Measuring Customer Based Brand Equity: Evidence from the Ethiopian Bottled Water Market

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Declaration

I, Ephrem Bogale Shiferaw, declare that the study entitled "Measuring Customer based Brand Equity: Evidence from the Ethiopian Bottled water market" is the result of my own effort in research undertaking. The study has not been submitted to any degree or Diploma in any college or university. It is submitted to Addis Ababa University College of Business and Economics, School of Commerce in partial fulfillment of the requirements for the Degree of Masters of Arts in Marketing Management.

Statement of Certificate

This is to certify that Ephrem Bogale Shiferaw has carried out his research work on the topic of "Customer Based Brand Equity: Evidence from the Ethiopian Bottled water market" for the partial fulfillment of Masters of Arts Degree in Marketing Management at Addis Ababa University College of Business and Economics school of commerce. This study is an original work and not submitted earlier for any degree either at this university or any other university and is suitable for submission of Master's Degree in Marketing Management.

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Advisor: Brhanu Denu (PHD)

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Measuring Customer Based Brand Equity: Evidence from the Ethiopian Bottled Water Market.

By

Ephrem Bogale

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Acronyms and Abbreviations

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CBBE	Customer Based Brand Equity
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
C.R.	Critical Ratio
CSA	Central statistics Authority
DF	Degree of Freedom
ECAE	Ethiopian Conformity Assessment Enterprise
ECAGR	Estimated Compound Annual Growth Rate
FL	Factor Loading
GFI	Goodness of Fit Index
KMO.	Kaiser Meyer Olkin
NFI	Normed-fit index
NNFI	Non-Normed Fit Index
OBE	Overall Brand Equity
PGFI	Parsimony Goodness-of-Fit Index
PNFI	Parsimonious Normed Fit Index
P value	Probability Value
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
SRMR	Significant Root Mean of Residual
SPSS	Statistical Package for Social Sciences
S.E.	Standard Error
SEM	Structural Equation Modelling
SAVE	Square root of average variance extracted
TLI	Tucker Lewis Index

Abstract

The study examines the applicability of a customer based brand equity model in the Ethiopian Bottled water market. Based on Aaker's well known conceptual framework of brand equity and extended by Yoo & Donthu (2001), this study employed structural equation modeling to investigate the causal relationships among the three dimensions of brand equity and overall brand equity in the Ethiopian bottled water industry. The study used the multidimensional brand equity scale and overall brand equity scale developed and validated by Yoo and Donthu (2001). The sample size of the study was 400 actual consumers of bottled water selected using a judgmental sampling method from Addis Ababa. The sample size was decided based on sample sizes used in similar previous researches and other considerations such as resource constraints. The findings of the study concluded that brand awareness and Perceived Quality are influential dimensions of brand equity in the Ethiopian bottled water market. However, the influence of brand loyalty was found to be insignificant which is in contradiction with both previous studies and the underlying brand equity theory that asserts brand loyalty to be the core component of brand equity. The study showed that marketing managers working in the Ethiopian bottled water industry should concentrate their efforts primarily on creating adequate awareness about their product emphasizing on enhancing the consumers perception about the quality of that particular bottled water product. This study contributes to the limited literature in testing the applicability of consumer-based brand equity model and measurement scale in the Ethiopian market, particularly in the bottled water industry. Future research needed to be done if the results are to be expanded into other more branded product categories given the product used in the current study is a pure commodity and infancy of the industry may not explain the brand equity model as adequately as expected.

This chapter introduces the purpose of the current research. It comprises of background of the study, statement of the problem, the research questions and objectives of the study, significance of the study, scope and delimitation of the study, definition of terms, organization of the study and ethical issue

Chapter One - Introduction

1.1. Background

For decades the value of a company was measured in terms of its buildings, land and its tangible assets such as plant and equipment. It is realized only recently that firm's real value lies in the minds of potential customers. The 1980's witnessed a turning point in conceptualizing brand when management came to realize that the principal asset of a company was in fact its brand names (Kapferer, 2008; Knowles, 2008). Brand name and what it represents became most important asset for many firms. It is the basis of competitive advantage and source of future earnings streams (Lassar et al, 1995; Aaker, 1991). According to Keller, (1993) firm's most valuable asset for improving marketing productivity is the knowledge that has been created about the brand in consumers' minds from the firm's investment in previous marketing program.

The word brand is derived from the Old Norse[1] word brandr, which means "to burn," as brands were the means by which owners of livestock mark their animals to identify them (Keller, 2013). The American Marketing Association (AMA) define brand as "a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate their product from those of competition." (Kotler and Keller 2012)

The earliest signs of branding in Europe were the medieval guilds' requirement that craftspeople put trademarks on their products to protect themselves and their customers against inferior quality (Kotler & Kelelr, 2012). Brick makers in Egypt placed symbol in their bricks to identify their products. In the fine arts, branding began with artists signing their works (Farquhar, 1989). Brand names first appeared in the early sixteenth century when whiskey distillers shipped their products in wooden barrels with the name of the

[1]Old Norse is a north Germanic language that was spoken by inhabitants of Scandinavia and inhabitants of their overseas settlements until about 1300 (Wikipedia, 2015)

producer burned into the barrel. The name showed the consumer who the maker was and prevented the substitution of cheaper products (Farquhar, 1989).

The brand concept evolved in the eighteenth century as the names and pictures of animals, places of origin, and famous people replaced many producers' names with the purpose of strengthening the association of the brand name with a product. Producers wanted both to make their products easier for consumers to remember and to differentiate their products further from the competition. In the nineteenth century, brand was used to enhance a products perceived value through such associations. For example, smuggled scotch whiskey acquired an excellent reputation for taste because of the special distilling processes used by bootleggers. In 1835 a brand of Scotch called "Old Smuggler" was introduced in order to capitalize on the quality reputation developed by bootleggers who used a special distilling process (Farquhar, 1989).

Although brands had a role in commerce for long, it was not until the twentieth century that branding and brand associations became so central to competitors. In fact, a distinguishing characteristic of modern marketing has been its focus upon the creation of differentiated brands. Market research has been used to help identify and develop bases of brand differentiation. (Aaker, 1991)

Brand is more than a product because it can have dimensions that differentiate it in some way from other products designed to satisfy the same need. These differences may be rational and tangible related to product performance of the brand or more symbolic, emotional, and intangible (Keller, 2013; Kapferer, 2008)

According to Wood (2000) an attempt to define the relationship between customers and brands produced the term ``brand equity'' in the marketing literature. Brand equity has been regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantage through successful brands (Lassar et al, 1995; Atilgan et al, 2005). The concept has been viewed from a number of perspectives. Some authors have focused on the financial aspects of brand equity, more pertinent to determining a brand's valuation for accounting, merger, or acquisition purposes while others

have focused on the consumer behavior effects specific to a particular brand.(Pitta & Katsanis, 1995)

Keller and Lehmann (2006) believe in the existence of three major and distinct perspectives in the study of brand equity namely; customer based, company based, and financial based. Kapferer (2004) on the other hand suggests that brand equity should be seen from only two main views: a consumer-based one, which focuses exclusively on the relationship between consumers and brands, and another that seeks to assign a monetary value to the brand

During the past two decades the brand equity concept was the area of interest among academicians and practitioners. Many research works were published regarding its conceptualization, measurement, its source, benefits etc. (eg. Farquhar, 1989; Aaker, 1991; Keller, 1993; Park & Srinivasan, 1994; Lassar et al, 1995;Wood, 2000; Yoo et al, 2000; Yoo & Donthu, 2001; Yoo & Donthu, 2002; Washburn & Plank, 2002; Pappu et al, 2005 etc)

Despite such global interest in the brand equity concept from various perspectives, the topic seems under researched in the Ethiopian context, except for some endeavors in recent years among researchers in the business filed. During the past two years some studies have been conducted on the issue of brand equity focusing on its measurement form the customer's perspective.

The studies were conducted by postgraduate students of Addis Ababa University, school of commerce. (eg. Milion, 2013; Bezawit, 2014; Beidemariam, 2014; Wasihun, 2014; Wengelawit, 2014) targating the Airline,the brewery and the carbonated soft drink, industries. All the studies were employed Aaker's (1991) four dimensional brand equity model namely brand awarness, brand association, perceived quality and brand loyality.

The current study focused on measuring brand equity from the customer's perspective but in a different industry context i.e. in the Ethiopian bottled water market. Moreover, unlike the previously conducted researches in the Ethiopian context this study will employ the three dimensional consumer based brand equity model of Yoo and Dontho (2001) extended on the work of Aaker (1991) and the multi dimensional brand equity measurement scale developed by Yoo et al (2000) and Yoo and Donthu (2001& 2002) will be adopted.

The rationale behind such decision is that Yoo and Donthu's (2001& 2002) brand equity model and multidimensional brand equity scale is tested for its validity among different cultures (Koreans, Americans, and Korean Americans) and across different product categories (low cost–low involvement, medium cost – medium involvement and high cost – high involvement products) (Yoo & Donthu, 2001 and 2002; Yoo et al, 2000) and supported by letter studies (Washburn & Plank, 2002; Atilgan et al, 2005; Kim and Kim, 2004).

The Global Bottled Water Market

The bottling and commercialization of water was first begun in Europe in the mid 16th century, with bottling of natural mineral water in Belgium, France, Italy and Germany. It is said that the first mechanical corking machine was invented in France in 1840 and bottling plants emerged throughout the continent by the late 19th century (European Federation of Bottled Water, 2013). Bottled waters were sold as medicinal treatment in pharmacies until the 20th century.(Hal, 2009; European Federation of Bottled Water, 2013)

By the end of the Second World War, bottled water became more widely distributed through grocery stores and began to be served in cafés and restaurants as a beverage. Today, bottled water is readily available as a convenient and healthy beverage in a wide range of formats and packaging materials. (European Federation of Bottled Water, 2013)

The global bottled water market valued at USD 157.27 billion in 2013 and expected to reach USD 279.65 billion by 2020. The demand for bottled water is expected to grow at an annual rate of 8.7% in terms of revenue from 2014 to 2020. Asia Pacific dominated the global bottled water market and accounted for 33% of the global demand in 2013, followed by Europe which accounted for 28.8% market share in the same year. In the coming six years, Asia Pacific is expected to remain the most promising market, with an estimated Compound Annual Growth Rate (CAGR) of 10.5% in terms of revenue from 2014 to 2020.(Transparency Market Research, 2015)

Table 0.1 Global Market share and per Capita Consumption of Bottled Water

Global market share by millions of Gallons					Gallons per capita			
Leading countries and compound annual Growth rate					**Per capital consumption by leading countries**			
		Year					**Year**	
Rank	**Country**	**2006**	**2011**	**CAGR**	**Rank**	**Country**	**2006**	**2011**
1	USA	8,255	9,107	2.00%	1	Mexico	8,255	9,107
2	China	4,163	7,686	13.00%	2	Italy	4,163	7,686
3	Mexico	5,360	7,521	7.00%	3	Thailand	5,360	7,521
4	Brazil	3,302	4,501	6.40%	4	UAE	3,302	4,501
5	Indonesia	2,156	3,761	11.80%	5	Belgium	2,156	3,761
6	Thailand	1,426	3,119	16.90%	6	France	1,426	3,119
7	Italy	3,116	3,035	-0.50%	7	Germany	3,116	3,035
8	Germany	2,809	2,954	1.00%	8	Lebanon	2,809	2,954
9	France	2,285	2,291	0.00%	9	Spain	2,285	2,291
10	Spain	1,524	1,515	-0.10%	10	Switzerland	1,524	1,515
Top Ten sub total		**36,402**	**47,501**	**5.80%**	**Global Average**		7.20%	8.80%
	All others	12,607	15,881	4.70%				
	World Total	**49,009**	**63,382**	**5.50%**				

Source: Beverage Marketing Corporation 2012

The Ethiopian Bottled water industry

Water has been bottled and sold in Ethiopia since 1930 following the establishment of Ambo mineral water factory in Ambo, some 130 km from Addis Ababa. (www.ambowater.com) Babile and Bure mineral water factories were letter established bottling plants in the easterner and northern part of the country, respectively. While former confined at the regional market, the latter was failed to get the desired market acceptance and exist shortly. These mineral waters are believed to have natural mineral content that distinguishes them from other water sources. Ambo even considered to have a medicinal value and named as "Ambo Tebel" a name given to holly water in the nation. This mineral waters consumed during and after meals as a digestive, as a thirst quenching soft drink or as a discerning mixer, specifically with whiskey (www.ambowater.com)

However, despite the early introduction of bottling mineral water, the industry has been recording slow growth and few entrants had dared to join the industry. Moreover, apart from mineral water that is considered having natural mineral content and medicinal value, bottling of pure water, that has little or no difference from the municipal tap water (Wilk, 2003),was not come to picture until the 1990's.

In the late 1990's a company named Ethiopian Ventures Apex Bottling PLC, pioneer in introducing purified bottled water, introduced the first locally bottled purified water under the brand name "Highland spring water"(Capital Ethiopia news paper, 2012). At that time, little was known about consuming purified water and it can be argued that many presumed it as luxury and doing so was seen as a waste of money. However, now a day the trend is changed and consumption of bottled water become a common practice especially among those who chose to have a healthy life style. Bottled water is preferred by consumers mainly due to its convenience and appealing packaging styles, among other things (Matiwos, 2014; Wilk, 2003).

Though bottled water difference from tap water is insignificant except for its convenience, (Wilk, 2003; Foote, 2011) the price difference is so enormous both in the Ethiopian and global context (Matiwos, 2014). As the researcher own observation, in Ethiopia a litter of municipal water costs less than one cent more specifically it costs 0.00175 cents per litter while same volume of bottled water costs Birr 10. Nonetheless, people are willing to pay the higher price for a commodity that can be found abundantly.

Currently there are more than 32 purified water bottling companies (excluding the mineral water bottling plants) throughout the country out of which fourteen of them fulfill the standard quality requirement recently imposed by Ethiopian Conformity Assessment Enterprise (ECAE) (Addis fortune news paper, October 2014). The market also start observing new entrants with new brands introduced gradually. Moreover, foreign investors start to express their interest in joining the industry. In 2013a Mauritian based investment company, Catalyst Principal Partners, has acquired a 50% stake in Yes Food & Beverages PLC, bottler of Yes brand bottled water.(Addis Fourtune Newspaper, 2013) Recently, an internationally known water brand, Dassani, is also introduced by the coca cola company to the Ethiopian market.

Although the pioneering bottled water brand "Highland Spring Water" is not currently available in the market, its name is still registered in the minds of many people and even usually used as a generic name for the product category.

1.2. Statement of the problem

According to Aaker (1996) strong brands will benefit firms to retain old customers and attract new ones, to secure future financial returns and to charge premium prices, to reduces firm's vulnerability and minimizes costs of marketing communication. Strong brand also give firms an overall competitive advantage over the competition (Lassar et al, 1995).Such competitive advantage of having brands with high equity includes the opportunity for successful extensions, resilience against competitors' promotional pressures, and creation of barriers to competitive entry (Farquhar, 1989).

Although the Ethiopian bottled water industry is at its infant stage and the market seems untapped, the number of new entrants to the industry is increasing year after year which is expected to aggravate the competition for same disposable income of the consumers. Furthermore, foreign investors are becoming interested in the sector and some moves are observed towards joining the sector. Hence, the competition in the industry is expected to be stiffer in the years to come.

Therefore, it could be argued that the need to build strong brand equity and thereby to gain an overall competitive advantage over the competition in the industry is becoming more vital than ever. In deeded, the need to build strong brands is important for all businesses whether engaged in producing physical product or services, durable or non durable, ordinary or luxury, (Knowles, 2008). Hence, researching the issue of brand equity, so as to have quality information on the sources of customer based brand equity, will help marketers to direct their marketing activities towards those sources so that build strong customer based brand equity to their products.

However, except for some recent attempts to research the issue of brand equity regarding its measurement from the customer's perspective (eg. Milion, 2013; Bezawit, 2014; Beidemariam, 2014; Wasihun, 2014; Wengelawit, 2014), the topic of how a fast moving consumption goods manufacturing firm, like bottler of water, builds and measures its brand equity appears to be under researched in the Ethiopian context. In fact, as to the knowledge of the researcher, let alone the water bottling industry, the concept of brand equity and its

importance to sustain long term return is neglected by many other industries players and researchers in the nation.

Most of the reviewed researches in the area of brand equity in the Ethiopian context have tried to test the four dimensional model of brand equity as conceptualized by Aaker (1991). However, the current study will deviate from such studies by employing a modified model of brand equity and a cross culturally validated scale of Yoo and Donthu (2001& 2002) in addressing the problem.

In developing a multidimensional brand equity scale, Yoo and Donthu (2001) has concluded that brand awareness and brand associations dimensions should be combined due to a lack of discriminant validity between the two dimensions. Therefore by combining these two dimensiions, they created a three dimensional brand equity model consists of brand awarness/association, perceived quality and brand loyality. Yoo and Donthu (2001) and Yoo et al (2000) have also developed two distinct brand equity scales, overall brand equity scale and multidimensional brand equity scale.

Yoo and Donthu's (2001) model was supported by later studies (Yoo et al, 2000; Washburn and Plank, 2002; Kim & Kim, 2004; Jung and Sung, 2008; Hilgenkammp, 2014). The measurment scale is also tested in different cultural settings and different product categories ranging from low cost fast moving to high cost durable goods(Yoo et al, 2000; Yoo & Donthu, 2001). Furthermore, as Christodoulides & Chernatony (2010) asserted, among the indirect measurment of brand equity, Yoo and Donthu's (2001) approach has the most strength and fewest weaknesses. Therefore, this study tested the applicability of the model and the measurent scale for bottled water products in the ehtiopoian context.

On the other hand, the bottled water industry is chosen for two reasons; the first is as to the knowledge of the researcher no prior research has been conducted regarding customer based brand equity in the industry under the Ethiopian context. The second reason is that, as water is natural, pure and sourced at minimal cost its value lies in the marketing activity towards branding the commodity, therefore, it is an exceptionally clear example to show the power of branding to make pure commodities a meaningful part of daily life (Wilk, 2003).

1.3. Research question

1. To what extent and magnitude brand awareness/association influence overall brand equity in the Ethiopian bottled water market?
2. To what extent and magnitude perceived quality influence overall brand equity in the Ethiopian bottled water market?
3. To what extent and magnitude brand loyalty influence overall brand equity in the Ethiopian bottled water market?
4. Should brand awareness and brand association combined as a single dimension in Aaker's customer based brand equity model as suggested by Yoo and Donthu (2001)?

1.4. Research Objectives

Main objective

The main objective of this study is to find out the applicability of Yoo and Donthu's (2001) three dimensional brand equity model, extended on the work of Aaker (1991) and the measurement scale developed and validated by the authors, as well as to find out which among the three dimensions of brand equity has the most influence in building brand equity in the Ethiopian bottled water market. Moreover the study tried to describe some aspects of the Ethiopian bottled water market.

Specific objectives

1. To find out whether brand awareness/association has a positive influence on customer based brand equity of bottled water in Ethiopia
2. To find out whether perceived quality has a positive influence on customer based brand equity of bottled water in Ethiopia
3. To find out whether brand loyalty has a positive influence on customer based brand equity of bottled water in Ethiopia
4. To examine whether the dimensions of brand awareness and brand association should be combined as a single dimension in the customer based brand equity model as suggested by Yoo and Donthu (2001).

1.5. Definition of terms

Bottled water: For the purpose of this study, bottled water shall only refer purified bottled waters; it does not include mineral waters and other carbonated drinks.

Brand equity: the difference in consumer choice between the branded product and an unbranded product given the same level of product features (Yoo et al, 2000).

Multidimensional brand equity: subcategories of brand equity concept consisting of perceived quality, brand loyalty, and brand awareness with strong brand associations (Yoo et al, 2000).

Brand loyalty: the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice" (Oliver, 1997, as cited on Yoo & Donthu, 2001, p. 3).

Brand awareness: The ability for a buyer to recognize or recall that a brand is a member of a certain product category" (Aaker, 1991, p. 61).

Brand associations: Anything linked in memory to a brand" (Aaker, 1991).

Perceived quality: The consumer's judgment about a product's overall excellence or superiority" (Zeithaml, 1988)

1.6. Significance of the study

Measuring the customer based brand equity of one's product or company helps marketers to focus on those dimensions that are more important in building strong brand equity. This is said based on the argument that customer based brand equity is the main driving force for firms financial returns (Christodoulides & Chernatony, 2010).

Although there are some studies conducted in the area of customer based brand equity measurement in the Ethiopian context, as to the knowledge of the researcher, so far no one attempted to test the applicability of the three dimensional model and multidimensional brand equity scale of Yoo and Donthu (2001). Therefore, the current study seek to find out the applicability of Yoo and Donthu's (2001) brand equity model, and the multidimensional brand equity scale in the Ethiopian bottled water market.

Thus, the outcome of the study contributes to the existing body of knowledge regarding testing the applicability of consumer-based brand equity model in the bottled water market in the Ethiopian context. This study also expected to provide important insights about consumers' perceptions on bottled water overall brand equity and its dimensions. The study gives some implication for marketers working in the bottled water industry to consider the importance of brand equity and to focus on those dimensions that could help them to build strong brand equity to their product.

1.7. Scope and delimitation of the study

The study is limited to measuring brand equity from the customer's point of view in the Ethiopian bottled water market. For the purpose of simplicity and product homogeneity, in this study only purified bottled waters are not considered, other carbonated and mineral waters are not included. The study did not include the performance of the industry and the firms within due to difficulties of accessing organized industry data. The study used samples taken from Addis Ababa, and not include other urban areas.

1.8. Organization of the study

The study report is organized in five chapters. The first chapter introduces background of the study, the objectives and definition of key words. The second chapter presents the theoretical framework with theories relevant to the problem area and the literature is structured in such a way to include conceptualization of brand equity, models of brand equity measurement and the dimensions of brand equity. Chapter three presents the method which explains the research design that is used, research approach, data collection methods, sources of data as well as the strategy to evaluate the model fit of the measurement and the structural model. Chapter four presents data analysis and results as well as discussion. Finally chapter five deals with conclusion, recommendation and future research. The references and appendix are presented at the end of the report.

1.9. Ethical issues

The study took in to account ethical issues that could have been arise during the course of undertaking this research. Respondents were precisely communicated about the objective of the study during the administration of the survey questioner to get their free consent and all were responded to the questionnaire voluntarily. Respondents were also promised that all data collected used for the study to be kept confidential and was done accordingly. Findings and results obtained from the study were presented without any biases. The works of scholar cited in the study were properly acknowledged.

This chapter is structured in to three sections. First it will review the underlying brand equity theory starting by providing the various brand equity definitions and the different perspectives it has been studied from in the past. Then it focuses on the brand equity perspective of the current study and highlights the available approaches in measuring customer based brand equity. It will also discuss the popular customer based brand conceptualizations and models. The second part review the empirical evidences regarding the brand equity model selected for the current study and some related works conducted in the Ethiopian context. The final section presents the conceptual framework of the current study based on the forwarded arguments in the literature.

Chapter Two - Literature Review

2.1. Theoretical Review

2.1.1. Defining Brand equity

"If you ask ten people to define brand equity, you are likely to get ten (maybe 11) different answers as to what it means"(Winters, 1991, p. 70)

Brand equity is an extremely important construct for marketing, yet it lacks theoretical consensus and clarity in its conceptualization, mainly because the researchers defining it come from different philosophies and perspectives (Wood, 2000). Besides the lack of conceptual agreement, the construct has been subject to varying terminology during the past two decades (Oliveira & Luce, 2012). The following are some of the definitions provided for the term brand equity

The added value to the firm, the trade, or the consumer with which a given brand endows a product (Farquhar, 1989)

A set of assets and liabilities linked to a brand, its name and symbol that add or subtract from the value provided by a product or service to a company and/or to that firm's customers (Aaker, 1991).

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 (Srivastava and Shocker (1991) as sited on Christodoulides & Chernatony, 2010)

Incremental cash flows that accrue to branded products over unbranded products. (Simon and Sullivan, 1993)

The differential effect that brand knowledge has on customer response to the marketing of that brand (Keller, 1993)

Increase in the perceived usefulness and level of attractiveness that a brand gives to a product (Lassar, Mittal, & Sharma, 1995)

The difference in consumer choice between the focal branded product and an unbranded product given the same level of product features (Yoo, Donthu, & Lee, 2000)

A set of perceptions, attitudes, knowledge, and behaviors on the part of consumers that results in increased utility and allows a brand to earn greater volume or greater margins than it could without the brand name (Christodoulides & Chernatony, 2010)

As one can observer from the above definitions, some define brand equity from the customer's point of view (Aaker , 1991; Keller, 1993; Lassar et al, 1995; Yoo et al, 2000; Christodoulides & Chernatony, 2010) while others addressed it for the financial perspective (Farquhar, 1989; Sarvastava and Shocker, 1991; Simon and sullivan, 1993)

2.1.2. Perspectives of Brand equity

Brand equity has been discussed in finance, accounting and marketing literatures (Wood, 2000). Some authors have focused on the financial aspects of brand equity, more pertinent to determining a brand's valuation for accounting, merger, or acquisition purposes while others have focused on the consumer behavior effects specific to a particular brand. (Pitta & Katsanis, 1995)

According to Keller (1993) the motivation behind studying brand equity is generally divided in to two categories; financially based and strategy based motivations. The former is concerned with estimating the value of a brand for accounting purposes in terms of asset valuation for the balance sheet or for merger, acquisition or divestiture purposes while the later concerned with improving marketing productivity. Given higher costs, greater

competition, and flattening demand in many markets, firms seek to increase the efficiency of their marketing expenses. As a consequence, marketers need a more thorough understanding of consumer behavior as a basis for making better strategic decisions about target market definition and product positioning

Keller and Lehmann (2006) believe in the existence of three major and distinct perspectives in the study of brand equity. Such perspectives include; customer based, company based, and financial based. From the customer's point of view, brand equity is part of the attraction or repulsion to a particular product from a particular company, generated by the nonobjective part of the product offering. From the company's perspective is the additional value that accrues to the firm because of the brand's value, which would not accrue from an equivalent unbranded product. From a finance point of view, brands are assets that, like the plant and equipment, can be, and frequently are, bought and sold. The financial worth of a brand is therefore the price it brings, or could bring, in the financial market. (Keller & Lehman, 2006)

Kapferer (2004) on the other hand suggests that brand equity should be seen only from two main perspectives: a consumer-based one, which focuses exclusively on the relationship between consumers and brands, and another that seeks to assign a monetary value to the brand. The latter discusses the financial value that brand equity creates for the company; the former would be what Keller (1993) calls brand equity based on the consumer (consumer-based brand equity), defined by him as the differential effect of brand knowledge in consumer response to marketing actions (Christodoulides & Chernatony, 2010).

The current study will focus only on the consumer-based brand equity perspective and will not discuss the financial based brand equity as it is 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. As Keller (1993) stated it for a brand to have value it must be valued first by the customer, if the brand has no meaning to the customer, the other definitions are meaningless". Moreover, consumer based brand equity is the driving force of increased market share and profitability of the brand since it is based on the market's perceptions (Lassar et al, 1995; Christodoulides & Chernatony, 2010).

2.1.3. Customer Based brand Equity

The conceptualizations of consumer-based brand equity have mainly derived from cognitive psychology and information economics (Christodoulides & Chernatony, 2010). The dominant stream of research has been grounded in cognitive psychology, focusing on memory structure (Aaker 1991; Keller 1993).

Aaker (1991) identified the conceptual dimensions of brand equity as brand awareness, brand associations, perceived quality, brand loyalty, and other proprietary brand assets such as patents, trademarks and channel relationships. The former four dimensions of brand equity represent consumer perceptions and reactions to the brand, while proprietary brand assets are not pertinent to consumer based brand equity (Yoo et al, 2000).

Looking CBBE from a consumer psychology perspective Keller (1993) defined it as "the differential effect of brand knowledge on consumer response to the marketing of the brand". According to this conceptualization, a brand has a positive or negative value if the consumer reacts more or less favorably to the marketing mix of a product of which he/she knows the brand name than to the marketing mix of an identical yet unbranded product. Consumer response to the marketing mix of a brand can be translated at various stages of the purchase decision making sequence such as preference, choice intentions and actual choice. According to Keller (1993), brand knowledge is a key antecedent of consumer based brand equity and is in turn conceptualized as a brand node in memory to which a variety of associations have been linked. Brand knowledge is then decomposed into two separate constructs, brand awareness and brand image (associations).

On the other hand brand equity research rooted in information economics draws on the imperfect and asymmetrical nature of markets (Erdem & Swait, 1998). In this context, economic agents are required to transmit information about their specific characteristics by means of signals. Brand names act as signals to consumers. A brand signal becomes the sum of that brand's past and present marketing activities. Imperfect and asymmetrical market information produces uncertainty in consumers' minds (Erdem et al, 2006). A credible brand signal generates consumer value by reducing perceived risk and cost of information search as well as by creating favorable attribute perceptions (Erdem & Swait, 1998).

2.1.4. Measuring consumer based brand Equity

Although Aaker (1991) and Keller (1993) amongst others conceptualized brand equity, they never operationalized a scale for its measurement (Yoo & Donthu, 2001). As a result a number of methodologies to quantify this highly regarded intangible asset were generated, most of which employ complex statistical procedures (e.g. Park & Srinivasan, 1994; aliawadi, 2003), making them difficult to understand and to use amongst practicing marketers.

Empirical endeavors to operationalize consumer-based brand equity can be classified as direct or indirect based on their approach to measurement. Direct approaches to brand equity measurement attempt to measure the phenomenon directly by focusing on consumers' preferences or utilities (e.g. Park and Srinivasan 1994; Kamakura and Russell 1993), while indirect approaches measure brand equity through its demonstrable manifestations (Yoo & Donthu, 2001; Pappu et al, 2005).

Studies fall under the direct approach neglect the theoretical dimensions of the construct that, if properly operationalised, can provide actionable insights into the drivers of equity. Ultimately, what these studies are trying to achieve is a separation of the value of the brand from the value of the product (Christodoulides & Chernatony, 2010). Over the years, the direct approach has proved to be conceptually and methodologically problematic as 'brands supervene on products, much as the mental has been claimed to supervene on non-aesthetic properties' (Grassl, 1999, p. 323)

The indirect approaches to customer based brand equity measurement adopt a more holistic view of the brand compared to direct approaches, and seek to measure brand equity either through its manifest dimensions or through an outcome variable such as a price premium (Christodoulides & Chernatony, 2010).

Therefore, the indirect approach to measuring customer based brand equity is selected for the current research first, because it provides a more holistic view of the brand and second, because the direct approach has been shown to be conceptually and methodologically problematic (Christodoulides & Chernatony, 2010).

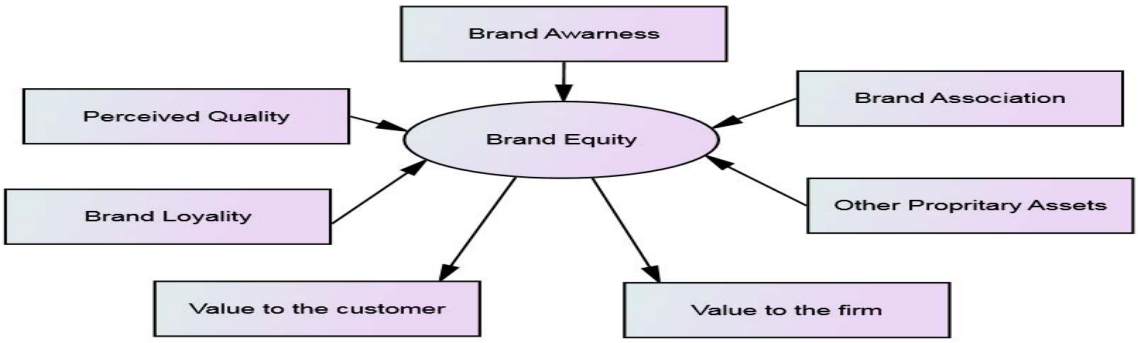
2.1.5. Customer Based Brand Equity Models

In literature there are many brand equity models depending on the purpose of the outcome and the approach employed. Among the different CBBE models, this study will give highlights on the models developed by Aaker (1991) and Keller (1993) and will concentrate on the work of Yoo and Donthu's (2001) and Yoo et al (2000) which is build up on brand equity conceptualization of Aaker's (1991) and Keller (1993).

2.1.5.1. Aaker's Brand Equity model

Aaker's brand equity model is composed of five dimensions namely brand loyalty, perceived quality, brand awareness, brand association and other proprietary assets. The model proposes that brand equity creates value for both the customer and the firm; value for the customer enhances value for the firm (Aaker, 1991). How the brand performs on these dimensions is what leads consumers to develop an overall, intangible rating of brand equity. This equity then provides value to the customer and the firm.

Figure 0-1 David A. Aaker's Brand Equity Model



Source: Aaker , 1991

Aaker (1991) Brand equity dimensions

Brand loyalty generates value by reducing marketing costs and leveraging trade. Retaining existing customers is much less costly than attracting new ones and even if there are low switching costs there is a significant inertia among customers. It is also difficult for competitors to communicate to satisfied brand users because they have little motivation to learn about alternatives.

Brand awareness It can provide the brand with a sense of the familiar and a signal of substance and commitment. Awareness at the recall level further affects choice by influencing what brands get considered and selected as the brand must first enter the consideration set before being on the purchase list

Perceived quality It provides a reason to buy. The quality associated with a brand can also be a strong factor of differentiation and positioning. Building a strong durable brand implies nevertheless an above average quality positioning or at least a minimum perceived quality when considering brands positioned as low market competitors. Perceived quality can also attract channel member interest, allow extensions and support a higher price that provides resources to reinvest in the brand.

Brand associations may refer to persons, a "use context", a life style or a personality. Associations can be critical factors in differentiating and positioning, creating a reason to buy to those potential customers who are looking for specific associated physical or emotional features. If a brand is well positioned upon a key product attribute the attempt of a frontal assault by claiming superiority via that dimension will be a credibility failure, thus an association being a barrier to competitors.

Other proprietary brand assets refer to patents, trademarks and channel relationships which can provide strong competitive advantage. A trademark will protect brand equity from competitors who might want to confuse customers by using a similar name, symbol or package. A patent can prevent direct competition if strong and relevant to the purchase decision process. Finally, a distribution channel can be indirectly controlled by a brand as customers expect the brand to be available

2.1.5.2. Keller's Brand Equity Model

Looking at customer based brand equity from a consumer psychology perspective; Keller (1993) defined it as the differential effect of brand knowledge on consumer response to the marketing of the brand. Keller emphasized two constructs: brand awareness and brand image and adopted two basic approaches: direct and indirect, to measuring customer based brand equity. The indirect approach attempted to identify potential sources of customer based brand

equity (CBBE) distribution channels, the effectiveness of marketing communications, the success of brand by measuring brand awareness, and the characteristics and relationships among brand associations. The direct approach focused on consumer responses to different elements of the firm's marketing program (Keller, 1993) According to Keller, a brand can have a positive or negative CBBE when consumers react more or less favorably to an element of the marketing mix for the brand than they do to the same marketing mix elements for other brands.

Figure 0-2 Keller's brand Resonance Model (Keller, 2013)

Source: Keller, 2002

Brand identity (Who are you?) requires creating brand salience with customers. Brand salience relates to aspects of brand awareness. Brand awareness refers to the customers' ability to recall and recognize the brand. Building brand awareness means ensuring that customers understand the product or service category where the brand competes and creating clear links to products and services sold under the brand name.

Brand meaning (What are you?) is important to create a brand image and establish what the brand is characterized by and should stand for in customers' minds. Keller divided brand meaning in *brand performance and brand imagery*.

> ***Brand performance*** is the way the product or service attempts to meet customers' more functional needs. It refers to the intrinsic properties of the brand.
>
> ***Brand imagery*** deals with the extrinsic properties of the product or service, including the ways the brand attempts to meet customers' more abstract psychological needs.

Brand responses (How about you?) refer to how customers respond to the brand, its marketing activity, and sources of information. Keller divided it in to two components:

> ***Brand judgments*** focus on customers' personal opinions about the brand based on how they put together different brand performance and brand imagery associations.
>
> ***Brand feelings*** describe the customers' emotional reactions to the brand relate to the social currency the brand evokes.

Brand relationships (What about you and me?) focuses on the relationship and level of personal identification the customer has with the brand and requires creating *brand resonance* characterized by the depth of the psychological bond customers have with the brands as well as how much activity this loyalty engenders. The strongest brands excel in all six of the brand-building blocks. The most valuable building block, brand resonance, occurs when all the other brand building blocks are completely.

Summary on Aaker's and Keller's brand Equity Models

Both Aaker's and Keller's views are customer oriented and emphasize the importance of brand awareness and associations. Most of their views are similar except for some differences. Keller's brand equity model focus on consumers and their brand knowledge structures more deeply than that of Aaker's. On the other hand Aaker's model takes the perceived quality aspect into account. Regarding the benefit of brand equity**,** the opinions of Aaker and Keller are very similar. However, Aaker is the one who classified customer's and firm's benefits of brand equity. Both Aaker and Keller give advices to build brand equity**.** Aaker outlines general guidance for each dimension of brand equity, while Keller suggests a four step process of building strong equity.

2.1.5.3. Yoo and Donthu (2001) Brand equity model

Based on Aaker's (1991) and Keller (1993) conceptualizations of brand equity, Yoo and Donthu (2001) proposed a multidimensional consumer based brand equity model and tested the model using cross-cultural data. Yoo and Donthu used commercial brands from three product categories: film for cameras, Athletic shoes and Color TVs from a low cost fast replacement cycle good, medium cost medium replacement cycle goods and high cost, slow

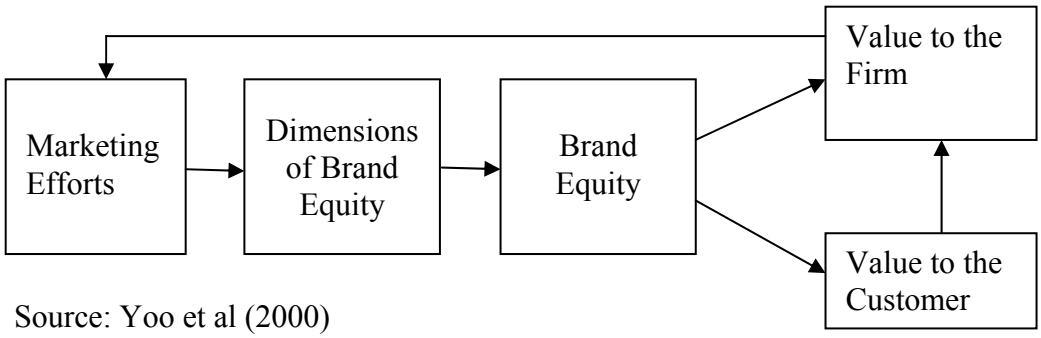
replacement cycle goods category, respectively. The products were selected because they are different in price range, frequency of purchase, consumers' product involvement, and consumption situation (Yoo & Donthu, 2001, p. 3). The model was evaluated for three consumer groups American, Korean American, and South Korean.

Yoo and Donthu (2001) developed two distinct brand equity scales, overall brand equity scale and multidimensional brand equity scale consist of four and ten item scales, respectively. They tested the scale for four, three, and one-dimensional brand equity model and validated the three-dimensional model of brand loyalty, perceived quality, and brand awareness/associations (Yoo & Donthu, 2001). The lack of discriminant validity between brand awareness and associations did not support the four-dimensional model and the authors have concluded that the two dimensions should be combined. Therefore by combining these two dimensiions, they created a three dimensional brand equity model consists of brand awarness/association, perceived quality and brand loyality (Yoo & Donthu, 2001). The authors found their measure to be both valid and reliable in assessing brand equity.

Their measure focuses mainly on the product itself and consumers' awareness and perceptions of it (indirect approach) rather than on consumers' preferences (direct approach). Because the indirect approach "measures brand equity through its demonstrable manifestations" (Christodoulides & Chernatony, 2010, p. 49)

Yoo et al (2000) brand equity formation process extended Aaker's model in two ways: First, the authors placed brand equity as a separate construct between the dimensions of brand equity and the value for the customer and the firm. They determined that brand equity is the value of a brand name, which can be high or low. By placing a separate brand equity construct within the model researchers could better understand how the dimensions of quality, brand loyalty, and brand associations contribute to brand equity. Second, the researchers added marketing mix elements (i.e. price, store image, distribution intensity, advertising expenditures, and price promotion) as antecedents of brand equity, assuming that they had a significant effect on the dimensions of brand equity.

Figure 0-3 Yoo et al (2002) Brand Equity Formation Process



Source: Yoo et al (2000)

In further studies, Yoo and Donthu (2002) tested Yoo et al.'s (2000) brand equity formation process model across the US and Korean samples with the same product categories used for Yoo and Donthu (2001). Yoo and Donthu (2002), concerned with brand equity dimensions, found greater effect of perceived quality on brand equity in Korean sample than in the US sample with brand loyalty being the most important dimension of brand equity across samples.

Yoo and Donthu's model of brand equity has been widely used in measuring brand equity across multiple domains (Londono, 2012). Among the indirect approaches to consumer-based brand equity measurement, the Yoo and Donthu (2001) study arguably has the most strengths and fewest weaknesses (Christodoulides & Chernatony, 2010). The authors argue this because Yoo and Donthu (2001) tested their model across multiple cultures and different product categories, it is easy to administer, gathers data at the individual consumer level, and a stringent validation process was completed.

2.2. Empirical Evidence

2.2.1. Validity of Yoo and Donthu Brand equity scale

Yoo and Donthu's (2001) consumer based brand equity scale was later validated by Washburn and Plank (2002). The result of Washburn and Plank (2002) study support and build upon the work of Yoo and colleagues (2000, 2001, and 2002). The results of ten items, three factors multidimensional brand equity model are most consistent with Yoo and Donthu's (2001). The authors also tested Yoo and Donthu's (2002) final model on six

samples and found an acceptable fit and acceptable composite reliability and variance extracted (Washburn & Plank, 2002).

Washburn and Plank (2002) also able to improve the model by using Yoo and Donthus (2001) same three factor structure but by examining all 15 items rather than the ten items. The findings suggest that as proposed by Yoo and donthu (2001) a three factor multidimensional brand equity model that groups together brand awareness and brand association items provides the most parsimonious model both in Washburn and Plank (2002) and Yoo and Donthu (2001) works(Washburn & Plank, 2002).

However, Washburn and plunk (2002) suggested that the question of whether or not brand awareness and brand associations should be collapsed was critical as both Aaker (1991) and Keller (1993) clearly distinguished the two constructs. The author's suggested that further research should focus on the brand awareness/brand association issue, and on the improvement of the measurement scale (Washburn & Plank, 2002).

Based on further research suggestion of Washburn and plank (2002) and by concluding that present models of brand equity suffers from limitation including lack of distinction between the dimensions brand awareness and brand associations, the use of non discriminant indicators in the measurement scales and of the use of student samples, pappu et al (2005) designed a scale consisting of four different dimensions in an attempt to cover as much variance as possible in the measurement of brand equity (Pappu et al, 2005). The dimensions were brand awareness, brand associations, periceived quality and brand loyality.

Moreover, contrary to Yoo and Donthu (2001), Pappu et al (2005) chose to use actual consumers rather than student samples as their survey respondents. They argued that this would add to the genuineness of the study. As with Yoo and Donthu's design, Pappu et al's model is based on confirmatory factor analysis and a rather advanced structural equations model. The researchers examined six brands across two product categories (TV sets and Cars), and like Yoo and Donthu (2001 &2002) the researchers actually took their theoretical model one step further than previous studies that had used student samples by using actual consumers.

Pappu et al's (2005) model is slightly more complex than Yoo and Donthu's in the sense that it contains a larger number of variables. It could be argued that the study of Yoo and Donthu (2001) is more generalizable than Pappu et al's (2005) concept, due to that the scale was developed in three different ethnic groups, taking into account the possibility of different brand perception in different cultures. The study validates Yoo and Donthu's research by providing empirical evidence that it is possible to measure consumer based brand equity using a multidimensional scale.

However, although Pappu et al separated the brand awareness and brand association dimensions in order to have a four dimensional study, they only used a single item for the latter. It is common practice to use at least three items when applying confirmatory factor analysis (Pappu et al, 2005, p. 151). This supports Yoo and Donthu's argument that it is difficult to provide a discriminatory validity between brand awareness and brand association when measuring brand equity from a consumer perspective.

2.2.2. Studies based onYoo and Donthu's (2001) work

Yoo and Donthu's (2001) model and multidimensional brand equity scale has been used in different studies conducted in different industry contexts (eg. Atilgan et al, 2005; Kim, Jin-Sun & Kim, 2008;Zhou & Jiang, 2011; Kazemi et al 2013; Ngoc, 2013; Li & Ellis, 2014 etc.).

Atilgan et al (2005) explored the generalizability of the brand equity measurement devised by Yoo et al (2000), by retesting the brand equity dimensions. The authors investigated the causal relationships between the dimensions of brand equity and brand equity itself, and specifically measured the way in which consumers' perceptions of the dimensions of brand equity affected the overall brand equity evaluations. The study found that brand loyalty is the most influential dimension of brand equity. Weak support is found for the brand awareness and perceived quality dimensions. According to Atligan et al, (2005) Brand awareness and brand association dimensions were not clearly dispersed, as in the previous research of Yoo et al (2000); Yoo and Donthu (2001&2002), suggesting that they are interrelated concepts and the scale has not enough discriminatory power for explaining the conceptual dimensions(Atilgan et al, 2005, p. 247).

A study on hotel brand equity by Kim, Jin-Sun, and Kim (2008) found that when brand loyalty and brand awareness/association were higher, so was guests' revisiting intent. Yoo and Donthu's perceived quality variables were not found to be a direct predictor of hotel revisit intent in the study.

Zhou & Jiang (2011) has applied Yoo and Donthu's (2001) three dimensional model to study the revisit intention of business and leisure travelers at five shanghai budget Hotels. The results show that, in sequence of degree of significance, brand loyalty, brand awareness/brand association and perceived quality as brand equity sub-dimensions have positive relationships with perceived value and revisit intentions.

Ngoc, (2013) investigated into the reflections of country of origin image on cosmetic product consumers' brand equity in the Vietnamese context through Yoo and Donthu's consumer-based brand equity model. The results of this study have shown that brand loyalty and perceived quality have positive and significant influences on consumers' overall brand equity. Though the result support brand awareness/brand association had a positive influence, it was found its influence is insignificant on overall brand equity through country of origin effects(Ngoc, 2013).

Kazemi et al's (2013) study on the Iranian lubricant industry has found that among the three brand equity dimensions of Yoo and donthu (2001) , perceived quality and brand loyalty has strong positive influence on overall brand equity while weak support was found for brand awareness/association.

Li and Ellis (2014) utilized Yoo and Donthu's three dimensional brand equity model and multidimensional brand equity scale items in order to test consumers' willingness to pay a price premium for branded apparel vs. non-branded apparel. Higher brand equity and perceived quality has found to lead to willingness to pay a price premium. Consumers were willing to pay around $2.50 more for apparel whose brand has higher brand equity.

2.2.3. Previous CBBE Studies in the Ethiopian Context

Among the research works in the area of customer based brand equity measurement in the Ethiopian context, those conducted using Aaker (1991) four dimensional brand equity model are discussed here. Such researches include (Milion, 2013; Wasihun, 2014; Wengelawit, 2014; Bezawit, 2014; Beidemariam, 2014).

Bezawit's (2014) study on the CBBE measurement of Ethiopian airline using sample size of 374 respondents employing covariance and multiple correlation analysis and one way ANOVA, has came to a conclusion that all the brand equity dimensions has positively influence brand equity. However, strong support was found for brand loyalty. Although the author promised to investigate the correlation among the brand equity dimensions in the objective part, nothing has been said in the analysis and findings section of the final report.

Wongelawit's (2014) study focused on the coca cola product in the Ethiopian context using a sample size of 470 respondents and employing a structural equation modeling has concluded that brand association and brand loyalty have positively influenced brand equity while perceived quality and brand awareness negatively influenced it.

Million (2013); Beidemariam (2014) and Wasihun (2014) were attempt to measure CBBE in the Ethiopian beer industry using a sample sizeof 385 each. All use Aaker's (1991) brand equity model but Beidemariam (2014) included brand preference as additional dimension of brand equity. However, fail to forward any argument as to how he came to a conclusion to include the dimension. Million (2013) and Wasihun (2014) employed structural equation modeling while Beidemariam analyzed the data using Pearson correlation coefficient and regression analysis.

Milion's (2013) study has provided strong support for brand loyalty while that of Wasihun (2014) found strong support for perceived quality. All dimensions were supported except for brand awareness according to the findings of Beidmariam (2014).

The beer brands used in Wasihun (2014) were taken from different product categories, (lager and premium beers). Therefore, it could be argued that since the products are not similar, the

difference in perception of consumers about the brand equity dimensions regarding the brands might be influenced by other factors.

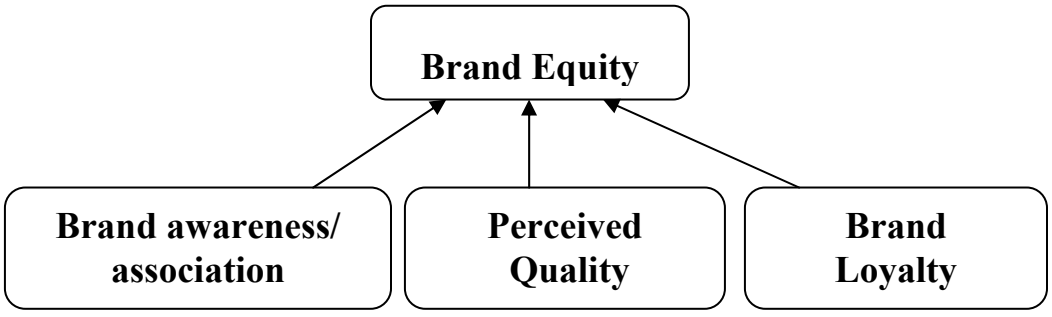
All the reviewed studies of customer based brand equity in the Ethiopian context do not substantiate as to how they came to a decision to employ the four dimensional brand equity model. No argument is raised in support or against the three dimensional brand equity model of Yoo and Donthu;s (2001).

The current study will use Yoo and Dontu's (2001) three dimensional brand equity model based on the arguments forwarded in the literature and based on its popularity and wide range support among academicians and practitioners in recent customer based brand equity studies (eg. Kazemi et al, 2013; Londono, 2012; Ngoc, 2013; Christodoulides & Chernatony, 2010; Zhou & Jiang, 2011; Oliveira & Luce, 2012)

2.3. Conceptual framework

Among several brand equity models in the literature, this study uses the one constructed by Aaker (1991) and modified by Yoo and Donthu (2001), which is the most commonly cited. It has been empirically tested in a number of previous studies(Kim and Kim, 2004; Yoo and Donthu, 2001; Yoo et al, 2000, Atilgan et al, 2005; Kim, Jin-Sun & Kim, 2008; Zhou & Jiang, 2011; Kazemi et al 2013; Ngoc, 2013; Li & Ellis, 2014). With Yoo and Donthu's (2001) brand equity model this study sets out to retest the measurement of customer-based brand equity with bottled water product brands in the Ethiopian market.

Figure 0-4 Brand Equity Model of Yoo and Donthu (2001)



Source: Yoo and Donthu, 2001

Dimensions of Brand equity

The main purpose of this study is to investigate the relationships between brand equity dimensions and overall brand equity. On the basis of the literature directional relationships among the dimensions of brand equity such as brand awareness/association, perceived quality and brand loyalty and overall brand equity is hypothesized.

Brand awareness/association

The first step in building brand equity is to register the brand in the minds of consumers. (Keller, 2013) Brand recognition is the basic first step in the communication task. It usually is wasteful to attempt to communicate brand attributes until a name is established with which to associate the attributes (Aaker, 1991). Brand awareness with strong associations forms a specific brand image. Brand associations are anything linked in memory to a brand and brand image is a set of brand associations, usually in some meaningful way (Aaker, 1991). Brand associations are complicated and connected to one another, and consist of multiple ideas, episodes, instances, and facts that establish a solid network of brand knowledge (Yoo & Donthu, 2001). The associations are stronger when they are based on many experiences or exposures to communications, rather than a few (Aaker 1991). Brand associations, which result in high brand awareness, are positively related to brand equity because they can be a signal of quality and commitment and they help a buyer consider the brand at the point of purchase, which leads to a favorable behavior for the brand (Yoo & Donthu, 2001).

Perceived quality

Perceived quality is the consumer's judgment about a product's overall excellence or superiority. (Zeithaml, 1988). Personal product experiences, unique needs, and consumption situations may influence the consumer's subjective judgment of quality (Yoo & Donthu, 2001). Therefore, perceived quality is different from actual or objective quality such as the extent to which the product or service delivers superior service; product-based quality which deals with the nature and quantity of ingredients, features, or services included; or manufacturing quality i.e. conformance to specification (Aaker, 1991). According to Yoo et la (2000) high perceived quality means that, through the long-term experience related to the brand, consumers recognize the differentiation and superiority of the brand.

Perceived quality is identified as a component of brand value (Zeithaml, 1988). High perceived quality lends value to a brand in several ways, it gives consumers a good reason to buy the brand and allows the brand to differentiate itself from its competitors, help firms to charge a premium price, motivate channel members to carry the product and to have a strong basis for the brand extension (Aaker, 1991). Therefore, to the degree that brand quality is perceived by consumers, brand equity will increase (Yoo et al, 2000).

Brand loyalty

Brand loyalty refers to the tendency to be loyal to a focal brand which is demonstrated by the intention to buy the brand as primary choice (Oliver, 1997, as cited in Yoo & Donthu, 2001, P. 3). The brand loyalty of the customer base is often the core of a brand's equity. If customers are indifferent to the brand and, in fact, buy with respect to features, price, and convenience with little concern to the brand name, there is likely little equity. If, on the other hand, they continue to purchase the brand even in the face of competitors with superior features, price, and convenience, substantial value exists in the brand and perhaps in its symbol and slogans (Aaker, 1991)

Brand loyalty is a measure of the attachment that a customer has to a brand. It reflects how likely a customer will be to switch to another brand, especially when that brand makes a change, either in price or in product features. As brand loyalty increases, the vulnerability of the customer base to competitive action is reduced. It is one indicator of brand equity which is demonstrably linked to future profits, since brand loyalty directly translates into future sales. (Aaker, 1991). Brand loyalty makes consumers purchase a brand routinely and resist switching to another brand. Hence, to the extent that consumers are loyal to the brand, brand equity will increase (Yoo et al, 2000).

2.3.1. Research Hypothesis

Based on the above definition and the suggested relationship of brand awareness/association, perceived quality and brand loyalty with brand equity in the literature, the following hypothesis are formulated

H_1. Brand awareness/ association have a significant positive direct effect on brand equity.

H_2. Perceived quality has a significant positive direct effect on brand equity

H_3. Brand loyalty has a significant positive direct effect on brand equity.

H_4. Brand association and brand awareness dimensions shall be combined in as a single dimension in the determination of customer based brand equity.

This chapter discuses the research methodology of the current study focusing on the overall research design, data collection method, the statistical tools employed in the analysis of the collected data, and the strategy adopted to evaluate the fit of the data with the proposed model.

Chapter Three - Research Methodology

3.1. Study design

This study is a quantitative casual research as it employed statistical tools so as to address the raised research questions and to test the formulated hypotheses. A structural equation modeling was developed to assess the statistical significance of the proposed relationships between overall brand equity and its dimensions.

3.2. Source of data

Both primary and secondary sources of data were used in the study. Secondary data was retrieved from books, previous research works, news papers, websites etc., while primary data was gathered from selected respondents using the survey method.

3.3. Population and Sample design

Study population

Since water is consumed by everyone, irrespective of age, gender, religion or culture, the study population can be considered to include population of the country. However, in Ethiopia, consuming bottled water is a phenomenon that is usually associated with urban dwellers. Because if we bring the rural community in to the picture, let alone consuming a bottled water, finding other water sources for daily consumption is a challenge. According to the Central Statistics Authority (2014), access to improved drinking water sources such as piped water, protected well, protected springs, rain, and bottled water stood at 50.3% out of which bottled water make up only 0.1%. The percentage of urban population who has access to bottled water is only 0.3% while that of the rural population is nil.

Therefore the study population includes all men and women aged eighteen and above, who reside in urban areas of Ethiopia. For the current study, however, the researcher use sample that was taken only from Addis Ababa due to time and resource constraints. Café and restaurants, gymnasiums, university libraries and some offices were used to target respondents. Friends, colleagues and the researcher administered the questioner.

Sampling technique

In this study a non probability sampling technique, judgmental sampling, was used. Judgmental sampling is a form of convenience sampling in which the population elements that are believed to be representative of the study population are selected based on the judgment of the researcher (Malhotra & Briks, 2007). One criterion needs to be met in defining the qualified respondent for the current study is that respondents should be frequent consumers of purified bottled water.

Non probability sampling can be used in small inquiries and researches by individuals, this design may be adopted because of the relative advantage of time and money inherent in this method of sampling (Kothari, 2004). In non probability sampling there is always the danger of bias, however, if the investigators are impartial, work without bias and have the necessary experience so as to take sound judgment, the results obtained from an analysis of deliberately selected sample may be tolerably reliable (Kothari, 2004). The researcher is impartial since has no interest of manipulating the outcome of the research as the study is meant for academic purpose. Regarding the experience, the student researcher had been relied on the guidance from the advisor in conducting the research.

Sample size

For all non-probability sampling techniques, other than for quota samples, the issue of sample size is ambiguous and unlike probability sampling, there are no rules in determining sample sizes (Saunders et al, 2009). Sample sizes used in similar studies, completion rates of survey questioners, and resource constraints are among the criterion used in determining the sample size of a certain study.(Kothari, 2004; Malhotra & Briks, 2007). The student researcher came accros some similar researches conducted in the area of customer based

brand equity measurment employing a non probability sampling techniques. Such studies use sample size that ranges between 350 and 400 respondants (eg. Kim & Kim, 2004; Zhou & Jiang, 2011; Ngoc, 2013).

Therfore, by taking in to account sample size used in other similar studies; the avaliable resource; and considering the complition rate of questioners so that to maximize the number of usable resposnes; the sample size of the current study was 400 respondants.

3.4. Research instrument

The scale items adopted from the Yoo and Donthu (2001) was translated to Amharic. The survey questionnaire has items for measuring the dimensions of brand equity, and overall brand equity, as well as demographic and general questions. The measurement scales came from existing scales (Yoo & Donthu, 2001 & 2002; Yoo et al, 2000), to measure the four constructs (overall brand equity, Brand awareness/association, perceived quality and Brand loyalty) on a five-point Likert scale (1 strongly disagree to 5 strongly agree).

Product Stimuli

Five bottled water brands; **Yes, Aqua Addis, Origin, Abyssinia and Eden** brands were used as product stimuli in the current study. The first four brands and Aqua safe were found to be the most preferred bottled water brands among consumers of bottled water in Addis Ababa as per recently conducted survey(Matiwos, 2014). However, Aqua safe is excluded due to its absense from the market for quite sometime and replaced by Eden spring water based on own judjment. Furthermore, the selected brands were certified by Ethiopian Conformity Assessment Enterprise (ECAE) (Addis Fourtune Newspaper, 2013). Respondents were first asked to choose the brand they are interested in or familiar with from the five listed brands, and asked to respond to all the statements in the questionnaire for that specific brand.

Exogenous factors (Independent Variables)

The three brand equity dimensions: perceived quality, brand awareness/brand association, and brand loyalty were used in the customer-based brand equity measurement of this study. The multidimensional brand equity scales was adopted from Yoo and Donthu (2001 & 2002)

and Yoo et al (2000). Accordingly, six items each for brand awareness/association and perceived quality and three items for brand loyalty were used.

Endogenous factors (Dependent Variables)

Four items for measuring customer overall brand equity were derived from the work of yoo and Donthu (2001) to examine consumers' overall attitudes toward the focal brand and their intention to select the brand against its counterpart.

3.5. Data Analysis methods

Structural equation modeling was developed to estimates the unknown coefficients in a set of linear structural equations. SEM is a general term that has been used to describe a large number of statistical models used to evaluate the validity of substantive theories with empirical data. It takes a confirmatory (hypothesis testing) approach to the multivariate analysis of a structural theory, one that stipulates causal relations among multiple variables (Lei & Wu, 2007). Variables in the equation system are usually directly observed variables plus unmeasured latent variables that are not observed but relate to the observed variables. SEM assumes there is a causal structure among a set of latent variables (unobserved variables), and that the observed variables are indicators of the latent variables. (Malhotra & Briks, 2007).

Hence, after collecting and sorting the relevant data using the data collection tools, responses were sorted coded, computed, and analyzed using Statistical Package for Social Sciences (SPSS) with AMOS (Analysis of Moment Structures) an add-on module for SPSS software which is designed for structural equation modeling. The appropriate statistical analyses such as frequencies, descriptive analysis, and mainly confirmatory factor analysis and path analysis were employed to investigate the hypothesized model.

3.6. Model Evaluation criteria

In structural equation modeling (SEM), the match between any particular model and the data is assessed by using several goodness-of fit indexes because there is no single statistical significance test that identifies a correct model given the sample data. Therefore, it is

necessary to take multiple criteria into consideration and to evaluate model fit on the basis of various measures simultaneously (Schermelleh-Engel et al, 2003).

However, it will not be wise reporting all the fit indices output of Amos as it is tiresome for both the researcher and the reviewer (Hooper et al, 2008).Therefore, model fit indices selected for the current study among the three classes of goodness-of-fit measures, i.e. absolute fit measures, incremental fit measures, and parsimonious fit measures, are discussed below. These indices were selected as they have been found to be the most insensitive to sample size, model misspecification and parameter estimates (Hooper et al, 2008).

Absolute Fit Indices

Evaluate the overall discrepancy between observed and implied covariance matrices; fit improves as more parameters are added to the model and degrees of freedom decrease: the following absolute fit indices were used in the current study

Chi-square statistic: It is the only statistically based measure of goodness-of-fit available in SEM (Jöreskog & Sörbom, 1993). In applying the chi-square test, the researcher customarily wishes to reject the null hypothesis so as to claim support for its alternative, i.e., there is a significant difference between the "observed" and the "expected." When applied in this way, the larger the chi-square values, the "better." However, when used in SEM, the researcher is looking for insignificant differences between the actual and predicted matrices. As such, the researcher does not wish to reject the null hypothesis and, accordingly, the smaller the chi-square value, the better fit of the model. However, the chi-square statistic is very sensitive to departures from multivariate normality of the observed variables and increases as a direct function of sample size (Ho, 2006).

Normed Chi-square statistic (χ2/df)to minimize the impact of sample size on the model chi-scqare, Normed Chi-square, i.e. chi-square divided by degree of freedom is used to assess the model fit. Although there is no consensus regarding an acceptable ratio for this statistic, recommendations range from as high as 5.0 (Wheaton et al, 1977) to as low as 2.0 (Tabachnick and Fidell, 2007).

Goodness-of-Fit Index (GFI): The GFI measures how much *better* the model fits compared with no model at all (Jöreskog & Sörbom, 1989). It is a non statistical measure ranging from 0 (poor fit) to 1 (perfect fit). Although higher values indicate a better fit, no threshold levels for acceptability have been established. Traditionally an omnibus cut-off point of 0.90 has been recommended for the GFI however, simulation studies have shown that when factor loadings and sample sizes are low a higher cut-off of 0.95 is more appropriate (Miles and Shevlin, 1998).

Adjusted goodness of fit index (AFGI)

AGFI adjusts the GFI based upon degrees of freedom, with more saturated models reducing fit (Tabachnick and Fidell, 2007). Thus, more parsimonious models are preferred while penalized for complicated models. In addition to this, AGFI tends to increase with sample size. Values for the AGFI also range between 0 and 1 and it is generally accepted that values of 0.90 or greater indicate well fitting models.

Root Mean Square Error of Approximation (RMSEA)

The RMSEA takes into account the error of approximation in the population. It is a measure of discrepancy per degree of freedom, and asks the question, "How well would the model, with unknown but optimally chosen values, fit the population covariance matrix if it were available" (Ho, 2006). RMSEA Values ranging from 0.05 to 0.08 are deemed acceptable; values ranging from 0.08 to 0.10 indicate mediocre fit, and those greater than 0.10 indicate poor fit (Browne & Cudeck, 1993 as sited on Ho, 2006)

Root mean square residual (RMR) and standardized root mean square residual (SRMR)

The RMR and the SRMR are the square root of the difference between the residuals of the sample covariance matrix and the hypothesized covariance model. The range of the RMR is calculated based upon the scales of each indicator, therefore, if a questionnaire contains items with varying levels (some items may range from 1 – 5 while others range from 1 – 7) the RMR becomes difficult to interpret (Kline, 2005). The standardized RMR (SRMR) resolves this problem and is therefore much more meaningful to interpret.

Values for the SRMR range from zero to 1.0 with well fitting models obtaining values less than .05 (Diamantopoulos and Siguaw, 2000 as sited on Schermelleh-Engel, Moosbrugger et al, 2003), however values as high as 0.08 are deemed acceptable (Hu and Bentler, 1999). SRMR of 0 indicates perfect fit but it must be noted that SRMR will be lower when there is a high number of parameters in the model and in models based on large sample sizes (Ho, 2006).

Incremental Fit Indices

Assess absolute or parsimonious fit relative to a baseline model, usually the null model (a model that specifies no relations among measured variables): the following incremental fit indices were used in the current study

Normed-fit index (NFI) This statistic assesses the model by comparing the $\chi 2$ value of the model to the $\chi 2$ of the null model. The null/independence model is the worst case scenario as it specifies that all measured variables are uncorrelated. Values for this statistic range between 0 and 1 with Bentler and Bonnet (1980) recommending values greater than 0.90 indicating a good fit. More recent suggestions state that the cut-off criteria should be NFI $\geq$ .95 (Hu and Bentler, 1999) it is sensitive to sample sizes.This problem was rectified by the Non-Normed Fit Index (NNFI), also known as the Tucker-Lewis index),

Tucker Lewis IndexNNFI (TLI) an index that prefers simpler models. However in situations were small samples are used, the value of the NNFI can indicate poor fit despite other statistics pointing towards good fit (Bentler, 1990; Kline, 2005; Tabachnick and Fidell, 2007). A final problem with the NNFI is that due to its non-normed nature, values can go above 1.0 and can thus be difficult to interpret (Byrne, 1998). Recommendations as low as 0.80 as a cutoff have been proferred however Bentler and Hu (1999) have suggested NNFI $\geq$ 0.95 as the threshold.

CFI (Comparative fit index) The Comparative Fit Index (CFI: Bentler, 1990) is a revised form of the NFI which takes into account sample size (Byrne, 1998) that performs well even when sample size is small (Tabachnick and Fidell, 2007). Like the NFI, this statistic assumes that all latent variables are uncorrelated (null/independence model) and compares the sample

covariance matrix with this null model. Values for this statistic range between 0.0 and 1.0 with values closer to 1.0 indicating good fit. A cut-off criterion of CFI ≥ 0.90 was initially advanced however, a value of CFI ≥ 0.95 is presently recognized as indicative of good fit (Hu and Bentler, 1999).

Parsimonious Fit indices

Evaluate the overall discrepancy between observed and implied covariance matrices while taking into account a model's complexity; fit improves as more parameters are added to the model, as long as thoseparameters are making a useful contribution:

The Parsimonious Normed Fit Index (PNFI)

The PNFI adjusts for degrees of freedom however it is based on the NFI. While no threshold levels have been recommended for these indices, Mulaik et al (1989) note that it is possible to obtain parsimony fit indices within the .50 region while other goodness of fit indices achieve values over .90 (Mulaik et al 1989).

This chapter deals with the analysis part of the study. Starting with data screening it goes on describing the demographic and general characteristics of the sample respondents. Reliability and validity issues were discussed in the confirmatory factory analysis part and the casual relationships are investigated in path analysis section. The chapter ends by summarizing the findings of the study with discussion.

Chapter Four - Data presentation and Analysis

4.1. Data Screening

Out of the total 400 surveys distributed to respondents, 374 were collected. After screening the returned questioners for missing data, unengaged response and questioner filled by rear user of bottled water, seven questioners were deleted and 367were considered valid and were used in the final analysis. The response rate is about 91.8%.

4.2. Data Analysis

Structural equation modeling was employed for confirmatory factor analysis and path analyses. The recommended two-step approach by Anderson and Gerbing (1988) was followed in the analysis. In the first stage, the measurement model was analyzed to ensure sufficient reliability and validity of the constructs. In the second stage, the hypothesized relationships between constructs were tested using structural equation modeling.

The criteria's set for the application of structural equation modeling in a certain study were more or less satisfied except the random selection of the population sample. Random selection was not applied due to its impracticality to address the current research problem as the student researcher found it difficult to select bottled water consumers in a randomly manner.

Normality of Data

One of the criteria to employ structural equation modeling and for the utilization of Maximum likelihood parameter estimation procedure is that the assumption of normality should not be severely violated. A data set with Skewness of greater than 3 and Kurtosis greater than 7 are indicators of the severe violation of data normality (Curran, West, & Finch, 1996). As the Mean Standard Deviation, Skewness and Kurtosis of the Scale Items table

(See Appendix C) depicts the largest values of skewness and Kurtosis was 1.9 and 4.7 which are associated with perceived quality indicator item six. Therefore, the values of the current data fell within the suggested guideline and considered as fairly normal for further analysis.

Multicollinearity

The other criteria to apply structural equation modeling to a data set are to make sure that there is no multicollinearity between variables. Multicollinearity occurs when variables are highly correlated with each other. A correlation coefficient matrix with correlations of .90 or higher (Kline, 2005) and .70 or higher (Meyers et al., 2006) among study variables can be a sign of multicollinearity. The Spearman Rho correlation test was used to detect multicollinearity. This test clearly identifies high correlations of more than .70 coefficient values. As the spearman Rho correlation indicated there is no multicollinearity issue as all the correlation coefficients are below 0.7.

Significance Level

Significance level illustrates how likely a result is to be due to chance (Kothari, 2004). The most common significance level is .95, meaning that the finding has a 95% chance of being true. Therefore, for this study, a significance level of .95 was set. The figure .05 is called the p value, indicating the 95 % probability that any selected samples from the study population would give the same results. Therefore, any statistical results obtained from the study having p values greater than .05 were considered statistically insignificant.

Descriptive statistics of the constructs

Table 4.1 below shows the mean scores of brand awareness association, brand perceived quality, brand loyalty and overall brand equity. All mean scores were greater than 3.0, ranging from a low of 3.75 to a high of 4.08, implying an overall positive response to the all of the constructs. The standard deviations for all variables were less than one which indicates the item scores were more or less around the mean scores.

Table 4.1 Descriptive Statistics of the construct

Factors	N	Mean	Std. Deviation
Awareness/Association	367	4.08	0.65
Perceived quality	367	4.03	0.59
Loyalty	367	3.93	0.80
Overall Brand equity	367	3.75	0.90

SPSS output 2015

Demographic characteristics

The distribution of demographic variables of the sample indicated that the respondents tended to be young, highly educated, and with moderate to high incomes. Among the 367 respondents 56.7 percent were male and 43.3 Percent were female. About 84.2percent were between 18-35 years of age, more than 88 percent of the respondents has at least college diploma or above. 57.8 percent were married, and more than 87 percent of the respondents reported a monthly income of more than Birr three thousand. The table below depicted demographic variable distribution of the respondents.

Table 4.2 Demographic Variables of Respondents

Demographic variable	Category composition	Frequency	Percentage
Gender	Male	208	56.7
	Female	159	43.3
	Total	**367**	**100**
Age group	18-25	57	15.5
	26-35	252	68.7
	36-45	36	9.8
	46-55	19	5.2
	56 and above	3	0.8
	Total	**367**	**100**
Education	Below high-school	4	1.1
	High school	27	7.4
	Some College Courses	13	3.5
	College Diploma	34	9.3
	First Degree	239	65.1
	Second degree and above	50	13.6
	Total	**367**	**100**

Marital status	Single	212	57.8
	Married	155	42.2
	Total	**367**	**100**
Income range	< 3000	46	12.5
	3001-8000	163	44.4
	8001-13000	118	32.2
	13001-18000	33	9
	> 18000	7	1.9
	Total	**367**	**100**

Source: Own survey, 2015

According to the sample respondents bottled water brand preference, Yes brand bottled water is the most preferred bottled water brand being the choice of 63.8% of the respondents followed by Acqua Addis with respondents proportion of 13.9%. The rest three brands constitute 22.3 percent of the respondents bottled water preference.

Table 4.3 Respondents preferred bottled water brand

Variable	Category composition	Frequency	Percentage
Brand preference	Yes	234	63.8
	Aqua Addis	51	13.9
	Origin	20	5.4
	Abyssinia	30	8.2
	Eden	32	8.7
	Total	**367**	**100.0**

Source: Own survey, 2015

As depicted in table 7 below respondents with bottled water consumption frequency of Daily, four to six times a week and two to three times a week were found to be 24.3 percent, 17.4 percent and 58.3 percent, respectively. About 58.6 percent of the respondents consume bottled water everywhere while those who consume bottled water at work and in recreational places represents 21 percent and 13.4 percent of the total population, respectively. Those who consume bottled water at Gym and home were not more than 7.1 percent of the total respondents.

Table 4.4 Consumption Frequency and Consumption setting of Respondents

Demographic variable	Category composition	Frequency	Percentage
Consumption Frequency	Daily	89	24.3
	4-6 times a week	64	17.4
	2-3 times a week	214	58.3
	Total	367	100.0
Consumption Setting	Gym	17	4.6
	Recreation	49	13.4
	At home	9	2.5
	At work	77	21.0
	anywhere	215	58.6
	Total	367	100.0

Source: Own survey, 2015

The leading motivation behind the consumption of bottled water among the sample respondents was its use convenience. Absence of tap water comes next being a triggering factor for consuming bottled water among respondents. Perceiving bottled water being of a better quality than tap water and concern for health comes third and forth in motivating the sample respondents to consume bottled water.

Table 4.5 Reason for Consuming bottled water

Variable	Category composition	Frequency	Percentage
Reason for consumption of bottled water	Quality	75	20.4
	Convenience	132	36.0
	Concern for health	72	19.6
	Absence of tap water	88	24.0
	Total	367	100.0

Source: Own survey, 2015

More than 70% of the respondents believed that bottled water has difference from tap water while about twenty percent of the respondents do not perceive bottled water to have difference from tap water. The remaining has no position regarding the issue.

Table 4.6 Perception about the Difference between bottled and tap water

Variable	Category composition	Frequency	Percentage
Difference between bottled and tap water	Yes	258	70.3
	No	75	20.4
	I don't Know	34	9.3
	Total	**367**	100.0

Source: Own survey, 2015

As indicated in the literature part of this study, the price difference between tap water and bottled waters is tremendous despite the fact that the difference between the two products is insignificant as water is a good example of pure commodity. More than 65 percent of the respondents were perceived the price of bottled water being expensive and too expensive as expected. In contrast a great deal of respondents (about thirty one percent of the respondents) considers the price of bottled waters to be reasonable while about 2.7 percent of the respondents found it cheap.

Table 4.7 Respondents Perception of Bottled Water Price

Variable	Category composition	Frequency	Percentage
Price perception	Too Expensive	86	23.4
	Expensive	156	42.5
	Reasonable	115	31.3
	Cheap	10	2.7
	Total	367	100.0

Source: Own survey, 2015

Reliability

First, Cronbach's alpha coefficients were calculated to examine the internal consistency of the items for the four constructs. Accordingly, all the nineteen items representing the four constructs were fulfilled the recommended cutoff point of alpha, i.e. 0.7 and all were retained for confirmatory factor analysis.

4.3. Confirmatory factor Analysis

A confirmatory factor analysis (CFA) with SPSS Amos 21.0 Graphics software (SEM package) for the measurement model with four constructs was performed. Maximum likelihood parameter estimation method was employed with promax rotation. Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity were used to determine if the scale is appropriate for factor analysis.

Table 4.8 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.728
Bartlett's Test of Sphericity	Approx. Chi-Square	1529.212
	df	66
	Sig.	.000

The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis. The value of KMO for the current data set was .728, which is higher than suggested level of .50 (Gursoy and Gavcar 2003).

Bartlett's test is another indication of the strength of the relationship among variables. It tests the null hypothesis that the correlation matrix is an identity matrix. An identity matrix is matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0. The null hypothesis should be rejected to decide there is indeed a correlation among variables and suitable for factor analysis (Garson, 2012). From table 4.8, it can be seen that the Bartlett's test of sphericity is 1,529 and it is significant, that is, its associated probability is less than 0.05. In fact, it is actually 0.000. Therefore, the significance value for this analysis resulted in rejection of the null hypothesis and concludes that there are correlations in the data set that are appropriate for factor analysis.

Factor Loading

Although, five dimensions composed of brand awareness, brand association, perceived quality, brand loyalty and overall brand equity were extracted initially, one brand awareness and one brand association (AWAS3 & AWAS4) items were failed to load in anyone factor and they were dropped immediately. Two other brand association items (AWAS5&AWAS6)

and two perceived quality items (PQ3 and PQ5) were also dropped due to a convergent validity issue, i.e. although they were load in a single factor, their loading was below the recommended cut off point of 0.5. One perceived quality indicator (PQ6) was dropped during the confirmatory factor analysis due to a discriminant validity issue as it cross loaded on more than one factor

The confirmatory factor analysis resulted in twelve items and four dimensions that were adequately loaded on their factors with a composition of two brand awareness items, three perceived quality items, three brand loyalty items and four overall brand equity items. There was no cross loading and the correlation between the factors were below the square root of the average extracted variance, implying the absence of discriminant validity. Table 4.9 summarizes the factor loading matrix with the corresponding cronbach's alpha coefficient of the twelve items under four constructs

4.3.1. Convergent and Discriminiant Validity

According to Fornell and Larcker (1981) there are three procedures to assess for convergent validity. These are item level reliability of each measure, composite reliability of each construct, and the average variance extracted. As shown in Table 4.9 the convergent validity for the proposed constructs of this study is adequate

Item level convergent validity: According to Hair et al. (2006) an item is significant if its factor loading is greater than 0.50. As shown in Table 4.9, the factor loadings of all the items in the measure range from 0.70 to 0.88, thus meeting the threshold set by Hair et al., and demonstrating convergent validity at the item level.

Construct level Convergent Validity At the construct level, Hair et al. (2006) recommended that the composite reliability should be used in conjunction with structural equation modeling to address the tendency of the Cronbach's alpha to understate reliability. For composite reliability to be adequate, a value of .70 and higher was recommended (Nunnally & Bernstein, 1994). Accordingly, the composite reliability (CR) for brand awareness, brand perceived quality, brand loyalty and overall brand equity were found to be 0.81, 0.78, .78 and 0.81, respectively, ensuring validity at the construct level.

Average variance Extracted The final indicator of convergent validity is the average variance extracted, which measures the amount of variance captured by the construct in relation to the amount of variance attributable to measurement error (Fornell & Larcker, 1981). Convergent validity is judged to be adequate when average variance extracted equals or exceeds 0.50 (i.e. when the variance captured by the construct exceeds the variance due to measurement error). Here, the retained constructs meet the criteria scoring an AVE range between .052 and .69.

Table 4.9 Factor Loading, Composite Reliability and Average Variance Extracted

	Factor Loading (FL)[2]	Composite reliability (CR)[3]	Average Variance Extracted (AVE)[4]
Brand Awareness/association			
BAW1	.942	0.809	0.690
BAW2	.659		
Brand perceived quality			
PQ1	.859	0.781	0.544
PQ2	.722		
PQ3	.601		
Brand loyalty			
BL1	.891	0.777	0..543
BL2	.659		
BL3	.637		
Overall brand equity			
OBE1	.930	0.809	0.523
OBE2	.761		
OBE3	.651		
OBE4	.532		

[2]FL: factor loading extracted using Maximum likelihood method with varimax rotation.
[3]CR: composite reliability.
[4]AVE: average variance extracted. This is computed by adding the squared factor loadings divided by number of factors of the underlying construct

Discriminant validity

Discriminant Validity measures the extent to which constructs differ. Fornell, Tellis, and Zinkhan (1982)states that discriminant validity is considered adequate when the variance shared between a construct and any other construct in the model is less than the variance that construct shares with its measures. The variance shared by any two constructs is obtained by squaring the correlation between the two constructs. The variance shared between a construct and its measures corresponds to average variance extracted. Discriminant validity was assessed by comparing the square root of the average variance extracted for a given construct with the correlations between that construct and all other constructs. Table 4.10 shows the correlation matrix for the constructs. The diagonal elements have been replaced by the square roots of the average variance extracted.

For discriminant validity to be judged adequate, these diagonal elements should be greater than the off-diagonal elements in the corresponding rows and columns. Discriminant validity appears satisfactory for all constructs. This indicates that each construct shared more variance with its items than it does with other constructs. Having achieved discriminant validity at both the item and construct levels, the constructs in the proposed research model are deemed to be adequate.

Table 4.10 Factor Correlation Matrix

Factor	OBE	PQ	Loyalty	Awareness
OBE	**0.723**			
PQ	.447	**0.738**		
Loyalty	.075	.024	**0.737**	
Awareness	.239	.231	.164	**0.831**

Note: the bold items represents square root of average variance extracted (AVE)

4.3.2. Goodness of fit of the measurement model

As per the stipulated model fit evaluation criteria, the measurement fit was evaluated and was found to meet most of the criteria's except the Chi- square test. Although a smaller value of chi square value of was obtained, its p value was 0.0 which is below .05. However, the chi-square statistics is known for its sensitivity with increase in the sample size. Therefore X2/df and other descriptive fit indices were also used to assess the goodness of fit of the measurement model. Accordingly, the measurement model has an acceptable fit. The following table summarizes the model fit indices used, the cutoff point and the result of the model fit indices of the current study.

Table 4.11 Goodness-of-Fit of the Measurement Model

Index	Shorthand	Cut-off Criteria	Result	Remark
Absolute Fit Indices				
Chi-square	$\chi 2$	Smaller the better	99	Acceptable Fit
Chi-square associated p value	p	≥ .05	0	Poor fit
Chi-square / Degree of Freedom	$\chi 2$ / df	≤ 2 ≤ 3 ≤ 4	2.245	Good fit
Root Mean Square Error of Approximation	RMSEA	≤ .05; good 05 < value ≤ .08; acceptable	0.058	Acceptable fit
Goodness of Fit Index	GFI	> 90 acceptable >0.95 good	0.958	Good fit
Adjusted Goodness of Fit Index	AGFI	> 90 acceptable >0.95 good	0.926	Acceptable
Standardized Root Mean Square Residual	SRMR	≤ .05 good;.05 < value ≤ .08; acceptable	0	Good fit
Incremental Fit Indices				
Normed Fit Indicies	NFI	> 0.90 is good fit	0.936	Good Fit
Tucker-Lewis Index	TLI	.90 ≤ value < .95; acceptable	0.945	Acceptable Fit
Comparative Fit Index	CFI	90 ≤ value < .95; acceptable . ≥ .95 ; good	0.963	Good fit
Parsimonious Index				
Parsimonious Normed Fit Index	PNFI	> 0.05 is acceptable	0.624	Acceptable fit

4.4. Structural Equation Modelling

Once the measurement model is evaluated for its fit with the data, a structural equation modeling was developed according to the research hypotheses to assess the statistical significance of the proposed relationships between overall brand equity and its Dimensions. Accordingly, Perceived quality, brand awareness, and brand loyalty were all taken as the exogenous variables, while brand equity was the endogenous variable. Moreover, all of the three exogenous variables were assumed to be inter-correlated.

Although brand awareness and brand association was combined initially as a single dimension based on the findings of Yoo and Donthu (2001), all the observed variables of brand association were eliminated from the final analysis due to convergent validity issue. Therefore, the structural model of the current study considers only the remaining dimensions of customer based brand equity.

4.4.1. Goodness of fit of the Structural model

Though the model fit test already done on the measurement model, it is also done again for the structural model in order to demonstrate sufficient exploration of alternative models. Again, the goodness-of fit statistics indicated that all criteria met the recommended values in the in the structural model except for the chi square statistics. Therefore, it could be concluded that the structural models is an acceptable fit to the data. Evaluation of the structural equation model fit is summarized in the table below.

Table 4.12 Goodness-of-Fit of the Structural Model

Index	Shorthand	Cut-off Criteria	Result	Remark
Chi-square	$\chi 2$	Smaller the better	56	Acceptable fit
Chi-square associated p value	p	$\geq .05$	0.044	Poor fit
Chi-square / Degree of Freedom	$\chi 2$ / df	$\leq 2 \leq 3 \leq 4$	1.411	Good fit
Root Mean Square Error of Approximation	RMSEA	$\leq .05$; good $05 <$ value $\leq .08$; acceptable	0.033	Acceptable
Goodness of Fit Index	GFI	> 90 acceptable >0.95 good	0.975	Good fit
Adjusted Goodness of Fit Index	AGFI	> 90 acceptable >0.95 good	0.952	Acceptable Fit
Standardized Root Mean Square Residual	SRMR	$\leq .05$ good;$.05 <$ value $\leq .08$; acceptable	0	Good fit
	NFI	> 0.90 is good fit	0.964	
Tucker-Lewis Index	TLI	$.90 \leq$ value $< .95$; acceptable	0.982	Acceptable Fit
Comparative Fit Index	CFI	$90 \leq$ value $< .95$; acceptable. $\geq .95$; good	0.986	good fit
Parsimonious Normed Fit Index	PNFI	> 0.05 is acceptable	0.584	Acceptable fit

4.4.2. Regression weights and standardized Regression Weight Analysis

Table 4.13summarizes the unstandardized regression coefficients with the corresponding standard error (S.E.) and a critical ratio (C.R.) value, the p value as well as the standardized estimates of the regression coefficients. The standard error of the coefficients represents the expected variation of the estimated coefficients, and is an index of the efficiency of the predictor variables in predicting the endogenous variable; the smaller the S.E. the more efficient the predictor variable is. The result shows that the standard error for the three path estimates ranges between .098 and .12, therefore, the independent variables (brand awareness, brand perceived quality and brand loyalty) seems efficient in predicting the dependent variable i.e. overall brand equity.

The critical ratio is a test of the significance of the path coefficients. A critical ratio that is more extreme than ±1.96 indicates a significant path at p value of less than 0.05.The results indicate that the unstandardized regression weights are all significant by the critical ratio test ($> \pm 1.96$, $p < .05$) except the path coefficient between brand loyalty and brand equity. Accordingly, it can be concluded that the brand perceived quality and brand awareness variables are highly significant predictors of overall brand equity (perceived quality C.R. = 5.74, $p < .001$; brand awareness C.R. = 2.34, $p < .05$).

The standardized path coefficients have been incorporated into the final direct model. Accordingly, the perceived quality of a particular bottled water brand and the level of brand awareness is directly related to the overall brand equity of bottled water brands. Thus, the greater the quality of a particular bottled water brand as perceived by consumers and the mere awareness of the brand among consumers, is expected to lead the creation of an overall customer based brand equity of a bottled water brand.(Perceived quality $\beta = 0.48$ and brand awareness $\beta = 0.14$, respectively). The brand loyalty variable was not significantly related to the overall brand equity variable as its C.R. value is 0.789 which is much lower than the threshold value of 1.96 and the probability value is 0.43 which is greater than 0.05.

Table 4.13 Regression weight and Standardized Regression Weight

			Unstandirdized Estimate	S.E.	C.R.	P	Standardized Estimate
OBE	<---	Loyalty	-0.041	0.063	-0.649	0.516	-0.038
OBE	<---	Aware	0.224	0.09	2.493	0.013	0.144
OBE	<---	Quality	0.731	0.114	6.424	0.000	0.476
OBE2	<---	OBE	1				0.831
OBE1	<---	OBE	0.875	0.072	12.213	0.000	0.801
OBE3	<---	OBE	0.919	0.081	11.292	0.000	0.758
OBE4	<---	OBE	0.752	0.082	9.212	0.000	0.52
PQ2	<---	Quality	1				0.767
PQ1	<---	Quality	0.995	0.084	11.787	0.000	0.754
PQ4	<---	Quality	1.133	0.1	11.304	0.000	0.69
Loyality2	<---	Loyalty	1				0.884
Loyality1	<---	Loyalty	0.739	0.072	10.262	0.000	0.665
Loyality3	<---	Loyalty	0.744	0.074	10.066	0.000	0.641
AWAS2	<---	Aware	1				0.622
AWAS1	<---	Aware	1.747	0.33	5.303	0.000	0.998

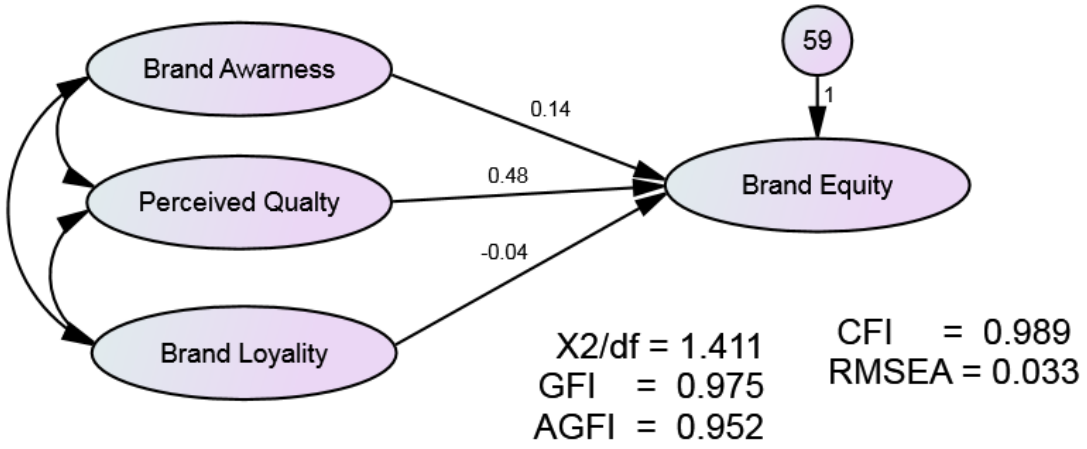
SPSS AMOS output (2015)

4.4.3. Squared multiple correlation analysis

Squared multiple correlation is an index of the proportion of the variance of the endogenous variable (Brand Equity) that is accounted for by the exogenous or predictor variables. It can be assumed that the higher the value of the squared multiple correlation, the greater the explanatory power of the regression model, and therefore the better the prediction of the dependent variable.

As shown in figure 4.2 below the unidirectional arrow without origin pointing to the latent factor of Overall brand equity represent unexplained (residual) variances for these factor. The residual variances are calculated by subtracting the factors' squared multiple correlations (explained variances) from 1. Thus, for this hypothesized model, 59% of the variation in overall brand equity is unexplained; alternatively, 41% of the variance is accounted for by the joint influence of the brand perceived quality and brand awareness dimensions.

Figure 4-1 Structural Model



SPSS AMOS Graphics Output 2015

Hypothesis testing

The empirical data and statistical tests result of the current study give support for Hypothesis two while partially supports hypotheses one. No support was found for Hypothesis 3 and Hypothesis 4.

Hypothesis one is partially supported in that although brand awareness/association were proposed to have a positive and significant influence on brand equity, the brand association dimension was fully eliminated during the confirmatory factor analysis due to convergent validity issue, Therefore, the final result provide support for the remaining dimension i.e. brand awareness dimension indeed has a significant and positive influence on brand equity with ß =0.14 and p value of 0.019 at $p < 0.05$).

The finding of the study supported hypothesis 2 that claims perceived quality of brand to have a positive and significant influence on brand equity. With strong and significant path, perceived quality found to be the strongest determinant of bottled water brand equity in the Ethiopian sample with ß =0.48 and p value of 0.000 at $P<0.001$).

The study did not provide sufficient support for the third hypothesis that proposed brand loyalty to have a significant and positive influence on brand equity of bottled water as the influence of the dimension on brand equity was found to be insignificant. (C.R. 0.789 and p value 0.430 > 0.05),

The last hypothesis posited in the current study was the uni-dimensionality of brand awareness and brand association dimensions in the customer based brand equity model as suggested by Yoo and Donthu (2001) due to lack of dicriminant validity between the dimensions. The hypothesis was not supported by the findings of the current study as the brand association variable is eliminated from the final analysis following the convergent validity issue.

Table 4.14 Results of Hypothesis Testing

Hypothesis	Standardized coefficient	C.R.	p-value	Results
Awareness/association → Brand equity	0.144	2.493	0.013	Partially supported
Perceived Quality → brand equity	0.476	6.424	0.000	Supported
Brand loyalty → brand equity	-0.038	-0.649	0.516	Not supported
Uni-dimensionality of Brand awareness and brand association				Not supported

4.5. Discussion

The purpose of this study was to evaluate the applicability of the three dimensional customer based brand equity model of Yoo and Dounthu (2001), which is developed based on the conceptualization of (Aaker's 1991), in the Ethiopian bottled water market.

The findings of the study gave support for perceived quality and brand awareness dimensions to have a positive and significant influence on the overall brand equity of bottled water brands while the influence of brand loyalty on brand equity was found to be insignificant. The influence of perceived quality was the stronger one among the brand equity dimensions in the determination of brand equity in the Ethiopian bottled water market.

The findings of the current study that provides support for brand awareness and perceived quality to have a positive and significant influence on brand equity is consistent with previous works of (Ngoc, 2013; Zhou & Jiang, 2011 and Li and Elis 2014)

According to Keller (1993) brand awareness consists of brand recognition and brand recall performance. Brand recognition relates to consumers' ability to confirm prior exposure to the brand when given the brand as a cue while brand recall relates to consumers' ability to retrieve the brand when given the product category, the needs fulfilled by the category, or some other type of probe as a cue. The relative importance of brand recall and recognition depends on the extent to which consumers make decisions in the store.

Brand recognition may be more important to the extent that product decisions are made in the store. In low involvement decision settings, a minimum level of brand awareness may be sufficient for product choice. Since bottled water products fall in low involvement low cost product categories, awareness in this context focuses on creating brand recognition.

According to Aaker (1991) High perceived quality of brand include, giving reason to consumers to buy the product, to differentiate the product from competing brands and to position the brand in consumers mind, to charge price premium, to boost the confidence of channel members to carry the products and the possibility of brand extension (Aaker, 1991)

On the other hand some of the findings of the current study were in contrast with Yoo and Dhont's (2001) suggestion that adheres combination of the brand awareness and brand association dimensions as a single dimension due to luck of discriminant validity issue. In the current study, though the two dimensions were initially loaded on their own factors, unlike Yoo and Donthu (2001), all of brand association items were dropped due to convergent validity issue (low loading) which resulted in complete elimination of the brand association dimension from the final analysis.

The findings are also contradicts with previous studies in that no support was found for brand loyalty dimension which is considered as the core of brand equity. As Aaker stated it, if customers are indifferent to the brand and, in fact, buy with respect to features, price, and convenience with little concern to the brand name, there is likely little equity (Aaker, 1991).

The absence of relationship between brand equity and brand loyalty might imply that consumers may consider bottled water as a pure commodity (since it is) and consider them to have more or less similar quality standard and consume them for the perception that they have a better quality than tap water or due to convenience.

As indicated in the demographic and general question response analysis part of the survey, the motivation behind the consumption of bottled water is mainly arise from concern for health, quality and convenience. This together with the final result of the study that provide strong support for the perceived quality dimension of brand equity to have a positive and significant influence on brand equity, might suggest that consumers of bottled waters may perceive all brands of the product category to have more or less the same level of quality.

Although these findings are based on the evidence from the bottled water market of Ethiopia, they might be helpful in other fast moving consumer goods industries as well as other products whose nature is relatively closer to pure commodity.

In this part of the research report, what has been done throughout the research process and the findings are summarized. Recommendations are forwarded based on the findings of the study. Limitations and further research is suggestion is also included.

Chapter Five - Conclusion and Recommendation

5.1. Conclusion

This study investigated the applicability of customer based brand equity model and a measurement scale proposed by Yoo and Dhontu (2001) based on the works of Aaker (1991). Accordingly, the relationships between multidimensional customer-based brand equity i.e. brand loyalty; perceived quality as well as brand awareness/brand association and overall brand equity was tested in the Ethiopian bottled water market.

Data was collected from a non- randomly selected 367 respondents with scale items adopted from previous works of Yoo and Donthu (2001 and 2002) and measured the four constructs at five point likert scales. Structural equation modeling was employed to evaluate the measurement model and the structural path model so as to test the posited hypothesis

The results provide support for perceived quality and brand awareness to have a significant and positive influence on the determination of brand equity in the Ethiopian bottled water market. These results are similar to the findings of (Ngoc, 2013; Zhou & Jiang, 2011). Among the two dimensions the influence of perceived quality on brand equity of bottled water brand in the Ethiopian market was found to be the stronger one.

In contrast with the findings of previous studies on customer based brand equity and the assertion of brand equity theory that demonstrate brand loyalty as the core dimension of brand equity, the result of the current study fail to provide support to the dimension of brand loyalty to have a significant and positive influence on brand equity of bottled water. This contradicts the findings of Yoo and Donthu;Washburn & Plank, 2002; Atilganet al, 2005) that provides support to the dimension of brand loyalty to have positive and significant influence on brand equity.

Moreover, the initially presumed combination of the brand awareness and brand association dimension as a single dimension as suggested by Yoo and Donthu (2001), was also fail to materialize in the current study as the brand association dimension is fully eliminated from the final analysis due to a convergent validity issue.

5.2. Recommendation

Although the results of the current study deviate from what is expected in that it fails to establish a relationship between the dimensions of brand equity and brand loyalty, the findings may give some practical implications for marketing managers and industry players of the bottled water market in Ethiopia.

One implication that could be derived from the result of the current study could be the significance of the brand awareness dimension in the determination of brand equity in the Ethiopian bottled water market. Marketers should wisely choose on marketing activities that systematically improves consumers awareness about their particular bottled water brand.

As the purchase of bottled water is a low involvement decision, marketing managers working in the Ethiopian bottled water market should concentrate on strategies that improve brand recognition in enhancing brand awareness. Accordingly, some of the strategies that could be implemented in enhancing consumer's awareness focusing on brand recognition of a particular bottled water brand may include but not limited to the following list of suggestions.

By sponsoring public mass events such as events like greater run (Aqua Addis is a good example here), they could display the name of their product to many consumers. Similarly, Participating in philanthropy also help the improvement in brand awareness of a particular product not only by having the name or logo in front of potential customers, but also the advantage of being seen as a favorable product for contributing to charity

Creating a social media presence is another way of improving the brand awareness of a certain product. Social media sites such as Facebook can be vital tools in developing brand awareness because they serve as forums where consumers discuss their lives, including their purchases and items they like. When a customer likes your product and tells people about it, they are doing free advertisement to increase the brand awareness of that particular product.

Displaying the product in stores with an eye level since it will make it easier for customers to notice it. Having a shelf space in frequently visited and well known stores will help the name or logo of the brand to catch the attention of potential consumers and may create a sense of familiarity and may be included in the consumers consideration list when the need to consume the product arises.

Broadcasting high quality production and memorable advertisements on electronic media during prime times is also another way of exposing the brand to a number of potential consumers. Having a jingle with catchy phrases, also help to easily register the brand name in potential consumers' mind.

The other important implication of the findings of the current study is that its strong and significant support for brand perceived quality to positively influence bottled water brand equity. As Aaker stated it the value of a high perceived quality of brand include, giving reason to consumers to buy the product, to differentiate the product from competing brands and to position the brand in consumers mind, to charge price premium, to boost the confidence of channel members to carry the products and the possibility of brand extension (Aaker, 1991)

To capitalize on such opportunities by improving the perceived quality of a product or service, marketers need to create a brand name that is based on market research of the target market and what this audience sees as beneficial should be given special consideration. Brand names, logos and slogans such as those appearing directly on products and signs that promote them also offer a consistency to the viewing public that leads to an appearance of reliability and thus higher quality.

Providing information on the bottling process of bottled waters emphasizing on the use of state of the art technology to purify the water, mentioning that there is no human direct contact in the bottling process, showing an appealing, clean and green processing plant, if possible, might help to position the product in the minds of potential customers as a symbol of quality and boost their confidence.

Associating bottled water products with health benefits by mentioning the actual benefits that could be gained by consuming purified water on the package as well as on the advertisement messages could be another way of enhancing the perceived quality of a particular bottled water brand. Endorsing bottled water products with well- known athletes or celebrities who are known to have a healthy life style may also improve the perceived quality of a particular bottled water brand.

5.3. Limitations and Further Research

Due to time and resources constraint, the findings of this study are based a sample taken from Addis Ababa employing a judgmental sampling method; the generalizablity of the findings is limited to the sample respondents and the area where the sample is taken. Further research is suggested in other towns of Ethiopia, and using a more representative data in order to test the results again.

This study emphasized the significance of brand equity in the Ethiopian bottled water market. The adjusted R Square indicates that the proposed brand equity model could only explain 41% of the variations in brand equity while the remaining 59% percent variation in brand equity is attributable to other factors. Therefore, further research by incorporating other relevant dimensions, might improve the explanatory power of the model.

The current study focuses on measuring customer based brand equity and testing the applicability of brand equity model on a product that is more inclined to be a pure commodity. Therefore, testing the model on other highly branded product or service categories might be important to get a full picture of the phenomenon.

The dimension of brand association was eliminated from the analysis due to low factor loading. This might be attributed to the capacity of the indicator variables in measuring the mentioned latent variable; therefore, testing alternative observed variables so as to measure the latent variable of brand association might result in resolving the issue.

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APPENDIX A SURVAY INSTRUMENTS

Addis Ababa University, College of Business and Economics
School of Commerce

Greetings!

Dear Respondents, My name is Ephrem Bogale and I am a graduate student at Addis Ababa University College of Business and economics, school of Commerce. Currently, I'm undertaking my thesis under the title "Measuring Customer based Brand Equity: Evidence from the Ethiopian Bottled water market", in partial fulfillment of Master of Art Degree in Marketing Management.

The study is intended to find out the sources of brand equity in the Ethiopian bottled water market based on consumer perception. It also aims to find out the applicability of a customer based brand equity model and measurement scale in the Ethiopian context.

I am inviting you to participate in this study by completing the attached survey. The main reason you are chosen as a respondent for the study is that given your frequent bottled water consumption habit, your inputs are believed to be helpful in drawing valid conclusions on the source of customer based bottled water brand equity. I assure you that all information gathered will be kept confidential and reported only aggregately.

The questionnaire will require approximately 3 to 5 minutes of your time to complete. Participation is strictly voluntary and you may refuse to participate at any time. If you choose to participate in this project, please answer all questions as honestly as possible and return the completed questionnaires promptly.

Thank you for taking the time to assist me in my educational endeavors.

If you have any inquiry or need explanation, please contact me @

e_bogale @yahoo.com
Tel.

Part I Demographic and General information questions

1. Gender

   Male ☐ Female ☐

2. Age

   18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56 and above ☐

3. Educational background

   Below high school ☐ High school ☐ Some Collage courses ☐

   College Diploma ☐ First Degree ☐ Second degree & above ☐

4. Marital status

   Single ☐ Married ☐

5. Monthly income

< 3,000 ☐ 3,001 – 8,000 ☐ 8,001 – 13,000 ☐ 13,001 – 18,000 ☐ 18,000 ☐

6. What is your preferred bottled water brand (or the one you are familiar with)

   Yes ☐ Aqua Addis ☐ Origin ☐ Abyssinia ☐ Eden ☐

7. Consumption frequency

   Daily ☐ 4-6 times a week ☐ imes a week ☐

8. Consumption setting

   Gym ☐ Recreational places ☐ at home ☐ at work ☐

   Anywhere ☐

9. Reason for consumption of bottled water

   Quality ☐ Convenience ☐ concern for health ☐ absence of tap water ☐

10. Do you think bottled water has difference from tap/pipe water?

    Yes ☐ No ☐ I don't Know ☐

11. Your perception of bottled water price

Too high ☐ high ☐ reasonable ☐ low ☐

Part II Brand equity and multi dimensional brand equity scales

The following statements describe **Yes**, **AquaAddis**, **Origin, Abyssinia** or **Eden** brand bottled water. Please circle your preferred brand and give your response for all the statements putting that particular brand in mind. Please put '✓' on the box that best describe your level of agreement

Note:

1. **X** represents your favorite bottled water brand.
2. The shaded statements are stated in reverse form and please take due care in responding those statements

	Brand awareness/association	**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
1	I know what **X** brand bottled water looks like.					
2	I can recognize **X** brand bottled water among other competing brands.					
3	I am aware of **X** brand bottled water.					
4	Some characteristics of **X** brand bottled water come to my mind quickly.					
5	I can quickly recall the symbol or logo of **X** brand bottled water.					
6	I have difficulty in imagining **X** brand bottled water in my mind.					

Perceived quality items		1	2	3	4	5
7	**X** brand bottled water is of high quality.					
8	The likely quality of **X** brand bottled water is extremely high.					
9	The likelihood that **X** brand bottled water would be thirst quenching is very high.					
10	The likelihood that **X** brand bottled water is reliable is very high.					
11	**X** brand bottled water must be of very good quality.					
12	**X** brand bottled water appears to be of very poor quality.					
Brand Loyalty		**1**	**2**	**3**	**4**	**5**
13	I consider myself to be loyal to **X** brand bottled water					
14	**X** brand bottled water would be my first choice.					
15	I will not buy other brands if **X** brand bottled water is available at the store.					
Overall Brand Equity (OBE)		**1**	**2**	**3**	**4**	**5**
16	It makes sense to buy **X** brand bottled water instead of any other brand, even if they are the same.					
17	Even if another brand has same features as **X** brand bottled water, I would prefer to buy **X** brand bottled water.					
18	If there is another brand as good as **X** brand bottled water, I prefer to buy **X** brand bottled water.					
19	If another brand is not different from **X** brand bottled water in any way, it seems smarter to purchase **X** bottled water bottled.					

Thank You!

አዲስ አበባ ዩኒቨርሲቲ ቢዝነስና ኢኮኖሚክስ ኮሌጅ
ንግድ ሥራ ትምህርት ቤት

ጤና ይስጥልኝ

የተከበሩ መላሽ፤ኤፍሬም ቦጋለ እባላለሁ፡፡ በአሁኑ ወቅት በአዲስ አበባ ዩኒቨርሲቲ የቢዝነስና ኢኮኖሚክስ ኮሌጅ፤ ንግድ ሥራ ትምህርት ቤት በገበያ አስተዳደር የሁለተኛ ዲግሪ ተማሪ ስሆን የማሚያ ጽሁፌን “ደንበኛ ተኮር የብራንድ እሴት ምዘና” በሚል ርዕስ በሐገራችን የታሸጉ የውሃ ምርቶች ገበያ ላይ በማተኮር በማከናወን ላይ እገኛለሁ፡፡

የጥናቱ ዓላማ በሃገራችን የታሸጉ የውሃ ምርቶች ገበያ ውስጥ የአንድን የታሸገ ውሃ ብራንድ በደንበኞች ዘንድ ያለውን ተፈላጊነት እና ተመራጭነትን በከፍተኛ ሁኔታ የሚጨምሩ ምክንያቶችን ለመረዳት፤ እንዲሁም በአጠቃላይ ደንበኛ ተኮር የብራንድ እሴት የምዘና ሞዴልን እና የምዘና መለኪያን በ ኢትዮጵያ ነባራዊ ሁኔታ ውስጥ ተግባራዊነቱን ለመፈተሽ ነው፡፡

ከዚህ ጋር የተያያዘውን መጠይቅ በመመለስ እንዲተባበሩኝ ስጠይቅ እርስዎን በመላሽነት የመረጥኩበት ዋነኛው ምክንያት ካልዎት የዳበረ የታሸገ ውሃ የማዘውተር ልምድዎ በመነሳት የሚሰጡት ምላሽ በጥናቱ ላይ ዋጋ ያለው ማጠቃለያ ለመስጠት ያስችላል ከሚል ጽኑ ዕምነት በመነሳት ነው፡፡ የሚሰጡት ማንኛውም መረጃ በሚስጥር የሚያዝ ሲሆን የሚቀርበውም ተጠቃሎ መሆኑን ላረጋግጥልዎ እወዳለሁ፡፡

ይህንን መጠይቅ ሞልቶ ለማጠናቀቅ ቢበዛ ከ 5 እስከ 7 ደቂቃ የሚሆን ጊዜዎን ይወስዳል፡፡ ተሳትፎ ሙሉ ለሙሉ በፈቃደኝነት ላይ የተመሰረተ ሲሆን በማንኛውም ጊዜ በመጠይቁ ላይ ላለመሳተፍ መወሰን ይችላሉ፡፡ በዚህ መጠይቅ ለመሳተፍ ፈቃድዎ ከሆነ ለሁሉም ጥያቄዎች ትክክለኛ መልስዎን በአግባቡ በማሰቀመጥ መጠይቁን በተቻለ ፍጥነት ይመልሱልኝ ዘንድ በማክበር እጠይቃለሁ፡፡

ጊዜ ወስደው መጠይቁን በመሙላት ሊተባበሩኝ በመፍቀድዎ ላቅ ያለ ምስጋናዬን በቅድሚያ ለማቅረብ እወዳለሁ፡፡

በመጠይቁ ላይ ጥያቄ ቢኖርዎ ወይም ማብራሪያ ቢያስፈልግዎ በኢ - ሜይል አድራሻ e_bogale @yahoo.com ወይም በተንቀሳቃሽ የስልክ መሥመር ቁጥር ያገኙኛል

ክፍል አንድ
የመላሾች አጠቃላይ መረጃ

1. ጾታ

ወንድ ☐ ሴት ☐

2. **ዕድሜ**

18-25 ☐ 26-35 ☐ 36-45 ☐ 46— 55 ☐ 56ና ከዚያ በላይ ☐

3. **የትምህርት ደረጃ**

ከሁለተኛ ደረጃ በታች ☐ ሁለተኛ ደረጃጥቂት የ☐ኮርሶች የወሰደ/ች ☐

ኮሌጅ ዲፕሎማ ☐ሪያዲግሪ ሁለተኛ ዲግሪ☐ያ በላይ ☐

12. የጋብቻ ሁኔታ

ያላገባ/ች ☐ ያገባ/ች ☐

13. ወርሃዊ ገቢ (በብር)

< 3,000 ☐ 3,001 – 8,000☐ 8,001 – 13,000 ☐ 13,001 – 18,000☐ >18,000 ☐

14. የርስዎ ምርጫ የሆነው ወይም በደንብ የሚያውቁት የታሸገ ውሃ ብራንድ ከሚከተሉት ውስጥ የትኛው ነው፡፡

የስ ☐ አካ. አዲስ አ☐ ☐ያ ኤደ☐ ☐

15. የታሸገ ውሃ የአጠቃቀም ልምድዎን እንዴት ይገልጹታል

በየቀኑ በሳም☐ 4 እስከ 6 ጊዜበሳምንት ከ 2 እ☐ ጊዜ ☐

16. የታሸገ ውሃ የሚጠቀሙበት ቦታ

በስፖርት ማዘውተሪያ ☐መዝናኛ ቦታ ☐ ውስጥ ☐

17. የታሸገ ውሃን የሚጠቀሙበት ምክንያት

የተለየ ጥራት ስላለውላ☐ም ምቹ ስለሆነ ☐ናዬ ስለምጠነቀቅ ☐

በአካባቢዬየቧንቧውሃስለማይገኝ ☐ የዘመናዊነትመገለጫስለሆነ ☐

18.የታሸገ ውሃ ከመደበኛው ውሃ ልዩነት አለው ብለው ያስባሉ?

አዎ አስባለሁ ☐ የለም አላስብም ☐ አላውቅም ☐

19.በታሸገ ውሃ ዋጋ ላይ ያልዎት አመለካከት ምን ይመስላል

በጣም ውደ☐ ውድ ☐ ምክንያታዊ ☐ ዝቅተኛ ☐

ክፍል ሁለት

የብራንድ እሴት እና የብራንድ እሴት መገለጫዎች መለኪያ

ከዚህ በማስከተል የቀረቡት ዓረፍተ ነገሮች የሚወክሉት ከአምስቱ የታሸጉ ውሃ ብራንዶች (የስ ፣ አኳ አዲስ ፣ አሪጅን ፣ አቢሲኒያ እንዲሁም ኤደን) መካከል አንዱን ነው። እባክዎን የርስዎ ምርጫ የሆነውን ብራንድ በማክበብ ሁሉንም ጥያቄዎች ይህንን ብራንድ በአዕምሮዎ በማኖር ለያንዳንዱ ዓረፍተ ነገር የርስዎን የስምምነት መጠን በሚገልጸው ዓምድ ሥር በሚገኘው ሳጥን ውስጥ የ '✓' ምልክት በማስቀመጥ ይመልሱ።

ማሳሳቢያ፡-

1. X የሚወክለው የዕርስዎ ምርጫ የሆነውን የታሸገ ውሃ ብራንድ ነው።
2. በቀለሙ ረድፎች ውስጥ የሚገኙ ዓርፍተ ነገሮች ከሌሎቹ በተቃራኒ የተገለጹ ስለሆነ እባክዎን መልስዎን በማስተዋል ያኑሩ።

	የብራንድ ግንዛቤ/ተዛማጅነት	ጭራሽ አልስማማም (1)	አልስማማም (2)	አላውቅም (3)	እስማማሁ (4)	በጣም እስማማሁ (5)
1	Xብራንድ የታሸገ ውሃ ምን እንደሚመስል አውቃለሁ					
2	X ብራንድ የታሸገ ውሃን ከሌሎች የታሸጉ የውሃ ብራንዶች ለይቼ አውቀዋለሁ					
3	ስለ X ብራንድ የታሸገ ውሃ በቂ ዕውቀት አለኝ					

4	አንዳንድ የ X ብራንድ የታሸገ ውሃ መለያ ባህሪያቶች ወደ አዕምሮዬ ፈጥነው ይመጡልኛል					
5	የ X ብራንድ የታሸገ ውሃ መለያ ዓርማ ወይም የንግድ ምልክትን በፍጥነት ማታወስ እችላለሁ					
6	የ Xብራንድን የታሸገ ውሃ ምርትን ምስል በአዕምሮዬ ውስጥ ማምጣት ይቸግረኛል					
አመለካከታዊ ጥራት		1	2	3	4	5
7	X ብራንድ የታሸገ ውሃ ከፍተኛ ጥራት አለው					
8	Xብራንድ የታሸገ ውሃ ከፍተኛ ጥራት ያለው ምርት የመሆኑ ዕድል ላቅ ያለ ነው					
9	X ብራንድ የታሸገ ውሃ ጥምን ሲያረካ ወደር የለውም					
10	X ብራንድ የታሸገ ውሃ አስተማማኝ ምርት የመሆኑ ዕድል ከፍተኛ ነው					
11	X ብራንድ የታሸገ ውሃ ከፍተኛ ጥራት ይኖረው ዘንድ ግድ ነው በዬ አምናለሁ					
12	የ X ብራንድ የታሸገ ውሃ ጥራቱ የወረደ ምርት ይመስላል					
የብራንድ ታማኝነት		1	2	3	4	5
13	ራሴን ለ X ብራንድ የታሸገ ውሃ ምርት ታማኝ አድርጌ እቆጥራለሁ					
14	X ብራንድ የታሸገ ውሃ የመጀመሪያ ምርጫዬ ነው					
15	በመደብር ወይም በሌላ ሥፍራ የ X ብራንድ የታሸገ ውሃ ካለ ሌላ ብራንድ የታሸገ ውሃ አልገዛም					
አጠቃላይ የብራንድ ዕሴት መለኪያዎች		1	2	3	4	5
16	ከሌሎች የታሸጉ የውሃ ምርቶች ይልቅ X ብራንድ የታሸገ ውሃን መግዛት ስሜት ይሰጣል፤ ምርቶቹ አንድ ዓይነት ቢሆኑም እንኳ					
17	ምንም እንኳ ሌላ የታሸገ ውሃ ምርት ከ X ብራንድ የታሸገ ውሃ ጋር አንድ ዓይነት መገለጫዎችና ባህርያት ቢኖረው እንኳ እኔ X የ ብራንድ የታሸገ ውሃ መግዛትን እመርጣለሁ					
18	ሌላ ከX ብራንድ የታሸገ ውሃ ጋር ተመሳሳይ የሆነ የታሸገ ውሃ ቢኖር እኔ የ X ብራንድ የታሸገ ውሃ መግዛትን እመርጣለሁ					
19	ሌላ የታሸገ ውሃ ምርት ከ X ብራንድ የታሸገ ውሃ ጋር ምንም ዓይነት ልዩነት የሌለው ከሆነ የ X ብራንድ የታሸገ ውሃን መግዛት ብልህነት ነው ብዬ አምናለሁ					

አመሰግናለሁ

APPENDIX B CORRELATION MATRIX OF THE DATA SET

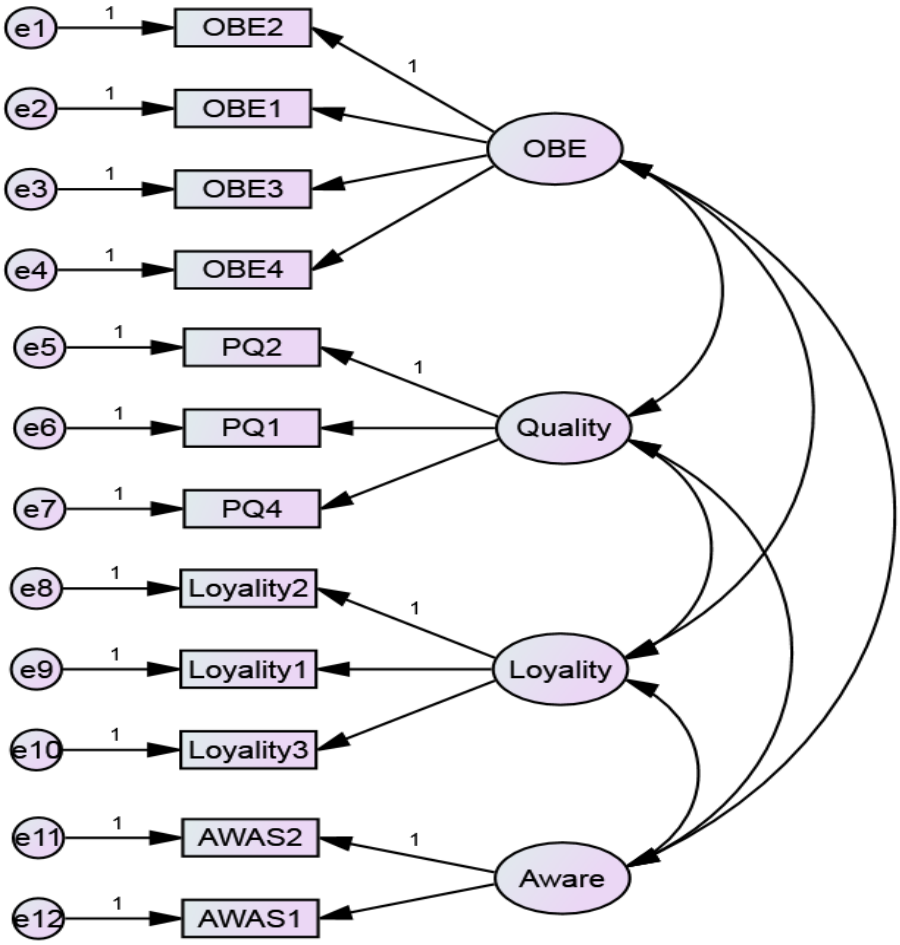
	AWAS1	AWAS2	AWAS3	AWAS4	AWAS5	AWAS6	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	Loyality1	Loyality2	Loyality3	OBE1	OBE2	OBE3	OBE4
AWAS1	1.000	.628	.376	.190	.282	.377	.262	.166	.140	.273	.064	.139	.147	.126	.141	.304	.210	.165	.189
AWAS2	.628	1.000	.237	.228	.347	.277	.196	.003	.155	.184	.033	.151	.073	.104	.058	.175	.100	.063	.000
AWAS3	.376	.237	1.000	.324	.080	.163	.368	.247	.098	.297	.289	.013	.074	.077	.077	.290	.285	.203	.259
AWAS4	.190	.228	.324	1.000	.310	.342	.127	.184	.190	.237	.276	.329	.016	-.006	-.026	.253	.365	.211	.102
AWAS5	.282	.347	.080	.310	1.000	.450	.232	.112	.092	.238	.170	.248	.045	.092	.056	.183	.188	.184	.012
AWAS6	.377	.277	.163	.342	.450	1.000	.148	.162	.055	.318	.237	.340	.080	.004	.045	.058	.190	.170	.028
PQ1	.262	.196	.368	.127	.232	.148	1.000	.592	.382	.504	.419	.225	.066	.047	.048	.254	.223	.366	.247
PQ2	.166	.003	.247	.184	.112	.162	.592	1.00	.505	.536	.419	.166	.024	-.023	-.050	.203	.199	.344	.202
PQ3	.140	.155	.098	.190	.092	.055	.382	.505	1.000	.411	.252	.119	-.061	-.051	-.034	.105	.137	.346	.206
PQ4	.273	.184	.297	.237	.238	.318	.504	.536	.411	1.000	.363	.165	.029	.026	-.002	.275	.294	.321	.278
PQ5	.064	.033	.289	.276	.170	.237	.419	.419	.252	.363	1.00	.130	-.076	-.056	-.059	.045	.235	.324	.299
PQ6	.139	.151	.013	.329	.248	.340	.225	.166	.119	.165	.130	1.00	-.054	-.018	-.001	.082	.010	.019	.011
Loyality1	.147	.073	.074	.016	.045	.080	.066	.024	-.061	.029	-.076	-.054	1.00	.589	.414	.059	.105	.029	-.016
Loyality2	.126	.104	.077	-.006	.092	.004	.047	-.023	-.051	.026	-.056	-.018	.589	1.000	.566	-.007	.105	.002	-.013
Loyality3	.141	.058	.077	-.026	.056	.045	.048	-.050	-.034	-.002	-.059	-.001	.414	.566	1.000	-.020	.078	-.007	.055
OBE1	.304	.175	.290	.253	.183	.058	.254	.203	.105	.275	.045	.082	.059	-.007	-.020	1.00	.679	.486	.399
OBE2	.210	.100	.285	.365	.188	.190	.223	.199	.137	.294	.235	.010	.105	.105	.078	.679	1.000	.613	.446
OBE3	.165	.063	.203	.211	.184	.170	.366	.344	.346	.321	.324	.019	.029	.002	-.007	.486	.613	1.00	.527
OBE4	.189	.000	.259	.102	.012	.028	.247	.202	.206	.278	.299	.011	-.016	-.013	.055	.399	.446	.527	1.00

APPENDIX C MEAN S. D., SKEWNESS & KUROTOSIS

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	S.E.	Statistic	S.E.
ASAS1	367	4.2480	1.02221	-1.392	.127	1.298	.254
ASAS2	367	4.3079	.94407	-1.453	.127	1.717	.254
ASAS3	367	3.7302	1.09182	-.538	.127	-.594	.254
ASAS4	367	3.7575	1.09572	-.622	.127	-.428	.254
ASAS5	367	4.1226	1.06802	-1.112	.127	.261	.254
ASAS6	367	4.3433	.82770	-1.498	.127	2.775	.254
PQ1	367	4.1335	.78312	-.891	.127	.801	.254
PQ2	367	3.9128	.77391	-.631	.127	.373	.254
PQ3	367	3.9101	.91740	-.589	.127	.067	.254
PQ4	367	3.7902	.97067	-.614	.127	-.242	.254
PQ5	367	3.9946	1.02694	-1.024	.127	.554	.254
PQ6	367	4.4469	.79396	-1.899	.127	4.744	.254
Loyality1	367	3.9210	.95057	-.782	.127	.293	.254
Loyality2	367	3.8965	.96675	-.795	.127	.370	.254
Loyality3	367	3.9646	.99251	-.957	.127	.645	.254
OBE1	367	3.9101	.99457	-1.075	.127	1.009	.254
OBE2	367	3.8338	1.09502	-1.311	.127	1.417	.254
OBE3	367	3.7003	1.10269	-.738	.127	-.012	.254
OBE4	367	3.5477	1.31710	-.558	.127	-.766	.254

SPSS output 2015

APPENDIXD MEASURMENT MODEL & MODEL FITSUMMARY



CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	34	98.764	44	.000	2.245
Saturated model	78	.000	0		
Independence model	12	1549.676	66	.000	23.480

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.043	.958	.926	.541
Saturated model	.000	1.000		
Independence model	.268	.529	.444	.448

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.936	.904	.964	.945	.963

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.667	.624	.642
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	54.764	29.727	87.530
Saturated model	.000	.000	.000
Independence model	1483.676	1359.209	1615.528

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.270	.150	.081	.239
Saturated model	.000	.000	.000	.000
Independence model	4.234	4.054	3.714	4.414

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.058	.043	.074	.176
Independence model	.248	.237	.259	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	166.764	169.269	299.547	333.547
Saturated model	156.000	161.745	460.618	538.618
Independence model	1573.676	1574.560	1620.541	1632.541

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.456	.387	.545	.462
Saturated model	.426	.426	.426	.442
Independence model	4.300	3.960	4.660	4.302

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	225	255
Independence model	21	23

APPENDIXE THE STRUCTURAL MODEL FITSUMMARY

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	38	56.422	40	.044	1.411
Saturated model	78	.000	0		
Independence model	12	1549.676	66	.000	23.480

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.033	.975	.952	.500
Saturated model	.000	1.000		
Independence model	.268	.529	.444	.448

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.964	.940	.989	.982	.989
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.606	.584	.599
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	16.422	.477	40.378
Saturated model	.000	.000	.000
Independence model	1483.676	1359.209	1615.528

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.154	.045	.001	.110
Saturated model	.000	.000	.000	.000
Independence model	4.234	4.054	3.714	4.414

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.033	.006	.053	.920
Independence model	.248	.237	.259	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	132.422	135.220	280.825	318.825
Saturated model	156.000	161.745	460.618	538.618
Independence model	1573.676	1574.560	1620.541	1632.541

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.362	.318	.427	.369
Saturated model	.426	.426	.426	.442
Independence model	4.300	3.960	4.660	4.302

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	362	414
Independence model	21	23

APPENDIXF ESTIMATES OF THE STURUCTURAL MODEL

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
OBE	<---	Loyalty	-.041	.063	-.649	.516	
OBE	<---	Aware	.224	.090	2.493	.013	
OBE	<---	Quality	.731	.114	6.424	***	
OBE2	<---	OBE	1.000				
OBE1	<---	OBE	.875	.072	12.213	***	
OBE3	<---	OBE	.919	.081	11.292	***	
OBE4	<---	OBE	.752	.082	9.212	***	
PQ2	<---	Quality	1.000				
PQ1	<---	Quality	.995	.084	11.787	***	
PQ4	<---	Quality	1.133	.100	11.304	***	
Loyality2	<---	Loyalty	1.000				
Loyality1	<---	Loyalty	.739	.072	10.262	***	
Loyality3	<---	Loyalty	.744	.074	10.066	***	
AWAS2	<---	Aware	1.000				
AWAS1	<---	Aware	1.747	.330	5.303	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OBE	<---	Loyalty	-.038
OBE	<---	Aware	.144
OBE	<---	Quality	.476
OBE2	<---	OBE	.831
OBE1	<---	OBE	.801
OBE3	<---	OBE	.758
OBE4	<---	OBE	.520
PQ2	<---	Quality	.767
PQ1	<---	Quality	.754
PQ4	<---	Quality	.690
Loyality2	<---	Loyalty	.884
Loyality1	<---	Loyalty	.665
Loyality3	<---	Loyalty	.641
AWAS2	<---	Aware	.622
AWAS1	<---	Aware	.998

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Quality	<-->	Aware	.105	.028	3.696	***	
Quality	<-->	Loyalty	.016	.032	.500	.617	
Loyalty	<-->	Aware	.090	.033	2.695	.007	
e3	<-->	e4	.173	.061	2.827	.005	
e5	<-->	e11	-.089	.023	-3.816	***	
e1	<-->	e5	-.090	.029	-3.089	.002	
e2	<-->	e5	-.060	.026	-2.308	.021	
e4	<-->	e11	-.135	.042	-3.227	.001	
e1	<-->	e6	-.078	.026	-2.982	.003	
e2	<-->	e3	-.126	.045	-2.801	.005	

Correlations: (Group number 1 - Default model)

	Estimate
Quality <--> Aware	.305
Quality <--> Loyalty	.032
Loyalty <--> Aware	.180

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Quality	.348	.046	7.544	***	
Loyalty	.731	.088	8.264	***	
Aware	.340	.079	4.316	***	
e14	.586	.076	7.664	***	
e1	.377	.060	6.260	***	
e2	.352	.050	6.994	***	
e3	.515	.068	7.583	***	
e4	1.253	.100	12.582	***	
e5	.244	.030	8.171	***	
e6	.263	.030	8.816	***	
e7	.492	.047	10.506	***	
e8	.205	.059	3.460	***	
e9	.504	.049	10.297	***	
e10	.580	.054	10.799	***	
e11	.539	.072	7.495	***	
e12	.005	.183	.027	.978	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
OBE	.411
AWAS1	.995
AWAS2	.386
Loyality3	.411
Loyality1	.442
Loyality2	.781
PQ4	.476
PQ1	.568
PQ2	.588
OBE4	.271
OBE3	.574
OBE1	.642
OBE2	.683

Note: *** is Significant at P value less than 0.01

APPENDIX G FACTOR LOADINGS AND CRONBACH'S ALPHA

Pattern Matrix[a]

	Factor			
	1	2	3	4
Cronbach's Alpha	0.807	0.773	0.766	0.770
OBE2	.930			
OBE1	.761			
OBE3	.651			
OBE4	.532			
PQ2		.859		
PQ1		.722		
PQ4		.601		
Loyality2			.891	
Loyality1			.659	
Loyality3			.637	
AWAS2				.942
AWAS1				.659

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.