CONSUMER PERCEPTION OF BRAND EQUITY MEASUREMENT:

A NEW SCALE

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Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

May 2012

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Baalbaki, Sally Samih. Consumer Perception of Brand Equity Measurement: A New Scale. Doctor of Philosophy (Marketing), May 2012, 92 pp., 18 tables, 3 figures, references, 123 titles.

Brand equity is perhaps the most important marketing concept in both academia and practice. The term came into use during the late 1980s; and the importance of conceptualizing, measuring, and managing brand equity has grown rapidly in the eyes of practitioners and academics alike. This has resulted in several often-divergent view-points on the dimensions of brand equity, the factors that influence it, the perspectives from which it should be studied, and the ways to measure it.

Many different definitions and ways to measure brand equity have been proposed, and most of them are based upon the definition: the added value with which a given brand endows a product. The two most influential conceptualizations of brand equity are Aaker and Keller. Aaker defines brand equity as a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers. Keller defines consumer-based brand equity (CBBE) as the differential effect of brand knowledge on consumer response to the marketing of the brand.

Currently, all research on brand equity has used the same conceptualization of the construct based on previously determined dimensions with no attempt to argue their validity. Given the importance of the concept of brand equity in marketing, as well as the need for the measurement of brand equity, the literature lacks an empirically based consumer-perceived brand equity scale. Since the brand is the consumer's idea, the consumer is an active participant in the creation of equity for the brand. So if we want to understand and manage the intangible equity directly, we have to have the consumer's help.

This dissertation enriches and strengthens the current knowledge on brand equity by developing a new conceptualization and scale determined by dimensions that consumers perceive. The new Consumer-Perceived Consumer-Based Brand Equity Scale is made up of five dimensions: quality, preference, social influence, sustainability, and leadership. Previous conceptualizations of brand equity have discussed dimensions that are consumer descriptors. Since perceived brand equity is the value that consumers perceive in the brand, this conceptualization presents dimensions that are brand characteristics.

The new robust scale contributes both to the theoretical understanding of consumer-based brand equity measurement, as well as assisting managers, or brand ambassadors, in measuring brand equity and developing successful brand strategies. The value of a consumer-perceived, consumer-based brand equity scale suggests a number of new directions for study and elaboration in what is certain to be a compelling stream of research with vast implications for both theory and practice.

ACKNOWLEDGMENTS

Looking back, I am very grateful for all I have accomplished throughout these years in the PhD program. It has certainly shaped me as a person and led me to where I am now.

My heartfelt gratitude and appreciation goes to my dissertation committee. To my chair, Dr. Francisco Guzmán, I express my thanks for mentoring and encouraging me from my very first semester as a doctoral student and guiding my development as an educator and a scholar. I have been very blessed with Dr. Guzmán's patience, encouragement, support, and guidance. I also thank my committee members, Dr. Audhesh Paswan, Dr. Charles Blankson, and Dr. James Conover for their helpful insights and guidance throughout this process. My thanks also go to Dr. Jeff Sager and all the other faculty members in the Department of Marketing & Logistics for their mentorship and stewardship during my time at the University of North Texas.

It was a pleasure to share these years with wonderful colleagues, and I would like to sincerely thank them for having helped and encouraged me in various ways.

My sincere thanks also goes to my family for always being there. I thank my mom for her never-ending love, support, and encouragement. Special thanks for my dad, who always believed in me and supported all my decisions. I dedicate this dissertation to both my parents, without them I would not be the person I am today. Finally, I want to thank my sisters who have been there for me throughout the years.

Last, but not least, I would like to thank my husband for always being there for me through all the good and bad times. Without his patience, support, strength, and love, I would not have been able to successfully get through the program. I am grateful for having you in my life, Omar, and for our amazing gift from God, our daughter Jana.

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CHAPTER 1
INTRODUCTION

> A product is something that is made in a factory; a brand is something that is bought by a customer. A product can be copied by a competitor; a brand is unique. A product can be quickly outdated; a successful brand is timeless.
>
> - *Stephen King, WPP Group London*

1.1. Introduction

The concept of branding is centuries old. In ancient Egypt brick-makers would “brand” their bricks as a form of identification. Traders would “trademark” their products to guarantee quality to consumers. Brands, however, first appeared in the early sixteenth century. They were used by whiskey distillers to “brand” their barrels when being shipped. The “brand” evolved in the eighteenth century when producers’ names were replaced with names and pictures of places of origin, animals, and famous people (Farquhar, 1989). This allowed for the strengthening of the association of the brand name with the product. Consumers were able to remember products as well as differentiate between competitor products. Then, in the nineteenth century, brands were used to enhance a product’s perceived value using associations. Branding evolved even further in the twentieth century with new purposes and strategies.

Why then are twenty-first century consumers willing to pay a premium for a product that is branded versus a non-branded one? Why are they loyal to and love their brands? Consumers actually develop feelings and associations with brands and then become loyal to them due to their “added value,” (i.e., their brand equity) (Barwise, 1993). Brands have become valuable assets to companies, and therefore, learning and understanding how to build, measure, and manage brand equity is of utmost importance (Kapferer, 2005).

Aaker’s (1991) and Keller’s (1993) conceptualizations of brand equity are the most well-known and commonly adopted. Neither author, though, operationalized a scale for measurement. Therefore, many academics took to the task of quantifying this intangible asset. However, these academics use Aaker (1991) and Keller's (1993) conceptualizations without coming up with their own or taking into account what mental resources consumers tap into in order to determine what characteristics of a brand are important to them (i.e., brand equity dimensions). Given the importance of the concept of brand equity in marketing, as well as the need for the measurement of brand equity, the literature lacks an empirically based consumer-perceived brand equity scale (i.e., a marketing-oriented brand equity scale). Since the brand is the consumer's idea, the consumer is an active participant or partner in the creation of equity for the brand (Blackston, 2000). Therefore, taking into account the consumer's perspective in developing dimensions will allow us to understand, manage, and measure the intangible equity directly.

The aim of this dissertation will be to develop and validate a new consumer-perceived consumer-based brand equity scale. This scale will provide a new conceptualization of brand equity (other than Aaker's (1991) and Keller's (1993) conceptualizations) and will use a comparison of a student and nationwide consumer sample in the development. Pursuant to the aim of the dissertation, a robust consumer-perceived consumer-based brand equity (CBBE) scale is proposed.

1.2. Brand Equity

1.2.1. Definition of Brand Equity

Brand equity is, if not the most, one of the most important marketing concepts for both academia and practice. Academics want to understand how brand equity is measured and what it means for a company, while practitioners want to understand how to influence consumer decisions with respect to different brand purchases in order to increase their brand equity. The term came into use during the late 1980s; and the importance of conceptualizing, measuring and managing brand equity has grown rapidly both for practitioners and academics alike (e.g. Aaker, 1991, 1996; Aaker and Keller, 1990; Ailawadi et al., 2003; Erdem et al., 2006; Keller, 1993, 2003; Netemeyer et al., 2004). This has resulted in "several often-divergent view-points on the dimensions of brand equity, the factors that influence it, the perspectives from which it should be studied, and the ways to measure it" (Ailawadi et al., 2003 p. 1).

Many different definitions and ways to measure brand equity have been proposed (see Chapter 2), and most of them are based upon Farquhar's (1989) definition: "the added value with which a given brand endows a product" (p. 24). Brand equity is an important concept in business practice as well as in academic research because it can be used by marketers to gain competitive advantages through successful brands. Strong brand equity leads to opportunities for successful brand extensions, resilience against competitors' promotional efforts, and the creation of barriers to competitive entry (Farquhar, 1989).

1.2.2. Perspectives of Brand Equity

Brand equity can be seen as emanating from three different perspectives. The first is the cognitive psychology perspective, which defines brand equity as the differential consumer response to a brand's marketing mix that results from consumer associations for a brand (Aaker, 1991; Keller, 1993). This perspective takes into account the fact that brands for which consumers have more favorable brand associations, or brands with higher brand equity, will be able to generate more positive marketing mix responses from their consumers than brands with less favorable brand associations. Therefore, in terms of the cognitive perspective, brand equity is the result of consumer responses to marketing activities, influenced by consumers' brand associations (Anderson, 2007).

The second perspective of brand equity is the information economics perspective, which views brand equity as the increased utility that a brand name gives to a product (Erdem and Swait, 1998; Wernerfelt, 1988). In this perspective, the brand name is a signal to consumers of product quality; it is derived from perceived firm costs or investments, and this perceived quality reduces information costs for the consumer, thereby increasing utility. This perspective is important in that it introduces the firm perspective into brand equity (Anderson, 2007).

The third perspective of brand equity is the financial markets perspective, which defines financial-based brand equity (FBBE) as a financial measure of a firm's market value minus the tangible asset value (Simon and Sullivan, 1993). The importance of this perspective lies in its forward-looking measurement of brand equity.

Although brand equity can be seen from three different perspectives, in general, it can be classified into two broad categories: financial and consumer-based brand equity (CBBE) (Keller, 1993). In addition, since brand equity affects and brings value to many stakeholders of a company, a third category of brand equity has been recently proposed; employee based brand equity (EBBE) (King and Grace, 2009). King and Grace (2009) define EBBE as "the differential effect that brand knowledge has on an employee's response to their work environment" (p. 130). Overall, the term consumer-based brand equity is usually used to refer to brand equity in general (Rajasekar and Nalina, 2008).

1.2.3. Brand Equity Perspective of this Dissertation

This dissertation will focus on the consumer-based brand equity (CBBE) perspective and will not discuss FBBE or EBBE, as these two perspectives lie outside the scope of the proposed study. The rationale behind this decision is based on the following: the financial value of brand equity is ultimately the outcome of consumer response to a brand name. CBBE, on the other hand, is the driving force of increased market share and profitability of the brand since it is based on the market's perceptions (Christodoulides and de Chernatony, 2010). The financial-based perspective thus measures the outcome of customer-based brand equity; and therefore, we must first understand CBBE in order to understand the other perspectives of brand equity.

1.2.4. Principal Conceptualizations of Brand Equity

The two most influential conceptualizations of brand equity are Aaker's (1991) and Keller (1993). Aaker defines brand equity as "a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers" (p.15). Aaker then proposes four dimensions of brand equity: brand awareness, brand loyalty, brand associations, and perceived quality. Keller (1993) develops the customer-based brand equity model (CBBE), which is the most widely used model today. Keller defines CBBE by stating that the power of a brand rests on what the clients have learned, felt, seen, and heard about it through time, that is, rests in their minds. Hence, CBBE is "the differential effect of brand knowledge on consumer response to the marketing of the brand" (p. 2). Keller's (1993) definition of CBBE is used in arguing that brand equity is positioned based on what consumers feel, see, and hear about the brand through time, therefore, the meaning of brand equity rests in the consumers' minds.

1.3. Research Questions and Potential Contribution

Currently, all research on brand equity has used the same conceptualization of the construct based on previously determined dimensions (i.e., based on the theoretical models of either Aaker, 1991 or Keller ,1993). A review of Aaker's (1991) work expresses his conceptualization of brand equity; and then, comments on the dimensions that Aaker discusses by stating "they are accepted largely on the basis of face validity and no attempt is made to argue their relative importance or possible interrelation" (Shocker,1993, p. 257). Therefore, developing a new conceptualization of CBBE, that focuses on the meaning of brand equity as it rests in the consumers' minds, is an opportunity to contribute to the field of marketing literature.

This dissertation will enrich and strengthen the current knowledge on brand equity by developing a conceptualization and scale determined by dimensions that consumers actually perceive. In other words, the aim of this dissertation is to develop the first Consumer-Perceived, Consumer-Based Brand Equity Scale. To date, there has not been an extensive examination of the consumer perceived dimensions that make up brand equity. Towards this end, this dissertation attempts to answer the following key research questions:

1. Which dimensions identified by *consumers* are critical to the development of the consumer perceived brand equity construct?
2. How can these dimensions be interrelated to measure brand equity effectively?

By answering these questions, this dissertation will contribute both to the theoretical understanding of consumer-based brand equity measurement, and assist managers, or brand ambassadors, in measuring brand equity and developing successful brand strategies.

This thesis maintains that, given the importance of the concept of brand equity in marketing, as well as the need for the measurement of consumer perceived brand equity, the literature lacks an empirically based consumer-derived/perceived brand equity scale. Since the brand is the consumer's idea, the consumer is an active participant or partner in the creation of equity for the brand (Blackston, 2000). We thus need to understand what lies in consumers' minds with respect to brand equity. This leads us to the need for qualitative research to help unearth the secrets of the "intangibility" of brand equity. In understanding the consumers' real perceptions of brand equity, we will close the gap between what consumers perceive and what we currently measure as brand equity.

1.4. Methodology

This dissertation is a scale development piece. It builds upon previous research on brand equity that has used the same conceptualization of the concept based on previously determined dimensions (i.e., based on either the Aaker 1991 or Keller 1993 theoretical models). A new conceptualization of brand equity based on consumer perceived dimensions will be presented. In order to develop a conceptualization and a scale determined by dimensions that consumers actually perceive, (i.e., the first consumer-perceived, consumer-based brand equity scale,) the first step was by determining these consumer-based dimensions using qualitative data from a student sample and a nationwide sample of the U.S. population.

This preliminary qualitative research was used to determine the most important consumer-based dimensions or constructs (Gummesson, 2005). The responses were analyzed using a frequency count; and the most commonly found words are grouped together to form dimensions for perceived brand equity. The results indicate that the dimensions for perceived brand equity may have some commonalities with the existing conceptualizations (Aaker, 1991 and Keller 1993), but also add new critical dimensions to the brand equity conceptualization that depicts brand equity as consumers perceive it today. The new perceived brand equity dimensions from this preliminary study are: quality, loyalty, sustainability, and value.

An online questionnaire was then used to measure the dimensions found using a combination of existing scales and newly developed items. Experts in the field ensured the face and content validity of the survey. The first study was conducted on a student sample in order to validate the items in the survey. After refining the instrument, the survey was then tested using both a student sample and a nation-wide consumer sample. Finally, after analysis of reliability and validity, the new consumer-perceived brand equity scale is presented.

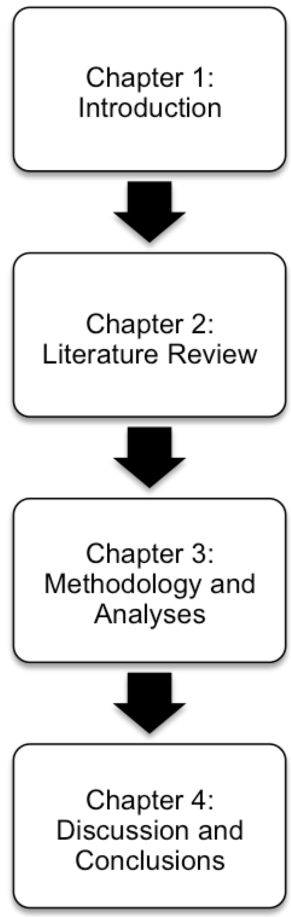
1.5. Outline of Dissertation

In order to address the proposed research questions, following Perry's (1998) structured approach for presenting a thesis, this dissertation is organized into four chapters. First, an introduction of the entire dissertation is presented. Second, the extant literature regarding brand equity and its measurement is reviewed in-depth and the gap in the literature is revealed. Third, the full-fledged scale development process is presented and analyzed. Finally, the research implications and suggestions for future research are discussed (see Figure 1.1.).

1.6. Conclusion

This chapter laid the foundation for the dissertation. It introduced the research problem and questions, justified the research, presented some definitions, and briefly discussed and justified the followed methodology. After having presented this outline, and based on these foundations, the dissertation can proceed with a detailed description of the extant literature in chapter 2.

Figure 1.1.
Outline of the Dissertation



CHAPTER 2
LITERATURE REVIEW

A brand is the consumer's idea of a product.
- David Ogilvy

Factories rust away, Packages become obsolete, Products lose their relevance. But great brands live forever.
- Backer Spelvogel Bates

2.1. Introduction

Market orientation is an important concept in the marketing discipline, and is generally understood as the implementation of the marketing concept, which has served as the discipline's philosophy since its formulation (McCarthy 1960). The marketing concept posits that marketing is the principal function of the firm, because the main purpose of any business was to create a satisfied customer (Levitt, 1960). It also emphasizes customer orientation and need satisfaction, as well as integration of all marketing activities with the goal of achieving higher financial performance for the firm. Recently, the marketing concept emphasizes the idea that the customer is at the heart of everything (Gunay, 2001).

There are two major points of view on market orientation. The first is behavior oriented. Narver and Slater (1990) discuss the three behavioral components of market orientation: (1) customer orientation: the sufficient understanding of one's target buyers to be able to create superior value for them continuously, (2) competitor orientation: to understand the short-term strengths and weakness and long-term capabilities and strategies of both the key current and potential competitors, and (3) inter-functional coordination: the coordinated utilization of company resources in creating superior value for target customers. The second point of view is culture oriented. Kohli and Jaworski (1990) define market orientation as being composed of three sets of activities: organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness to it.

The two major points of view on market orientation resonate with each other. Combining the two gives us a more complete picture of market orientation. First, firms must be able to generate intelligence on their customers (i.e., be customer focused). Second, they need to generate intelligence on their competitors (i.e., be competitor focused).
Third, firms must be able to efficiently and effectively disseminate intelligence throughout the organization via formal and informal channels. This approach provides the entire organization access to necessary resources. Finally, the firm must be responsive to the information, which will lead them to a strategic advantage.

Our marketing paradigm guides us to first go to the consumer and be customer-focused. To date, however, we have not followed our marketing paradigm in developing measures for brand equity. The two most poignant conceptualizations of brand equity Aaker's (1991) and Keller (1993) have led to the development of many scales to measure brand equity that are supposed to capture what people perceive. However, the conceptualizations were actually developed by what two experts believed made up brand equity, and the subsequent constructs and measurements were developed without first doing what marketers say should always be done first: talk to consumers. Hence, this dissertation fills this gap by understanding the consumer's perspective of brand equity through qualitative research and then developing a scale that measures what consumers actually perceive.

2.2. Brands and Branding

2.2.1. Definition of a Brand

A product offers the consumer a functional benefit (e.g., a car, or shampoo, or health insurance). How is a brand any different? What is a brand? Many different definitions of what a brand is have been proposed. The American Marketing Association (AMA) defines a brand as a name, term, sign, symbol, design, or a combination, which is intended to identify the goods and services of a firm in order to differentiate them from competition. A brand has also been defined as “a product offer from a known source” (Kotler, 2000). Keller (2003) defines a brand as a product that adds other dimensions that differentiate it from other products and services designed to satisfy the same need. Kapferer (1997) says that a brand exists when there is certain perceived risk. Without it, a brand would simply be the name of a product. Therefore, a brand makes life simpler and less risky (Barwise et al., 1990) and is a source of value for the consumer (Kapferer, 1997). A brand is also an “intangible but critical component of what a firm means; a set of promises” (Davis, 2002). Finally, Bedbury and Fenichell (2002) say that “a brand is, if it is something, the result of a synaptic process in the brain. They are sponges for content, images, feelings, sensations, and experiences; psychological concepts inside consumers’ minds.” Hence, brands enhance the value of a product beyond its functional purpose (Farquhar, 1989). The many definitions that have been developed for a “brand” are based upon consumer perceptions of brands due to their own feelings, associations, and relationships with them. As different people may have different perceptions of the same brand, therefore, a brand can be defined as a collection of many meanings.

Table 2.1.
Functions of the Brand for the Consumer

Function	Consumer Benefit
Identification	To be clearly seen, to make sense of the offer, to quickly identify the sought-after products.
Practicality	To allow savings of time and energy through identical repurchasing and loyalty.
Guarantee	To be sure of finding the same quality no matter where or when you buy the product or service.
Optimization	To be sure of buying the best product in its category, the best performer for a particular purpose.
Characterization	To have confirmation of your self-image or the image that you present to others.
Continuity	Satisfaction brought about through familiarity and intimacy with the brand that you have been consuming for years.
Hedonistic	Satisfaction linked to the attractiveness of the brand, to its logo, to its communication.
Ethical	Satisfaction linked to the responsible behavior of the brand in its relationship towards society.

Source: Adapted from Kapferer (1997)

A brand can be a physical product such as a detergent—Tide or Gain; a service such as an airline—Southwest or American Airlines; a store or distributor—Wal-Mart or Target; a person—Oprah or Michael Jordan; a place—Walt Disney World or Las Vegas; a sport organization—Dallas Cowboys or New York Yankees; an organization—Livestrong Foundation or Greenpeace; and even an animal—Shamu the whale or Knut the German polar bear. According to Kapferer (1997), brands have many different functions for consumers (see Table 2.1.). They play the roles of identification to allow consumers to clearly see the brand; practicality in saving time and energy; a guarantee of product or service quality; optimization in assuring the best buy within a category; characterization in being the confirmation of your self-image; continuity in satisfaction with familiarity and intimacy; hedonistic in satisfaction linked to brand attractiveness; and finally, an ethical function in satisfaction linked to a responsible behavior. Based on individual consumer perception, a brand may have one or more of these functions.

2.2.2. The Evolution of Branding

Branding has changed and evolved over time, as have the consumers of brands (Aaker and Joachimsthaler, 2000; Davis, 2002). Traditionally, branding was seen as part of a company's operations, and thus, when budgets were cut, branding expenditures were the first to get dropped from the budget (Aaker and Joachimsthaler, 2000; Davis, 2002). Companies had a short-term focus that emphasized retaining consumers, deriving benefits from the product, and increasing market share. Currently, branding is seen as the most important function within an organization because a brand is now considered a company's most important asset (Aaker and Joachimsthaler, 2000; Davis, 2002). Modern branding focuses on creating loyalty to the brand, building long-lasting relationships through a long-term focus, and having every functional area manage the brand—for a more detailed description of brands and branding see Keller and Lehmann's (2006) literature review. Since brands have become the most important assets firms own, measuring the strategic value of a brand—brand equity—has become of paramount importance.

2.3. Brand Equity

2.3.1. Definition of Brand Equity

Brand equity is perhaps the most important marketing concept in both academia and practice (Christodoulides and de Chernatony, 2010; Keller and Lehmann, 2006). Academics want to understand how brand equity is measured and what it means for a company, while practitioners want to understand how to influence consumer decisions with respect to different brand purchases in order to increase their brand equity. The term came into use during the late 1980's; and the importance of conceptualizing, measuring, and managing brand equity has grown rapidly in the eyes of practitioners and academics alike (e.g. Aaker, 1991, 1996; Aaker and Keller, 1990; Ailawadi et al., 2003; Erdem et al., 2006; Keller, 1993, 2003; Netemeyer et al., 2004). This has resulted in "several often-divergent view-points on the dimensions of brand equity, the factors that influence it, the perspectives from which it should be studied, and the ways to measure it" (Ailawadi et al., 2003, p. 1). Consumers actually develop feelings and associations with brands and then become loyal to them due to their "added value" (i.e., their brand equity) (Barwise, 1993). Brands have become valuable assets to companies; and therefore, learning and understanding how to build, measure, and manage brand equity is of utmost importance (Kapferer, 2005).

Many different definitions and ways to measure brand equity have been proposed, and most of them are based upon Farquhar's (1989) definition: "the added value with which a given brand endows a product" (p. 24). Aaker (1991, 1996) defines it as a group of brand assets and liabilities that either add or subtract value to a brand. Srivastava and Shocker (1991) define it as the incremental value a brand name gives a product. Holbrook (1992) and Simon and Sullivan (1993) define it in terms of the financial impact of a brand. Keller (1993, 2003) perceives it as the differential effect that brand knowledge has on consumer response to the marketing of a brand. Park and Srinivasan (1994) define it as the incremental consumer preference for a brand. Kapferer (1997) further defines brand equity by stating "the brand has an economic function, the value of a brand (brand equity) derives from its capacity to generate an exclusive, positive, and prominent meaning in the minds of a large number of consumers" (p. 25). Berry (2000) conceptualizes it as the differential effect of brand awareness and meaning combined with customer response to the marketing of the brand. Yoo et al. (2000) define it as the difference in consumer choice between a branded and an unbranded product given the same level of product features. Clow and Baack (2005) define it as a set of characteristics that make a brand unique in the marketplace, allows the company to charge a higher price and retain a greater market share than would be possible with an unbranded product. For a more thorough discussion on the definition of brand equity, see Wood (2000). Although there is no universally accepted definition of brand equity, most authors agree that brand equity denotes the added value endowed by the brand to the product. This dissertation adopts Farquhar's (1989) definition of brand equity: "the added value with which a given brand endows a product" (p. 24).

Brand equity is an important concept in business practice as well as in academic research because it can be used by marketers to gain competitive advantages through successful brands. Strong brand equity leads to opportunities for successful brand extensions, resilience against competitor's promotional efforts, and creation of barriers to competitive entry (Farquhar, 1989).

2.3.2. Perspectives of Brand Equity

Brand equity can be seen as emanating from three different perspectives. The first is the cognitive psychology perspective, which defines brand equity as the differential consumer response to a brand's marketing mix that result from consumers' associations to a brand (Aaker, 1991; Keller, 1993). This perspective takes into account the fact that brands for which consumers have more favorable brand associations, or brands with higher brand equity, will be able to generate more positive marketing mix responses from their consumers than brands with less favorable brand associations. Therefore, in terms of the cognitive perspective, brand equity is the result of consumers' responses to marketing activities, influenced by consumer brand associations (Anderson, 2007).

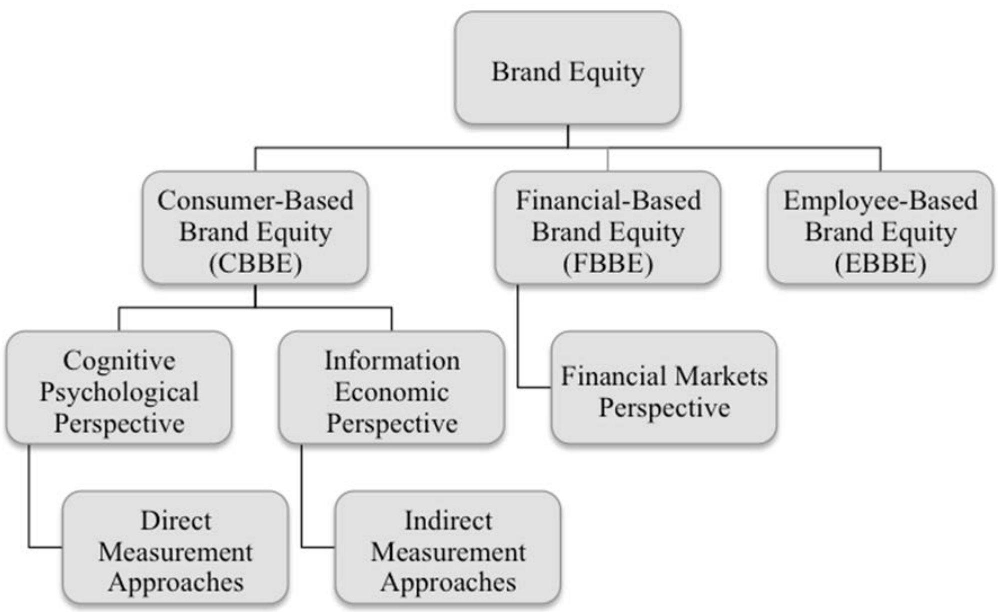
The second perspective of brand equity is the information economics perspective. This perspective views brand equity as the increased utility that a brand name gives to a product (Erdem and Swait, 1998; Wernerfelt, 1988). In this perspective, the brand name is a signal to consumers of product quality, which is derived from perceived firm costs or investments, and this perceived quality reduces information costs for the consumer, thereby increasing utility. This perspective is important in that it introduces the fact that firms make investments and incur costs to market their brands, which should be taken into account when measuring brand equity (Anderson, 2007).

The financial markets perspective is the third perspective of brand equity, which defines brand equity as a financial measure of a firm's market value minus its tangible asset value (Simon and Sullivan, 1993). The problem with this perspective is two-fold: first, it emphasizes the fact that the only intangible value for a firm is the brand (not taking into account other intangible assets such as human capital), and second, it measures equity for firm-level (corporate) brands only—not a firm's product-level brands, e.g. Coke Zero for Coca-Cola. However, the importance of this perspective lies in its forward-looking measurement of brand equity (Anderson, 2007).

Although brand equity can be seen as evolving from three different perspectives, in general, it can be classified into two broad categories: the financial perspective—(i.e. the value of the brand for the firm)—firm-based brand equity (FBBE), and the consumer- based perspective—(i.e., the value of the brand for the client)—consumer-based brand equity (CBBE) (Keller, 1993). Therefore, Kapferer's definition - brand equity has an economic function, for example - follows through with the financial perspective. Farquhar's definition, on the other hand

- the added value which a given brand endows a product - follows with the consumer-based perspective (see Figure 2.1.). In addition, since brand equity affects and brings value to many stakeholders of a company, a third category of brand equity has been recently proposed; employee-based brand equity (EBBE) (King and Grace, 2009). King and Grace (2009, p. 130) define EBBE as "the differential effect that brand knowledge has on an employee's response to their work environment." It is worth noting, however, that the term consumer-based brand equity is frequently used to refer to brand equity in general (Rajasekar and Nalina, 2008).

Figure 2.1.
Brand Equity Diagram



Source: Own Elaboration

It is also worth noting that brand equity has also been studied from different business areas. From the marketing side, brand equity is seen as the added value that a brand endows a product. From the financial side, brand equity is the incremental cash flow that accrues to the company as a result of owning a brand. Finally, from the accounting side, brand equity is replaced by trademark and associated goodwill, since accountants see the world in terms of assets not brands (Knowles, 2008).

2.3.3. Brand Equity Perspective of this Dissertation

This dissertation will focus on the consumer-based brand equity perspective and will not discuss FBBE or EBBE, as these two perspectives are outside the scope of this study. The rationale behind this decision is based on the following: The financial value of brand equity is ultimately the outcome of consumer response to a brand name. CBBE, on the other hand, is the driving force of increased market share and profitability of the brand since it is based on the market's perceptions (Christodoulides and de Chernatony, 2010). The financial-based perspective thus measures the outcome of customer-based brand equity; and it is therefore expedient to first focus on CBBE.

2.3.4. Principal Conceptualizations of Brand Equity

The two most influential conceptualizations of brand equity are Aaker's (1991) and Keller's (1993) conceptualizations. Aaker defines brand equity as "a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers" (p.15). Aaker then proposes four dimensions of brand equity: brand awareness, brand loyalty, brand associations, and perceived quality.

Brand awareness refers to “the ability of a potential buyer to recognize or recall that a brand is a member of a certain product category” (Aaker, 1991, p. 61). When consumers are exposed to a brand, the result is brand awareness. Therefore, the first step in building brand equity is building brand awareness. In order to measure brand awareness, we have to measure brand recognition and recall (Keller, 1993; Aaker, 1996).

Brand loyalty is the heart of brand equity. It is defined as “a deeply held commitment to rebuy or repatronize 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 behavior” (Oliver, 1997). Gil et al. (2007) have shown that loyalty is an important dimension of equity; and if brand loyalty is established, then brand equity will be the result. They conceptualize brand loyalty on the basis of consumer perception. Brand loyalty adds considerable value to a brand or firm because it creates a group of buyers that will be loyal for a long time and will less likely switch to a competitor due to price.

Brand associations are representations of what a brand means for a consumer and are “anything linked in memory to a brand” (Aaker, 1991, p. 109). Any contact or experience a consumer has with a brand can create, change, or reinforce certain favorable or unfavorable associations (Keller, 2003). In order for associations to have a positive effect on brand equity, they must be unique, strong, and favorable (Keller, 2003).

Finally, perceived quality is related to a consumer’s judgment of a product or brand’s overall superiority or excellence (Zeithaml, 1988). Therefore, firms have to genuinely increase the real quality of their brands and then communicate this quality through their marketing actions in order to affect perceived quality in a positive manner. High perceived quality allows for consumers to be convinced about buying the brand; for differentiation of the brand from competition; and for the firm to charge a premium price and then extend the brand (Aaker, 1991).

Keller (1993) developed the customer-based brand equity model (CBBE), which is the most widely used model today. Keller defines CBBE by stating that the power of a brand rests on what the clients have learned, felt, seen, and heard about it through time, that is, rests in their minds. Hence, CBBE is “the differential effect of brand knowledge on consumer response to the marketing of the brand” (p. 2). He defines brand knowledge in terms of two components: brand awareness and brand image. Brand awareness is easy to measure in terms of recognition and recall. Recognition is the consumers’ ability to confirm prior exposure to the brand when given the brand as a cue. Therefore, it is consumers’ ability to recognize the brand when they see a picture of the logo for example. Recall is consumers’ ability to retrieve the brand when given the product category. For example, if you ask someone to list the first three fast food restaurants off the top of their head, then they are recalling the “top of mind” brands for them. Brand image, on the other hand, is difficult to measure because it is made up of the perceptions about a brand as reflected by the brand associations held in consumer memory related to attributes, benefits, and attitudes. Therefore, the objective is to create unique, strong, and favorable associations in consumers’ minds that lead to a stronger brand image. These associations can be partially controlled with marketing mix tools. However, total control of a brand’s image is not possible given that many brand associations depend on aspects that are out of a firm’s control, e.g. external brand information, word-of-mouth, experience consumers have directly with the brand, consumers’ identification of a brand with a firm, country, place, event, or person that is not necessarily the one intended by the company, amongst many others.

2.4. Brand Equity Measurement

In order to assess brand performance and properly manage brands, it is essential that marketers understand their brands' value or equity (Keller and Lehmann, 2006). Therefore, marketers must be aware of two aspects of brand performance: the measurement of brand equity; and the relationship between customer equity and brand equity (Leone et al., 2006). In terms of measurement, brand equity has been measured according to the three previously discussed perspectives: at the customer level (Aaker and Joachimsthaler, 2000; Baker et al., 2005; Bendixen et al., 2003; Chen, 2001, Keller, 1993; Lassar et al., 1995; Shocker et al., 1994; Tong and Hawley, 2009), the company or firm level (Cobb-Walgren et al., 1995; Doyle, 2001; Dyson et al., 1996; Farquhar et al., 1991; Kapferer, 1997; Kim et al., 2003), and the financial market level (Aaker and Jacobson, 1994; Barth et al., 1998; Simon and Sullivan, 1993). Many authors have also developed models that encompass all aspects of brand equity (Epstein and Westbrook, 2001; Keller and Lehmann, 2003; Srivastava et al., 1998).

2.4.1. Consumer-level Measures

Consumer-based brand equity refers to consumers' feelings of a particular product due to associations that are not necessarily related to specific product attributes, that is, associations that exist independent of the product itself (Keller and Lehmann, 2006). The customer level measurement perceives the value of a brand to originate entirely from the consumers (what they buy, how they buy, why they buy, etc.). Therefore, consumers assign levels of equity to brands when they favor one over the other. From the consumers' point of view, brand equity is part of their attraction to or repulsion from a product (Keller and Lehmann, 2006). This perspective allows marketing managers to use an effective strategy in understanding and influencing consumer attitudes and behaviors. Consumer-based brand equity (CBBE) focuses on understanding consumers' state of mind in brand selections and identifying the sources of brand values (Baker et al., 2005; Lassar et al., 1995; Yoo and Donthu, 2001). According to Keller (1993) and Srivastava and Shocker (1991), CBBE can be measured directly or indirectly. The direct approach looks at brand equity as the value that a brand adds to a product and uses consumers' responses to understand the effects of branding activities. The indirect approach is based on Keller's (1993) view of identifying the antecedents of brand equity that exist in consumers' minds and influence their purchase decisions.

2.4.2. Company-level Measures

Company or firm based brand equity is the added value a company receives from a branded product that it would not have if the product were unbranded (Cobb-Walgren et al., 1995; Doyle, 2001; Dyson et al., 1996; Farquhar et al., 1991; Kapferer, 1997; Kim et al., 2003). A company benefits from a strong brand with respect to advertising and promotion effectiveness, brand extensions insulation from competition, and strong distribution (Hoeffler and Keller, 2003). According to Hoeffler and Keller (2003), there have been numerous measures, including increased advertising elasticity, decreased sensitivity to competitor prices, price premiums, and the ability to secure and maintain distribution channels, that assess the impact of brand equity in the product market.

2.4.3. Financial-level Measures

From a financial-based perspective, brands are assets that can be bought and sold for a certain price; this price is the financial worth of a brand. Several authors have looked at measuring brand equity based on financial market performance (Simon and Sullivan, 1993;

Aaker and Jacobson, 1994; and Barth et al., 1998). Simon and Sullivan (1993) define brand equity as "the incremental cash flows which accrue to branded products over and above the cash flows which would result from the sale of unbranded products" (p. 29). The authors measure a firm's brand equity by deriving financial market estimates from brand-related profits. They do this by using the financial market value of the firm as a base and then extract the firm's brand equity from the value of the firm's other tangible and intangible assets. This then results in an estimate based on the firm's future cash flows. Doyle (2001) contends that brand equity is explained by the ability of brands to create value by accelerating growth and enhancing prices. Therefore, brands function as an important driver of cash flow. These different measures have allowed for a different understanding of why and how companies or brands have been able to create or maintain high brand equity.

2.4.4. Customer Equity and Brand Equity

As for the relationship between customer equity and brand equity, Rust et al. (2000) look at the antecedents and consequences of developing and maintaining strong ties with consumers. Furthermore, the value of a customer to the firm (customer equity) is shown to be the sum of the profit from the sale of generic products and the additional value from the sale of branded products—brand equity (Ambler et al., 2002). Therefore, customer equity is perceived as the sum of lifetime values of all customers, or customer lifetime value (CLV) (Rust et al., 2004). Customer loyalty to a brand affects both brand equity and customer equity and allows companies to charge consumers higher prices. Hence, both brand equity and customer equity are equally important (Leone et al., 2006).

2.4.5. Academic Models

Since the rise of the value-based management philosophy, there has been a development of a wide range of different brand equity models (Aaker, 1991; Keller, 1993; Berry, 2000; Srinivasan et al., 2005). Some of these models focus on the perspective of the buyer (e.g., Aaker and Joachimsthaler, 2000), some focus on the perspective of the company and/or employees (e.g., King and Grace, 2009) and some focus on an integrated external and internal approach (e.g., Burmann et al., 2009). From these different models, academics have developed different ways in which to measure brand equity.

Many different methods to measure brand equity have been proposed. There are two basic, complementary approaches to measurement: (1) an indirect approach which assesses potential sources of customer-based brand equity by identifying and tracking customers' brand knowledge structure and (2) a direct approach which measures customer-based brand equity more directly by assessing the actual impact of brand knowledge on customer response to different marketing elements.

Examples of the direct approach include the financial or market-outcome-based measures of brand equity such as revenue premium (Ailawadi et al., 2003), brand equity as a price premium measure (Holbrook, 1992; Randall et al., 1998), and brand equity as a measure of brand extendibility (Randall et al., 1998). In terms of financial measurement, Anderson (2007) argues that brand equity is the financial value that a firm derives from customer response to the marketing of a brand, and brands are an infinitely-lived asset. He continues to suggest that the financial term for an infinitely-lived asset is a perpetuity; and therefore, brand equity should be measured as total revenue minus total marketing cost, divided by periodic interest rate.

Netemeyer et al. (2004) presents a model containing four core or primary facets of consumer based brand equity: perceived quality, perceived value for cost, brand uniqueness, which would influence purchase intention and behavior through the mediation of a fourth construct, the willingness to pay a price premium. The model also includes secondary facets of consumer based brand equity, such as brand awareness, familiarity, and popularity. The authors conducted four empirical investigations to test different aspects of the model, including its predictive validity with respect to purchase behavior. Their results indicate that the best predictors of future behavior are perceived quality of the brand, which could not be distinguished from perceived value for cost, and brand uniqueness, whose influence on purchase behavior was found to be mediated by the willingness to pay a price premium.

Examples of the indirect approach include the measurement of brand equity that takes an overall picture of the brand and looks at it through its manifest dimensions. Most authors that have used the indirect approach have developed scales to measure brand equity at different levels and using different contexts. For example, Lassar et al. (1995) use survey data from consumers collected in two product categories (TV monitors and watches) to develop a 17-item scale that has adequate levels of internal consistency and validity. Vazquez et al. (2002) develop a 22-item scale that is easy to administer and sheds light on the measurement of consumer-based brand equity at the individual level. There are also various studies that develop category or industry specific measures of consumer-based brand equity (e.g., de Chernatony et al., 2004; Christodoulides et al., 2006). Finally, Yoo and Donthu (2001) use the four components of customer-based brand equity put forth by Aaker's (1991) and Keller (1993) in developing a multidimensional scale to measure brand equity.

2.4.6. Industry Models

There are many industry models currently used by companies to measure brand value. Young and Rubicam's BrandAsset Valuator (BAV) model profiles brands according to four key dimensions: differentiation, relevance, esteem, and knowledge. *Differentiation* is about a brand's ability to create a sustainable competitive advantage and it is the engine of the brand. *Relevance* is the brand's ability to be personally meaningful. *Esteem* is the extent to which consumers like and respect a brand; it measures loyalty and how well a brand fulfills its promise. *Knowledge* measures the level of intimacy a consumer has with the brand. Differentiation and relevance form a measure of brand strength which is a leading indicator of future growth value; whereas esteem and knowledge form a measure of brand stature, which is a current indicator of current operating value. According to BAV, leadership brands excel on both strength and stature (BrandAsset Consulting, 2010). Coopers and Lybrand evaluate brand equity by comparing the premium price paid for a branded product with the price of unbranded products. Arthur Young Australia assess profitability of a branded versus unbranded product by accounting for things such as advertising, trademark registration, and other branding expenses.

Millward Brown Optimor's BrandZ defines the brand value as being equal to the branded intangible earnings multiplied by the brand contribution multiplied by the brand multiple (or projected earnings). What the company does is summarize the strength of a brand's relationship with consumers using two key measures: presence and voltage. *Presence* measures how many people know about a brand and what it offers. Therefore, brands with high presence will be top of mind and in consumers' consideration sets. *Voltage* is a measure of how efficiently a brand converts people from presence to higher levels of loyalty. Therefore, a brand with high voltage will be in a good position to grow its share of sales in the category. They then plot brands according to presence and voltage to create a map of brand equity made up of four quadrants. The estimation of total brand value is found by focusing on the strength of a brand's relationship with consumers, making it possible to put a value on the current and future contribution that branding makes to a company's bottom line (Millward Brown Optimor, 2010).

The Interbrand Group has developed a model to formally estimate the dollar value of a brand. Their approach is consistent with the notion that brand equity is the discounted cash flow from the future earnings stream of the brand. There are three aspects that are vital to their assessment: the financial performance of the branded products or services; the role of brand in the purchase decision process; and the strength of the brand (Interbrand, 2010).

Financial performance measures the organization's financial return to its investors. Interbrand calculates this using economic profit (i.e., operating profits minus taxes). The role of brand is the part of the decision to purchase the product that is attributable to the brand. The strength of the brand is evaluated using ten dimensions of brand activation. Specifically, these ten dimensions are: *commitment,* which is the extent to which the brand receives support in terms of time, influence, an investment; *protection,* which is how secure a brand is across a number of dimensions; *clarity*, which the brand values, positioning and proposition must be clearly articulated and shared across the organization; *responsiveness,* which looks at the brand's ability to adapt to market changes, challenges, and opportunities; *authenticity,* which is about how soundly a brand is based on an internal capability; *relevance,* which estimates how well a brand fits with customer needs, desires and decision criteria; *understanding,* which is that customers recognize and have an in-depth understanding of the distinctive qualities and characteristics of the brand and its owner; *consistency,* which measures the degree to which a brand is experienced without fail across all touch points and formats; *presence,* which measures the degree to which a brand feels omnipresent and how positively consumers, customers and opinion formers discuss it in both traditional and social media; and *differentiation,* which is the degree to which customers perceive the brand to have a positioning that is distinct from the competition (Interbrand, 2010). In order to then calculate overall brand value, Interbrand calculates economic profit, and then multiplies it by the role of brand to arrive at the amount of branded earnings that contribute to the valuation total. These branded earnings are then discounted back to a present value (multiplied by a brand strength discount rate) to arrive at a final brand value (Interbrand, 2010).

However, since these types of brand valuations are making assumptions about different dimensions that they believe make up brand value (or equity) without asking the consumer about their opinion, they are in a way taking a *guesstimate* of different aspects that may or may not, as a whole, impact a brand's equity. Therefore, a more practically oriented method in taking into account experiences and comparative research to judge the validity and usefulness of brand valuation methods is needed (Farquhar, 1989).

2.5. Brand Equity Scale Developments

Although Aaker's (1991) and Keller (1993) are most recognized for their conceptualization of brand equity, they never operationalized a scale for its measurement. Therefore, many academics took to the task of quantifying this intangible asset. Most methodologies employ complex statistical procedures (e.g. Park and Srinivasan, 1994; Leuthesser et al., 1995) and are difficult to understand and use, especially for practitioners. To recap, empirical undertakings to operationalize CBBE can be classified based on their direct or indirect approach to measurement—direct approaches to brand equity measurement attempt to measure the phenomenon by focusing on consumers' preferences (e.g., Srinivasan, 1979; Park and Srinivasan, 1994) or utilities (e.g., Kamakura and Russell, 1993; Swait et al., 1993), while indirect approaches measure brand equity through its demonstrable dimensions (e.g., Yoo and Donthu, 2001; Pappu et al., 2005).

2.5.1. Direct Approaches

The multi-attribute model was used by Srinivasan (1979), Park and Srinivasan, (1994), and Jourdan (2002) to measure consumer-based brand equity. Srinivasan (1979) calls brand equity a "brand-specific effect" and defines it as "the component of a brand's overall preference that is not explained by the multi-attribute model" (p. 12). Srinivasan (1979) measures brand equity by actual choice behavior with those implied by utilities obtained through conjoint analysis with product attributes, but no brand names. Then the difference between overall preference and the preference estimated by the model is quantified into a monetary scale. The limitation of this method is that it provides only segment-level estimates of brand equity. This type of direct measurement of brand equity does not shed light on the sources of brand value. After more than a decade, Park and Srinivasan (1979) developed a new survey-based method for measuring and understanding a brand's equity in a product category. They operationalize brand equity as "the difference between an individual consumer's overall brand preference and his or her multiattributed preference based on objectively measured attribute levels" (p. 273). Park and Srinivasan (1979) obtain a measurement of brand equity at the individual level by dividing brand equity into attribute-based and nonattribute-based components. However, their method does not break down the non-attribute based component of brand equity.

Jourdan (2002) improves the reliability and validity of the measurement of brand equity proposed by Park and Srinivasan (1994). He notes that Park and Srinivasan's calculation of differences of utilities includes an error term. Aside from the brand name effect, there are two other reasons why overall preference may not correspond with the preference based on objectively measured product attributes. First, a consumer may have positive evaluations for all product attributes yet still choose a different brand due to other reasons (random error). Second, preference based on objective evaluations of a brand's attribute levels is estimated using the multi-attribute model, which may cause a systematic error. Therefore, Jourdan (2002) uses a repeated measures experimental design to show that an error component is not negligible in this case. Although this method has advantages over its predecessors, the complex experimental design used makes it difficult to put into practice.

Other types of direct approaches include Leuthesser et al. (1995) who begin with the assumption that personal evaluation of a given brand on a number of attributes is always biased since consumers are predisposed toward brands they know. This predisposition is manifest through the psychological "halo effect" what the authors believe is the basis of brand equity. In order to isolate the outcome of the "halo effect" the authors use two techniques: "partialling out" and "double centering." One weakness of this method is that it does not indicate what the underlying dimensions of consumer-based brand equity are. Also, this method measures equity at the aggregate level rather than at the individual level. Finally, this method does not overcome limitations of previous techniques, and it is difficult to use by brand managers.

Kamakura and Russell (1993) use a segment-wise logit model to examine consumers' actual purchase behavior. They measure consumer-based brand equity as "the implied utility or value assigned to a brand by consumers" (p. 10). The authors use real purchase data from supermarket checkout counters in their empirical estimation of a model of Brand Value. They go on to identify two major sources of brand equity: Brand Value (which provides a good diagnostic for a brand's competitive position) and Intangible Brand Value (which isolates the utility associated with intangible factors such as brand associations and perceptual distortions). This approach, however, evaluates consumer-based brand equity at the aggregate level, similar to Srinivasan (1979) and can only be used when scanner data is available.

Swait et al. (1993) build on the information economics paradigm by using the entire value attached to a brand rather than isolating specific parameters. They argue that any measure of brand equity should reflect total utility because the effect of brand equity occurs throughout the components of the utility function. Hence, they propose a measure of consumer-based brand equity called “Equalization Price” (EP) which is “the monetary expression of the utility a consumer attributes to a bundle consisting of a brand name, product attributes and price” (p. 30). EP is a measure of the implicit value to the individual consumer of the brand in a market in which some degree of differentiation exists vis-à-vis its implicit value in a market characterized by no brand differentiation. This model can be used for both existing products and proposed brand name extensions, so it can also be used as a product-concept screening tool. Swait et al. (1993) propose a method that permits the calculation of consumer-based brand equity at the individual level, identifies the sources of brand associations, and determines importance weights in the function of consumer utility. Nevertheless, the model assumes that all consumers have identical preferences, so unless it is being tested in homogeneous consumer choice markets this method is inappropriate.

Shankar et al. (2008) develop a model of brand equity based on customer survey and financial measures. They describe two parts to brand equity, offering value and relative brand importance. Offering value is the net present value of a product or product range carrying a brand name and can be estimated through financial measures such as margin ratios and forecast revenues. Relative brand importance is a measure that seeks to isolate the effect of brand image on consumer utility relative to the effect of other factors that also affect consumer choice. The authors propose certain drivers of brand image that can be captured through a consumer survey: brand reputation, brand uniqueness, brand fit, brand associations, brand trust, brand innovation, brand regard, and brand fame. This method combines both financial and consumer data, but does not take into consideration that some companies' financial measures may be unavailable at the brand level. In addition, this is an aggregate measure of brand equity because only relative brand importance is measured at the individual level. However, Shankar et al.'s (2008) method does allow for estimating brand equity for multi-category brands.

2.5.2. Indirect Approaches

Indirect approaches to the measurement of brand equity take an overall picture of the brand and look at it through its manifest dimensions. For example, Lassar et al. (1995) define consumer-based brand equity as "the enhancement in the perceived utility and desirability a brand name confers on a product" (p. 10). The authors propose five CBBE dimensions based on a previous study by Martin and Brown (1990): performance, value, social image, trustworthiness, and commitment. Lassar et al. (1995) use survey data from consumers collected in two product categories: TV monitors and watches. Their 17-item Likert scale has adequate levels of internal consistency and discriminant validity. However, the scale does not include any behavioral components of brand equity such as loyalty. Also, the authors do not report any tests on the scale's external validity.

Vazquez et al. (2002) also follow a holistic definition of brand equity and define it as "the overall utility that the consumer associates to the use and consumption of the brand; including associations expressing both function and symbolic utilities" (p. 28). They develop a measurement instrument of brand equity that has four basic dimensions of brand utilities: product functional utility, product symbolic utility, brand name functional utility, and brand name symbolic utility. Their 22-item scale shows a reasonable degree of reliability and validity for the sports shoes sector. A positive aspect of the Vazquez et al. (2002) scale is that it is relatively easy to administer, and it sheds light on the measurement of consumer-based brand equity at the individual level. However, it was only tested in the sports shoes sector and, therefore, may need to be adapted for other contexts. Kocak et al. (2007) try to replicate the results of Vazquez et al. (2002) in a different cultural context (i.e., Turkey). They use the exact same 22-item scale, which was originally developed and tested in Spain, in the sports shoes sector as well. Kocak et al. (2007) find that the original scale does not work for the Turkish sample, so they adapt it to 16 items. The authors conclude that the differences between Vazquez et al.'s (2002) study and their replication are due to cultural differences—consumers in different cultures have different evaluations of brands. Rajh (2002) also developed a scale for measuring customer-based brand equity using Keller's (1993) framework for CBBE. His 14-item scale measures four dimensions: brand awareness, strength of brand associations, favorability of brand associations, and uniqueness of brand associations. However, this scale is weak due to two reasons: first, the awareness dimension is made up of only two items, which makes it a weak dimension (Churchill, 1979); and second, the scale was only tested using undergraduate students at one university in one cultural setting (i.e., Croatia).

There are also various studies that develop category or industry specific measures of consumer-based brand equity (e.g., de Chernatony et al., 2004; Christodoulides et al., 2006). The study by de Chernatony et al. (2004) develops a brand performance measure for financial brands. The authors depict three dimensions of CBBE that are specific to financial services brands: brand loyalty, satisfaction, and reputation. Christodoulides et al. (2006) measure brand equity in an online context and look into the unique characteristics of the internet that render consumers as co-creators of brand value. By conducting interviews with experts in the field, they identify five dimensions of e-tail brand equity (emotional connection, online experience, responsive service nature, trust and fulfillment) that make up their Online Retail/Service (ORS) 12-item brand equity scale. Both studies use consumer surveys with items to measure brand equity's different dimensions.

Davis et al. (2009) develop a measure of brand equity in the logistics services context and offer a foundation for future logistics branding research. Boo et al. (2009) further develop a model of consumer-based brand equity applicable to different destinations. Their framework includes five dimensions of CBBE: destination brand awareness (DBA), destination brand image (DBI), destination brand quality (DBQ), destination brand value (DBV), and destination brand loyalty (DBL). They conclude, using two destinations (Las Vegas and Atlantic City), that destination-specific items should be considered when developing a destination brand model. Rajasekar and Nalina (2008) have looked specifically at one destination or country in measuring CBBE. Their study measures brand equity in the Indian environment using five factors, namely performance, social image, value, trust-worthiness, and attachment. The results indicate that the components of brand equity that have a significant influence on overall equity of the brand for consumers are performance, trust-worthiness, and attachment.

The most influential brand equity scale is the Yoo and Donthu (2001) multidimensional brand equity scale. Yoo and Donthu (2001) use the four components of customer-based brand equity put forth by Aaker's (1991) and Keller (1993) in developing a multidimensional scale to measure brand equity. They define the four components as follows: brand loyalty is loyalty to a brand, measured by the intention to purchase the brand. They adopt Aaker's (1991) definition of brand awareness, which is the sum of brand recall and recognition, and it is when a buyer can recognize or recall a brand in a specific category. They define perceived quality as a consumer or user's subjective evaluation of product quality. For the final dimension, they use both Keller's (1993) and Aaker's (1991) definition that brand associations are specific links in consumer's memory to the brand. The resulting scale measuring brand equity, "the multi-dimensional brand equity" scale (MBE) is made up of three dimensions: brand loyalty; brand perceived quality and brand awareness/associations. The authors also developed a separate scale to measure overall brand equity in order to assess the multi-dimensional brand equity scale's convergent validity.

Yoo and Donthu's (2001) scale is perhaps the most robust scale in the literature due to the fact that they used a comprehensive approach to scale development (Christodoulides and de Chernatony, 2010). They used samples from multiple cultures making their scale culturally valid. Also, their scale is applicable to various product categories unlike other scale developments. Third, the scale is parsimonious and easy to administer which makes it easy for brand managers to find out the equity of their brands quickly and efficiently. Finally, the scale measures brand equity at the individual level and has gone through rigorous validation.

However, this scale is not without limitations. First and foremost, the three-factor MBE scale collapsed two distinct constructs of brand equity, brand awareness, and brand associations into one dimension. Both constructs are clearly correlated, but both Aaker's (1991) and Keller (1993), whose frameworks are used as a basis in this scale development, distinguish between awareness and associations. Pappu et al. (2005) are able to distinguish between brand awareness and brand associations, but they operationalize brand awareness using one item and brand loyalty using two items, making the psychometric properties of their scale questionable. Pappu et al.

(2005) and Yoo and Donthu (2001) both use student samples to develop and validate their brand equity scale. Although using student samples to develop the scale is acceptable, the scale should be validated using a general consumer sample in order to gain effective generalizability. Netemeyer et al. (2004) use an adult consumer population in developing and validating measures of facets of CBBE. The facets or dimensions they use are perceived quality, perceived value for the cost, uniqueness, and the willingness to pay a price premium for a brand. In addition, although Yoo and Donthu (2001) use three different brands for their survey, they use only product brands (camera film, athletic shoes, and color televisions) and fail to include service brands, which is a limitation because service brands rank high in terms of brand equity nowadays.

Finally, Yoo and Donthu (2001) use samples consisting of Koreans, Korean Americans, and Americans, which makes their study based on specific country cultures. Buil et al. (2008) provide evidence about the dimensionality of brand equity and its measurement invariance across two samples of UK and Spanish consumers. The four dimensional structure of brand equity (brand awareness, perceived quality, brand loyalty, and brand associations) was supported in both countries. Due to the above limitations, it is necessary for future scale development to allow researchers and practitioners to try to come up with a universally accepted measure of consumer-based brand equity (Washburn and Plank, 2002).

2.6. Gap and Contribution

"Brand Equity is nice – until you have to use it" was stated by by Amoroso and Kover (1992). The authors comment, "the search for brand equity sometimes feels like whacking at a piñata. It is blind; it is hit or miss." This is the current situation in the marketing literature—the brand equity scales are nice, until you have to use them. The problem is that the majority of research on brand equity has used the same conceptualization of the construct based on previously determined dimensions (i.e., based on the theoretical framework of either Aaker 1991 or Keller 1993). A review of Aaker's (1991) book discusses his conceptualization of brand equity and then comments on the dimensions that Aaker discusses by saying that "they are accepted largely on the basis of face validity and no attempt is made to argue their relative importance or possible interrelation" (Shocker, 1993). Therefore, we need a new approach of measuring CBBE by tapping into the minds of consumers.

This dissertation will enrich and strengthen the current knowledge on brand equity by developing a conceptualization and scale determined by dimensions that consumers actually perceive. In other words the aim of this dissertation is to develop the first *consumer-perceived, consumer-based brand equity scale*. As noted earlier, to date, there has not been an extensive examination of the consumer perceived dimensions that make up brand equity. Towards this end, this dissertation attempts to answer the following research questions:

1. Which dimensions identified by consumers are critical to the development of the consumer perceived brand equity construct?
2. How can these dimensions be interrelated to measure brand equity effectively?

By answering these questions, this dissertation contributes both to the literature, by providing a theoretical understanding of consumer-based brand equity measurement, and assisting managers or brand ambassadors, in measuring brand equity and developing successful brand strategies.

This thesis maintains that, given the importance of the concept of brand equity in marketing, as well as the need for the measurement of brand equity, the literature lacks an empirically based consumer-derived/perceived brand equity scale. Since the "brand is the consumer's idea" (David Ogilvy), the consumer is an active participant or equity partner in the creation of equity for the brand (Blackston, 2000). Therefore, we need to delve inside consumers' minds in order to understand and manage the intangible equity directly. This leads us to the need for qualitative research to help unearth the secrets of the "intangibility" of brand equity. In understanding consumers' real perceptions of brand equity, we will close the gap between what consumers perceive and what we currently measure as brand equity.

More specifically, the review of the literature reveals that some of the most widely referred to conceptualizations (e.g., Aaker, 1991; Keller, 1993) are in fact purely conceptual (see Table 2.2. for a summary of extant brand equity scales). The above statements raise certain pertinent issues that have provided the motivation for this research and which are worth mentioning:

1. Several scholars including the following authors, have actually cited the Aaker's (1991) and Keller (1993) conceptualizations without questioning their validity (e.g. Leuthesser et al., 1995; Lassar et al., 1995; Washburn and Plank, 2002; Zeugner-Roth et al., 2008; Davis et al., 2009; Boo et al., 2009; Atilgan et al., 2009) let alone suggesting a method for its operationalization or embarking upon one themselves.
2. With regards to specific scale developments, four authors (i.e., Yoo and Donthu, 2001; Netemeyer et al., 2004; Pappu et al., 2005; Guizani et al., 2008; Rajasekar and Nalina, 2008) have used the Aaker's (1991) and Keller (1993) conceptualizations without suggesting their own operationalization.

From the previous discussion, the following weaknesses have been identified and have provided the impetus for this research:

- Most scale developments, including Yoo and Donthu (2001), do not develop their own conceptualization of brand equity, but rely on either Aaker's (1991) or Keller's (1993) conceptualizations.

- Most scale developments use students alone to test and validate their scales (i.e., lack methodological rigor and applicability).
- While all authors claim that input from consumers is important in the development of a scale, there is scant evidence of the above being adopted and becoming part of their development.
- To the best of our knowledge, so far, no attempt has been put forward for the development and validation of a consumer-perceived brand equity scale.

Therefore, the aim of this dissertation will be to develop and validate a consumer-perceived, consumer-based brand equity scale. This scale will provide a new conceptualization of brand equity (other than the Aaker's (1991) and Keller (1993) conceptualizations) and use a comparison of students and nation-wide consumers in the development. Therefore, this study will serve as a building block for measuring consumer-perceived, consumer-based brand equity, and will benefit brand research in several ways. A new conceptualization and scale for consumer-perceived brand equity can be used to investigate the antecedents and consequences of brand equity. Furthermore, nomological relationships between consumer-perceived brand equity and new relevant variables could be studied. Finally, this new consumer-perceived brand equity scale will provide practitioners with a robust CBBE scale derived from the minds of consumers.

Table 2.2.
List of Brand Equity Scales

#	Author	Year	Description	Base Conceptualization	Dimensions	Definition of Brand Equity
1	Srinivasan	1979	uses the multi-attribute model to measure consumer-based brand equity	n.a.	n.a.	"brand-specific effect" is the component of a brand's overall preference that is not explained by the multiattribute model
2	Kamakura & Russell	1993	look at perceived quality and brand intangible value of CBBE	n.a.	perceived quality, brand intangible value	the implied utility or value assigned to a brand by consumer
3	Swait et al	1993	Equalization Price as a measure of brand equity	n.a.	n.a.	propose a measure of consumer-based brand equity called "Equalization Price" (EP) which is the monetary expression of the utility a consumer attributes to a bundle consisting of a brand name, product attributes and price
4	Park & Srinivasan	1994	achieves measurement of brand equity at the individual level	n.a.	attribute-based brand equity, non-attribute-based brand equity	the difference between an individual consumer's overall brand preference and his or her multiattributed preference based in objectively measured attribute levels
5	Leuthesser et al	1995	the halo effect measure of brand equity	Thorndike 1920 and Keller 1993	n.a.	from Keller: brand equity represents the value to a consumer of a product, above that which would result for an otherwise identical product without the brand's name
6	Lassar et al	1995	measure customer-based brand equity	Keller 1993	performance, social image, value, trust worthiness, and attachment	brand equity stems from the greater confidence that consumers place in a brand than they do in its competitors. This confidence translates into consumers' loyalty and their willingness to pay a premium price for the brand
7	Yoo & Donthu	2001	multidimensional brand equity scale	Aaker 1991, 1996 and Keller 1993	brand loyalty, perceived quality and brand awareness/associations	consumers' different response between a focal brand and an unbranded product when both have the same level of marketing stimuli and product attributes.
8	Jourdan	2002	amendment and improvement of the Park & Srinivasan measurement model using experimental design	Park & Srinivasan 1994	attribute-based brand equity, non-attribute-based brand equity	the difference between the subjective preference and the objective preference vis-à-vis the product
9	Vazquez et al	2002	develop and validating a measurement instrument for consumer- based brand equity	Kamakura & Russell 1991 and Cobb-Walgren et al 1995	product utility (product functional utility, product symbolic utility) and brand name utility (brand name functional utility, brand name symbolic utility)	the overall utility that the consumer associates to the use and consumption of the brand; including associations expressing both functional and symbolic utilities
10	Washburn & Plank	2002	modifications of the Yoo & Donthu (1997) scale	Aaker 1991, 1996 and Keller 1993	brand loyalty, perceived quality and brand awareness/associations	consumers' different response between a focal brand and an unbranded product when both have the same level of marketing stimuli and product attributes.

#	Author	Year	Description	Base Conceptualization	Dimensions	Definition of Brand Equity
11	Ailawadi et al	2003	propose and validate revenue premium as an outcome measure of brand equity	Keller 2003	revenue premium is the difference in revenue (net price x volume) between a branded good and a corresponding private label	from various authors: the marketing effects or outcomes that accrue to a product with its brand name compared with those that would accrue if the same product did not have the brand name
12	de Chernatony et al	2004	develop a brand performance measure for financial services brands	In-depth interviews	brand loyalty, satisfaction, reputation	Marketing Science Institute (MSI) definition: a set of associations and behaviors on the part of a brand's consumers, channel members and parent corporation that enables a brand to earn greater volume or greater margins than it could without the brand name and, in addition, provides a strong, sustainable and differential advantage
13	Netemeyer et al	2004	develop and validating measures of facets of customer-based brand equity	Aaker 1991, 1996 and Keller 1993	perceived quality, perceived value for the cost, uniqueness, and the willingness to pay a price premium for a brand	from Keller: CBBE occurs when the consumer is familiar with the brand and holds some favorable, strong, and unique associations in memory
14	Pappu et al	2005	an improvement to the measurement of consumer-based brand equity	Aaker 1991, 1996 and Keller 1993	brand awareness, brand associations (including brand personality), perceived quality, and brand loyalty	from Farquhar: value endowed by the brand to the product
15	Christodoulides et al	2006	conceptualize and measure the equity of online brands	qualitative research	emotional connection, online experience, responsive service nature, trust, and fulfillment	Online Retail/Service (ORS) Brand equity is defined as a relational type of intangible asset that is co-created through the interaction between consumers and the e-tail brand.
16	Kocak et al	2007	replicate of the consumer-based equity scale developed by Vazquez et al 2002 revised it from 22 items to 16 items when cross-cultural	Vasquez et al 2002	product utility (product functional utility, product symbolic utility) and brand name utility (brand name functional utility, brand name symbolic utility)	from Vazquez et al: overall utility that consumer associates to the use and consumption of the brand, including associations expressing both functional and symbolic utilities
17	Guizani et al	2009	working paper on the development of a scale for consumer brand equity using French consumers (non-students)	Aaker 1991, 1996 and Keller 1993	brand loyalty, perceived brand quality, brand knowledge (brand recognition and brand awareness), and social value (related to consumption of the brand)	from Farquhar: value added by the brand name to the product
18	Shankar et al	2008	a multicategory brand equity model and its application	n.a.	offering value (net present value or financial worth of an offering carrying a brand name) and RBI (relative brand importance derived from consumer brand choice and determined by brand image and other marketing-mix elements)	from Shocker & Weitz 1988: the net present value of the incremental cash flows attributable to a brand name and to the firm owning that brand relative to an identical product with no brand name or band-building efforts

#	Author	Year	Description	Base Conceptualization	Dimensions	Definition of Brand Equity
19	Lehmann et al	2008	suggest a parsimonious set of brand measures that can be used to measure brand performance	Keller & Lehmann 2003	comprehension (presence, awareness, and knowledge), comparative advantage (difference, esteem, performance, advantage, and acceptability), interpersonal relations (caring, prestige, service and innovation), history (heritage and nostalgia), preference (bonding, loyalty, intention, value for money, overall attitude, and extension potential) and attachment (persistence and activity)	brand performance can be thought of in terms of four stages: awareness, image and associations (which encompasses comparative advantage, interpersonal relations, and history), preference, and attachment.
20	Rajasekar & Nalina	2008	a new measure of customer-based brand equity in India	Aaker 1996 & Brucks & Zeithaml 1991	performance, social image, value, trust worthiness, and attachment	from Farquhar: value endowed by the brand to the product
21	Buil et al	2008	new brand equity scale including personality dimensions (items from many different authors)	Aaker 1991	Brand awareness, perceived quality, brand loyalty, and brand associations (perceived value, brand personality and organizational associations)	from Aaker: a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers
22	Zeugner-Roth et al	2008	country brand equity scale	Yoo & Donthu 2001 (i.e., Aaker, 1991 and Keller 1993)	country brand loyalty, perceived country brand quality, and country brand awareness/associations	from Farquhar: define country brand equity as the value-added brought forth by the association of a product or brand with a given country name, as perceived by the individual consumer
23	Davis et al	2009	measure brand equity for logistics services	Keller 1993	brand awareness, brand image, overall brand equity	from Aaker: a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers
24	Boo et al	2009	develop a destination brand scale (used Las Vegas and Atlantic City as destinations)	Aaker 1991, 1996 and Keller 1993	destination brand awareness, destination brand image, destination brand quality (image & quality = experience), destination brand value, and destination brand loyalty	from de Chernatony & McDonald 2003: overall utility that customers place in a brand compared to its competitors
25	Atilgan et al	2009	emergence of brand trust as a new dimension instead of brand awareness	Aaker 1991, 1996 and Keller 1993	perceived quality, brand loyalty, brand associations, and brand trust	from Yoo & Donthu 2001: difference in consumer choice between the focal branded product and an unbranded product given the same level of product features and Keller 2003: brand with equity provide an ownable, trustworthy, relevant, distinctive promise to consumers

CHAPTER 3
METHODOLOGY AND ANALYSES

3.1. Introduction

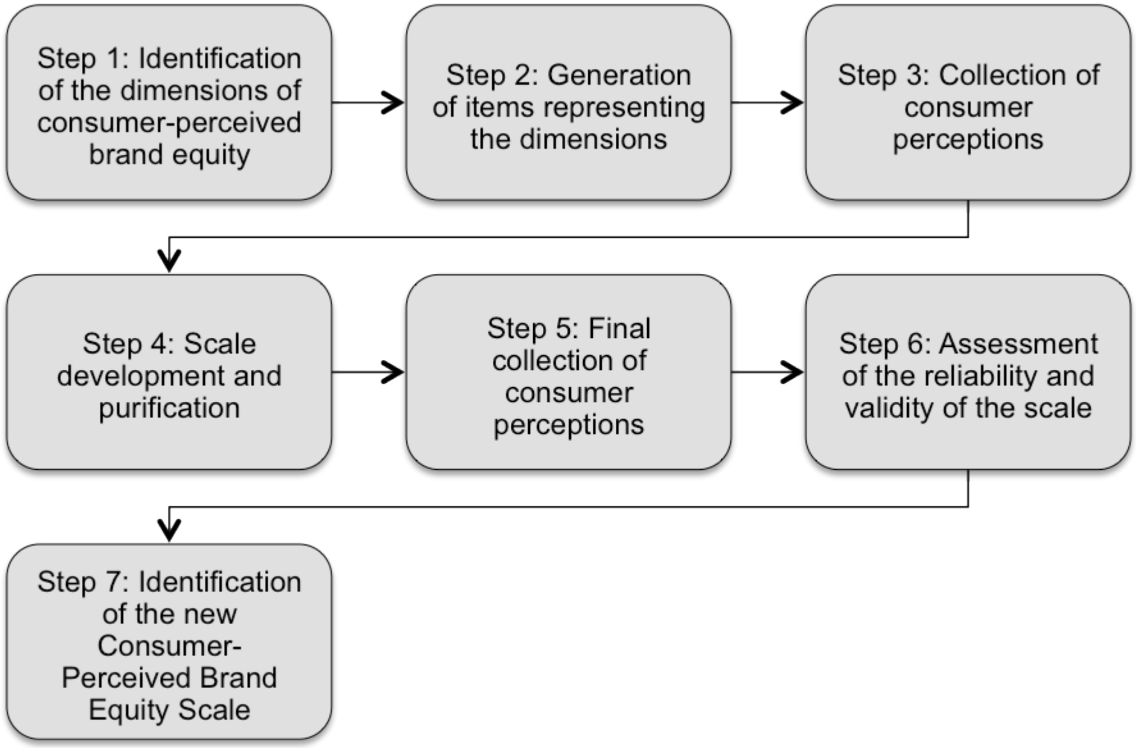
Winters (1991) states, "if you ask ten people to define brand equity, you are likely to get ten (maybe 11) different answers as to what it means" (p. 70). Although many studies have been published on brand equity since the 90s, Winters' statement is even more relevant today than it was in 1991. Brand equity is a complex concept and the diversity of its conceptualizations and measurements in the literature are evidence of that. Due to the fact that all research on brand equity to date has used the same conceptualizations of brand equity, based on previously determined dimensions (i.e., based on either the Aaker 1991 or Keller 1993 theoretical models), a new conceptualization of the construct based on consumer perceived dimensions is warranted. The aim of this research is the development and validation of a scale measuring consumer-perceived, consumer-based brand equity. More specifically, the objectives of the study are:

1. To generate a pool of items that *consumers* perceive to determine brand equity;
2. To synthesize and reduce these items into constructs or dimensions that will form the basis of the scale; and
3. To validate the proposed brand equity scale.

3.2. Stages in the Development and Validation of a Scale Measuring Consumer- Perceived Brand Equity

In order to achieve the research aim, a multi-step process, where thorough attention is to be paid to every step of the process (DeVellis, 1991), has been adopted. This is a modified version of the frameworks proposed by Parasuraman et al. (1988) and Churchill (1979); it is presented in Figure 3.1. Each of the steps is now discussed in detail.

Figure 3.1.
Steps in Developing and Validating a Scale Measuring Consumer- Perceived Brand Equity



Source: Adapted from (Parasuraman, Zeithaml, and Berry, 1988) and (Churchill, 1979).

3.2.1. Step 1: Identification of the Dimensions of Consumer-Perceived Brand Equity

In order to develop a conceptualization and a scale determined by dimensions that consumers actually perceive (i.e., the first "consumer-perceived, consumer-based brand equity scale"), qualitative data was collected from 423 marketing students at a University in the Southwest of the United States (Gummesson, 2005). The data were collected from April 5 to April 30, 2010. These students provided answers to an open-ended question: "In 5-10 words please state what first comes to your mind when you think of a brand that is important to you." Frequency count was used to group the most commonly reported words together into consumer-perceived dimensions (Gummesson, 2005). The results indicate there are four dimensions of consumer-perceived brand equity: perceived quality, perceived value, brand loyalty, and sustainability.

In order to further validate these student responses, additional qualitative data were collected from a nationwide sample of the U.S. population using an omnibus survey. The data were collected from September 20 to September 27, 2010. A sample of 1,000 consumers provided answers to the question: "In 5-10 words please state what first comes to your mind when you think of a brand that is important to you." This preliminary qualitative research also helped identify the most important consumer-based dimensions or constructs based on a frequency count (Gummesson, 2005). The results confirmed our previous findings and indicate there are indeed four dimensions of consumer-perceived brand equity: perceived quality, perceived value, brand loyalty, and sustainability (see Table 3.1). These dimensions were named based on the adjectives that consumers delineated.

Table 3.1.
Perceived Dimensions from Qualitative Study

Perceived Quality	Perceived Value	Brand Loyalty	Sustainability
• quality • reliable • consistent • works well • durable • long-lasting • performance	• price • cost • affordable • value • ease of use • available	• loyalty • trust • honesty • likeable • comfortable • dependable	• safety • sustainable • healthy • reputation • environmentally responsible

Perceived quality and brand loyalty are dimensions that have similar items to Aaker and Keller's conceptualizations. However, perceived value incorporates aspects of brands that consumers find important in their evaluation of a brand (i.e., price, value, ease of use, and availability). In addition, sustainability brings to light a current perspective that consumers have towards their brand choices today. Consumers are aware of the level of responsibility they expect from a brand and perceive this in terms of how safe, sustainable, healthy, reputable and environmentally responsible the brand is. Overall, the dimensions for perceived brand equity may be somewhat similar in nature to the existing conceptualizations (Aaker, 1991 and Keller, 1993), but the two new critical dimensions that were identified fall in line with how consumers perceive brand equity.

3.2.2. Step 2: Generation of Items Representing the Dimensions

The four dimensions of brand equity that were identified are perceived quality, perceived value, brand loyalty, and sustainability (see Table 3.1.). Items were developed for the attributes within these dimensions (see Table 3.2.). For perceived quality the two items used by Yoo and Donthu (2001) were adapted. In addition, four items were generated to cover the attributes found in the qualitative research that were not expressed in the Yoo and Donthu (2001) study. The Sweeney and Soutar (2001) consumer perceived value scale was adapted and modified to fit the context of this thesis. The three items used by Yoo and Donthu (2001) for brand loyalty were adapted, as well as one item on commitment from Berry (2000). Four additional items were generated to cover the remaining attributes that consumers perceived in the qualitative research. Finally, in addition to the Brown and Dacin (1997) social responsibility scale that was adapted for the sustainability dimension, five new items were generated.

Table 3.2.
Original Items in Survey

ORIGINAL ITEMS IN SURVEY	Author
Loyalty	
I consider myself to be loyal to (X).	Yoo & Donthu 2001
(X) would be my first choice.	Yoo & Donthu 2001
I will not buy other brands if (X) is available at the store.	Yoo & Donthu 2001
I feel that (X) is trustworthy.	qualitative research
(X) is an honest brand.	qualitative research
I feel comfortable when I buy (X).	qualitative research
(X) is a dependable brand.	qualitative research
I am comitted to buying (X)	Berry 2000
Quality	
The quality of (X) is extremely high.	Yoo & Donthu 2001
The functionality of (X) is very high.	Yoo & Donthu 2001
The reliability of (X) is very high.	qualitative research
(X) is consistent in the quality it offers.	qualitative research
The durability of (X) is very high.	qualitative research
The performance of (X) is very high.	qualitative research
Value	
(X) has consistent quality.	Sweeney & Soutar 2001
(X) is well made.	Sweeney & Soutar 2001
(X) has an acceptable standard of quality.	Sweeney & Soutar 2001
(X) has poor workmanship.	Sweeney & Soutar 2001
(X) would *not* last a long time.	Sweeney & Soutar 2001
(X) performs consistently.	Sweeney & Soutar 2001
(X) is a brand I would enjoy.	Sweeney & Soutar 2001
(X) would make me want to use it.	Sweeney & Soutar 2001
(X) is a brand that I would feel relaxed about using.	Sweeney & Soutar 2001
(X) would make me feel good.	Sweeney & Soutar 2001
(X) would be economical.	Sweeney & Soutar 2001
(X) is reasonably priced.	Sweeney & Soutar 2001
(X) offers value for money.	Sweeney & Soutar 2001
(X) is a good product for the price.	Sweeney & Soutar 2001
(X) would help me to feel acceptable.	Sweeney & Soutar 2001
(X) would improve the way I am perceived.	Sweeney & Soutar 2001
(X) would make a good impression on other people.	Sweeney & Soutar 2001
(X) would give its owner social approval.	Sweeney & Soutar 2001
Sustainability	
(X) is an environmentally safe brand.	qualitative research
(X) is a sustainable brand.	qualitative research
(X) is a healthy brand.	qualitative research
(X) is a brand with a good reputation.	qualitative research
(X) is an environmentally responsible brand.	qualitative research
(X) is a socially responsible brand.	Brown & Dacin 1997
(X) is more beneficial to society's welfare than other brands.	Brown & Dacin 1997
(X) does not contribute something to society.	Brown & Dacin 1997

Based on suggestions by Tull and Hawkins (1994), Bliss et al. (1987), Aaker and Day (1990) and De Vellis (1991), the data were given to two academic experts on scale development and brand equity for their perusal and comments. This, as noted by Parasuraman et al. (1988), was designed to ensure the elimination of ambiguous statements prior to the first stage of data collection. The result of this step added one item, suggested by an expert, to the loyalty dimension "I am committed to buying (X)" from Berry (2000).

3.2.3. Step 3: Initial Collection of Consumer Perceptions

The initial data collection was composed of undergraduate university students using a survey. The self-administered online survey was carried out using a non-probability convenience sample of 90 students attending a large University in the Southwest of the United States. The data were collected between September 19 and September 26, 2011. For each statement, the participants were requested to indicate the degree to which they agreed or disagreed with the statement. The 40 statements were measured on a 7-point Likert scale where 1 indicated strongly disagree and 7 strongly agree. The product category purposely chosen for this survey was electronics, specifically cellular phones. This product category is widely understood and valued by both students and non-students. Furthermore, consumers have well-established perceptions regarding this product category. In addition, three widely known, heavily advertised brands, with clearly established brand identities are used. These specific brands were tested and chosen, due to high brand recognition: iPhone, Blackberry and HTC.

Researchers suggest that the use of student subjects in measurement development research threatens the external validity and generalizability of findings due to the non-representativeness and unique characteristics of the population (e.g., Burnett and Dunne, 1986;

Wells, 1993). However, students have been effective surrogates for non-students or adults (consumers) in various empirical studies that have examined, for example, country of origin, attitude toward advertising, the attitude-preference relationship (Yavas, 1994) and self-identity acculturation (Owenbey and Horridge, 1998).

3.2.4. Step 4: Scale Development and Purification

The data collected in step 3 was analyzed and used as a basis for step 4. According to Churchill (1979), Parasuraman et al. (1988), Tull and Hawkins (1994), Dabholkar et al. (1996), and Fabrigar et al. (1999), exploration of the underlying structure of the data was carried out through exploratory factor analysis (EFA) (Hair et al. 2006). Principal component analysis (Nunnally, 1978) using varimax rotation was used. An eigenvalue greater than 1 and a cumulative percentage of variance explained greater than 50% were used as criteria in determining the number of factors. Based on these criteria, six factors were extracted (quality, loyalty, social influence, perceived value, sustainability, and durability). This, collectively, accounted for an average variance explained of 85% between the three brands.

At this point, only initial testing of the internal reliability of the extracted factors was performed in the form of Cronbach's coefficient alpha (α). The cut-off value adopted was 0.70 and all factors were above the cut-off point (see Parasuraman et al. 1988; Spector 1992; Churchill 1979).

Following the examination of the EFA results and analysis of the reliability and conceptual coherency of the indicated factors, it is suggested that the six factors below tentatively represent potentially robust factors underpinning consumer-based brand equity. The six factors are as follows: quality, loyalty, sustainability, social influence, durability, and perceived value.

3.2.5. Step 5: Final Collection of Consumer Perceptions

In order to test and validate the initial factors identified, a second survey using two different samples; a student sample and a consumer sample, was used. Data were collected simultaneously from the two samples, (477 students and 403 consumers), using an online survey on Qualtrics. The data were collected between October 24 and October 31, 2011. The consumer group was a nation-wide representative sample and data was collected using an omnibus survey. Care was taken to make sure that each of the three brands (iPhone, Blackberry, and HTC) received equal responses in both population groups (see Table 3.3.).

Table 3.3.
Composition of the Samples

Brand	Sample	# of respondents	Gender		Age		Education	
			Male	Female	<= 30	> 30	<= High School	> High School
iPhone	consumers	138	75	63	34	104	34	104
Blackberry	consumers	138	59	79	34	104	42	96
HTC	consumers	127	61	66	29	98	27	100
iPhone	students	163	75	88	150	13	10	153
Blackberry	students	162	71	91	153	9	13	149
HTC	students	152	60	92	145	7	8	144
		880	46%	54%	62%	38%	15%	85%

Similar to the initial data collection, on a scale of 1 to 7 (where 1 indicated strongly disagree and 7 strongly agree), the respondents were requested to indicate their perception of the statements for a specific brand (iPhone, Blackberry, HTC). The process recommended by Anderson and Gerbing (1988), and Nunnally and Bernstein (1994) was followed for conducting a series of exploratory and confirmatory factor analyses on the data.

3.2.6. Step 6: Assessment of the Reliability and Validity of the Scale

This step involved the assessment of the proposed dimensions in terms of reliability and validity (Spector 1992). The analysis for all three brands yielded a 24-item factor structure made up of five factors: quality, preference, sustainability, social influence, and leadership. The student sample will be discussed first, followed by the consumer sample.

For the student sample, the descriptive statistics can be found in Table 3.4, and the reliability coefficients for the resulting factors is high for all three brands (see Tables 3.5, 3.6 and 3.7.). In addition, the inter-item correlations for the 24 items are acceptable with each item above the cut-off point of .30.

Table 3.4.
Descriptive Statistics (student sample)

	Blackberry - students		HTC - students		iPhone - students	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
The reliability of (Brand X) is very high.	4.17	1.48	4.39	1.447	5.42	1.427
(Brand X) is consistent in the quality it offers.	4.2	1.483	4.54	1.451	5.55	1.419
The performance of (Brand X) is very high.	4.09	1.495	4.56	1.473	5.7	1.384
The quality of (Brand X) is extremely high.	4.22	1.499	4.51	1.483	5.63	1.379
The functionality of (Brand X) is very high.	4.19	1.541	4.62	1.509	5.77	1.283
(Brand X) has consistent quality.	4.19	1.526	4.6	1.348	5.42	1.503
(Brand X) performs consistently.	4.15	1.443	4.42	1.379	5.37	1.401
(Brand X) has an acceptable standard of quality.	4.4	1.463	4.73	1.395	5.63	1.41
(Brand X) is well made.	4.34	1.467	4.75	1.42	5.53	1.48
(Brand X) would be my first choice.	1.98	1.506	2.85	1.76	4.73	2.261
I consider myself to be loyal to (Brand X).	1.98	1.594	2.84	1.791	4.17	2.364
I will not buy other brands if (Brand X) is available at the store.	1.83	1.336	2.55	1.508	4.07	2.267
I am committed to buying (Brand X).	2.14	1.544	3.06	1.484	4.33	2.241
(Brand X) is an environmentally safe brand.	3.96	1.065	4.08	1.077	4.37	1.324
(Brand X) is an environmentally responsible brand.	4.03	1.106	4.16	1.101	4.52	1.326
(Brand X) is a sustainable brand.	4.07	1.298	4.39	1.213	4.96	1.488
(Brand X) is a healthy brand.	4.02	1.182	4.24	1.276	4.87	1.424
(Brand X) improves the way I am perceived by others.	3.05	1.637	3.62	1.474	3.79	2.044
(Brand X) would make a good impression on other people.	3.35	1.68	3.89	1.555	4.23	1.936
(Brand X) would give its owner social approval.	3.36	1.74	3.78	1.569	4.18	1.95
(Brand X) helps me feel accepted.	3.01	1.609	3.61	1.532	3.9	1.946
(Brand X) would last a long time.	4.53	1.488	4.67	1.316	5.06	1.733
(Brand X) has good workmanship.	4.57	1.392	4.81	1.326	5.39	1.509
(Brand X) contributes something to society.	4.33	1.125	4.2	1.181	4.64	1.498

Table 3.5.
Exploratory Factor Analysis –iPhone (student sample)

	Quality	Social Influence	Preference	Sustainability	Leadership
iPhone has consistent quality.	0.852				
The quality of iPhone is extremely high.	0.851				
iPhone has an acceptable standard of quality.	0.844				
The performance of iPhone is very high.	0.803				
iPhone performs consistently.	0.803				
The reliability of iPhone is very high.	0.793				
The functionality of iPhone is very high.	0.79				
iPhone is consistent in the quality it offers.	0.781				
iPhone is well made.	0.754				
iPhone would make a good impression on other people.		0.883			
iPhone would give its owner social approval.		0.882			
iPhone improves the way I am perceived by others.		0.872			
iPhone helps me feel accepted.		0.831			
I am committed to buying iPhone.			0.827		
I will not buy other brands if iPhone is available at the store.			0.825		
I consider myself to be loyal to iPhone.			0.813		
iPhone would be my first choice.			0.781		
iPhone is an environmentally safe brand.				0.831	
iPhone is a healthy brand.				0.809	
iPhone is an environmentally responsible brand.				0.808	
iPhone is a sustainable brand.				0.738	
iPhone has poor workmanship (reversed)					0.809
iPhone would not last a long time (reversed)					0.786
iPhone does not contribute something to society (reversed)					0.762
Total Variance Explained = 81.822	51.551	11.92	7.469	5.932	4.95
Cronbach's alpha	0.97	0.948	0.964	0.892	0.778

Table 3.6.
Exploratory Factor Analysis – Blackberry (student sample)

	Quality	Preference	Sustainability	Social Influence	Leadership
The reliability of Blackberry is very high.	0.898				
Blackberry is consistent in the quality it offers.	0.897				
The performance of Blackberry is very high.	0.875				
The quality of Blackberry is extremely high.	0.86				
The functionality of Blackberry is very high.	0.837				
Blackberry has consistent quality.	0.832				
Blackberry performs consistently.	0.832				
Blackberry has an acceptable standard of quality.	0.817				
Blackberry is well made.	0.805				
Blackberry would be my first choice.		0.907			
I consider myself to be loyal to Blackberry.		0.89			
I will not buy other brands if Blackberry is available at the store.		0.887			
I am committed to buying Blackberry.		0.848			
Blackberry is an environmentally safe brand.			0.842		
Blackberry is an environmentally responsible brand.			0.816		
Blackberry is a sustainable brand.			0.778		
Blackberry is a healthy brand.			0.762		
Blackberry improves the way I am perceived by others.				0.866	
Blackberry would make a good impression on other people.				0.835	
Blackberry would give its owner social approval.				0.817	
Blackberry helps me feel accepted.				0.723	
Blackberry would not last a long time (reversed)					0.83
Blackberry has poor workmanship (reversed)					0.765
Blackberry does not contribute something to society (reversed)					0.726
Total Variance Explained = 80.146%	45.767	11.908	9.67	6.662	6.138
Cronbach's Alpha	0.974	0.932	0.901	0.91	0.707

Table 3.7.
Exploratory Factor Analysis – HTC (student sample)

	Quality	Social Influence	Preference	Sustainability	Leadership
The quality of HTC is extremely high.	0.843				
The functionality of HTC is very high.	0.842				
The performance of HTC is very high.	0.834				
The reliability of HTC is very high.	0.81				
HTC has an acceptable standard of quality.	0.784				
HTC has consistent quality.	0.779				
HTC is well made.	0.774				
HTC is consistent in the quality it offers.	0.752				
HTC performs consistently.	0.687				
HTC improves the way I am perceived by others.		0.888			
HTC helps me feel accepted.		0.84			
HTC would give its owner social approval.		0.834			
HTC would make a good impression on other people.		0.811			
I will not buy other brands if HTC is available at the store.			0.878		
HTC would be my first choice.			0.87		
I consider myself to be loyal to HTC.			0.858		
I am committed to buying HTC.			0.796		
HTC is an environmentally safe brand.				0.849	
HTC is an environmentally responsible brand.				0.802	
HTC is a sustainable brand.				0.748	
HTC is a healthy brand.				0.668	
HTC would not last a long time (reversed)					0.856
HTC has poor workmanship (reversed)					0.844
HTC does not contribute something to society (reversed)					0.629
Total Variance Explained = 80.389	50.125	9.149	8.863	7.2	5.051
Cronbach's alpha	0.966	0.948	0.929	0.91	0.712

The EFA for the student sample was used as a basis of the factor structure for both samples; and therefore, with the consumer sample confirmatory factor analysis (CFA) was used directly. The descriptive statistics for the consumer sample can be found in Table 3.8. Confirmatory factor analysis (CFA) was employed for both samples to test the measurement structure and examine how well the data set fits the hypothesized measurement structure (see Dabholkar et al. 1996). This was undertaken via the Lisrel structural equation modeling (SEM) approach. In line with Hair et al. (2006), model goodness-of-fit was evaluated through (a) absolute-fit measures, (b) incremental-fit measures, and (c) parsimonious-fit measures.

Individual indices examined for the first fit measures were likelihood-ratio chi-square (p-value), goodness-of-fit index (GFI), and root of mean square error of approximation (RMSEA) value; for the second fit, the adjusted goodness-of-fit index (AGFI), normed fit index (NFI), and non-normed fit index (NNFI) were examined. As for the third fit, the comparative fit index (CFI), incremental fit index (IFI), relative fit index (RFI) and root mean square residual (RMR) were examined (see Hair et al. 2006).

Table 3.8.
Descriptive Statistics (consumer sample)

ORIGINAL ITEMS IN SURVEY	Author
Loyalty	
I consider myself to be loyal to (X).	Yoo & Donthu 2001
(X) would be my first choice.	Yoo & Donthu 2001
I will not buy other brands if (X) is available at the store.	Yoo & Donthu 2001
I feel that (X) is trustworthy.	qualitative research
(X) is an honest brand.	qualitative research
I feel comfortable when I buy (X).	qualitative research
(X) is a dependable brand.	qualitative research
I am comitted to buying (X)	Berry 2000
Quality	
The quality of (X) is extremely high.	Yoo & Donthu 2001
The functionality of (X) is very high.	Yoo & Donthu 2001
The reliability of (X) is very high.	qualitative research
(X) is consistent in the quality it offers.	qualitative research
The durability of (X) is very high.	qualitative research
The performance of (X) is very high.	qualitative research
Value	
(X) has consistent quality.	Sweeney & Soutar 2001
(X) is well made.	Sweeney & Soutar 2001
(X) has an acceptable standard of quality.	Sweeney & Soutar 2001
(X) has poor workmanship.	Sweeney & Soutar 2001
(X) would *not* last a long time.	Sweeney & Soutar 2001
(X) performs consistently.	Sweeney & Soutar 2001
(X) is a brand I would enjoy.	Sweeney & Soutar 2001
(X) would make me want to use it.	Sweeney & Soutar 2001
(X) is a brand that I would feel relaxed about using.	Sweeney & Soutar 2001
(X) would make me feel good.	Sweeney & Soutar 2001
(X) would be economical.	Sweeney & Soutar 2001
(X) is reasonably priced.	Sweeney & Soutar 2001
(X) offers value for money.	Sweeney & Soutar 2001
(X) is a good product for the price.	Sweeney & Soutar 2001
(X) would help me to feel acceptable.	Sweeney & Soutar 2001
(X) would improve the way I am perceived.	Sweeney & Soutar 2001
(X) would make a good impression on other people.	Sweeney & Soutar 2001
(X) would give its owner social approval.	Sweeney & Soutar 2001
Sustainability	
(X) is an environmentally safe brand.	qualitative research
(X) is a sustainable brand.	qualitative research
(X) is a healthy brand.	qualitative research
(X) is a brand with a good reputation.	qualitative research
(X) is an environmentally responsible brand.	qualitative research
(X) is a socially responsible brand.	Brown & Dacin 1997
(X) is more beneficial to society's welfare than other brands.	Brown & Dacin 1997
(X) does not contribute something to society.	Brown & Dacin 1997

The results of the analysis of the model goodness-of-fit for the student sample are shown in Table 3.9. Although the chi-square (χ^2) values were statistically significant at the 0.05 level (a common occurrence, given the well-known sensitivity of this statistic) (Bagozzi and Yi 1988), other structure diagnostics (i.e., NFI, NNFI, CFI, IFI, and RFI) were generally supportive and appeared to fall within the acceptable ranges (Hair et al. 2006). Reliability was assessed by using

Cronbach's alpha, which ranged from 0.939 to 0.952, and therefore, all samples have a reliability that was greater than .70 (Nunnally, 1978). Consequently, the results indicate appreciable goodness-of-fit; and hence, it is judged that the structure is well supported for iPhone, Blackberry, and HTC for both the student and consumer samples.

Table 3.9.
Reliability and Factor Structure (LISREL) Diagnostics

Brand	Sample	Cronbach's Alpha	Chi Square	RMSEA	GFI	AGFI	NFI	NNFI	CFI	IFI	RFI	RMR
iPhone	consumer	0.949	624.14	0.108	0.72	0.66	0.95	0.96	0.97	0.97	0.94	0.059
Blackberry	consumer	0.948	608.66	0.106	0.73	0.66	0.95	0.97	0.97	0.97	0.94	0.067
HTC	consumer	0.951	721.59	0.128	0.67	0.59	0.92	0.94	0.95	0.95	0.91	0.091
iPhone	student	0.952	435.65	0.072	0.82	0.77	0.96	0.98	0.98	0.98	0.95	0.041
Blackberry	student	0.939	557.49	0.091	0.78	0.72	0.94	0.96	0.97	0.97	0.93	0.071
HTC	student	0.950	505.72	0.086	0.78	0.73	0.95	0.97	0.97	0.97	0.94	0.053

The validity of the research constructs/factors was assessed through content, converegent, predictive, nomological, and discriminant validity.

Content validity: The measures developed for the consumer-based brand equity factors were derived from an exhaustive systematic approach that commenced with examination of the relevant literature, a qualitative data collection process, and followed with the generation of statements. The measures underwent detailed evaluations by both academicians and experts in the industry thus providing the confirmation for content validity. Furthermore, during the refinements of the questionnaires, a pre-test was conducted among a group of undergraduate students. The results of these approaches indicated that the content of the factors was well represented by the measurement items. It must however be mentioned that although the judgment of content validity is subjective, the procedures used in this research are consistent with good practice in the literature (see DeVellis 1991; Churchill 1979).

Convergent validity: In this study, convergent validity was examined through EFA where the extracted latent factors can be seen as a set of common underlying dimensions of the research construct,(i.e., factors explaining consumer-perceived consumer-based brand equity) (see Tables 3.5., 3.6. and 3.7.).

Predictive validity: The considerable degree of inter-factor correlations and evidence of internal reliability (see Cronbach's alpha for all scales in Table 3.9.) attest to the stability of this scale in terms of predictive validity. Thus, overall, the five factors identified are statistically significant.

Nomological validity: This refers to the way the measurements correlate in a theoretically predictable way with measures of different but related constructs. Given that this scale uses a combination of items from the extant literature and the qualitative research, the resulting consistency with extant scales in brand equity gives indication of nomological validity.

Discriminant validity: Evidence of discriminant validity is presented (Tables 3.10., 3.11., 3.12., 3.13., 3.14., and 3.15.) where average variance extracted and construct reliabilities are contrasted with the square of the correlations between the constructs. The average variances extracted and construct reliability for each construct were satisfactory (Fornell and Larcker 1981). All phi's squared were consistently lower than the reliability estimates. This procedure satisfies the requirement of discriminant validity (Hair et al 2006).

Table 3.10.
Evidence of Discriminant Validity – iPhone (consumer sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability		AVE	CR
Preference	1	0.449	0.044	0.410	0.397		0.82	0.95
Quality	0.670	1	0.005	0.336	0.656		0.84	0.98
Leadership	-0.210	-0.070	1	0.073	0.123		0.67	0.86
Social Influence	0.640	0.580	-0.270	1	0.449		0.85	0.96
Sustainability	0.630	0.810	-0.350	0.670	1		0.75	0.92

Table 3.11.
Evidence of Discriminant Validity – Blackberry (consumer sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability	AVE	CR
Preference	1	0.372	0.006	0.292	0.325	0.78	0.93
Quality	0.610	1	0.010	0.397	0.740	0.82	0.98
Leadership	-0.080	-0.100	1	0.130	0.123	0.56	0.79
Social Influence	0.540	0.630	-0.360	1	0.462	0.84	0.95
Sustainability	0.570	0.860	-0.350	0.680	1	0.83	0.95

Table 3.12.
Evidence of Discriminant Validity – HTC (consumer sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability	AVE	CR
Preference	1	0.397	0.012	0.221	0.292	0.83	0.95
Quality	0.630	1	0.048	0.194	0.410	0.81	0.97
Leadership	-0.110	0.220	1	0.058	0.002	0.74	0.89
Social Influence	0.470	0.440	-0.240	1	0.504	0.87	0.96
Sustainability	0.540	0.640	-0.040	0.710	1	0.87	0.96

Table 3.13.
Evidence of Discriminant Validity – iPhone (student sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability	AVE	CR
Preference	1	0.504	0.176	0.314	0.270	0.87	0.96
Quality	0.710	1	0.270	0.250	0.372	0.77	0.97
Leadership	0.420	0.520	1	0.008	0.040	0.59	0.81
Social Influence	0.560	0.500	0.090	1	0.240	0.80	0.94
Sustainability	0.520	0.610	0.200	0.490	1	0.65	0.88

Table 3.14.
Evidence of Discriminant Validity – Blackberry (student sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability	AVE	CR
Preference	1	0.144	0.001	0.058	0.144	0.78	0.93
Quality	0.380	1	0.144	0.303	0.360	0.80	0.97
Leadership	0.030	0.380	1	0.010	0.063	0.49	0.72
Social Influence	0.240	0.550	0.100	1	0.270	0.70	0.90
Sustainability	0.380	0.600	0.250	0.520	1	0.67	0.89

Table 3.15.
Evidence of Discriminant Validity – HTC (student sample)

	Preference	Quality	Leadership	Social Influence	Sustain ability		AVE	CR
Preference	1	0.325	0.044	0.212	0.212		0.77	0.93
Quality	0.570	1	0.078	0.410	0.533		0.75	0.96
Leadership	0.210	0.280	1	0.014	0.023		0.56	0.76
Social Influence	0.460	0.640	0.120	1	0.314		0.82	0.95
Sustainability	0.460	0.730	0.150	0.560	1		0.70	0.90

3.2.7. Step 7: Identification of the New Consumer-Perceived Brand Equity Scale

Given the fact that the 24-item scale has acceptable fit, with acceptable discriminant and convergent validity, internal consistency reliability and parsimony, the new Consumer-Perceived Brand Equity Scale is now presented (see Table 3.16.). The leadership dimension items have been reversed and are shown below in a positive light. This consumer-perceived brand equity scale is made up of five dimensions: quality, preference, social influence, sustainability, and leadership.

Table 3.16.
The New Consumer-Perceived Brand Equity Scale

Quality	The reliability of (Brand X) is very high.
	(Brand X) is consistent in the quality it offers.
	The performance of (Brand X) is very high.
	The quality of (Brand X) is extremely high.
	The functionality of (Brand X) is very high.
	(Brand X) has consistent quality.
	(Brand X) performs consistently.
	(Brand X) has an acceptable standard of quality.
	(Brand X) is well made.
Preference	(Brand X) would be my first choice.
	I consider myself to be loyal to (Brand X).
	I will not buy other brands if (Brand X) is available at the store.
	I am committed to buying (Brand X).
Sustainability	(Brand X) is an environmentally safe brand.
	(Brand X) is an environmentally responsible brand.
	(Brand X) is a sustainable brand.
	(Brand X) is a healthy brand.
Social Influence	(Brand X) improves the way I am perceived by others.
	(Brand X) would make a good impression on other people.
	(Brand X) would give its owner social approval.
	(Brand X) helps me feel accepted.
Leadership	(Brand X) would last a long time.
	(Brand X) has good workmanship.
	(Brand X) contributes something to society.

CHAPTER 4

DISCUSSION AND CONCLUSIONS

4.1. Introduction

This study has developed and validated a scale measuring consumers' perceived consumer-based brand equity. Adhering to good practices in the literature, this research started by generating a pool of statements which consumers use in their evaluations of brand equity. Following this, the statements were synthesized and then reduced to form key determining factors. The new consumer-perceived consumer-based brand equity scale is made up of five dimensions (quality, preference, social influence, sustainability, and leadership) supported by items ranging from three to nine. Previous conceptualizations of brand equity discuss dimensions that are actually consumer descriptors (e.g. perceived quality, perceived value, brand associations, brand loyalty). For example, consumers are loyal to a brand when they believe it has certain characteristics. Since perceived brand equity is the value that consumers perceive in the brand, brand characteristics will be discussed rather than consumer descriptors. The five dimensions that will be discussed in the ensuing sections are different characteristics of the equity of the brand.

4.1.1. Quality

Quality for this conceptualization describes how consumers perceive the quality of a consumer technology brand (product) in terms of its consistency, acceptable standards, performance, reliability, functionality, and being well made. Consumers perceive that a brand (product) should perform highly on all of these aspects. This dimension includes two items adapted from the Yoo and Donthu (2001) scale, "The quality of (X) is extremely high" and "The functionality of (X) is very high". It also includes four items adapted from the Sweeney & Soutar (2001) consumer perceived scale, "(X) has consistent quality", "(X) performs consistently", "(X) has an acceptable standard of quality", and "(X) is well made". Finally, this dimension has three additional items generated through qualitative research in this study, "The reliability of (X) is very high", "(X) is consistent in the quality it offers", and "The performance of (X) is very high". It is interesting to note that although four of the items came from a perceived value scale in the marketing literature, they represent quality when perceived by consumers. This signifies that value may entail characteristics of quality, and the two can be interrelated. Quality in this study entails characteristics of functionality, reliability, performance, and being well made, which could also all be characteristics of value. Consumers perceive a brand (product) to have high quality if it is reliable, consistent, functional, has good performance, has an acceptable standard of quality, and is well made. Although quality as a dimension was included in the previous conceptualizations of Aaker's (1991) and Keller (1993), the quality dimension in this new scale includes consumer perceived items that have never before been included together in any brand equity scale. Also, quality is "the consumer's judgment about a product's overall excellence or superiority" (Zeithaml, 1988, p. 3). Therefore, it is based on consumers' or users' (i.e., not managers' or experts') subjective evaluations of product quality, fitting the above definition perfectly as it is truly a consumers' perception of quality.

4.1.2. Preference

A preferred brand commands loyalty. For this consumer-perceived scale, preference describes how a brand (product) is a consumer's first choice, how they are loyal to the specific brand (product), how they will not buy other brands if that specific brand (product) is available at the store, and how they are committed to buying that brand (product). This dimension includes the three loyalty items used by Yoo and Donthu (2001), "(X) would be my first choice", "I consider myself to be loyal to (X)", and "I will not buy other brands if (X) is available at the store". It also includes one item from Berry (2000), "I am committed to buying (X)". Although the items under the preference dimension are actually loyalty items, since brand characteristics are being discussed, it is expedient for this dimension to be labeled preference. Loyalty is a factor that was previously included in the Aaker's (1991) and Keller (1993) conceptualizations. Aaker (1991, p. 39) defines brand loyalty as "the attachment that a customer has to a brand." Yoo and Donthu (2001, p. 3) define brand loyalty in their study as "the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice." However, this dimension merges the above definitions, and items used in the Yoo and Donthu (2001) scale (which uses the Aaker's (1991) and Keller (1993) conceptualizations) as well as an additional item from Berry (2000) to create a new conceptualization of the loyalty dimension, as preference. Therefore, preference is perceived by consumers to mean that the brand will always be "number one" on their list and they will always prefer to purchase this brand no matter what.

4.1.3. Social Influence

Social influence is a dimension that has never been included in any brand equity scale. It arose as a result of consumer perceptions of the definition of brand equity. Consumers perceive that a brand (product) improves the way they are perceived by others, would make a good impression on other people, would give its owner social approval, and would help them feel accepted. The four items that make up the dimension of social influence came from the Sweeney and Soutar (2001) consumer perceived value scale. However, in this study the four items became a factor on their own and were labeled social influence. Although these items do in fact signify value to the consumers, in this case, the value comes in the form of gaining social approval, feeling accepted, making a good impression, and being perceived by others in a specific way. Consumers today are bombarded with thousands of brand messages in the marketplace. A lot of brands have a vague identity for the average consumer, but brands that are able to create this social influence will prove to be valuable to the consumer. Therefore, this dimension describes ways in which consumers use (purchase) a brand in order to achieve social approval. An example could be the Starbucks brand where consumers pay a premium price for the brand (coffee) in order to achieve a specific status among their peers, colleagues, friends, and family (Thompson & Arsel, 2004).

4.1.4. Sustainability

The sustainability dimension is made up of items that were developed from the attributes found in the qualitative research of this study. The items are: "(X) is an environmentally safe brand", "(X) is an environmentally responsible brand", "(X) is a sustainable brand", and "(X) is a healthy brand". From a consumer perspective, sustainability is an important factor to take into account when analyzing the brand equity of a brand today because we are more conscious of sustainability issues than ever before. Consumers are aware of brands and companies that are environmentally safe, environmentally responsible, sustainable, and healthy. A consumer is more loyal to a brand and believes it is of higher quality if it is sustainable. A growing number of consumers today think about recycling, going green, and worry about the environment (Huang and Rust, 2010; Sheth et al., 2011). This is a concept that is being incorporated into the brand equity of products and the brands that consumers purchase on a daily basis as it provides added value to today's consumers. Sustainability is thus a new dimension that has not been included in any brand equity scale before, and the items are newly developed in this study.

4.1.5. Leadership

From a consumer perspective, leadership is seen through a brand that lasts a long time, has good workmanship, and contributes something to society. The leadership dimension includes two items from the Sweeney and Soutar (2001) scale as well as one item from the Brown and Dacin (1997) scale. This dimension provides evidence that consumers want a brand that will function well for a long period of time; they do not want to have to re-purchase a new product every six months (cellular phones, in this case), since that will cost them a lot of money. They want to know that the brand (cellular phone) has good workmanship, which in turn will allow it to last a long time. Finally, they want the brand to contribute something to society so they can be proud of the brand they use. These aspects create a leader brand, which will enable a consumer to gain value out of it.

Given that no additional items are needed (e.g., other sub-factors), it is inferred that this scale is simple to use and will be valued by academics and practitioners, alike. The confirmatory factor analysis supports the goodness-of-fit of the data set and the hypothesized structure. It is therefore inferred that the five identified factors in this study (quality, preference, social influence, sustainability, and leadership) reflect the basis of the new consumer-perceived consumer-based brand equity scale. Although some of the dimensions in this scale are dimensions found in previous conceptualizations, it is important to note that the items that make up these dimensions are very different in nature. This delineates the fact that consumers' perception of brand equity can lead to a new conceptualization of the construct. In addition, this scale introduces new dimensions that prove to be important to consumers in how they perceive the brand equity of the brands they use every day.

4.2. Theoretical Contributions

This research identified consumer-perceived factors that make up consumer-based brand equity; and hence, the study contributes to the literature and adds to the broad discussion on current conceptualizations and measures of brand equity. The proposed set of factors may be helpful to both practitioner and academic researchers in the marketing industry with interest in brand equity. It is worthy to mention that while previous studies have provided results of consumer-based brand equity, mostly from a student perspective (see Table 2.1.), these studies are based on Aaker's (1991) and Keller's (1993) conceptualizations and use students (or convenience samples) to test their scales (leading to a lack in methodological rigor). This is the first study that develops a consumer-perceived conceptualization and contributes to the marketing literature with a comparison of a student sample and a consumer sample to test and validate the new scale.

With regard to theoretical implications, this study serves as the building block for measuring consumer-perceived, consumer-based brand equity. The study benefits brand research in several ways. First, brand equity's potential antecedents (e.g. brand knowledge, purchase experience, consumption experience, marketing activities, corporate image, and environmental factors) can be used to see how brand equity results. Also, this new consumer perceived brand equity scale can be used to investigate the consequences of brand equity and see if they change using new dimensions. In specific, the impact of each dimension of this scale on consequent variables needs to be identified. Therefore, nomological relationships between consumer-perceived brand equity and new relevant variables could be studied.

Furthermore, this new measure of brand equity can be used to aid in studies of brand value, brand extensions, and marketing activities, to name a few. Therefore, we can use this scale to re-assess and measure the equity of brands now seen from the perspective of consumers. For example, we can measure the equity of co-brands by measuring the equity of each brand separately, then measuring the brand equity as a co-brand. Furthermore, we can try to understand how consumers perceive the equity of brand extensions and how it affects the equity of the parent brand before and after the extension (Sullivan, 1998). In the same light, the equity of a brand can be measured before it is perceived as sustainable and the equity after it is considered sustainable.

Consumers are also interested in a brand's sustainability when considering widely adopted, well-understood technology products, such as cellular phones. Sustainability in this case includes being environmentally safe, responsible, sustainable, and healthy. Reverting back to the product category at hand (cellular phones), consumers perceive iPhone, Blackberry, and HTC as having these sustainability characteristics. This new measure can be used in testing the sustainability of different brands in different product categories. We could also possibly segment different groups of consumers based on their perceptions of the sustainability of brands. This could in turn lead to new positioning strategies for many brands.

Also, there may be a potential causal order among the dimensions of brand equity. According to Levidge and Steiner (1961), the hierarchy of effects model suggests that perceived quality precedes brand loyalty. In this study this turns out to be true as quality always has a higher variance explained than any of the other dimensions (see Tables 3.4, 3.5, and 3.6). Consumer perception of high product quality actually leads to loyalty since it is the basis of consumer satisfaction (Oliver, 1997). Hence, if there is a strong order among the dimensions, then in order to manage resources more efficiently, managers should consider strategies that focus on the different timings of each of the five dimensions.

Another important use for this scale is that it can possibly be used to rank brands based on their perceived consumer value. In other words, a brand equity index can be determined to rank brands according to the five dimensions (i.e., a brand might be high or low on each of the dimensions). This is similar to Hofstede's (1980) cultural dimensions in that a culture can be high or low on any specific dimension. Ranking brands could allow for new segmentation strategies as some brands may find that they are not perceived by consumers to be where they think they are in terms of the dimensions. This may also have an impact on the brands' competitors in the market as they are also ranked on the dimensions. New clusters of competitors may lead a brand to have new positioning strategies.

Given that the products from the category used, cellular phones, are expensive, and have short useful lives (from a branding perspective), this study has created a scale that is capable of measuring the brand equity of any luxury good whose value has been widely established in consumer markets. Therefore, this scale can be used to measure "brand equity effectiveness" relative to benchmarks established prior to a change in a branding strategy for many electronic products such as HDTV's, cameras, computers, web cameras, flash cards, USB devices, printers, etc. Furthermore, this scale could also be used to measure the brand equity in consumer personal accessories and luxury goods, ranging from clothing to consumer beverages and furniture to automobiles.

4.3. Managerial Contributions

In order to enhance the measurement of brand equity from a consumer perspective, the findings of this study encourage managers to re-assess their brand equity with respect to quality, preference, social influence, sustainability, and leadership. Consumers, as well as students, are now looking for new aspects of brand equity, namely, social influence and sustainability. They have expectations that a brand will help them socially in terms of making a positive impression on their peers, helping them feel accepted, and gaining social approval and acceptance. Especially with respect to the product category used in this study, cellular phones, the social influence dimension plays a key role. Think about the iPhone today and how it has changed consumers' lives forever. People and businesses are able to communicate in a faster more efficient and effective way using the iPhone. The same applies to HTC and Blackberry, especially with businesses due to the high level of security provided by these networks.

This consumer perceived brand equity scale is valid, reliable and also parsimonious. Most firms, due to a lack of availability of a good scale, have been measuring brand equity using unidimensional measures. However, this parsimonious scale will provide practitioners with an easy way to understand and measure brand equity using five dimensions that consumers perceived. Its ease of use will allow managers to track the brand equity of brands on a regular basis. Therefore, using this measure to track the brand equity of a brand over time will allow practitioners to understand if a brand is succeeding or failing in certain areas. This will then allow them to efficiently allocate resources to create a successful balance of the dimensions of consumer perceived brand equity. In turn, this may allow managers to better understand the long-term effect of marketing efforts on brand equity, which will lead to successful building of brand equity. Also, this measure will aid in the effective study of the relationship between brand equity and market/business consequences such as sales, profits, market share and others.

4.4. Methodological Contributions

This scale development piece not only follows the proper scale development method (Churchill, 1979), but also enhances this method by including a new approach of merging qualitative data with quantitative data from the consumer. Although quantitative methods for scale development can contribute to raise the scientific status of marketing, they are not sufficient on their own (Gummesson, 2005). Quantitative methods cannot achieve scientific excellence without a clear awareness of their qualitative dependency. Therefore, "…a merger of the best of both worlds – rather than a one-sided acquisition - will add substantial synergy to research in marketing" (Gummesson, 2005, p. 2). This study has merged the best of both quantitative and qualitative methods in a scale development that resulted in a new conceptualization and scale for consumer-perceived, consumer-based brand equity.

Finally, it is inferred from the findings that consumers and students alike perceive consumer-based brand equity to include five dimensions: quality, preference, social influence, sustainability, and leadership. Consumers want a brand (product) to have high quality and preference in order to be loyal to it. They want the brand (product) to be a positive influence on their social life, as well as the environment. Finally, they want the brand (product) to be a leader in order to work well, last a long time, and contribute to society. The identification and validation of these five dimensions and the resulting scale represent an important methodological contribution.

4.5 Limitations and Future Research Directions

Although the study described to this point makes a substantial contribution to the marketing literature and holds much promise as a springboard for future research, some considerations are in order. First, although a consumer sample was used in the study, a student sample was also employed as a comparison sample. This student sample encompasses all of the requisite caveats regarding representativeness and generalizability. Also, respondents from this student sample were geographically concentrated in the Southwestern United States, and they were younger than the population at large. However, students of this age group do represent a segment of consumers who purchase cellular phones (i.e., iPhone, Blackberry, and HTC).

There was also a limitation in the sample size as the consumer sample and student sample were limited in the number of respondents (student sample = 477, consumer sample = 403). These limitations pose generalizability questions without further replication and validation. Although the attempt is consistent with the literature and directions from academic experts, it is acknowledged that there is a lack of (true experimental) control over the identified factors. One exception to this is the use of a consumer sample in addition to the student sample to test and validate the scale. However, a larger sample would be more appropriate for future studies to re-validate the scale.

Several measurement/correlation issues were encountered in the course of this research. In the consumer sample, the value measures employed had a negative correlation with the remaining four factors. Future research should determine if this factor is truly negatively correlated with the remaining factors, or if it even holds up as a dimension in the scale when using other product categories and samples.

Another limitation of this study is that only one product category was used. As a result, participants saw one of three brands, again limiting generalizability. This research should encourage researchers to revise and revalidate the scale. It would be desirable to replicate this study using additional product categories and brands. However, limiting the study allowed the research to limit, and better control for, extraneous and confounding variables.

In addition to replication studies with other product categories and brands, this study points to a number of interesting directions for future research. Some research directions include:

1. Testing and validating the scale using a larger nation-wide sample and comparing that to nation-wide samples in various other countries (cross-cultural study).
2. Testing and validating the scale using other product categories and brands including services and industrial goods.
3. Testing the dimensions to see if they may be extended into sub-dimensions.
4. Testing the relationship between dollar-metric brand equity and this consumer perceived brand equity.

In summary, this study fully answers the research questions - which dimensions identified by consumers are critical to the development of the consumer perceived brand equity construct; and how can these dimensions be interrelated to measure brand equity effectively. There are five dimensions to the consumer-perceived brand equity scale: quality, preference, social influence, sustainability, and leadership. These dimensions clearly measure brand equity effectively with a total explained variance of at least 80% and very high reliability and validity using both a student sample and a nation-wide consumer sample. The scale that is developed and validated in this study not only contributes to the marketing discipline’s body of knowledge, but it also provides a springboard for future research into brand equity. The value of a consumer-perceived brand equity scale suggests a number of new directions for study and elaboration in what is certain to be a compelling stream of research with vast implications for both theory and practice.

APPENDIX A

MEASUREMENT INSTRUMENT (1st Study)

This survey is intended to measure your attitude towards brands. Please **circle the number** that most closely matches your attitude/opinion. Your identity and response will be kept confidential.

1. To what extent do **you agree with the following statements**? Please **circle the number** that most closely matches your opinion.

circle the number that most closely matches your opinion	Strongly Disagree						Strongly Agree
I consider myself to be loyal to (X).	1	2	3	4	5	6	7
(X) would be my first choice.	1	2	3	4	5	6	7
I will not buy other brands if (X) is available at the store.	1	2	3	4	5	6	7
I feel that (X) is trustworthy.	1	2	3	4	5	6	7
(X) is an honest brand.	1	2	3	4	5	6	7
I feel comfortable when I buy (X).	1	2	3	4	5	6	7
(X) is a dependable brand.	1	2	3	4	5	6	7
I am committed to buying (X).	1	2	3	4	5	6	7

2. To what extent do **you agree with the following statements**? Please **circle the number** that most closely matches your opinion.

circle the number that most closely matches your opinion	Strongly Disagree						Strongly Agree
The likely quality of (X) is extremely high.	1	2	3	4	5	6	7
The likelihood that (X) would be functional is very high.	1	2	3	4	5	6	7
The likelihood that (X) is reliable is very high.	1	2	3	4	5	6	7
(X) is consistent in the quality it offers.	1	2	3	4	5	6	7
The likelihood that (X) is durable is very high.	1	2	3	4	5	6	7
The likelihood that (X) would perform well is very high.	1	2	3	4	5	6	7

3. To what extent do **you agree with the following statements**? Please **circle the number** that most closely matches your opinion.

circle the number that most closely matches your opinion	Strongly Disagree						Strongly Agree
(X) has consistent quality.	1	2	3	4	5	6	7
(X) is well made.	1	2	3	4	5	6	7
(X) has an acceptable standard of quality.	1	2	3	4	5	6	7
(X) has poor workmanship.	1	2	3	4	5	6	7
(X) would *not* last a long time.	1	2	3	4	5	6	7
(X) would perform consistently.	1	2	3	4	5	6	7
(X) is a brand I would enjoy.	1	2	3	4	5	6	7
(X) would make me want to use it.	1	2	3	4	5	6	7
(X) is a brand that I would feel relaxed about using.	1	2	3	4	5	6	7
(X) would make me feel good.	1	2	3	4	5	6	7
(X) would be economical.	1	2	3	4	5	6	7
(X) is reasonably priced.	1	2	3	4	5	6	7
(X) offers value for money.	1	2	3	4	5	6	7
(X) is a good product for the price.	1	2	3	4	5	6	7
(X) would help me to feel acceptable.	1	2	3	4	5	6	7
(X) would improve the way I am perceived.	1	2	3	4	5	6	7
(X) would make a good impression on other people.	1	2	3	4	5	6	7
(X) would give its owner social approval.	1	2	3	4	5	6	7

4. To what extent do **you agree with the following statements**? Please **circle the number** that most closely matches your opinion.

circle the number that most closely matches your opinion	Strongly Disagree						Strongly Agree
I consider (X) to be a safe brand.	1	2	3	4	5	6	7
It is important that (X) is a sustainable brand.	1	2	3	4	5	6	7
I find it important that (X) be a healthy brand.	1	2	3	4	5	6	7
The likelihood that (X) has a good reputation is very high.	1	2	3	4	5	6	7
I consider it important that (X) is environmentally responsible.	1	2	3	4	5	6	7
I consider (X) as a socially responsible brand.	1	2	3	4	5	6	7
(X) is more beneficial to society's welfare than other brands.	1	2	3	4	5	6	7
(X) does not contribute something to society.	1	2	3	4	5	6	7

Categorical Questions - something about yourself:

1. Your gender?

Male	Female

2. Your age?

Less than 21 yrs	21-25 yrs	26-30 yrs	31-35 yrs	36-40 yrs
41-45 yrs	46-50 yrs	51-55 yrs	56-60 yrs	More than 60 yrs

3. Your House Hold income?

Less than $20,001	$20,001-40,000	$40,001-60,000	$60,001-80,000	$80,001-100,000
$100,001-120,000	$120,001-140,000	$140,001-160,000	More than $160,000	

4. Employment status

Student	Homemaker	Part time	Full time	Retired	Self-employed

5. Your last completed Educational level?

High School or less	Some College	Completed College degree	Graduate School	Professional degree – Law, Medicine, etc.

6. If not a student, your work status

Work for a small firm	Work for a large firm	Own my own business

7. Ethnic background

Caucasian	African American	Hispanic/Latin	Native American	Asian	Others

We thank you for your time and effort

APPENDIX B

MEASUREMENT INSTRUMENT (2^{nd} Study)

Your gender?

- Male
- Female

Your age?

- Less than 21 years
- 21-25 years
- 26-30 years
- 31-35 years
- 36-40 years
- 41-45 years
- 46-50 years
- 51-55 years
- 56-60 years
- More than 60 years

To what extent do you agree with the following statements? Please choose the answer that most closely matches your opinion.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
I consider myself to be loyal to HTC.							
HTC would be my first choice.							
I will not buy other brands if HTC is available at the store.							
I feel that HTC is trustworthy.							
HTC is an honest brand.							
I feel comfortable when I buy HTC.							
HTC is a dependable brand.							
I am committed to buying HTC.							

To what extent do you agree with the following statements? Please choose the answer that most closely matches your opinion.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
The quality of HTC is extremely high.							
The functionality of HTC is very high.							
The reliability of HTC is very high.							
HTC is consistent in the quality it offers.							
The durability of HTC is very high.							
The performance of HTC is very high.							

To what extent do you agree with the following statements? Please choose the answer that most closely matches your opinion.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
HTC has consistent quality.	○	○	○	○	○	○	○
HTC is well made.	○	○	○	○	○	○	○
HTC has an acceptable standard of quality.	○	○	○	○	○	○	○
HTC has poor workmanship.	○	○	○	○	○	○	○
HTC would not last a long time.	○	○	○	○	○	○	○
HTC performs consistently.	○	○	○	○	○	○	○
HTC is a brand I would enjoy.	○	○	○	○	○	○	○
HTC would make me want to use it.	○	○	○	○	○	○	○
HTC is a brand that I would feel relaxed about using.	○	○	○	○	○	○	○
HTC would make me feel good.	○	○	○	○	○	○	○
HTC would be economical.	○	○	○	○	○	○	○
HTC is reasonably priced.	○	○	○	○	○	○	○
HTC offers value for money.	○	○	○	○	○	○	○
HTC is a good product for the price.	○	○	○	○	○	○	○
HTC helps me feel accepted.	○	○	○	○	○	○	○
HTC improves the way I am perceived by others.	○	○	○	○	○	○	○
HTC would make a good impression on other people.	○	○	○	○	○	○	○
HTC would give its owner social approval.	○	○	○	○	○	○	○

To what extent do you agree with the following statements? Please choose the answer that most closely matches your opinion.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
HTC is an environmentally safe brand.	○	○	○	○	○	○	○
HTC is a sustainable brand.	○	○	○	○	○	○	○
HTC is a healthy brand.	○	○	○	○	○	○	○
HTC is a brand with a good reputation.	○	○	○	○	○	○	○
HTC is an environmentally responsible brand.	○	○	○	○	○	○	○
HTC is a socially responsible brand.	○	○	○	○	○	○	○
HTC is more beneficial to society's welfare than other brands.	○	○	○	○	○	○	○
HTC does not contribute something to society.	○	○	○	○	○	○	○

To what extent would you purchase HTC? Please choose the circle closest to the adjective that most closely matches your opinion.

Never	○	○	○	○	○	○	○	○	○	○	Definitely
Definetely do not intend to buy	○	○	○	○	○	○	○	○	○	○	Definitely intend to buy
Very low interest	○	○	○	○	○	○	○	○	○	○	High purchase interest
Definitely not buy it	○	○	○	○	○	○	○	○	○	○	Definitely buy it
Probably not	○	○	○	○	○	○	○	○	○	○	Probably buy it

Have you purchased an HTC before?

○ Yes

○ No

If yes, how much did you pay for the HTC?

Ideally how much would you pay for an HTC?

Your household income?

- Less than $20,001
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,001-$120,000
- $120,001-$140,000
- $140,001-$160,000
- More than $160,000

Your employment status?

- Student
- Homemaker
- Part-time job
- Full-time job
- Retired
- Self-employed

Your last completed level of education?

- High school or less
- Some college
- Completed college degree
- Graduate school
- Professional degree - Law, Medicine, etc.

Your work status?

- Work for a small firm/organization (50 or less employees)
- Work for a large firm/organization (51 or more employees)
- Own my own business

Are you Spanish/Hispanic/Latino? (choose "No" if not Spanish/Hispanic/Latino)

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino

Your ethnic background is?

- ◯ Caucasian/White
- ◯ African American
- ◯ American Indian or Alaska Native
- ◯ Asian
- ◯ Other

Thank you for completing the survey.

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