responsibility	Emotional	Simplicity					
Helgeson and Supphellen, (2004) **Sweden**					Modern					Classic
Hosny *et al.*, (2006) **Sweden**	Conviviality					Sincerity			Excitement	
Kim *et al.*, (2001) **Korea**		Excitement				Sincerity		Competence		Sophistication Ruggedness
Milas and Malcic, (2007) **Croatia**	Agreeableness	Extraversion	Conscientiousness	Emotion Stability	Intellect					
Smit *et al.*, (2002) **Netherlands**	Gentle Annoyance	Excitement	Competence		Distinction					Ruggedness
Snug and Tinkahm, (2005) **US**	likeableness		Competence		Trendiness Traditionalism					Sophistication Ruggedness White collar Androgyny
Snug and Tinkham, (2005) **Korea**	likeableness		Competence		Trendiness Traditionalism					Sophistication Ruggedness Western Ascendancy
Venable *et al.*, (2005) **US**			Integrity				Nurturance			Sophistication Ruggedness

Appendix B

Topic agenda for FG

Topic		Questions
Introduction		Welcoming the participants “personal and participants introduction” Illustrate the purpose of the discussion Making note for recording permission Warming up questions “general questions about brands and mobile phones”
Discussion	Level 1	Identify what are the factors for preferring certain brand over another of mobile phones
	Level 2	How consumers can describe their experiences with brands of mobile phone? (brand of their choice)
		What are the main attributes/benefits consumers associated with brands of mobile phones?
		What are the personality traits of the big five can be assigned to brands of mobile phones?
Ending		Thanks the participants

Table 5.3: The coding schemes and their description

Code Schemes	Description
Brand Experience	The consumer internal, subjective (feelings, sensations, intellectual) and behavioural responses induced from brand-related stimuli through interactions.
Attribute Perception	The salient beliefs about the brand-related attributes and assigned benefits.
Price	The economic meaning of the brand perceived by consumers.
Appearance	The aesthetic appeal and the beauty od design of the brand perceived by the consumers.
Brand Personality	The set of human personality traits consumers assign to the brands.
Self-congruity	The degree of congruence between the consumers self-concept and brand-user image.
Sensorial Experience	Consumer responses to the brand appealing to his senses (sight, hear, touch, taste and smell). This experience arises from the brand sense of beauty, aesthetical pleasures, and sensory experiences.
Emotional Experience	It is extended far from liking and disliking including the feelings, emotions, joy and moods attached with experiencing the brand.
Intellectual/ Cognitive/ Rational Experience	It is related to thinking and engaging the consumers in cognitive, creative problem-solving experiences. Try to engage and intrigue, and provoke consumers by surprising him with new design, revising product use, and functional value.
Behavioural/Act/Physical/lifestyle Experience	This kind of experience targets the consumer physically by offering new lifestyle, behaviours, and interaction; thus, affirm the system of values and beliefs.
Social/Relate/Relational Experience	This experience takes the individual from his personal context relating him/her to an outside setting beyond his private personal setting. Thus, affirm the social identity of consumer and his sense of belonging to social group.
Pragmatic Experience	The use of the product along the product life-cycle stages.

Appendix C

Questionnaire

Section A: Please select from the following list your current brand of mobile phone, if the brand is not on list please specify it in the space provided below the table.

Brand	Mark	Brand	Mark
Alcatel		Motorola	
Apple iphone		Nokia	
Blackberry		Samsung	
HTC		Sony Erickson	
LG		Siemens	
The brand of my current mobile phone is.....………………………………………………			

Instructions:
Please follow this scale and tick the number that best describe your opinion, for example:

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This brand is good	1	2	3	√4	5

A. The following statements describe your preference for your current brand of mobile phones. Please mark the number that best reflects your opinion (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

1	I like this brand more than any other brand of mobile phone	1	2	3	4	5
2	This brand is my preferred brand over any other brand of mobile phone	1	2	3	4	5
3	I would use this brand more than any other brand of mobile phone	1	2	3	4	5
4	This brand meets my requirements of mobile phones better than other brands	1	2	3	4	5
5	I am interested in trying other mobile phones from other brands.	1	2	3	4	5
6	When it comes to making a purchase, this brand of mobile phone is my first preference	1	2	3	4	5
7	Brand is very important to define my choice of mobile phone	1	2	3	4	5

B. The following statements describe your intentions to repurchase the current brand of your mobile phone. Please mark the number that best reflects your opinion (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

8	In future, this brand will be my first choice	1	2	3	4	5
9	I would be inclined to buy the same brand of mobile phone again	1	2	3	4	5
10	I will probably buy the same brand again	1	2	3	4	5

C. The following statements describe your experience with your current brand of mobile phones. Please mark the number that best reflects your opinion (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

11	This brand makes a strong impression on my visual sense	1	2	3	4	5
12	This brand appeal to my senses	1	2	3	4	5
13	This brand is interesting in a sensory way	1	2	3	4	5
14	This brand tries to engage most of my senses	1	2	3	4	5
15	This brand is focused in sensory appeal (e.g. clarity of sound, sense of beauty)	1	2	3	4	5
16	This brand is an emotional brand	1	2	3	4	5
17	There is an emotional bond between me and this brand	1	2	3	4	5
18	This brand tries to put me in a good mood	1	2	3	4	5
19	I feel relaxed using this brand	1	2	3	4	5
20	I am pleased with this brand	1	2	3	4	5
21	I feel peace of mind with no worries using this brand	1	2	3	4	5
22	I engage in a lot of thinking when I encounter this brand	1	2	3	4	5
23	This brand tries to stimulate my curiosity	1	2	3	4	5
24	I am thinking what the new model of this brand will look like	1	2	3	4	5
25	This brand provide solution to communication problems	1	2	3	4	5
26	I am always up-to-date with this brand	1	2	3	4	5
27	This brand is more than a mobile phone	1	2	3	4	5
28	This brand is not action-oriented	1	2	3	4	5
29	This brand tries to make me think about lifestyle	1	2	3	4	5
30	This brand tries to remind me of activities I can do	1	2	3	4	5
31	This brand gets me to think about my behaviour	1	2	3	4	5
32	This brand is part of my daily life	1	2	3	4	5
33	This brand fits my way of life	1	2	3	4	5
34	This brand tries to make me think about social bonds	1	2	3	4	5
35	I can relate to other people through this brand	1	2	3	4	5
36	This brand supports my relationship with others anywhere	1	2	3	4	5
37	I am part of the smart community with this brand	1	2	3	4	5
38	This brand engages me with all social networks	1	2	3	4	5

D. The following statements are description of mobile phone attributes, to what extent you perceive each attribute is assoicated with your current brand. Please mark the number that best reflects your opinion (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

39	Physical characteristics (size/weight)	1	2	3	4	5
40	Interfaces (3G, GPRS, Wi Fi)2	1	2	3	4	5
41	Multimedia features (camera, video, MP3,..*etc*)3	1	2	3	4	5
42	Fun features (games, themes,.*etc*)4	1	2	3	4	5
43	Memory capacity5	1	2	3	4	5
44	Battery life6	1	2	3	4	5
45	Country of origin7	1	2	3	4	5
46	Language adaptability8	1	2	3	4	5
47	Ease-of-use9	1	2	3	4	5
48	Durability 10	1	2	3	4	5
49	Manufacturing quality11	1	2	3	4	5
50	Technical assistance 12	1	2	3	4	5
51	Functionality 13	1	2	3	4	5

E. The following statements describe the perception of the brand price. Please mark the number that best reflects your opinion (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

52	The brand is reasonably priced	1	2	3	4	5
53	This brand offers value for money	1	2	3	4	5
54	The price of this brand is a good indicator of its quality	1	2	3	4	5

F. The following statements describe your perception of the brand appearance. Please mark the number that best reflects your opinion. (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

55	This brand is aesthetically appealing	1	2	3	4	5
56	The visual appearance of this brand is attractive	1	2	3	4	5
57	This brand has an appealing design	1	2	3	4	5

G. The following are human traits; if your current brand of mobile phone was a person which of these traits will best describes it. Please mark the number that best reflects your opinion (1= Not at all Descriptive, 2= Not Descriptive, 3= neutral, 4= Descriptive. 5= Very Descriptive).

58	Active	1	2	3	4	5	74	Efficient	1	2	3	4	5
59	Energetic	1	2	3	4	5	75	Practical	1	2	3	4	5
60	Bold	1	2	3	4	5	76	Hard-work	1	2	3	4	5
61	Strong	1	2	3	4	5	77	Elegant	1	2	3	4	5
62	Happy	1	2	3	4	5	78	Patient	1	2	3	4	5
63	Resolute	1	2	3	4	5	79	Calm	1	2	3	4	5
64	Affectionate	1	2	3	4	5	80	Level-head	1	2	3	4	5
65	Altruistic	1	2	3	4	5	81	Stable	1	2	3	4	5
66	Original	1	2	3	4	5	82	At ease	1	2	3	4	5
67	Generous	1	2	3	4	5	83	Emotional	1	2	3	4	5
68	Friendly	1	2	3	4	5	84	Intelligent	1	2	3	4	5
69	Faithful	1	2	3	4	5	85	Creative	1	2	3	4	5
70	Pleasant	1	2	3	4	5	86	Innovative	1	2	3	4	5
71	Modest	1	2	3	4	5	87	Modern	1	2	3	4	5
72	Reliable	1	2	3	4	5	88	Up-to-date	1	2	3	4	5
73	Precise	1	2	3	4	5	89	Sophisticated	1	2	3	4	5

H. The following statements describe the degree of matching between your self-concept and the brand image of your current brand. Please mark the number that best reflects your opinion. (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree).

90	People similar to me own the same brand	1	2	3	4	5
91	This brand is consistent with how I see myself	1	2	3	4	5
92	This brand reflects who I am	1	2	3	4	5

Section B: Personal information

The following are personal data questions that do not interfere with your personal life. Please mark only one box of the category that describes you or fill in the blank.

1. Gender

    a. Male   b. Female

2. Age……………… □

3. Marital Status

    a. Single □   b. Married □   c. Divorced □   d. Widowed □

4. Education Level

    a. Undergraduate student □   b. Bachelor degree □   c. Master/PhD □

5. Occupational Status

    a. Employed □   b. Self-employed □   c. Unemployed □

Many thanks.

Appendix D

	N	Min.	Max.	Mean	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
PRF01	325	1.00	5.00	4.1415	.83424	-.752	.135	.298	.270
PRF02	325	1.00	5.00	4.2246	.72137	-.764	.135	.874	.270
PRF03	325	1.00	5.00	4.2400	.73970	-.784	.135	.666	.270
PRF04	325	1.00	5.00	4.0800	.81256	-.773	.135	.683	.270
PRF05	325	1.00	5.00	4.0615	.82171	-.820	.135	.938	.270
PRF06	325	1.00	5.00	4.1231	.83717	-1.156	.135	2.162	.270
RPI01	325	1.00	5.00	3.3877	1.07891	-.271	.135	-.530	.270
RPI02	325	1.00	5.00	3.4338	1.05968	-.013	.135	-.815	.270
RPI03	325	1.00	5.00	3.9077	1.05297	-.772	.135	-.275	.270
EXS01	325	1.00	5.00	3.8062	.87979	-.542	.135	.215	.270
EXS02	325	1.00	5.00	3.8708	.85449	-.555	.135	.396	.270
EXS03	325	1.00	5.00	3.8985	.81204	-.612	.135	.825	.270
EXE01	325	1.00	5.00	4.1108	.75770	-.659	.135	.531	.270
EXE02	325	1.00	5.00	3.9108	.82479	-.430	.135	.020	.270
EXE03	325	1.00	5.00	3.9015	.84043	-.409	.135	-.104	.270
EXE04	325	1.00	5.00	3.7538	.93013	-.464	.135	.024	.270
EXE05	325	1.00	5.00	3.9600	.85433	-.521	.135	-.183	.270
EXE06	325	1.00	5.00	4.1015	.72786	-.593	.135	.627	.270
EXT01	325	1.00	5.00	4.0246	.80470	-.438	.135	-.235	.270
EXT02	325	1.00	5.00	3.9108	.85421	-.366	.135	-.421	.270
EXT03	325	1.00	5.00	4.0000	.79737	-.478	.135	-.026	.270
EXT04	325	1.00	5.00	4.0062	.88190	-.583	.135	-.143	.270
EXT05	325	1.00	5.00	4.0000	.87135	-.676	.135	.277	.270
EXT06	325	1.00	5.00	3.9446	.86959	-.601	.135	.190	.270
EXB01	325	1.00	5.00	3.9200	.93280	-.804	.135	.518	.270
EXB02	325	1.00	5.00	3.9662	.89344	-.822	.135	.721	.270
EXB03	325	1.00	5.00	3.6646	1.03704	-.546	.135	-.183	.270
EXB04	325	1.00	5.00	3.4862	1.04702	-.328	.135	-.511	.270
EXB05	325	1.00	5.00	3.2923	1.13207	-.234	.135	-.694	.270
EXB06	325	1.00	5.00	3.8554	.86460	-.668	.135	.652	.270
EXR01	325	1.00	5.00	3.7723	1.03212	-.668	.135	-.029	.270
EXR02	325	1.00	5.00	3.8246	.97974	-.672	.135	.004	.270
EXR03	325	1.00	5.00	3.9446	.90779	-.638	.135	.033	.270
EXR04	325	1.00	5.00	3.9323	.90695	-.740	.135	.357	.270
ATT01	325	2.00	5.00	4.2523	.74393	-.626	.135	-.339	.270
ATT02	325	1.00	5.00	4.3292	.78915	-1.225	.135	1.912	.270
ATT03	325	1.00	5.00	4.3138	.77377	-1.091	.135	1.396	.270
ATT04	325	1.00	5.00	4.0954	.82035	-.617	.135	.130	.270
ATT05	325	1.00	5.00	4.2523	.78037	-.866	.135	.525	.270
ATT06	325	1.00	5.00	4.2554	.78529	-.830	.135	.326	.270
ATT07	325	1.00	5.00	4.0369	.94861	-1.013	.135	.912	.270
ATT08	325	1.00	5.00	4.1692	.79289	-.797	.135	.698	.270
ATT09	325	1.00	5.00	4.3477	.76520	-1.224	.135	1.889	.270
ATT10	325	2.00	5.00	4.3600	.68691	-.721	.135	-.160	.270
ATT11	325	1.00	5.00	4.1692	.76918	-.832	.135	1.268	.270
AP01	325	1.00	5.00	3.9754	.82365	-.509	.135	-.132	.270
AP02	325	1.00	5.00	3.9923	.84571	-.650	.135	.111	.270
AP03	325	1.00	5.00	3.7985	.87056	-.474	.135	.041	.270
PR01	325	1.00	5.00	2.1846	1.01975	.660	.135	-.224	.270
PR02	325	1.00	5.00	2.1077	1.01110	.684	.135	-.291	.270
PR03	325	1.00	5.00	2.0338	.97282	.843	.135	.240	.270

	N	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
BP_EX01	325	1.00	5.00	4.0062	.81268	-.636	.135	.437	.270
BP_EX02	325	2.00	5.00	4.0769	.75170	-.390	.135	-.400	.270
BP_EX03	325	1.00	5.00	3.9108	.85058	-.343	.135	-.448	.270
BP_EX04	325	2.00	5.00	4.0892	.76661	-.401	.135	-.509	.270
BP_EX05	325	1.00	5.00	3.7815	.84891	-.389	.135	-.083	.270
BP_AG01	325	1.00	5.00	3.7692	.89872	-.273	.135	-.582	.270
BP_AG02	325	1.00	5.00	3.8031	.87029	-.370	.135	-.098	.270
BP_AG03	325	2.00	5.00	4.1323	.77641	-.433	.135	-.649	.270
BP_AG04	325	1.00	5.00	3.8708	.83624	-.390	.135	-.075	.270
BP_AG05	325	1.00	5.00	3.7938	.82997	-.348	.135	-.042	.270
BP_AG06	325	1.00	5.00	4.0308	.86726	-.688	.135	.287	.270
BP_AG07	325	2.00	5.00	3.8462	.75830	-.205	.135	-.350	.270
BP_CS01	325	2.00	5.00	4.1846	.78356	-.686	.135	-.064	.270
BP_CS02	325	2.00	5.00	4.1108	.74951	-.449	.135	-.323	.270
BP_CS03	325	2.00	5.00	4.2862	.70358	-.627	.135	-.173	.270
BP_CS04	325	2.00	5.00	4.3323	.74143	-.895	.135	.303	.270
BP_CS05	325	2.00	5.00	4.1415	.76878	-.617	.135	-.022	.270
BP_EM01	325	1.00	5.00	3.6738	.84149	-.293	.135	-.140	.270
BP_EM02	325	1.00	5.00	3.6246	.86817	-.360	.135	.023	.270
BP_EM03	325	2.00	5.00	3.8185	.74595	-.231	.135	-.219	.270
BP_EM04	325	2.00	5.00	3.8554	.78607	-.199	.135	-.494	.270
BP_OP01	325	1.00	5.00	4.1046	.78654	-.685	.135	.387	.270
BP_OP02	325	1.00	5.00	4.1231	.79945	-.736	.135	.395	.270
BP_OP03	325	2.00	5.00	4.1631	.82469	-.677	.135	-.273	.270
BP_OP04	325	2.00	5.00	4.2862	.80964	-.883	.135	-.004	.270
BP_OP05	325	2.00	5.00	4.2985	.74959	-.816	.135	.111	.270
BP_OP06	325	2.00	5.00	4.2338	.77823	-.710	.135	-.169	.270
CON01	325	1.00	5.00	4.2492	.77939	-1.018	.135	1.344	.270
CON02	325	1.00	5.00	4.2000	.80123	-.811	.135	.375	.270
CON03	325	1.00	5.00	4.2677	.74060	-.795	.135	.549	.270
Valid N (listwise)	325								

Appendix E

Assessment of normality (Group number 1) (Mardia's coefficient)

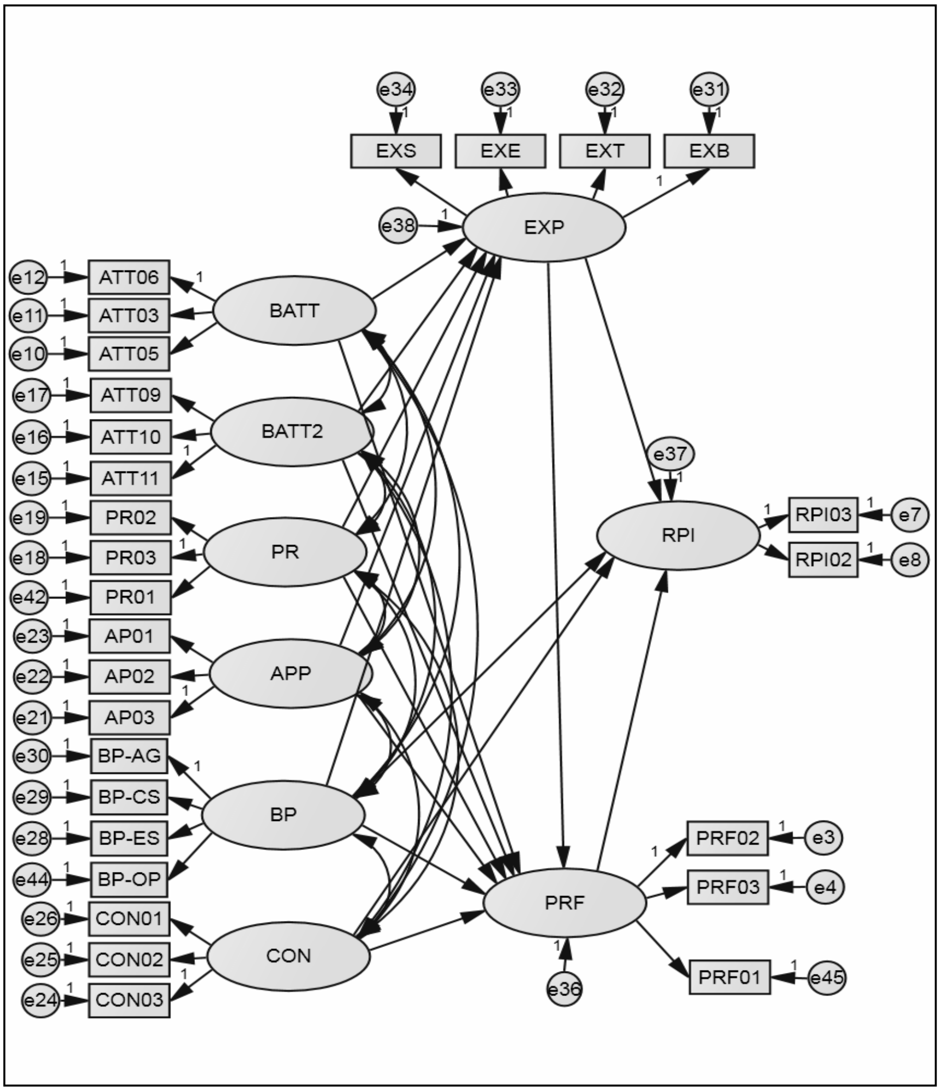
Variable	min	max	skew	c.r.	kurtosis	c.r.
PRF01	1.000	5.000	-.749	-5.512	.275	1.013
PRF02	1.000	5.000	-.760	-5.594	.842	3.099
PRF03	1.000	5.000	-.780	-5.741	.637	2.344
PRF04	1.000	5.000	-.769	-5.662	.654	2.406
PRF05	1.000	5.000	-.816	-6.006	.905	3.331
PRF06	1.000	5.000	-1.151	-8.470	2.111	7.767
RPI01	1.000	5.000	-.270	-1.985	-.540	-1.989
RPI02	1.000	5.000	-.013	-.097	-.821	-3.022
RPI03	1.000	5.000	-.769	-5.656	-.289	-1.064
EXS01	1.000	5.000	-.539	-3.969	.193	.710
EXS02	1.000	5.000	-.553	-4.069	.371	1.366
EXS03	1.000	5.000	-.609	-4.486	.794	2.922
EXE01	1.000	5.000	-.656	-4.825	.505	1.858
EXE02	1.000	5.000	-.428	-3.153	.002	.006
EXE03	1.000	5.000	-.407	-2.993	-.121	-.446
EXE04	1.000	5.000	-.462	-3.397	.005	.020
EXE05	1.000	5.000	-.519	-3.816	-.199	-.732
EXE06	1.000	5.000	-.590	-4.344	.599	2.203
EXT01	1.000	5.000	-.436	-3.209	-.250	-.919
EXT02	1.000	5.000	-.364	-2.682	-.433	-1.593
EXT03	1.000	5.000	-.476	-3.500	-.044	-.161
EXT04	1.000	5.000	-.580	-4.267	-.159	-.584
EXT05	1.000	5.000	-.673	-4.952	.255	.937
EXT06	1.000	5.000	-.598	-4.402	.169	.622
EXB01	1.000	5.000	-.800	-5.891	.492	1.810
EXB02	1.000	5.000	-.818	-6.020	.691	2.543
EXB03	1.000	5.000	-.544	-4.001	-.198	-.730
EXB04	1.000	5.000	-.327	-2.406	-.521	-1.918
EXB05	1.000	5.000	-.233	-1.713	-.701	-2.581
EXB06	1.000	5.000	-.664	-4.891	.624	2.296
EXR01	1.000	5.000	-.665	-4.891	-.047	-.173
EXR02	1.000	5.000	-.669	-4.926	-.015	-.054
EXR03	1.000	5.000	-.635	-4.671	.014	.050
EXR04	1.000	5.000	-.737	-5.421	.334	1.227
ATT01	2.000	5.000	-.623	-4.583	-.353	-1.298
ATT02	1.000	5.000	-1.220	-8.976	1.864	6.859
ATT03	1.000	5.000	-1.086	-7.989	1.357	4.992
ATT04	1.000	5.000	-.614	-4.520	.110	.404
ATT05	1.000	5.000	-.862	-6.346	.499	1.835
ATT06	1.000	5.000	-.827	-6.083	.303	1.115
ATT07	1.000	5.000	-1.008	-7.417	.880	3.237
ATT08	1.000	5.000	-.794	-5.841	.669	2.461
ATT09	1.000	5.000	-1.218	-8.964	1.842	6.778
ATT10	2.000	5.000	-.718	-5.284	-.176	-.649
ATT11	1.000	5.000	-.828	-6.094	1.230	4.528
PR01	1.000	5.000	.657	4.835	-.239	-.880

Variable	min	max	skew	c.r.	kurtosis	c.r.
PR02	1.000	5.000	.681	5.009	-.305	-1.121
PR03	1.000	5.000	.839	6.174	.218	.804
AP01	1.000	5.000	-.506	-3.726	-.148	-.545
AP02	1.000	5.000	-.647	-4.759	.091	.335
AP03	1.000	5.000	-.472	-3.474	.022	.080
BP_EX01	1.000	5.000	-.633	-4.660	.411	1.514
BP_EX02	2.000	5.000	-.389	-2.860	-.412	-1.515
BP_EX03	1.000	5.000	-.342	-2.515	-.460	-1.692
BP_EX04	2.000	5.000	-.399	-2.939	-.520	-1.914
BP_EX05	1.000	5.000	-.387	-2.848	-.100	-.368
BP_AG01	1.000	5.000	-.272	-2.001	-.591	-2.176
BP_AG02	1.000	5.000	-.368	-2.711	-.115	-.424
BP_AG03	2.000	5.000	-.431	-3.173	-.658	-2.420
BP_AG04	1.000	5.000	-.388	-2.858	-.093	-.341
BP_AG05	1.000	5.000	-.347	-2.551	-.060	-.220
BP_AG06	1.000	5.000	-.685	-5.040	.264	.971
BP_AG07	2.000	5.000	-.204	-1.504	-.363	-1.336
BP_CS01	2.000	5.000	-.683	-5.023	-.081	-.299
BP_CS02	2.000	5.000	-.447	-3.292	-.336	-1.237
BP_CS03	2.000	5.000	-.624	-4.592	-.189	-.696
BP_CS04	2.000	5.000	-.891	-6.558	.280	1.032
BP_CS05	2.000	5.000	-.614	-4.518	-.040	-.148
BP_EM01	1.000	5.000	-.292	-2.147	-.157	-.576
BP_EM02	1.000	5.000	-.358	-2.635	.004	.016
BP_EM03	2.000	5.000	-.230	-1.692	-.235	-.863
BP_EM04	2.000	5.000	-.198	-1.459	-.505	-1.858
BP_OP01	1.000	5.000	-.682	-5.016	.363	1.334
BP_OP02	1.000	5.000	-.732	-5.391	.370	1.363
BP_OP03	2.000	5.000	-.674	-4.957	-.287	-1.056
BP_OP04	2.000	5.000	-.879	-6.470	-.023	-.083
BP_OP05	2.000	5.000	-.812	-5.977	.091	.335
BP_OP06	2.000	5.000	-.707	-5.204	-.185	-.681
CON01	1.000	5.000	-1.013	-7.457	1.305	4.803
CON02	1.000	5.000	-.808	-5.944	.351	1.292
CON03	1.000	5.000	-.791	-5.822	.522	1.920
Multivariate					761.338	59.182

Source: AMOS v.18

Appendix F

Structural equation model-(AMOS software)



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