

MEASURING CONSUMER BASED BRAND EQUITY: EMPIRICAL EVIDENCE FROM BEER MARKET OF ETHIOPIA (IN CASE OF ADDIS ABABA)

BY: WASIHUN EJIGIE TESEMA

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POST GRADUATE PROGRAM

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF MASTER OF ARTS IN MARKETING MANAGEMENT

ADVISOR: KAHSU MEBRAHTU (ASST. PROF.)

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE
DEPARTMENT OF MARKETING MANAGEMENT
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Approval Sheet

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE GRADUATE STUDIES MARKETING MANAGEMENT MA PROGRAM

MEASURING CONSUMER BASED BRAND EQUITY: EMPIRICAL EVIDENCE FROM BEER MARKET OF ETHIOPIA (IN CASE OF ADDIS ABABA)

BY: WASIHUN EJIGIE

APPROVED BY BOARD OF EXAMINERS

_____	_____	_____
Advisor	**Signature**	**Date**
_____	_____	_____
Internal Examiner	**Signature**	**Date**
_____	_____	_____
External Examiner	**Signature**	**Date**

Letter of Declaration

Here I, Wasihun Ejigie Tesema, declare that this investigation, entitled "***MEASURING CONSUMER BASED BRAND EQUITY: EMPIRICAL EVIDENCE FROM BEER MARKET OF ETHIOPIA (IN CASE OF ADDIS ABABA)*** is my novel work and not used by any other university for any requirements and all sources of information in the study is acknowledged properly. I conducted the study with guidance and counseling of my advisor (Ato Kahsu Mebrahtu (Asst. Prof.)) by my own endeavor in order to fulfill the requirements for Master of Arts in Marketing Management at the AUSCC.

Declared by:

Wasihun Ejigie Tesema	_____	June, 2014
Student	signature	Date

Letter of Certification

This investigation, entitled "***MEASURING CONSUMER BASED BRAND EQUITY: EMPIRICAL EVIDENCE FROM BEER MARKET OF ETHIOPIA (IN CASE OF ADDIS ABABA)*** was carried by Wasihun Ejigie Tesema so as to obtain his second degree from AUSCC. He conducted his original thesis under my guidance and supervision. I certify that, the study is his- own original work and suitable for submission of the award of MA in Marketing Management.

Certified by:

Kahsu Mebrahtu
(Asst. Prof.)

_____ May, 2014

Name Signature Date

Acknowledgment

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List of Abbreviations

AGFI	Adjusted Goodness-of-Fit Statistics
AMOS	Analysis of Moment Structure
ANOVA	Analysis of Variance
AVE	Average Variance Extracted
BAS	Brand Association
BAW	Brand Awareness
BE	Brand Equity
BEM	Brand Equity Measurement
BL	Brand Loyalty
CBBE	Consumer Based Brand Equity
CFA	Confirmatory Factor Analysis
GEM	General Linear Modeling
GFI	Goodness-of-Fit
OBE	Overall Brand Equity
PQ	Perceived Quality
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Science

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ABSTRACT

In marketing endeavors like beer market where, branding plays a significant role in differentiating the brand from competitor brands, measuring brand equity plays a vital role to extract and utilize what resides in the mind and heart of the consumer for the success of business. The study was aimed to measure the consumer based brand equity via empirical evidence from the beer brands of Addis Ababa, Ethiopia. A five dimension of brand equity model posited by David Aaker was used in order to conduct the investigation via quantitative methods of research, where cause and effect conclusive study were applied. Using a probability sampling method (Multistage), 384 questionnaires were distributed in Nifassilk lafto and Kirkos sub cities. 305 valid questionnaires were collected, which maintained 79.43% response rate and run into analysis using descriptive and inferential statistics. The Confirmatory Factor Analysis (CFA) was carried out, so as to vigorously assess the validity and reliability of the model of measurement. The CFA results in a good fit between the model and data so that structural Equation modeling was carried out in order to come up with dimensions in the beer market of Addis Ababa through testing the hypothesis using IBM AMOS 21 version. The findings conclude that brand loyalty, perceived quality and brand association dimensions were found to have a significant and positive impact in the creation of brand equity in the beer market of Addis Ababa. Whereas brand awareness have a negative impact on brand equity, that was a minus from the brand equity. Thus, brand marketing managers should give much emphasis to invest marketing resources up on brand loyalty so as to create a superior positive brand equity value. In terms of brands St. George beer is a leader in the market while Castle Beer is the last. The demographics: Educated, male and youth and early adults dominate the consumption of beer in the country where most of them are drink beer less than per week in frequent bases. Brand equity dimensions vary significantly among mean groups of only in habit of drinking consumer demographic characteristics. marketing managers in brewery companies, thus, should use different strategies such as cause marketing, sponsorship, participating in trade fair, enriching their consumer through creating brand communities, employing secondary brand associations like using celebrities, country of origin so as to increase the brand knowledge of their customer. Creating a strong, favorable and unique, positive brand association in the mind of the consumer necessitates high level of awareness and familiarity with the brand. This is a key way to create a long term marketing relationship to maintain brand loyalty. This study had some limitations. Some were attributed to the method of collecting data entertaining flexible idea based on the respondents was the problem of self-structured questionnaire. The other, the sample was not proportional to the market share of the beer brands as a result the industry could be attributed to the brand with high market share.

Key words: brand, Brand Equity, Brand awareness, brand association, brand loyalty, perceived quality

CHAPTER ONE

INTRODUCTION

This section encompasses background of the study, statement of the problem, objective of the study, basic research question, hypothesis, limitation and delimitation of the study, among others.

1.1.Background of the study

Philip Kotler and Waldemar Pfoertsch (2006) stated branding decisions like building, sustaining and measuring brand equity are a strategic in nature and have to be monitored by top management. That is, because products with brands are more valuable than products without brands. Similarly, stronger brands are more valuable than weaker brands (Keller, 2003). David A. Aaker (1991) stated that a strong brand plays a massive role to stand tall among competitors' brands through creating an entry barrier for new products per strong brand creates insecurity risk to shift by consumers from one brand to another especially to competitor.

Strong brands are a source of competitive advantage (Aaker, 1991) (Kotler and Pfoertsch, 2006). In 1993, Kevin K. Keller stated brands as forerunner of future marketing activities. In recent studies of Hyun S. (2009) strong brand equity is considered as a base in order to minimize future marketing costs while the company intends to make brand extension decisions. Authors like Hong-Bumm Kim, Woo Gan Kim, and Jeong A. An (2003) found that strong brands improve financial performance of the firms.

Keller (2003) discussed that strong brand equity enables the firm to extend its equity to direct or indirect brands. Share holders also would like to know the value of their shares after some time.

The beer market of Ethiopia is entering a new era where scientific strategic marketing decisions are being exhibited. Additionally, multinational companies have acquired around three beer plants as well publicly and locally owned existing beer plants have started to expand their branch around and outside of Addis Ababa. (Access Capital beer sector report, 2010)

According to Agro Processing profile of MOT (2013) the new project and expansion still in progress by breweries is more than 7 billion Ethiopian birr. This indicates that the need of building, measuring, and sustaining brand equity of beer brands to withstand the completion, to earn superior profit, perform well as well at exporting. To do so, the positive or negative value of the existing beer brands has to be measured scientifically in the context of consumers so that appropriate marketing intervention could be developed and acted up on.

Prominent marketing authors like Kotler and Keller (2012) described that the short term financial benefit versus the long term brand building exercise will be evaluated based on a perpetual measurement of brands. Obviously marketers, thus, due to these and other facts consider not only building and sustaining of brand equity as strategic concern of marketing intangibles but also the measurement of brand equity as strategic concern in their marketing endeavors. Thus, this study will shed light and narrow literature gap by empirically measuring the dimensions of brand equity of beer brand markets of Ethiopia (in case of Addis Ababa) via employing a probability sampling method to expand the ecological and population validity of the study.

1.2.Statement of the problem

According to Access Capital beer sector report (2010) the market growth of beer is 20%. That is twice of the country's economic growth. The beer market of Ethiopia is playing a tremendous role in the Ethiopian economy. To show statistically, according to Ethiopian Federal Democratic Ministry of Industry report on the profile of Agro industry 2013 (2013) the annual revenue of the industry is currently estimated more than 4.5 Billion Birr. The industry created jobs for more than 4000 permanent and temporary employees.

Currently, the beer industry of Ethiopia is showing a very significant growth owning to acquisition of Bedele and Meta breweries by famous players like Heineken and Diageo respectively. Additionally the already existed beer manufacturers like BGI have expanded their new plant into

Hawassa as well Dashen Brewery is establishing its second plant at Debere Birhan in order to tap the central beer market of Ethiopia. Additionally, Dashen Brewery has built its own malt factory in Gondar with a capital of 500 million with a strategy of back ward integration. Very recently new players will come to existence like Habesha beer, which intends to possess a 20% market share and Raya Beer that looks forward to start its operation by forming a joint partnership with BGI Ethiopia with an investment of 732 million birr. More recently, a beer brand name Zebidar will come to play soon.

The above aforementioned marketing actions are strategic in nature and show to what extent the beer market is so attractive and lucrative in Ethiopia .The industry is entering a sky high level of competition. This is witnessed by the aggressive sponsorship and hefty promotional expenditures (investment) made by brewery companies or beer brands in recent times. But, all these efforts unless supported with appropriate brand marketing strategy expansion by itself do not guarantee to overwhelm the market as intended where the competition battle is too fierce.

Beer is one of the heavily branded items in marketing (Eda et al., 2005). Jean Noel Kapferer (2008) compares the traditional marketing and the branding decision in base of positioning. In traditional marketing, the brand is defined by its positioning: "*it aims to be the brand that offers the greatest (the promise or the client benefit) to a certain type of person (the target) in relation to certain competitors (the source of business, the enemy to which you want to be compared)"*. This positioning constitutes the cornerstone of brand management. Bastien, Jean-Noël Kapferer and Vincent (2009) described positioning as the lasting angle of attack on the market to take an increasing share of it.

But, what the beer brand (Company) positioned is resides in the minds of the consumer as the firm intended or contrary to what the company wants to be perceived. On top of this, the perception of consumers towards these marketing practices should be assessed on continuous basis in order to match the branding activities made by the company as well what resides in the consumer's side (Keller, 2003). Measuring brand equity from the point of consumer would offer the stand of the beer brand within the industry, by locating where the beer brand is found in the perceptual map of the consumer in comparison with the competitive beer brands (Kotler and Keller 2012). According to Jan Jonker, BartJan Pennink (2010) to measure something is to know something about the strength and weakness.

Consumer Based Brand equity is essential since financial measures tend to focus only on short term results, which can lead to brand building activities being reduced in order to obtain fast financial result in the short run. Especially, sales promotions, e.g. short term price reductions, are proved to diminish brand equity over time, even though it creates short term financial gains (Aaker, 1991) (Kotler and Keller 2012).

In connection with this, measuring consumer based brand equity as a strategic decision got too much emphasis and a number of pure and action researches that are done in the same topic in different parts of the world such as related with sport wears Xiao Tong, Jana M. Hawley (2009), beverage sector Eda Atilgan, Safak Aksoy, Serkan Akinci (2005), and beer category Cristina Calvo Porrel, and Normand Bourgault (2013).

Most of the researches paid attention in the variables of marketing mix such as price, communication and distribution. But, in the purchase decision making process, consumers are not only concerned about the price or quality of the product, but also variables such as brand awareness, brand loyalty, brand image (Eda et al., 2005), (Cristian and Bourgault, 2013), (Tekeste , 2013).

Although brewery sector is one of the key economic industries with in the Ethiopian agri-business scenario few empirical studies were conducted measuring brand equity in the perspective of consumer based brand equity (Million Tekeste, 2013). Studies like Tekesete (2013) found out that brand loyalty is the only brand equity dimension that creates positive brand equity in the Ethiopian beer market. This study used convenience, non probability sampling method and fewer brands. Marketing practices breadth and depth is being changed after that and new brands like Amber beer introduced very recently were not included in his study.

What if probability sampling method, more specifically multistage sampling is used will the result be the same? Thus, study will contribute to the body of literature as well as methodology by comparing how the determinants of brand equity according to Aaker model are go along with the beer market of Ethiopia. At the same time, how these dimensions of brand equity are correlated to influence the brand equity in the same market.

1.3.Hypothesis

The research was used to test the following hypotheses

Brand awareness is the first dimension of brand equity in Aaker model. It refers to the customer's ability to recall and recognize the brand, as reflected by their ability to identify the brand under different Conditions (Keller, 2003). It can be an anchor to which other associations can be attached, familiarly and liking can be created, a signal of commitment in considering the brand both to product category and purchase (Aaker, 1991) (Keller, 2003).

Kotler and Keller (2012) defined brand awareness as

> **Fostering the consumer's ability to recognize or recall the brand within the category, in sufficient detail to make a purchase. Recognition is easier to achieve than recall —consumers asked to think of a brand of frozen entrées are more likely to recognize Stouffer's distinctive orange packages than to recall the brand. Brand recall is important outside the store; brand recognition is important inside the store. Brand awareness provides a foundation for brand equity.**

In the literature it is observed that brand awareness positively affecting brand equity.

$H1_0$ (Null Hypothesis): Brand awareness will not have a significant positive consequence upon beer brand equity in Ethiopian (Addis Ababa) beer market.

$H1_a$ (alternate Hypothesis): Brand awareness has a significant positive consequence on brand equity in Ethiopian (Addis Ababa) beer market.

Brand Loyalty refers to the enduring relationship between the consumer and the company. The consumer would stay to consume behaviorally and attitudinal loyal to the company even in turbulent times, when competitors bring something unique offering, unique communication and so on (Keller, 2003). Brand loyalty provides predictability and security of demand for the firm, and it creates barriers to entry that make it difficult for other firms to enter the market. Loyalty also can translate into customer willingness to pay a higher price—often 20 percent to 25 percent more than competing brands. (Kotler and Keller, 2012)

$H2_{0:}$ Brand loyalty will not have a significant positive effect upon beer brand equity in the Ethiopian (Addis Ababa) beer market.

$H2_{a:}$ Brand loyalty has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.

Perceived quality refers to the consumer's judgment (perception) about product's overall excellence or superiority with reference to substitutes (Aaker, 1991).

$H3_{0:}$ Perceived quality will not have a significant direct impact upon beer brand equity in the Ethiopian (Addis Ababa) beer market.

$H3_{a:}$ Perceived quality has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.

Brand associations are more than objective, rational brand features and include emotions and feelings as well as nonverbal and modality-specific impressions (L.Rogers, Bernd H. Schimtt and David, 2008). According to Kotler and Keller (2012) brand association consist of all brand-related thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on that become linked to the brand node.

$H4_{0:}$ Perceived quality will not have a significant direct impact upon beer brand equity in Ethiopian (Addis Ababa) beer market.

$H4_{a:}$ Brand loyalty has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.

$H5_{0:}$ Brand equity dimensions will not be significantly varies among mean groups of demographic characteristics of the consumers of beer in Addis Ababa.

$H6_{0:}$ Brand equity dimensions are equal among mean group's beer brands.

1.4.Objectives of the study

The general objective of this study was to measure the brand equity of beer brands in Ethiopia market by using customer based brand equity model.

Specific objectives

- To test whether brand equity is equal among groups in the demographic characteristics of the respondents.
- To check whether brand equity is equal among different brands.
- To identify the variable (s) which are significantly and directly influence the beer brand equity in Addis Ababa market
- To test how the four dimensions of brand equity according to Aaker are related?
- To identify the variable, which creates a negative brand equity value or (liability), up on the beer brands in Ethiopia?
- To identify the brand equity dimension that creates a superior value.

1.5.Limitation of the study

Multistage sampling application may encounter subjective phenomenon was one limitation. It is also gives less precise result than simple random sampling and systematic sampling method. If the sample was proportionately collected based on the market share of each brand the overall finding would have been fairly distributed and relevant accordingly. Response bias would be occurred in a closed questionnaire, since the study employed a self-administered questionnaire as a data collection method. New issues cannot be raised from the respondent. Instead respondents only answer in a way which may not match their actual opinion, since data collection method is a closed questionnaire. In the study, respondents forced to select one brand they prefer most. Therefore, the issue of equally multi-loyal customers was not being properly addressed. Since the data were collected from hotels, restaurants and cafeterias, and pubs there is almost null probability that beer drinkers who take away what they drink to their own home don't covered as the unit of analysis.

1.6.Significance of the study

The beer market of Ethiopia is currently growing highly and the investment made by both local and foreign companies reached a level of amazing rate than ever before. It is more than 9 billion capital rough figures according to the MOT report (MOT, 2013). Though the basic product is similar different beer brand producers will be able to compete with marketing strategies of intangibles like branding. Since , to measure is to know the status, it helps in identifying the major independent variable that create significant brand equity of that brand and will be able to cultivate on that as a competitive tool. Still, identification of which factor creates an asset for the company to extend the brand, increase sales and territory as well as financial benefits identification.

In connection, a brand equity dimension that levies a liability up on the brand shall be addressed with appropriate marketing strategies. Academicians as well practitioners may get an insight about the measurement of brand equity in beer market of Ethiopia that focused in Addis Ababa. The researcher acquired and developed research conducting skill.

1.7.Delimitation/scope of the study

The study is limited to measuring consumer based brand equity of beer industry of Ethiopia, especially that of Addis Ababa. Measurement techniques like that of financial, or firm is not the concern of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The related literature review part is composed of definition of brand and brand equity, various models available in the literature to measure brand equity, David Aaker'S CBBE model with the flux of dependent and independent variables and an over view of Beer industry market of beer brands of Ethiopia.

2.1. Definition of Brand and Brand equity

2.1.1 Definition of Brand

It is hard in marketing literature to find a single and concise definition of both brand and brand equity. L.Rogers, Bernd H. Schimtt and David (2008) believed that term 'brand' is used broadly to refer to a "*branded product (for example, Diet Coke), service (for example, UPS), retailer (for example, Gap Kids), company (for example, IBM), person (for example, a politician, celebrity), organization (for example, the Boy Scouts), group (for example, a sports team), or place (for example, a city brand*)"

According to Kapferer (2008) *"brands are intangible assets, assets that produce added benefits for the business"*. This definition tried to see brands as valuable to the firms mainly from financial perspective. Brands will results in higher returns to the business since premium price can be set and claimed by the business of a product with brand than with a generic brand. These notions further strengthen by Keller (Keller, 2003) on" *a product, but one added other dimensions that differentiate it in some way from other products designed to satisfy the same need"*.

A legal protection and the added value point view of the brand also further forwarded by Philip Kotler and Armstrong (2012) in the following definition: "A brand is *a name, term, sign, symbol, or design, or a combination of these, that identifies the maker or seller of a product or service*. Consumers view a brand as an important part of a product, and branding can add value to a product. Customers attach meanings to brands and develop brand relationships. Brands have meaning well beyond a product's physical attributes.

Similarly, Aaker (1991) defines brand in a perspective of identification and differentiation product/service by the customer from the competitor. For a brand is a portion of an intangible asset that offer a sustainable competitive advantage over the competitor. In addition, brands are built now for the purpose of earning a long-term benefit. In the context of total experience of the consumer towards a given brand, Schmitt, B. (2003) defined brand as "the sum of all associations customers have with a certain product or service"

In connection with this, Kapferer (2008) presented the benefits of brands both for final and Business consumer as one entity and the firm as another entity. To the final consumers brands offer the recognition, expediency, assurance, optimization, symbol, continuity, and hedonistic benefits'. For distributors a brand is a promise of recognition signal, Practicality of choice, optimization of choice, pleasure for different categories of brands. The firm (manufacturer) also obtains a number of benefits. To mention a few, brand avoids risk, increase the likelihood of setting high price stability of future sales. In support of this, For Dyson brand is mental relationship that will be developed with final user or industrial users P.Dyson, A. Farr and N.S.Hollis (1996)**.**

Andreas Buchholz and Wolfram WÖrdeman (2001) stated that successful brands build on the establishment of five portals in the brains of the consumers. The five portals are represented by factors such as product features and promises, norms and values, perceptions and programs, identity and self expression, and emotions and love. Some gurus are arguing that as business environments are changed so brands do change. As per Philip Kotler, Hermawan Kartajaya and Iwan Setiawan (2010) The forces that change the business landscape are three and indicated by Kotler as "the age of participation", "the age of globalization paradox" and "the age of creative

society" . As a result, recently brands are broader than an association of customers with certain product and service.

In other words, the scope of branding is so widening and includes the role of consumer and stake holders than the sole brand ownership claimed by firms. Brands here, must address multiple audiences, brand values must be lived from within and brands are currently built on via interactive relationship with the customer due to information communication technology developments. . As per Vallaster, Dr Claudia Fisher-Buttinger and Dr Christine (2008) a *brand is the sum total of relationships among stakeholders, or the medium through which stakeholders interact and exchange with each other*. According to Kermally, Sultan (2003) a brand is considered to be a legal instrument, a logo, a company, an identity, a consumer perception, a personality, or a relationship. It, therefore, has many perspectives. According to Ellwood, Iain (2003) Brands acts as a kind of flag, waving to consumers, creating awareness of the product and differentiating it from other competitors.

A more broad definition of brands is forwarded by Tilde Heding, Charlotte F. Knudtzen and Mogens Bjerre **(2009)** from 7 different approaches. The seven approaches are:

1. *The economic approach*: the brand as part of the traditional marketing mix. This approach assumed that, the consumers to make primarily rational decisions and the interactions with the consumer are standalone isolated rather than ongoing relationship. These premises make the utility attributes as the brand has to offer judged against its price relative to competitors, level of awareness and recognition, and the accessibility of brand. The attributes related to the four P's are the main mechanisms behind the creation and management of brand equity.

2. *The identity approach*: the brand as linked to corporate identity. It brings into focus the creation of a unified visual and behavioral identity. It is assumed that consumers attribute theory. Identity characteristics to companies and that people form images of companies based on total experience of the company. This places the corporation and its employees at the center of brand equity creation.

3. *The consumer-based approach*: the brand as linked to consumer associations. In this approach the brand is analyzed as a cognitive construal. The two priory approaches the internal formation strategy in contrary CBA introduces an outside- is approach to a brand management. Brand value creation talks place by molding the brand associations held in the consumers' minds, understanding the consumer is hence central in this take on brand value creation; but it is important to notice that the approach implies a specific view on the consumer. The consumer is analyzed by means of theories adopted from cognitive psychology and the information-processing theory of consumer choice.
4. *The personality approach*: the brand as a human-like character. This approach in brand management focuses on how and why people choose brands with certain personalities and how imbuing brands with personality thus can be a powerful tool to create and enhance brand equity.

5. *The relational approach*: the brand as a viable relationship partner. The brand relationship theory is based on a 'dyadic' brand–consumer relationship, implying an equal exchange between brand and consumer. Both parties contribute to brand value creation, which takes place in an ongoing meaning-based exchange.

6. *The community approach*: the brand as the pivotal point of social interaction. Consumers form communities around brands. In brand communities a brand is a focal point of social interaction among passionate consumers. These consumers use the community to share their brand experience and brand stories. The brand approaches of the 1990s (the CBB approach, the personality approach and the relational approach) dealt with the exchange between one marketer and one consumer. Marketers can benefit from a brand community in many ways. The marketer can reap benefits either by observing brand communities and extracting brand meaning or by facilitating consumer's interaction through a brand community.

7. *The cultural approach*: This approach emphasizes the cultural forces in society and how these can be used to build iconic brands as well as the impact of branding practices on the globalized culture and market place.

2.1.2 Definition of Brand Equity

Similar to branding despite years of research over more than two decades, the meaning, boundaries and measures of brand equity is still contentious. This lack of consensus is reflected in the numerous measures and theoretical perspectives (for example, customer-based, product market-based, and financial marketplace-based) that underlie the brand equity construct. For example, a consensus has not emerged on whether brand equity refers to the value of a brand name or the value of a brand which is denoted by a brand name. Such lack of definitional clarity has serious measurement implications as different definitions of the term 'brand equity' would clearly imply different measures For example, the net difference approach between a target brand and a fictitious/generic/private label brand reflects the value of a brand name, not the value of a brand. L.Rogers, Bernd H. Schimtt and David (2008)

Kapferer (2008) (as quoted Feldwick, 1996) and defined brand equity from three perspectives: brand assets, brand strength and brand value. The first, brand assets are the sources of influence of the brand (awareness/saliency, image, type of relationship with consumers) and patents. Brand strength is the second perspective of defining brand equity. It is at specific point in time as a result of brand assets within a specific market and competitive environment. They are the "brand equity outcomes' if one restricts the use of the phrase brand equity to brand assets alone. Brand strength is captured by behavioral competitive indicators: market share, market leadership, loyalty rates and price premium (if one follows a price premium strategy). The third stand point is how the ability of the brands to deliver profits it is called brand value.

According to Leuthesser, L. (1988) The marketing Science institute defined brand equity as the set of associations and behaviors on the part of the brand's consumers, channel members, and parent corporations that permits the brand earn bigger volume or bigger margins than it would devoid of the brand name and that gives the brand is tough, sustainable, and differentiated advantage over competitors. But for (Aaker ,1991) BE is the value of consumers associate with a brand, as reflected in the dimensions of brand awareness, brand associations, perceived quality, brand loyalty and other proprietor brand asset. Kapferer (2008) on the other hand, states that positive brand equity may be indicated by four assets. These are aided brand awareness, spontaneous brand

awareness, evoked set also called consideration set, and whether the consumer experienced the brand or not.

Measuring is a derivation of brand building. Meaning what you measure is what you laid down and a comparison of what you planned and what you performed. In this context**,** Kevin (2005) identified six components of brand equity. These are familiarity, differentiation, relevance, performance, empathy and popularity. Defining each dimension may give us a base to compare with the conceptual frame work of this study. The first, familiarity is the clarity of what a brand stands for and the strength of communication of what it stands for. The author states that it includes aided and top of mind awareness. The second one is differentiation. It is a strategy in which product offering is a different from that of one or more competitors in a way that is valued by the customers or in some way affects customer choice. If you fail to offer anything different from your competitors, then there is no reason for consumers to consider switching to your brand. This point of difference needs to provide value to the customer that is substantial enough to matter, customers must realize that the value exists, and the resulting advantage needs to be sustainable (Aaker,1992).

Kevin (2005) Relevance (3rd) is about whether the brand meets the emotional and rational needs of the consumer and also consumers decision to consider it as in a purchase category; whereas, Performance (4th) is the functional aspect the brand where consumers are distinguishing it from emotional aspects. Finally, empathy (5th) represents the emotional side to quality, a complement to the 'performance' side. To some extent it goes with relationship building at the higher levels of the needs map, whereas performance tends to emphasize the lower levels of the map. Popularity (6th) means an emotional connection with a customer, a feeling of closeness and liking the brand.

Brands act as a signal or cure regarding the nature of product and service quality and reliability and image/status. As per Kamakura W. and Russel G (1993) CBBE occurs when the consumer is familiar with the brand and holds some favorable, strong, and unique brand associations in memory. Keller (2003) states brand equity as the "*differential effect of brand knowledge on consumer response to the marketing of the brand".* Brand knowledge is the full set of brand associations linked to the brand in the long-term consumer memory. Leuthesser (1988) on the other

hand defined brand equity as the consumer's perception o the overall superiority of product carrying that brand name when compared to other brands. Five perceptual dimensions of brand equity include performance, social image, value, trustworthiness, and attachment.

Aaker (1996) later defined brand equity as a set of 10 elements. These are: (1) loyalty (brand's real or potential price premium), (2) loyalty (customer satisfaction based), (3) Perceived comparative Quality, (4) perceived brand leadership, (5) Perceived brand value(brand functional benefit's) , (6) Brand personality , (7) consumer's perception of organization (trusted, admired or credible), (8) Perceived differentiation to competing brands , (9) brand awareness (Recognition and recall), (10) Market position (market share) , prices and coverage.

As a summary the brand equity definition posited by (Aaker, 1996) is worthy to discuss. He defined brand equity as "a set of brand assets, and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or a service to a firm and/ or to that firm's customers."

The above definition singles out that when brand equity dimensions, whether name or symbol, are strong the brand equity can be considered as an asset of the firm. As an asset the brand can command higher price, the brand can be sold above the infrastructure of the firm, competitors would be forced to incur huge amount of money to compete. Furthermore, the consumers are less likely to shift the brand because it offers values to them like functional value, avoidance of perceived risk, information processing, confidence and symbol. The company may further strength the customer base to extend brands (Aaker,1996) , (Kotler and Keller, 2012) and (Aaker ,1991). on the contrary when the brand strength is decaying the company will lost its customers to other competitors, the image will be eroded and the value of the company will be below the sum of tangible and intangible balance sheet accounts. Incurring a huge expenditure related to marketing communication, creating an effective channel, revising pricing techniques, and as well packaging will be a must in order to re-brand and revitalize its brand and gain competitive position again. All these show negative brand equity where it's a liability that will be paid in short and long term period (Aaker, 1996), (Kotler and Keller, 2012) and (Aaker, 1991).

2.2 A review of measurements of Consumer Brand Equity Models

Measuring brand equity is one of the key tasks in brand management. Because brands decay overtime, they must be revitalized. To extend a brand in to similar of totally different new brand, measuring the key strength of the parent brand is a most before doing any extension. Failure is an unbearable for a brand because the financial loss is too severe. But, a dozen of conducted researches were and still unable to arrive at one conclusion about what are the dimensions of and how to measure brand equity (Keller, 2003), (Kotler and Keller,2012) and (Aaker ,1991)

Some of scholars for example, classify brand equity measurements as of financial and consumer based. Chris Myres A. (2003) stress on the financial perspectives focus mostly on stock prices or brand replacement. It is used to estimate the value of the brand more precisely for accounting purposes (in terms of asset valuation for the balance sheet) or for merger, acquisition or divesture. Other researcher, who were and still dominant on the field, tries to measure brand equity from the consumer perspective.

In 1991 and 1996, Aaker argued that brand equity should be measured from the perspective of the consumer. The stronger the brand awareness, brand loyalty, and brand association the higher the financial value will be. In other words the value of the brand equity dimensions (i.e. especially brand awareness, brand loyalty, brand association and perceived quality) are the bases on which the financial value of the firm will depend. The CBBE model of Aaker (see Figure 5 at the appendix), often called the "five asset Brand Equity model". It is one of the most accepted models used to build, maintain, sustain, and measure brand equity over time.

Aaker (1991, 1996) the first element of brand equity, brand loyalty, will help firms by reducing marketing costs. Costs such as, promotional and distribution costs (trade leverage). For example, the costs of brand awareness could be minimized if the customers are loyal and sometimes loyal customers also influence others to accustom with the brand. In other words, loyal customer base will enhance to attract new customers by minimizing perceived risk of the new comers. One of the characteristics of loyal customers is that their resistance to better competitor offers both in value

and communication. This in turn, will give extra time to develop a cutting-throat or me too products.

Aaker (1991, 1996, and 1992).The second dimension of brand equity according Aaker model is brand awareness. Brand awareness can an anchor to which other associations can be attached, familiarity or liking about the brand could be developed, it may signal substance or commitment of the company/brand and help consumers to consider the brand in the purchase category. The third determinant of brand equity, perceived quality, which is difficult to measure in service business than merchandise may offer a number of benefits for the company. Because consumers took quality as a justification of their buying, a base to conquer consumer mind as the tip of hand brand awareness, enable the company to extend its brands since consumers faith on the quality the earlier products/ services will be projected and still enable both the manufacturer and trader to command premium prices.

As per Kotler and Armstrong (2013) described that brand association also offers similar benefit with perceived quality. Some authors use brand awareness and brand image interchangeably. It creates positive attitude and feelings, and help consumers to acquire, and process huge data of information about hundreds and thousands of different brand communication messages.

Similarly, Keller (2003) emphasizes the role of measuring consumer based brand equity to the benefits of the firm in terms of both long term and short term basis. He added that, measuring CBBE is strategic in nature and help to improve marketing productivity. Keller defined BE as "*the differential effect on brand knowledge on consumer response to the marketing of brand".* Keller believed the sources of brand equity are brand knowledge and brand association. Brand knowledge, the higher the familiar with the brand with some kind of favorable, strong and unique association in memory the higher the value of the brand equity will be. This construct is based on the associative network memory model.

According to Keller (1993, 2003) the *associative network memory model* views memory as consisting of a network of nods and connecting links, in which nodes represent stored information or concepts and links represent the strength of association between this information and concepts.

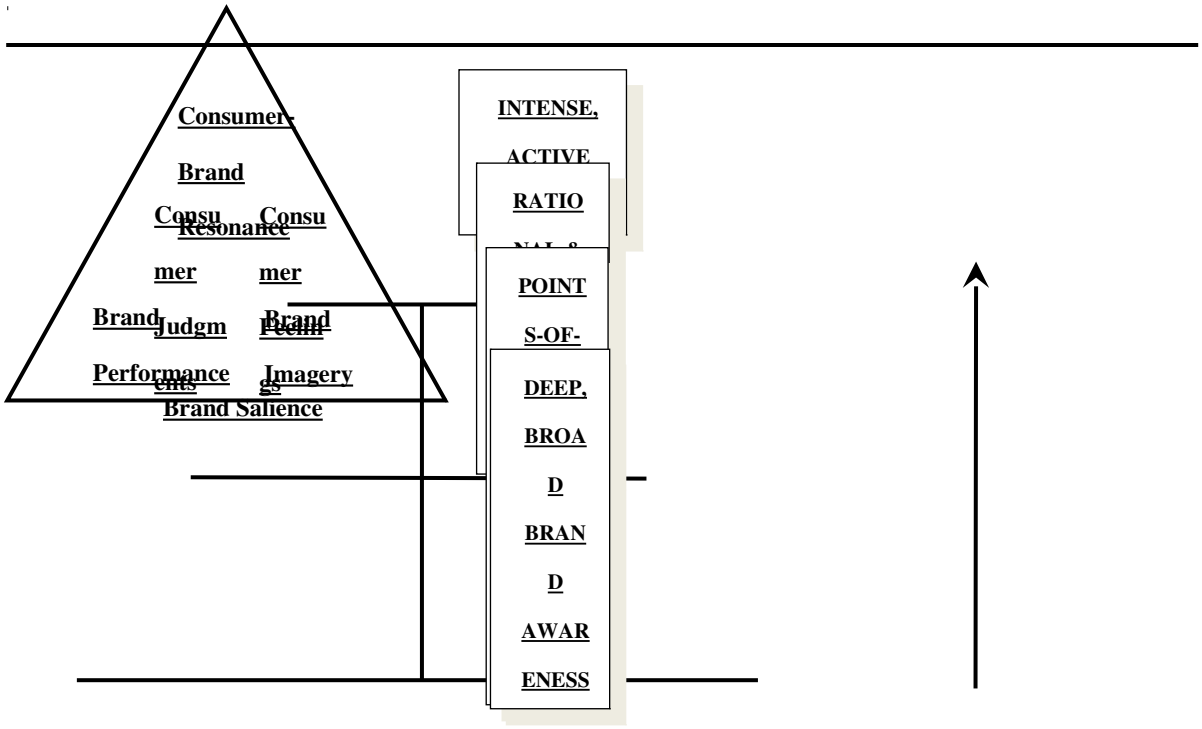
Any type of information can be stored in the memory network, including information that is verbal, visual abstract, contextual in nature.

Consistent with, the associative network memory model Keller (1993, 2003) conceptualized brand equity from perspective of individual consumer brand knowledge. Moreover, the knowledge of consumer about brands affects the marketing brand strategy of firms. Brand knowledge is not the facts about the brand – it is all the thoughts, feelings, perceptions, images, experiences, and so on that becomes linked to the brand in the minds of consumers about the brand. In this model, brand knowledge is composed of brand awareness and brand associations (image). Brand awareness is related to the strength of the brand nod or trance in memory, as reflected by consumers' ability to identify the brand under different conditions. Brand awareness is necessary, but not always sufficient, step in building brand equity.

Keller (2003), Kotler and Keller (2012) defined brand image as perceptions about a brand as reflected by the brand associations held in consumer memory. In other terms, brand associations are other informational nodes linked to the brand for consumers. Associations come in all forms and may reflect characteristics of the product or aspects independent of the product itself. Brand image is expressed as the function of the type, favorability, uniqueness and strength of associations between the brand and the consumers.

The CBBE measurement approach argued by Keller (2003) is an indirect approach, which tries to identify potential sources of customer-based brand equities distribution channels, the effectiveness of marketing communications, and the success of brand extension by measuring brand awareness and the characteristics and relationships among brand associations. The direct approach focuses on consumer response to different elements of the firm's marketing program.

Figure 1: CBBE Keller Model



Source: Consumer Based Brand Equity Model (Keller K. L., 2003)

Keller (2003) proposed that strong brand equity can be created by following the CBBE model (pyramid) (Figure 1). Brand salience is the first component that relates to the brand awareness aspects. It answers who the brand is. Brand performance is the second element in Keller CBBE pyramid. It relates the ways in which the product or service attempts to meet customer's more functional needs. Brand imagery is about how consumers are thinking of about a brand abstractly. The third level of hierarchy includes judgments and feelings. The former focus on customer's personal opinions and evaluations with regard to the brand; whereas feelings are customer's emotional responses and reactions with respect to the brand. The fourth element of the pyramid is about brand resonance. It focuses on the ultimate relationship and level of identification that the customer has with the brand.

The second consumer based brand equity model (see figure 2) developed by Anne Martensen and Lars GrÈnholdt(2000) named **cause-effect model** that links customer –based brand relationships to rational and emotional brand associations, as well as rational and emotional brand evaluations. The

customer-based brand relationships are characterized by loyalty, based on both behavior and attitude.

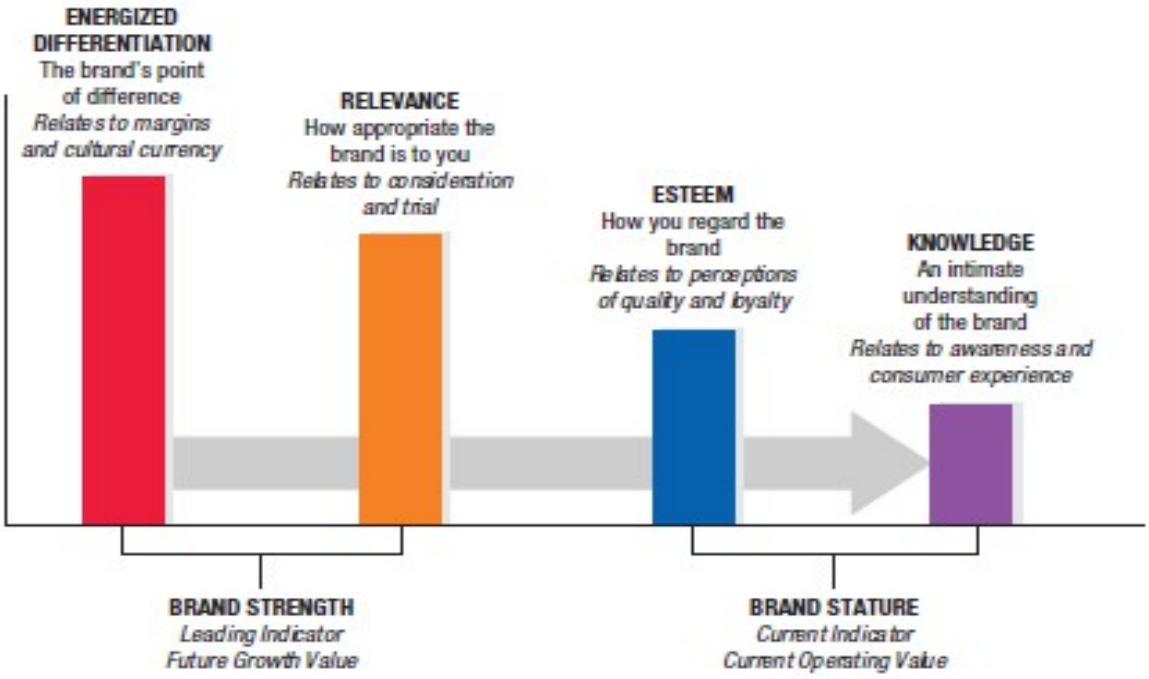
Gronholdt (2000) As it is displayed in figure 2 below, the cause and effect model links the final variable, customer-based brand relationships, to the drivers rational brand evaluations and emotional brand evaluations, which are in turn linked to the product quality, service quality, price, and brand premise, brand differentiation and brand trust and credibility. The model proposes two routes to creating brand strength; rational and an emotional route, as well as a combination of these routes.

Figure 2: Cause and Effect CBBE model

Source: Understanding and Modeling Brand Equity: PP: 75 (Gronholdt ,2000)

The third CBBE model is that of Aaker. The author proposes brand equity is depended on four determinants. These are brand awareness, brand association, brand loyalty and perceived quality. (Aaker ,1991). This study used this model to measure the brand equity and identify the determinants of brand equity in brewery market of Ethiopia. (Figure 7)

Figure 3: BRAND ASSET ®VALUATOR MODEL



Source: BRAND ASSET ®VALUATOR MODEL Kotler and Keller, 2012 PP: 246

Kotler and Keller (2012) discussed the fourth consumer based brand equity measurement model, recent one, which is called Brand Asset ®Valuator (BAV) Model was forwarded by BRANDASSET®VAUATOR Advertising Agency (**see figure 3**). The agency identified four pillars of brand equity; namely: energized differentiation, Relevance, esteem and knowledge. Energized differentiation is the brand's point of difference relate to margins and cultural currency. But, relevance is how appropriate the brand is to the consumer relates to consideration and trial. It is about whether the brand can be considered in purchase decision. Esteem refers to how the brand is perceived in quality and loyalty. If it is about the intimate understanding of the brand relates to awareness and consumers experience, it is called knowledge.

As per Kotler and Keller (2012) in figure 3 above model brand strength, which is the leading indicator of future growth value, is composed of energized differentiation. Similarly, the current indicator for current operating value (i.e. Brand stature) is made up of esteem and knowledge. Brand strength components from energized differentiation than relevance show more value than brand stature components, where esteem is better future value indicator than knowledge.

2.4. Conceptual (theoretical) Frame work of the study

The researcher used Aaker brand equity measurement model as a conceptual (theoretical) framework of study (See Figure 4 below) to test the hypotheses (Aaker, 1991) ,(Keller ,2003) scholars of brands like Aaker and Keller believe that there are two kinds of measuring brand equity: direct and indirect. The first one, direct measure intends to know the consumer response towards the marketing efforts of the firm. But, indirect approach tries to see the opposite. That is, measurement of consumers brand perception about a particular brand reflects the marketing and financial performance of the firm.

Aaker's (1991, 1996) five assets CBBE model was an indirect measurement approach that later named to Ten Equity Model consists of five determinants of brand equity. These are: Brand awareness, brand loyalty, brand association, perceived quality and other proprietary assets. Except the last dimension all four are a flux of consumer perception and behavior while the last one is of a firm's side. All five are independent variables that affect brand equity, which is the dependent variable. The conceptual framework (figure 4) would give a glimpse on the structure of the study. In addition the figure may show the hypotheses developed in order to test its relevance in the beer market of Ethiopia (more specific of Addis Ababa) diagrammatically.

2.4.1. Dependent Variable

According to (Aaker, 1991) brand equity is the dependent variable in this paper. It is a consequence of brand awareness, brand association, brand loyalty and perceived quality in the content of consumer based brand equity.

2.4.2. Independent Variables

2.4.2.1. Brand awareness

Brand awareness is the ability of a potential buyer to recognize or recall that a brand is a member of certain product category. It is related to the strength of the brand node or trace in memory as reflected by consumer's ability to identify the brand under different conditions. It consists of brand recognition and brand recall performance. Brand recognition relates to customers' ability to

confirm prior exposure to the brand when given the brand as a cue. Brand recall relates to consumers ability to retrieve the brand from memory when given the product category, the needs fulfilled by the category or a purchase or usage situation as a cue (Aaker,1996), (Keller, 2003). Aaker posited the awareness pyramid where unaware of the brand as the lowest and goes up to brand recognition, brand recall and top of mind awareness.

Keller (2003) brand recognition is based on the aided recall test. Respondents, perhaps in a telephone survey, are given a set of brand names for a given product class and asked to identify those that had heard of before. Thus, although there needs to be a link between the brand and the product class, it need not be strong. Brand recognition is a minimal level of brand awareness. It is particularly important when a buyer chooses a brand at the point of purchase.

Keller (2003) putted as the next level of brand recognitions is brand recall. It is based upon asking a Person to name a brand in a product class; it is termed "unaided recall" because, unlike as in the recognition task, the respondent is not aided by having the names provided. Unaided recall is a substantially more difficult task than recognition, and is associated with a stronger brand position. A person can recall many more items on an aided recall basis than then unaided.

The first-named brand in an unaided recall task has achieved top-of-mind awareness, a special position. In a very real sense, it is ahead of the other brands in a person's mind. (Of course, there may be another brand close behind).

Brand awareness according to (Aaker ,1991) creates value in different aspects. It create value via anchoring to which other associations can be attached, familiarity then liking can be obtained, signal of substance commitment and brand to be considered in purchase decision.
Keller (2003) stated the advantages of creating a high level of brand awareness as follows:

1. **Learning advantages: - by influencing the formation & strength of a brand association that makes up the brands image. A necessary condition for the creation of a brand image is that a brand node has been established in memory. The nature of that brand node should affect how easily different kinds of information can become attached to the brand in memory as a brand in memory as brand associations.**
2. **Consideration advantages: - It increases the likelihood that the brand will be a member of the consideration set, a handful of brands that receives serious**

consideration for purchase. Because consumers typically only consider a few brands for purchase making sure that the brand is in the consideration set also means that other brands may be less likely to be considered or recalled.

3. **Choice advantage: - it can affect choices among brands in the consideration set, even if there are essentially no other association to those brands. For example consumers have been shown to adopt a decision rule to buy only more familiar, well established brands in some cases especially for low involvement decision making**.

Other authors also provided explanation as how brand awareness provides competitive advantage. How does brand awareness provide a competitive advantage? Aaker presents the following ways:-

1. It provides the brand with a sense of familiarity and this can be useful especially for low involvement products
2. Name awareness can be a signal of presence, commitment and substance. This is useful even for durables.
3. The initial step in selecting an advertising agency, a car to test drive or a computer system is to decide on which brands to consider. Brand recall can be crucial to entering this group.

A brand carefully installed in the minds of the customer its brand awareness can be an asset that is durable and sustainable. Many studies conducted in how much consumers are familiar with the brands supported this claims. Keller. (2003) the implication is that the establishment of a strong name anchored by high recognition creates an enormous asset. Furthermore the assets become stronger and stronger over the years as the number of exposures and experience grew. This will make difficult for others to compete with this memory of the consumer. (Aaker, 1992)

2.4.2.2. Brand associations

Keller (2003) Brand associations are the other informational nodes linked to the brand node in memory and contain the meaning of the brand for consumers. Associations come in all forms and may reflect characteristics of the product or aspects independent of the product itself. It is anything that is directly or indirectly linked in memory to a brand. In addition to product attributes and customer benefit associations brands gain strategic position by association with use or application,

product users, celebrity, life style & feelings, product class ,symbol, country of origin, other brands, events and so on.

According to Chen A.C.H. (2001) Brand associations can be categorized into two: product associations and organizational associations. Product associations include the functional attributes like performance characteristics, consumers used to link when evaluating the brand. (Keller, 2003) Non-functional attributes like social image, trustworthiness, perceived value, differentiation and country of the origin to the brand. Social image is about consumer's perception of the esteem in which consumers' social group holds the brand. It includes the attributes a consumer makes and a consumer thinks that others make to the typical user of the brand.
Chieng Fayrene Y.L. Goi Chai Lee (2011) as quoted (Lassar, 1995) Trustworthiness is a non-functional association. It is the confidence a consumer places in the firm and the firm's communications and as to whether the firm's action would be in the consumer's interest. Consumers put high value in the brands they trust. Chen (2001) stated organizational associations include corporate ability associations via discharging societal obligations.

Aaker (1991, 1992, and 1996) delineated brand associations as assets that can provide value for companies in several ways. First, brands association can provide an important basis for differentiation. Associating the brand name can provide a unique and distinguishable attribute that will stand the brand differently. Second, brand association can represent a basis for purchase decision and brand loyalty by providing product attributes or customer benefits that provides a specific reason to buy and use a brand. Third, it can also influence purchase decision by ascribing credibility & confidence to a brand by stimulating positive feeling that are transferred to a brand.

Aaker (1991, 1992,1996) fourth, brand association create value through creating a positive feeling during the use experience, serving to transform a product into something different than what it might otherwise be. Finally, it provides the basis for an extension and associations can serve to summarize a set of facts and specification that otherwise would be difficult for the customer to process and access, and expensive for the firm to communicate.

2.4.4.3. Brand Loyalty

Aaker (1991, 1992) labeled brand loyalty is prime enduring dimension of brand equity. Contrary to the brand awareness and brand association brand loyalty may resulted from a perpetual purchase of the brands by the same consumer over time. Brand loyalty is resistance to switch the brand, rather, consumers continue to buy the brand even in the face of competitors with superior features, and price, and convenience, substantial value exists in the brand and perhaps in its symbol and slogans. Brand loyalty is at the of heart brand equity. According to Aaker's brand equity model Aaker (1991) brand loyalty reduce marketing costs, boost trade leverage, attract new customers and offer time to respond to competitive threats.

It is evident in different studies that attracting new customer is more costly than retaining new customers Aaker (1992). First, new customers may lack initiation to change their brand and shift to the new one. Second, customers may have high shifting cost to move from one brand to another brand. Third, it will be still costly to contact new customers because they are not interested to go for searching new substitutable brands. On the other hand, the competitor brand may obtain some time to react to the company offer. Thus, it is advisable for any company, which is customer focused, to die hard to minimize the outflow of loyal customer by addressing their issue at different contexts.

Lancaster (2009) believed that trade leverage is another value obtained from loyal customers. Strong loyalty will create a pressure up on traders to display or avail the brands that the loyal customers are intended to purchase. This commands brand owners to distribute easily and command shelf space for the existing brands up on traders. In addition to this, the command may also goes on even when the company introduces new sizes, new varieties, variations, or brand extensions.

Aaker (1991) described loyal customer as a base also create value for the brand via attracting new customers. New customer perceived risk will be minimized because their colleague or other customer already experienced/ bought ideas, services or products that the new ones are trying to acquire especially for high involvement products. On top of this, personal observation, the loyal customer may act as an opinion leader and able to influence others in their sphere to buy /experience the brand that they consumed. Moreover, a relatively large satisfied customer base provide a base of an image of the brand as an accepted, successful product which will be around and will be able to afford service back up and product improvements. .

Aaker identified different levels of loyalty (Aaker, 1992) the level of loyalty of customers may vary and may imply different meaning for marketers about a given brand. The level will goes up from the lowest of switchers/price sensitive, those are indifferent-no brand loyalty, then to satisfied/habitual buyer but with no reason to change, to satisfied buyer with switching costs, to those who like brand and considers it a friend and finally a committed buyer. Loyalty Status Marketers usually envision four groups based on brand loyalty status.

Kotler and Keller (2012) classified loyal customers in to four. One, hard-core loyals, consumers who buy only one brand all the time. Second, Split loyals, consumers who are loyal to two or three brands. Third, shifting loyals are consumers who shift loyalty from one brand to another. Finally, switchers are consumers who show no loyalty to any brand.

2.4.4.4. Perceived Quality

Keller (2003), Aaker (1991) defined perceived quality as customers' perception of the overall quality or superiority of a product or service relative to relevant alternatives and with respect to its intended purpose. In the long run, the most important single factor affecting a business unit's performance is the perceived quality of its products and services related to those of competitors.

Gronroos (1996) stated that the customer perceived quality is basically a function of the customer perceptions of two dimensions: the impact of the outcome or the technical solution (what the customer receives), and an additional impact based on the customer's perception of the various interactions with the firm (how the so called "moments of truth" are perceived). The former quality dimension is sometimes called the technical quality of the outcome or solution, whereas the latter dimension is called the functional quality of the Interaction process.

Lancaster 2009) , Aaker (1991) the product quality dimensions may include the performance, durability, conformance to specifications, features, the name, reliability, serviceability and fit and finish. The service quality dimensions on the other hand include tangibles, reliability, responsiveness, competence, empathy.

Lancaster (2009), Aaker (1991) delineated that the quality of any brand is a key to build, sustain measure and revitalize the brand equity over time. In other words, perceived quality is one of the critical dimensions of brand equity. The fighting of maintaining brand loyalty, store versus manufacturer depends on the perceived quality of the brand. There may be a number of reasons/bases for such perceived superiority, e.g. superior quality, better delivery and after-sales services, the availability of credit, or some combination of these or other factors. In discussing possible reasons for brand/supplier loyalty, we enter the realms of motives, perceptions, attitudes, etc., and more complex behavioral areas. Different authors agree that perceived quality will help to create positive and strong brand image. Strong brand image in turn plays a significant role in creating brand loyalty (Lancaster, 2009).

2.5. Variables and Measurement Scales

This study employ a five scale likert scale with 1 "strongly disagree" to 5 "strongly agree". The most accepted and standardized multilevel brand equity measurement scale proposed by (Yoo and Donthu, 2001) was used as backbone of measurement scale. In addition a detailed review of relevant literature regarding with brand equity dimensions and their constructs the measurement scale being developed.

First in order to measure brand awareness, the researcher used five items proposed by (Yoo and Donthu, 2001) and Richard G. Netemeyer, Balaj Krishnan, Chris Pullig, Guangpink Wang, Mehmet Yagci, Dwane Dean, Joe Ricks, and Ferdinand Wirth (2004). Brand awareness is about the recall and recognition of the brand whether the whole element of the brand or some of its features in comparison with the competitor brands. Second, three constructs from (Yoo and Donthu, 2001) taken so as to measure the consumer's resistance to shift the beer brand.

The measure the third dimension of consumer based brand equity, perceived quality, issues such as consistency, credibility and excellent functionality of the perceived quality facets are taken from the (Yoo and Donthu, 2001) and (Ravi Pappu, Pascale G. Quester, Ray W. Cooksey,2005)

According to Aaker ten asset brand equity model brand association, which is the fourth dimension of consumer based brand equity model, can be explained through the brand personality, organizational association and perceived value constructs. The former two measurements scales are taken from the same. And finally, the overall brand equity constructs, but taken from (Yoo and Donthu, 2001)

2.6. Over view of Beer and Brand Equity

According to the mill ward brown top 100 brandz brands involved in technology were the top three. The first is Apple with the brand value of 185,071 million dollar. The second one was Google with a brand value of 113,669 and the third one IBM with the brand value of 112,536 million dollar. Measuring the value of brands such as in the above may indicate to what extent their brand building, sustaining, and measuring strategy is so magnificent. The measured value of their brand will surely increase the par value of their share holders; create a barrier up on competitors, command shelf space upon distributers.

Although the physical and intangible values of these companies when evaluated may be less than the brand value it will increase the finance similarly, the loyal customers will keep on buying, suggesting others to consumer even at a premium price. Here comes the role of branding and creating strong brand equity (Kotler and Keller, 2012) for more than two decades, although, no agreement of defining and measuring what brand equity mean, there is a high tendency by researchers and practitioners to deal with the concept. But, marketing gurus like Kotler and Keller believe in creating brand equity in sectors like beer (Kotler and Keller, 2012)

As per Kotler and Keller (2012) beer is one of the non –durable goods that needs heavy advertising to induce trial and build preference. Hence, brand equity plays a key role in beer market similar to other beverage products. On top of this Kotler again emphasize the need of heavy advertising as by looking beer in a base of *substitutability*—Brands in less-differentiated or commodity-like product classes(**beer**, soft drinks, banks, and airlines) require heavy advertising to establish a unique image. In the global beer category brands like Brahma increased in brand value from 2,359(2012) into 3803 in (2013) with. From the table we can safely arrive at how the beer industry is growing globally. The same pattern is being exhibited in Ethiopia (Brown, 2014)

During the early government, Economic and market decisions like what to produce? When to produce and for whom to produce were decided by the government. As a result, the breweries were on the hands the state. After privatization a number of breweries were established, and very recently 3 beer brands are come to existent. Currently there are more than 10 brands in Ethiopia. These are St. George beer, Amber Beer, Castel Beer, Meta Beer, Meta Premium Beer, Bedele Beer, Bedele Special Beer, Harar Beer, and Dashen Beer. Most of the beer brands names are given from the source where the breweries are found.

Million (2013) wrote BGI Ethiopia is currently marketing three brands. These are: St. George beer, Amber Beer, Castel Beer. St. George was established in 1922 and located at the heart of Addis Ababa. Meta Abo Brewery is located in at Sebeta around 30 km far away from Addis Ababa. I was established 1963. It markets Meta Beer, and Meta Premium Beer. More recently, it was acquired by Diageo Ethiopia.

Heineken Ethiopia Acquired Harar Brewery and Bedele Brewery. Harar Brewery located in Harar City, at Harare Region of Ethiopia where as Bedele Brewery is located in Bedele, Oromia region, illubabor far away around 500 km from Addis. The company currently marketing beer bands such as: Bedele Beer, Bedele Special Beer, and Harar Beer. Dashen Beer, Found in Northern Gondar, 745 Km far away from Addis currently marketing Dasheen Beer brand.

Table 1: Market share of Breweries in Ethiopia (2010)

Brewery	Market share of Breweries in Addis Ababa	Market share of Breweries in Ethiopia
BGI Ethiopia	64%	48%
Meta	12%	16%
Dashen	11%	13%
Harar	5%	11%
Bedele	7%	10%

Source: Access Capital Reports Based on Industry Experts(2010)

The market share of the beer brand in Ethiopia recently shall be changed because new players are entering to the market. Then after, an operation of competition goes on by positioning different claims. Some breweries claim they have quality, others claim they work with and support farmers, others also claim their brand name shows love. The researchers observed a number of packaging, bill board quality and quantity changes recently as a result of competition. All these, are related with how brand equity is still relevant to the beer sector. They try to increase the knowledge of the consumer about their product that is brand awareness. Some of them are sponsoring National team so that familiarity and likeness can be earned, that is relevant to brand association.

Creating strong brand equity in the beer market is vital. To do so, brand awareness, brand loyalty, perceived quality and brand association are some of the sources that create positive strong brand. The familiar and famous the beer brand through branding endeavors the higher the market share, the strong customer base, less vulnerable to competitors strong offering (Kotler and Keller, 2012), (Keller, 2003), (Aaker 1991, 1992 and 1996).

H2a(+)

H1a(+)

H3a(+)

Figure 4: Conceptual Framework of the Study

H4a(+)

Source: (Aaker ,1991 PP: ii) with own elaboration

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter covers the road map of conducting the paper. It covers the research design, the population and sampling technique, instruments for data collection, and data analysis among others.

3.1. Research Design

A quantitative research is employed as a research design. Quantitative research entails putting a theoretical construct to the test. It is a method of research designed to test a hypothesis (Jan, 2010). This empirical investigation follows the sequence 'theory – hypotheses – data-gathering – analysis – return to theory' which, the researcher aims at, constitutes the typical structure of classical quantitative research (CORBETTA PIERGIORGIO, 2003). Causative research is utilized as a research approach ,because, the empirical investigation tried to see how brand awareness, brand loyalty, perceived quality and brand association influence up on brand equity in beer market of Ethiopia especially that of Addis Ababa.

The study employed cause and effect research strategy. In 2009, CRESWELL, JOHN W. (2009 delineated quantitative strategies involve complex experiments with many variables and treatments (e.g. factorial designs and repeated measure designs). They also included elaborate Structural equation models that incorporated causal paths and the identification of the collective strength of multiple variables.

3.2. Population and Sampling Technique

3.2.1. Population

The population of the study was all beer consumers those are found in Addis Ababa older than 18 years of age, who are consuming beer by in response collection clusters such as hotels, bar and restaurants, and pub.

The sample frame was not an accessible one and the population is unknown. In such cases, for populations that is large, as per (CORBETTA, 2003) to yield a representative sample for proportions. Which is valid where n_0 is the sample size, Z^2 is the abscissa of the normal curve that cuts off an area α at the tails (1 – α equals the desired confidence level, e.g., 95%) , e is the desired level of precision. P=.5 is the maximum variability that the estimated proportion attribute in the population, and q is 1-p (1-.5 =.5). The value for Z is found in statistical tables which contain the area under the normal curve. The resulting sample in this study will be determined as follows.

$$n_0 = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2(.5)(.5)}{(.05)^2} = 384 \text{ respondents}$$

The researcher distributed 384 questionnaires and 322 questionnaires being collected. That is, 83.85% response rate. But, due to >10% in missing value, respondents of extreme values, responses such as with all strongly disagree, disagree, neutral , agree or strongly agree the standard deviation is zero. 17 questionnaires with zero standard deviation were canceled. All in all 305 valid questionnaires were considered for analysis. The response rate was very high like a 30% response rate is considered as acceptable. (Sekaran, 2003)

3.2.2. Sampling Technique

Kothari (2004) defined sampling as the process of obtaining information about an entire population by examining only part of it. Sampling is the procedure through which we pick out, from a set of units that make up the object of study (the population), a limited number of cases (sample) chosen

according to criteria that enable the results obtained by studying the sample to be extrapolated to the whole population. Since it offers cost and time of data collection and analysis, sampling is a day to day practice in social science research.

According to (Bhattacherjee, 2012) sampling is a three stage process from the identification of population to the actual selection of observation or sample.

Figure 5: Sampling Process



Source: The sampling process ((Bhattacherjee, 2012) Social Science Research PP: 66

Kothari (2004) sampling techniques are two in kind. One is probability and the other is non probability. According Jan (2010) a probability sampling is also known as 'random sampling' or 'chance sampling'. Under this sampling design, every item of the universe has an equal chance of inclusion in the sample

The researcher used multistage sampling. It is ideal when it is impossible or impractical to compile a list of the elements composing the population. A single-stage sampling procedure is one in which the researcher has access to names in the population and can sample the people (or other elements)

directly. In a multistage, clustering procedure, the researcher first sample groups or organizations (or clusters), obtains names of individuals within groups or clusters, and then samples within the clusters.

Singh (2006) distinct multistage sampling as a comprehensive and representative method of probability sampling where Stages of a population are usually available within a group or population, whenever stratification is done by the researcher. Multistage sampling earns the following advantages one, it is a good representative of the population. Two, it an improvement over the earlier methods. Third, it is an objective procedure of sampling. Finally, the observations from multi-stage sample may be used for inferential purpose. Some limitations are, one it is a difficult and complex method of samplings. Second, it involves errors when we consider the primary and secondary stages. Finally, it is again a subjective phenomenon.

In this study, it was impossible or impractical to access the names of beer drinkers in Addis Ababa from hotels, , Café & Restaurants and Groceries, which offer beer to its consumers. For one thing, an application of a data base marketing may be required in order to access these names. The researcher used 10 sub-cities of Addis Ababa as a cluster unit with heterogeneous population within but homogenous population with other sub-cities. The ten sub-cities are: Bole, Arada, Gulele, Akaki-Kality, Nefas Silk Lafto, Lideta, Yeka, Addis Ketema, Kirkos and Kolfe Keranio sub- cities as a base in order to select two sub-cities through lottery method. In the lottery probability method, Kirkos sub-city and Nefas Silk lafto sub-city were selected.

Table 2: List of Sample Frame

S.no	Name of the sub-city	Number of Hotels	Number of bar, café and restaurant	Number of groceries	Total
1	Nefas Silk Lafto	65	314	43	422
2	Kirkos	51	310 (including Groceries and pubs)	---	361

Source:(Nefas Silk lafto and Kirkos Sub-City Culture and Tourism Office 2014) own elaboration

The sample allotted to Hotels in Nefas silk lafto sub city was ($\frac{65}{422}$ *193) =30 respondents. In the same manner proportion to the number, groceries $\frac{43}{422}$ *193=20 and the remaining 152 were collected from café, restaurant and bars. An average of 10 respondents were allotted in each strata and using systematic sampling method a number from 0 to 9 were first selected using lottery method. Then 65/30, 43/30 and 152/30th hotels, bar, café and restaurant and groceries were selected among the lists in Nefa Silk lafto sub-cities. Thus, 3 hotels, 2 groceries, and 16 bars, café and restaurant were visited and questionnaires were collected for analysis.

The same procedure was applied for Kirkos sub-city as well. The sample allotted to Hotels were ($\frac{51}{361}$ *192) = 27 respondents were allotted while the remaining (192-27) 165 samples were allotted to bar, café and restaurant. Thus, the 51/27th and 92/65th hotels and bar, café and restaurant were selected as a sample frame so that 3 hotels and 17 bar, café and restaurant were visited in this study to collect a total of 193 response. All in all a total of 384 samples were selected and accordingly structured questionnaires were administered.

3.3. Types of Data and Tools/Instruments of Data Collection

The researcher used both primary and secondary source of information. The former collected from locally manufactured beer consumers in Ethiopia specifically from beer consumers of Addis Ababa via self administered questionnaire. But, the later like company profile, the market share of companies and their brands from ministry of trade, market information form Access Capital and others available in the literature review, and so forth. David A. Aaker (1998). The structured questionnaire was developed mainly based on (Yoo and Bongee, 2001) and (Cristina et al., 2013) with slight adaptation from the review of related literature. Although, the reliability and validity of these standardized scales were tested the researcher made a rigorous reliability and validity analysis using a confirmatory factor analysis method.

3.4. Procedures of Data Collection

A closed structured questionnaire with a 5 scale Likert Scale with a probable responses alternatives of (1) strongly disagree, (2) disagree, (3) neutral, (4)agree, and (5) strongly agree was distributed and collected so as to get a firsthand data from respondent the questionnaire consisted of two parts. The first part of the questionnaire related with socio-demographic and economic variables, which is commonly called general information. But, the second part encompasses the four dimensions of brand equity and the overall brand equity measurement constructs, which are the basic research questions. The questionnaire was translated into Amharic by the researcher and to check its proper translation it was retranslated into English by 4 students, class mates.

3.5. Method of Data Analysis

The researcher used descriptive analysis like mean, percentage and counts and cross-tabulation in order to describe the demographic and general information of the respondents. Similarly, anova test was done in order to check the impact of demographic variables up on brand equity and its dimensions. As well Anova was used to test whether brand equity dimensions significantly vary among mean groups of different beer brands in Addis Ababa beer market. In addition, so as to investigate the correlation among independent variables correlation analysis was carried using SEM. Similarly, the same analysis (in the light of regression) method also employed to see the direction and significance of the independent variable such as brand awareness, brand loyalty, perceived quality and brand association up on the overall brand equity.

Multivariate analysis was carried out in order to measure the influence of brand awareness, brand loyalty, perceived quality, and brand association in relation with brand equity. This empirical investigation posited a causal relationship between dependent and independent variable of the study. Thus, multiple regression was done in order to identify to what extent the independent variables explained or affected the dependent variable. On top of this, the covariance analysis were done to see how these independently variables are jointly affecting brand equity. All these correlation and regression and variance analysis were done using the result and interpretation of SEM by utilizing the SPSS 21 and AMOS 21 output results.

According to Robert Ho (2006) Structural Equation Model “used to describe a large number of Statistical Models used to evaluate the validity of substantive theories with empirical data.

Statistically, it represents an extension of General Linear Modeling (GLM) procedures such as the ANOVA and multiple regression analysis. One of the primary advantages of SEM (Vs. other applications of GSM) is that it can be used to study the relationship among latent constructs that are indicated by multiple measures. It is also applicable to both experimental and non-experimental data, as well as cross sectional and longitudinal data.

As per Wu, Pui-wa and Quing (2007) confirmatory factor analysis was carried out in order to validate the reliability and statistical validity of the measurement model where as SEM takes a confirmatory (hypothesis testing) approach to the multivariate analysis of structural theory, one that stipulates casual relations among multiple variables. The casual pattern of inter variable relations with in the theory is specified a priori. The goal is to determine whether a hypothetical theorized model is consistent with the data collected to reflect this theory."

SEM used three methods in order to test the model fit. One is the χ^2 and the $\chi 2$ / df (normed Chi-square) $\leq$ **4.0.** Second, one goodness of fit index, (e.g., GFI, CFI, NFI, and TLI) all should be > **0.90.** And third, one badness of fit index (e.g., RMSEA, RMSR) **< .10**

In summary, to be more specific, Confirmatory Factor Analysis (CFA) was used in order to analyze and validate the reliability and validity of statistical data. On top of this, structural Path models adjustment indexes like absolute fit measures (indices) including Chi-square test(x2), Root Mean Square Error of Approximation (RMSEA), Goodness-of –Fit Statistics(GFI) and Adjusted Goodness-of-Fit Statistics (AGFI), Root Mean Square(RMS) and Standardized Root Mean Square Residual (SRMSR) were exploited so as to understand the influence of brand equity dimensions considered in this study-brand awareness, perceived quality, brand associations, and brand loyalty up on brand equity. The combination of CFA models with structural path models on the latent constructs represents the general Structural Equation Modeling (SEM) framework in analyzing covariance structures." (Wu ,2007)

A Combination of statistical IBM packages SPSS 21 and AMOS 21 as well Microsoft Excel 2007 were used to code, enter, and screen data. Hypothesis testing were carried out using SEM and come up with a brand equity dimension that affect brand equity positively and significant in the beer market of Ethiopia; especially Addis Ababa context.

3.6. Reliability and Validity issue

In the study the items/constructs were adopted from (Yoo and Bongee, 2001) in that the reliability and validity of the study were checked. But, CFA needs rigorous validity and reliability analysis and that was carried on accordingly. In order to assess the measurement model reliability and construct validity of the study was conducted. Construct validity in CFA involves whether the data set and theory were passed validity checkups such as convergent validity, discriminant validity, face validity and Nomo logical validity.

The convergent validity is the extent to which indicators of a specific construct "converge" or share a high proportion of variance in common. To assess the convergent validity of the input data the researcher examined construct loadings and variance extracted (AVE). Both measurements were found to be above the ideal cut off point, 0.7 and 0.5 respectively. The results indicate that the CFA model is so reliable in order to develop a structural equation model. The detail analysis of this part is found in the data analysis part.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter covers the data analysis and finding part of the study.. It encompasses the general information analysis of the respondents and the basic questions result analysis. Reliability and validity analysis based on confirmatory factor analysis also presented here. Besides, the structural equation analysis as well portrayed. The discussion of findings still presented at the end.

Introduction

This study tries to investigate the dimensions that affect brand equity in the beer market of Ethiopia, (in case of Addis Ababa). The study hypothesized the four independent variables (Brand awareness, brand association, perceived quality and Brand loyalty) have a significant and positive impact on Beer brand equity of Ethiopian market. This causal relationship between brand equity dimensions and brand equity model were taken from Aaker's Brand Equity model (Aaker, 1991). To do so, CFA and SEM were used to fit the construct model and the cause and effect model respectively. Doing so, result in how these variables are related and significantly or insignificantly affecting the brand equity. The studies find out that, brand loyalty, perceived quality and brand association have direct and high significant impact up on the creation of Ethiopian beer brand equity. the anova analysis on the other hand, shows that brand equity dimensions vary among mean groups of different brands.

4.1. General information of the respondents

The researcher distributed 384 questionnaires and 305 valid responses were taken for analysis purpose. The response rate is 79.22% after the data is being screened from 322 respondents. Faulty 17 responses were excluded from the analysis. A percentage and frequency characteristic of the respondents is presented in the following subsequent tables.

Table 3 Frequency Table

		Age of the respondents	Gender of the respondents	Educational level of the respondents	Monthly income of the respondents	Marital Status of the respondents	employment status of the respondents	brand preference of the respondents	Habit of beer drinking of the respondents
N	Valid	305	305	305	305	305	305	305	305
	Missing	0	0	0	0	0	0	0	0

Source: Survey SPSS result (2014)

Table 4: Age and Gender of the respondents

	Age	Frequency	Percent	Cumulative Percent
Age of the respondents	"18-25"	68	22.3	22.3
	"26-30"	96	31.5	53.8
	"31-35"	59	19.3	73.1
	"36-40"	50	16.4	89.5
	"41-50"	21	6.9	96.4
	>51	11	3.6	100.0
	Total	305	100.0	
	Sex	Frequency	Percent	Cumulative Percent
Gender of the respondents	"Male"	223	73.1	73.1
	"Female"	82	26.9	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

In table 4 the age of respondents are found to be 22.3% (68) 18-25, 31.5% (96) were 26-30, 19.3 %(59) of them were 31-35, 16.4% (50) were between the age of 36 and 40; while 6.9% (21) were between 41 and 50 and the remaining 11 (3.6%) were above the age of 51 years old. In the same table it can be observed that the maximum percentage of the respondents 31.5 %(96) were between 26-30 years of age where as the minimum age range lies above 51 years of old with 3.6 % (11). In the same table the number of male respondents was 73.10 %(223) and the remaining 26.9 % (82) were female respondents. That is, in this investigation the numbers of male beer consumers are as much three times as female beer consumers.

Table 5: Educational level of the respondents

Educational level of the respondents				
		Frequency	Percent	Cumulative Percent
Valid	"below secondary School"	19	6.2	6.2
	"Finished Secondary School"	73	23.9	30.2
	"Diploma"	101	33.1	63.3
	First Degree	88	28.9	92.1
	Second Degree	19	6.2	98.4
	Doctor of Philosophy	5	1.6	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

Table 5 shows that the almost all of the respondents' educational level is above secondary school. Accordingly, 6.2% (19) responded below secondary school , 23.9% (73) responded finished secondary school, 33.1 %(101) of them were diploma holder, 28.9% (88) of them were first degree holders and 6.2(19) and 1.6(5) were second degree and third degree holders respectively. The data shows most of the respondents, who drink beer, were at least diploma holders. Put it in number, Diploma holders and First degree holders constitute 62% (189) of the entire respondents. The results imply the verbal and non-verbal marketing communication efforts can be reached easily. At the same time, branding communication should not focus on one side positive message as well emotional appeal, rather a two way message and a balanced mix of emotional and rational appeal. Moreover, it strengthens the validity of the finding.

Table 6: Monthly income of the respondents

		Frequency	Percent	Cumulative Percent
Valid	0-2ooo	80	26.2	26.2
	2001-4000	126	41.3	67.5
	4001-6000	54	17.7	85.2
	6001-8000	12	3.9	89.2
	>8000	33	10.8	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

In table 6 it is found that 26.2 %(80) of respondents earn o up to 2000 monthly income, 41.3 % (126) respondents earn between 2001 and 4000, 17.7 % (54) respondents earn between 4001 and 6000, 3.9% (12) respondents earn between 6001 and 8000, and the remaining 10.8% (33) earned a monthly income of more than 8000 birr. Most beer consumers lay in the range of 2001-4000 monthly income range.

Table 7: Marital Status of the respondents

Marital Status of the respondents				
		Frequency	Percent	Cumulative Percent
Valid	Married	114	37.4	37.4
	Single	168	55.1	92.5
	divorced	15	4.9	97.4
	widowed	8	2.6	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

Regarding the marital status of the respondents table 7, above, shows that 37.4% (114) of the respondents were married, where as 55.1(168) the respondents were single. Those who responded divorced and widowed were 4.9 %(15) and 2.6% (8) respectively. In the same table, it is witnessed that more than half of the respondents were single. The marketing efforts may include messages that are suitable to single individual might be appropriate.

Table 8: employment status of the respondents

employment status of the respondents				
		Frequency	Percent	Cumulative Percent
Valid	employed	220	72.1	72.1
	self employed	69	22.6	94.8
	unemployed	16	5.2	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

The above table 8 shows that 72.1 % (219) responded employed, 22.6 %(69) replied self employed and the remaining 5.2 % (16) responded unemployed. In the same table it is observed that, most of beer consumers were found to be employed.

Table 9: brand preference of the respondents

brand preference of the respondents			
Beer Brands in Ethiopia (rank)	Frequency	Percent	Cumulative Percent

Valid	St. George Beer (1)	134	43.9	43.9
	Amber Beer (6)	19	6.2	50.2
	Castle Beer (9)	9	3.0	53.1
	Meta Abo Beer (2)	47	15.4	68.5
	Meta Premium Beer(4)	23	7.5	76.1
	Harar Beer (3)	27	8.9	84.9
	Bedele Beer (5)	21	6.9	91.8
	Bedele Special Beer (7)	15	4.9	96.7
	Dashen Beer (8)	10	3.3	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

Table 9 presented the brand preference of the respondents. 43.9% (134) of the respondents favored, St. George Beer, 6.25(19) respondents favored Amber Beer, 3% (9) respondents favored Castle Beer, 15.4 % (47) respondents Meta Abo beer. 7.5% (23) responded Meta Premium Beer, 8.9% (27) responded Harar Beer, 6.9(21) responded Bedele Beer, 4.9 (15) responded Bedele Special Beer and the remaining 3.3. (10) Responded Dashen Beer.

In the same table it is found that St. George the most favored beer and Castle beer the least favored beer among the respondents. The finding in company wise indicated that BGI (the sum of St. George Beer, Amber Beer, and Castle Beer) leading the market, Heineken Ethiopia (The sum of Bedele and Harar brands) strong follower, Diageo Ethiopia placed third, and Dashen Beer is placed at fourth.

Table 10: Habit of beer drinking of the respondents

Habit of beer drinking of the respondents				
		Frequency	Percent	Cumulative Percent
Valid	daily	61	20.0	20.0
	several times per week	31	10.2	30.2
	once a week	64	21.0	51.1
	frequently	133	43.6	94.8
	several times a year	16	5.2	100.0
	Total	305	100.0	

Source: Survey SPSS result (2014)

In table 10 it is found that most of the respondents 43.6% (133) consumer beer frequently. The next maximum, drinking beer once a week was given 21% (64). Respondents, who consume beer daily, found to be 20% (61), several times per week 10.2% (31) and several times a year only 5.2% (16) replied respectively.

4.2. Descriptive Analysis of independent and Dependent variables

This study used a structured questionnaire to collect attitudinal data of the respondents about the dimensions of brand equity employing 4 independent variables and 1 dependent variable.

4.2.1. Demographic Characteristics and Overall brand Equity analysis

According to Kotler and Keller (2012) demographic segmentation is about dividing the market into segments based on variables such as age, gender, family size, family life cycle, income, occupation, education, religion, race, generation, nationality and so on. To check whether brand equity is equal among mean demographic characteristics one way ANOVA was carried out. The result shows that brand equity dimensions are not significantly vary among mean groups of different consumer demographic characteristics, specifically, age, sex, educational status, level of income, and marital status and employee status group means are the same across brand equity dimensions. In the contrary, perceived quality, brand association, and overall brand equity are significantly vary among mean groups found in habit of beer consumption. Here, breweries may find ways to increase the usage rate and frequency of beer consumptions through tying beer consumption into family issues social gatherings, minimizing the packaging size.

4.3. Brand Equity & its dimensions and Beer brands

4.3.1. Analysis of Variance (Anova)

In the study four independent variables were considered namely: brand awareness, brand loyalty, perceived quality and brand association. Based on the null hypothesis of *brand equity dimensions will not be significantly vary among mean groups of brand names* anova analysis were performed. The evidence obtained in Anova table shows that all brand equity dimensions found to vary among different groups of beer brands consumed.

Anova (Analysis of Variance) used to compare the means across more than two groups or conditions (Marczyk et al, 2005). Zoltán Dörnyie (2007) put anova as a two step process. First, the computation of *F* value to check whether the mean difference is signifcant. If the *F* value is significant, it means there is at least one significant amongst the group means. Second, to check which contrast(s) is/ are significant *post hoc* is used. Dörnyie interpreted 'eta squared" as " the percentage of the variance in the target variable explianed by the grouping variable. Eta is the most common effect size indicator for anova. The interpretation is commonly based on if eta=.01 had small effet, eta=.06 moderate effect and eta=.14 large effect. (Dörnyie , 2007)

$$eta = \frac{\sum of\ Squares between Groups}{Total \sum of\ Squares}$$ (Dörnyie , 2007)

4.3.1.1. Brand Awareness and beer brands

In the Anova table (table 11), brand awareness, one of the brand equity dimensions, vary among groups of beer brands. The anova was significant, F=2.55, P<0.05, and eta=.064. consequently, there is a significant evidence to conclude there brand awareness vary among beer brands. The effect size was moderate so that post hoc comparisons were run to evaluate the degree of significnae among the brand names with the use of Bonferroni correction[1] since qual variance is teenable (Dörnyie , 2007). In the study, this correction is used in order to minimize the *experiment-*

1 Bonferroni Correction- is the simplest and the most conservative method of controlling for experiment-wise error.

wise error(i.e the inflated likelihood of achieving a significant result with 5% in the study). It means, among 20 observations the likelihood of 1 mean differnece resulted from merly by chance will be considered as a statistical significnace by error.

The Anova test revealed brand awareness signficantly vary between Meta Abo Beer is in a beeter position by maintaining a higher mean differnce over St. George Beer by .69. But, there is no signficant differnce in brand awarness among groups of other beer brands considered in the study. The implication is Meta Abo Beer seems enjoyed relatively high brand awareness than other brands. That is, this beer brand able to create brand awareness uniquely than other competitor brands.

Table 11: ANOVA analysis of mean difference among brand names

ANOVA							
		Sum of Squares	df	Mean Square	F	Sig.	Effect size indicator (eta)
Brand Awareness	Between Groups	26.152	8	3.269	2.549	.011	0.064
	Within Groups	379.630	296	1.283			
	Total	405.782	304				
Brand Loyalty	Between Groups	22.524	8	2.816	3.404	.001	0.08
	Within Groups	244.826	296	.827			
	Total	267.350	304				
Perceived Quality	Between Groups	29.243	8	3.655	4.405	.000	0.11
	Within Groups	245.619	296	.830			
	Total	274.862	304				
Brand Association	Between Groups	29.486	8	3.686	3.783	.000	0.09
	Within Groups	288.388	296	.974			
	Total	317.874	304				
Overall Brand Equity	Between Groups	32.120	8	4.015	4.244	.000	0.10
	Within Groups	279.998	296	.946			
	Total	312.118	304				

Source: own survey SPSS resutl (2014)

4.3.1.2. Brand loyalty and beer brands

Brand loyalty is a key dimension in brand equity, since consumers repeatedly purchase the same brand continuously (Kotler and Kevin, 2012). The anova table (table 11) shows that the existence of significant variation among groups of brand names. But, the Bonferroni correction did not show a significant difference. The mean difference among brand names regarding to brand loyalty is ignorable.

The Anova result indicated that brand loyalty is at point of parity among beer brands. According to Kotler and Keller (2012) and Aaker (1991) the higher brand loyalty, the greater positive brand equity will be. Loyal customers can be a base if new relevant beer brands are introduced, or the company entered into a new product category. Loyal, customers can also refer the product to their friends and relatives. This in turn, helps the beer brands to increase their sales volume or market share. Quality products, by themselves are not a guarantee to have loyal customers. Behavioral stage of loyalty may not be a guarantee for beer brands. Thus, beer brand managers expected to engage consumers actively in order to bring attitudinal loyalty upon customers to share their pocket at large.

4.3.1.3. Percieved quality and beer brands

As per Keller (2003) and Kotler and Keller (2012) functional and non-functional attributes related with the organization's (beer brand) trustworthiness, consistencies of quality are the characteristics of perceived quality. This is a judgmental quality found up on the heart and mind of the consumers. Perceived quality significantly vary among groups of beer brand names, F= 3.40, $p<0.01$ and eta=.08 (the effect size is moderate, >0.06). Thus, there is a significant evidence to conclude, there is a difference in perceived quality among groups of brand names in the study. Post hoc comparisons with the use of Bonferroni tests displayed a significant difference between St. George maintained higher mean than Harar Beer and Dashen beer by .67 and 1.24 respectively. Similarly, Amber beer higher mean by .93 and 1.51than Harar beer and Dashen respectively. Meta Abo beer on the other hand, with higher mean by .72 and 1.3 than Harar and Dashen beer mean respectively. Finally, Meta Abo Premium maintained higher mean than Dashen by 1.13 among mean groups.

St. George, Amber beer, Meta Abo beer and Meta Abo Premium are being perceived by customers as quality beers and company. It implies, the brand (company) able to create quality image up on the consumers via direct and indirect sources of brand communications. If these companies introduce new product category than beer, the existing customers perceive the extended product as a quality and their purchase decision would be influenced

In the contrary other beer brands like Harar and Dashen perceived by consumers as low quality. The finding related to Dashen beer seems far from fact. The mean difference showed that consumers not believe Dashen beer as brand is trustworthy, offer consistent and excellent quality product. The beer brand is one of the beers with actual premium quality but was perceived low might be due to less branding communication. Good products are at the heart of quality branding. But, without good branding communication business success is difficult (Keller ,2003),(Kotler and Keller,2012).

4.3.1.4. Brand Association and Beer Brands

According to Keller (2003) Brand association is about image and familiarity of the brand with its actual and potential user. Based on who uses what products consumers have a tendency to categorize themselves as social strata with distinct behaviors. Sometimes brands may have gender characteristics as female or male personality. Consuming some products also express the life style of that user.

The evidence in ANOVA table 11, brand association is significantly vary among groups of beer brands (F=3.78, P<0.001, eta=0.09). Since the effect size is moderate it needs investigation. The post hoc shows that, the existence of significant difference in brand awareness among different brands. For example, St. George beer had higher mean than Dashen Beer by 1.2, Amber Beer over Dashen, and Meta Abo beer over Dashen by 1.37 mean.

Beer brands like St. George beer, Amber Beer and Meta Abo beer able to create a strong and unique association with their brands and their company up on the consumer mind. That is,

consumers are easily able to remember these brands and consider these brands in category selection and purchase decision. On the contrary, Dashen beer managers should create primary and secondary sources to associate their aim, business concept and product through different communication methods.

4.3.1.. Overall brand Equity and Beer Brands

Overall brand equity significantly vary among groups of beer brand names, F= 4.244, p<0.001 and eta=.10 (the effect size is moderate, >0.06). Thus, there is a significant evidence to conclude, there is a difference in over all brand equity among groups of brand names in the study. Post hoc comparisons with the use of Bonferroni tests displayed a significant difference between St. George, Amber beer, Meta Abo beer and Meta Abo Premium beer higher mean than Dashen beer by 1.46, 1.39, 1.64, 1.27, and 1.24 over respectively.

The overall brand equity dimension finding is the direct derivation of the above four dimensions of brand equity. St. George, Amber beer, Meta Abo beer and Meta Abo Premium beer brand maintained higher than mean over all brand equity assessment than other brands especially, than Dashen beer.

In summary, dependent and independent variables analysis was about describing what the consumers feel and think about the brands they preferred in line with brand equity dimensions. Brands like St. George Beer, Amber Beer, Meta Abo beer and Meta Premium Beer have high positive brand equity. In the contrary, Dashen Beer and Harar Beer, relatively have lower brand equity. On top of this, it is found that the higher value in brand awareness, brand loyalty, brand association and perceived quality, the greater market share and positive brand equity is observed.

4.4. Assessing the Measurement Model Validity (CFA)

4.4.1. Assumptions and Normality Check

Robert (2006) list down four assumptions should be considered to test SEM or CFA model. The first is about the independence of each observation. The second is the random sampling of the respondents. (Robert, 2006) Linearity of relationship between exogenous and endogenous variables is the third assumption. As regression analysis is based on the concept of correlation, the linearity of the relationship between dependent and independent variables is crucial. When the predictor variables are correlated among themselves, the unique contribution of each predictor variable is difficult to assess. This is because of the overlapped or shared variance between the predictor variables, i.e., they are multi-collinear. To increase both the predictive accuracy of the model and the validity of the estimated coefficient the unavailability of multi-co-linearity problems multicolinearity statistics test must be done.

Table 12: Multi-Co-linearity Statistics Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.829	.208		3.995	.000		
	Brand Awareness	-.115	.043	-.125	-2.701	.007	.806	1.240
	Brand Loyalty	.278	.060	.266	4.650	.000	.532	1.881
	Perceived Quality	.330	.065	.314	5.037	.000	.446	2.244
	Brand Association	.292	.067	.265	4.364	.000	.471	2.122

Source: Survey SPSS result (2014)

In 2006, Robert when, Tolerance (It is an indication of the percentage of variance in the predictor that cannot be accounted for by the other predictors). Hence, very small values indicate "overlap" or sharing of predictive power (i.e., the predictor is redundant). Both the "tolerance" values (greater than 0.10) and the "VIF" values (less than 10) are all quite acceptable accordingly, in table 15 since the tolerance value is >.10 and VIF (Variance of Inflation) is <10 the independent

variables are free of multicolinearity problem. The fourth one is multivariate normal distribution of observed variables.

Table 13: Normality Test

Statistics						
		Overall Brand Equity	Brand Awareness	Brand Loyalty	Perceived Quality	Brand Association
Mean		3.77	3.76	3.69	3.86	3.69
Median		4.00	4.00	4.00	4.00	4.00
Skewness		-.941	-1.369	-.903	-1.073	-1.049
Kurtosis		.643	1.325	.800	.929	1.057
kurtosis/Skewness		-0.68407	-0.967859	-0.88554	-0.86625	-1.0071103

Source: Survey SPSS result (2014)

In table 13 the normality tests descriptive statistics is presented. Paurav Shukla (2009) stated that skewness and Kurtosis test, and the low difference between mean and median is the basic ways to check the normality of the data. (Shukla, 2009) positive skewness values suggest clustering of data points on the low value (left hand side of the bell curve) and negative skewness values suggest clustering of data points on the high values (right hand side of the bell curve). The data in the study suggests the response is clustering on the high values (right hand side of the bell curve) Positive kurtosis value suggest that the data points have peaked at (gathered in center) with long thin tails. The data set is of a thin bell shape value. Kurtosis below zero (0) suggests that the distribution of data points is relatively flat. (Shukla, 2009). In addition, As per Hair J.B (2010) when kurtosis divided by skeweness and the result is below $\pm$ 2.58 the data assumed normal. According to this rule, the result is a maximum of -1 that shows the input data is normally distributed. The case of normality might be affected when the sample is increasing (Shukla, 2009).

4.4.1. Reliability and Validity analysis (Confirmatory Factor Analysis)

The researcher carried out confirmatory factor analysis in order to handle the issue of reliability and validity. Before carrying out confirmatory factor analysis data screening was performed. In the process, exactly that same response like if one respondents reply either of all strongly agree, disagree, neutral, disagree and strongly disagree, the standard deviation will be zero, and these

responses were excluded from the analysis. Moreover, missing value, which is, less than 10% were imputed by replacing with mean for general information and median for the likert scale respectively. Issues related with outliers also corrected using the mean via SPSS computation. (Wiki, 2014)

Robert (2006), Paswan (2009) Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. The researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori and then tests the hypothesis statistically. The coefficient results of the CFA were the basis to ensure whether the measurement model is both reliable and valid. CFA is carried out to determine the degree of model fit, the adequacy of the factor loadings, and the standard residuals and explained variances for the measurement model.

Bhattacherjee (2012) defined reliability of a measuring instrument based on its ability to consistently measure the phenomenon it is designed to measure. It is the degree to which the measure of a construct is consistent or dependable. Reliability, therefore, refers to test consistency. The importance of reliability is lies in the fact that it is a prerequisite for the validity of a test. (Robert , (2006). CFA AMOS needs to constrain one item within each variable. While constructing the AMOS graphics brand awareness construct 5 (BAW5), Brand Loyalty construct 3 (BL3), Perceived quality construct 1 (PQ1), Brand Association Construct 6 (BAS6) as well as overall Brand Equity item 4 (OBE4) were constrained.

The researcher carried out the reliability analysis by measuring Cronbach alpha and the result showed that **0.906** which is above the minimum cut off alpha of 0.7. It is a single correlation coefficient that is an estimate of the average of all the correlation coefficients of the items with in the test. If alpha is high (.70 or higher), then this suggests that all of the items are reliable and the entire test is internally consistent (Robert, 2006).

For accurate reliability analysis application of split-half technique and item analysis also recommended (Robert, 2006). The former correlated one half of the test items with the other half. The higher the correlation, the more internally consistent the measure will be. Using SPSS 21 the split-half method was carried out and the spearman-Brown i.e. the widely used formula to determine the reliability showed that the correlation is as strong as of **0.811.**

The later reliability analysis called Item-analysis also done. After running the item-total correlation procedure the results of all corrected-item total correlation were above **0.33** minimum cut off. The minimum and maximum corrected-item correlations were **0.43** and **0.75** respectively. The corrected item correlation shows the correlation (consistency) between each item and the sum of the remaining items. All of the three reliability analysis showed that the measurement is dependable.

Validity

Validity, often called construct validity, refers to the extent to which a measure adequately represents the underlying construct that it is supposed to measure. Construct validity is the extent to which a set of measured items actually reflect the theoretical latent construct they are designed to measure. One of the biggest advantages of CFA/SEM is its ability to quantitatively assess the construct validity of a proposed measurement theory. One of the biggest advantages of CFA/SEM is its ability to quantitatively assess the construct validity of a proposed measurement theory (Bhattacherjee, 2012)

Construct validity is made up of <u>four components</u>:

1. Face validity is the extent to which the content of the items is consistent with the construct definition, based solely on the researcher's judgment.
2. Convergent validity is the extent to which indicators of a specific construct "converge" or share a high proportion of variance in common. To assess we examine construct loadings and average variance extracted (AVE).
3. Discriminant validity is the extent to which a construct is truly distinct from other constructs (i.e., one-dimensional)(Paswan ,2009).
4. Nomo logical validity it examines whether the correlations between the constructs in the measurement theory make sense (Paswan, 2009).

Similarly in order to maintain convergent validity the researcher carried out and verified standardized loadings 0.5 or higher, average variance extracted .5 or more and Cronbach's alpha above .7. **(I.e.** refers to the closeness with which a measure relates to (or converges on) the construct that it is purported to measure. In other words, it implies that different methods for researching the same construct should give a relatively high inter-correlation, whilst *discriminant validity* suggests that using similar methods for researching different constructs should yield relatively low inter-correlations (Bhattacherjee, 2012), (Cohen, 2000).

A detail explanation of the above paragraph, the rules of thumb of ***Convergent Validity*** and the respective results, are shown below.

1. **Standardized loadings estimates should be .5 or higher, and ideally .7 or higher.**

In the table below it is found that the only minimum factor loading is .**718,** which is above the minimum factor loading of 0.5 rather all factor loadings are above the ideal estimate.

2. **AVE should be .5 or greater to suggest adequate convergent validity**. The minimum of AVE is 0.**522**, which is the ideal minimum of average variance extracted. The result ensured one the convergent validity criteria
3. AVE estimates also should be greater than the square of the correlation between that factor and other factors to provide evidence of discriminant validity. Discriminant validity – compares the average variance extracted (AVE) estimates for each factor with the squared inter construct correlations **(SIC)** brand loyalty score AVE and SIC is equal. But, all variables AVE's is greater than the SIC (Squared Inter construct correlations).Brand loyalty has a tendency to predict some other items out of their variable. However, it is reasonably fair to say that the measurement model fit the discriminant validity.

4. **Construct reliability should be .7 or higher to indicate adequate convergence or internal consistency**. The rule of thumb for a construct reliability estimate is that **.7** or higher suggests good reliability. The result in the construct reliability column below shows that a minimum of . **77**. That is, high construct reliability. High construct reliability indicates that internal

consistency exists. This means the measures all are consistently representing something. (Paswan, 2009)

$$Construct\ Reliability = \frac{\sum (Factor\ Loading)^2}{\left(\sum Standard\ error\ variance + \sum (Factor\ Loading)^2\right)}$$

$$Average\ Variance\ Extracted = \frac{\sum squared\ loadings}{n}$$

Where n, are the number items (constructs) in the variable.

The result of confirmatory factor analysis excluded the following constructs in each variable. Items BAW2, BAW3, and BAW1 were excluded from brand awareness variable. BL4 from Brand loyalty variable and BAS1, BAS2, and BAS3 from brand association variables, PQ4 from perceived quality and OBE1 from an overall brand equity measurement as well deleted from analysis.

Table 14: CFA: Reliability and Validity analysis workshop

Variables and Indicators	factor loadings	Cronbach alpha	Construct reliability	AVE	Squared factor loadings	Delta (1-R^2)
Brand Awareness						
BAW4: I Know "X" Beer Brand	**.854**	**0.873**	**0.88**	**0.78**	**0.72**	**0.28**
BAW5: Among competitive beer brands I can recognize "X" beer brand easily	**.909**				**0.84**	**0.16**
Brand Loyalty						
BL1:I am loyal to this "X" Beer brand	**.731**			**0.52**	**0.52**	**0.48**
BL2:If I purchase beer, this "X" beer brand will be my first buy option	**.718**	**0.757**	**0.77**		**0.53**	**0.48**
BL3: I will not buy other beer brands if this "X" beer brand is available in the store.	**.718**				**0.52**	**0.48**
Perceived Quality						
PQ1: This "X" beer brand gives an excellent quality beers(droughts)	**.760**				**0.69**	**0.31**
PQ2: This "X" beer brand have the same quality over time	**.783**	**.880**	**0.88**	**0.71**	**0.72**	**0.28**
PQ3: This "X" Beer brand offers reliable and trustworthy products	**.895**				**0.72**	**0.28**
Brand Association						
BAS3:I trust the company which manufacture "X" beer brand	**.852**				**0.73**	**0.27**
BAS4:I like the company which manufacture "X" beer brand	**.823**	**0.866**	**0.87**	**0.69**	**0.67**	**0.33**
BAS6:the Company that makes "X" beer brand has credibility	**.810**				**0.66**	**0.34**
Overall Brand EQuity					**0.74**	
OBE2: Although another brand has the same features as "X" beer brand, I would prefer to purchase this "X" beer brand	**.858**		**0.86**	**0.68**		**0.26**
OBE3:if there is another beer brand as good as "X" beer brand I prefer to buy this "X" beer brand	**.878**	**0.852**			**0.77**	**0.23**
OBE4:if another brand is different from "X" beer brand any way, it seems smarter to buy "X" beer brand	**.735**				**0.54**	**0.46**

Source SPSS and Amos Survey data with own elaboration (2014)

Similarly, the standardized regression weight portrays an estimate range from a minimum of **.719** and a maximum of **0.916** coefficients. In other words, the factors loadings (Commonly in AMOS called Standardized regression Coefficients) all are above the minimum ideal cut off, which is **.70**. That is, 14 constructs were retained among 23 measurement variables are significantly represented by their latent variables. Nomo logical validity is tested by examining whether the correlations

between the constructs in the measurement model make sense (Paswan, 2009) in the above analysis it is verified that the measurement model is accepted.

4.4.2 Model Fit analysis of Confirmatory factor Analysis

The researcher passed through (1) Linking the model to the data set, (2) obtaining the desired statistics in the results output, and (3) conducting the analysis and the output result of CFA is analyzed here under. The maximum likelihood method is used in deriving out AMOS results. In sum based on the following table (Table 19), the CFA maintained a validity and reliability criteria. The model fit analysis of the confirmatory factor analysis is presented below.

4.5. Structural Equation Modeling Analysis

Structural Equation Model is a flexible, comprehensive model that specifies the pattern of relationship among independent and dependent variables, either observed or latent. Moreover, it permits directional predictions among a set of independent or a set of dependent variables. The SEM analysis the number of total variables was 36. The Number of observed variables was 15; whereas the numbers of unobserved variables were 21. With regard to exogenous and endogenous variables, it was 20 and 16 respectively (Robert, 2006).

4.5.1. SEM Goodness of Fit Analysis

4.5.1.1. Goodness-of-Fit Criteria

A number of goodness-of-fit measures are found to evaluate the overall fit of the hypothesized model. Goodness-of-fit measures the degree to which the actual or observed covariance input matrix corresponds with (or departs from) that predicted from the proposed model. Goodness-of-fit dealings can be classified into three types: (1) absolute fit measures, (2) incremental fit measures, and (3) parsimonious fit measures (Robert, 2006).

Table 15: Goodness of Fit Criteria and Result of the measurement Model (CFA)

Absolute Fit Measures	Minimum Requirement	Survey coefficient	Remark
Chi-Square(χ^2)	Insignificant	**124.151**	significant
Degrees of Freedom		**67**	
Significant Level	**.05**	**.000**	significant
Goodness of Fit Index(GFI)	**>.90**	**.945**	
Root Mean Square Error of Approximation(RMSEA)	1) **<.5 good fit** 2) **b/n .5 and .10 moderate fit** 3) **>1 bad fit**	**.053**	Almost Good fit
Adjusted Goodness of Fit Index (AGFI)	**>.80**	**.914**	Good Fit
Incremental Fit Index		**coefficient**	
Normed Fit Index (NFI)	**>.90**	**.951**	Good Fit
Incremental Fit Index (IFI)	**>.90**	**.977**	Good Fit
Tucker-Lewis Index (TLI)	**>.90**	**.968**	Good Fit
Comparative Fit Index(CFI)	**>.90**	**.977**	Good Fit
Parsimony Measures		**coefficient**	
Normed Chi-Square (CMIN/DF)= (χ^2)/degree of freedom	• **< 2 is preferred** • **2-5 normal**	**1.853**	**Preferred**

Source: Survey SPSS AMOS result (2014)

4.5.1.2. Absolute Fit Measures

Robert (2006) cited from (Jöreskog & Sörbom 1989) described about the measures that determine the degree to which the proposed model predicts (fits) the observed covariance matrix. Some commonly used measures of absolute fit include the chi-square statistics (χ^2), the goodness-of-fit statistic (GFI), and the root mean square error of approximation (RMSEA). Chi-square statistic is the most fundamental measure of overall fit is the likelihood ratio chi-square (x^2) statistic, the only statistically based measure of goodness-of-fit available in SEM. In the study the (x^2) is significant that it shows how the model was not fit. But, (x^2) suffered a serious model fit problem one if the sample size is large and the number of variables are also high (Robert, 2006) as a result researchers developed a Normed chi –square statistics that is not affected by the sample size. In the SEM table,

it is found that the Normed chi-square ((x^2)/DF<2 i.e. shows a good fit of the model) The GFI measures how much *better* the model fits compared with no model al all. RMSEA is the value that is representative of the goodness-of-fit when the proposed model is estimated in the population.).

4.5.1.3. Incremental Fit Measures

These measures compare the proposed model to some baseline model, most often referred to as the null or independence model. Tucker-Lewis Index (TLI), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI) and Comparative Fit Index (CFI) are some of the incremental fit indices measures. Specifically, they show the improvement achieved by a proposed model over the null model (i.e., a model assuming independence among the variables); they range from 0 (a fit that is no better than the null model) to 1 (a perfect fit).

4.5.1.4. Parsimonious Fit Measures

In scientific research, theories should be as simple, or parsimonious, as possible. (Robert, 2006) cited from (Bentler and Moorjaart, 1989) put it, "models with fewer unknown parameters may be considered as standing a better chance of being scientifically replicable and explainable. Following this line of thought, parsimonious fit measures relate the goodness-of-fit of the proposed model to the number of estimated coefficients required to achieve this level of fit. Their basic objective is to diagnose whether model fit has been achieved by "over fitting" the data with too many coefficients. Parsimonious Normed Fit Index (PNFI**)** takes into account the number of degrees of freedom used to achieve a level of fit

(In table 16 Goodness Fit Measure of SEM) the SEM model is fit in all three criteria's. The absolute fit measures, the incremental fit measures and parsimony fit index. Hence, SEM AMOS output's can be safely analyzed and discussed. In SEM the exogenous variables were brand awareness, brand loyalty, perceived quality, and brand association while the endogenous variable was overall brand equity. In other words, exogenous variables are independent variables where as endogenous variables are dependent variables.

Table 16: Goodness of Fit the SEM model Analysis and Finding table

Absolute Fit Measures	Minimum Requirement	Survey coefficient	Remark
Chi-Square	insignificant	**124.151**	significant
Degrees of Freedom		**67**	
Significant Level	**.05**	**.000**	significant
Goodness of Fit Index(GFI)	**>.90**	**.945**	
Root Mean Square Error of Approximation(RMSEA)	1) **<.5 good fit** 2) **b/n .5 and .10 moderate fit** 3) **>1 bad fit**	**.053**	Good fit
Adjusted Goodness of Fit Index (AGFI)	**>.80**	**.914**	Good Fit
Incremental Fit Index(Base Line Comparisons)		**coefficient**	
Normed Fit Index (NFI)	**>.90**	**.951**	Good Fit
Incremental Fit Index (IFI)	**>.90**	**.977**	Good Fit
Tucker-Lewis Index (TLI)	**>.90**	**.968**	Good Fit
Comparative Fit Index(CFI)	**>.90**	**.977**	Good Fit
Parsimony Measures		**coefficient**	
Normed Chi-Square (CMIN/DF) (Chi-square divided by degree of freedom)	• **< 2 is preferred** • **2-5 Normal**	**1.853**	**Preferred**

Source: Survey SPSS AMOS result (2014)

4.6. Regression Weights, Standardized Regression Weights, and Squared Multiple Correlations Analysis

4.6.1. Regression Weights Analysis

Regression weights are the unstandardized coefficient estimates generated from maximum likelihood procedure. (Robert, 2006)

Table 17: Regression Weights: (Group number 1 - Default model)

Dependent variable		independent variables	Estimate	S.E.	C.R.	P	Label
brand_ equity	<---	Brand awareness	-.187	.052	-3.603	***[2]	
brand_ equity	<---	Brand loyalty	.415	.113	3.679	***[1]	

Dependent variable		independent variables	Estimate	S.E.	C.R.	P	Label
brand_ equity	<---	Perceived quality	.363	.120	3.015	.003[3]	
Brand _equity	<---	Brand Association	.185	.088	2.097	.036[4]	

Source: Survey SPSS AMOS result (2014)

Associated with each estimated unstandardized regression coefficient (in the Regression Weights table 17) are a **standard error** (S.E.) and a **critical ratio** (C.R.) value. 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 **critical ratio** is a test of the significance of the path coefficients. Each C.R. value is obtained by dividing that parameter estimate by its respective standard error, and it is distributed approximately as *z*. As such, a critical ratio that is more extreme than ±1.96 indicates a significant path ($p < .05$).

Based on this criterion, Reject H0 if $Z < -1.96$ or if $Z > +1.96$; otherwise, do not reject H0 it can be seen (Table 17) that the variables Brand Loyalty (CR=3.679, at P =.001), Perceived quality (CR=3.015, at P < .001), Brand Association (CR= 2.097, at p< 0.0) are rejected in the null hypothesis test. In other words, the alternate hypotheses are accepted. That is, brand loyalty, perceived quality and brand loyalty are positively and significantly affecting brand equity of the Ethiopian beer market (Addis Ababa). In the contrary, when the rule Reject H0 if $Z < -1.96$ or if $Z > +1.96$ is applied the critical ratio of brand awareness is found to be -3.60, which is less than -1.96 as a result the null hypothesis is retained.. In other terms, the alternate hypothesis is rejected. That

2 The probability of getting a critical ratio as large as 3.603 in absolute value is less than 0.001. In other words, the regression weight for awareness in the prediction of brand equity is significantly different from zero at the 0.001 level (two-tailed)1 The probability of getting a critical ratio as large as 3.679 in absolute value is less than 0.001. In other words, the regression weight for loyalty in the prediction of brand equity is significantly different from zero at the 0.001 level (two-tailed).

3 The probability of getting a critical ratio as large as 3.015 in absolute value is .003. In other words, the regression weight for quality in the prediction of brand equity is significantly different from zero at the 0.01 level (two-tailed

4 The probability of getting a critical ratio as large as 2.097 in absolute value is .036. In other words, the regression weight for Association in the prediction of brand equity is significantly different from zero at the 0.05 level (two-tailed).

is, brand awareness (CR=-3.603, at P =.001) is found to be negatively affecting brand equity of the Ethiopian beer market.

Symbolically, when brand loyalty goes up by 1, brand equity goes up by 0.415, when perceived quality goes up by 1, brand equity goes up by 0.363 and when brand association goes up by 1, brand equity goes up by 0.185. In the contrary, when brand awareness goes up by 1, brand equity goes down by 0.187.

4.6.2. Standardized Regression Weights Analysis

Standardized regression weights (β) are standardized coefficient estimates, and are independent of the units in which all variables are measured. These standardized coefficients allow the researcher to compare directly the relative relationship between each independent variable and the dependent variable. (Robert, 2006).

Table 18: Standardized Regression Weights: (Group number 1 - Default model)

Dependent variable		independent variables	Estimate
brand_ equity	<---	Brand awareness	-.229
brand_ equity	<---	Brand loyalty	.383
brand_ equity	<---	Perceived quality	.336
Brand _equity	<---	Brand Association	.188

Source: Survey SPSS AMOS result (2014)

Table 18 portrays how change in brand equity dimensions changes brand equity based on standard deviation. Symbolically, when Brand awareness goes up by 1 standard deviation, brand equity goes down by 0.229 standard deviations. When brand loyalty goes up by 1 standard deviation, brand equity goes up by 0.383 standard deviations. When perceived quality goes up by 1 standard deviation, brand equity goes up by 0.336 standard deviations. When brand association goes up by 1 standard deviation, brand equity goes up by 0.188 standard deviations.

4.6.3. Correlation Analysis

Marczyk G., Dematteo D, and Festinger D (2005) a correlation is simply a relationship between two things. Correlations are perhaps the most basic and most useful measure of association between two or more variables is primarily concerned with finding out whether a relationship exists and with determining its magnitude and direction. A correlation is simply a relationship between two things (Robert, 2006).

Table 19: Covariance's: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Brand loyalty	<-->	Brand Association	.497	.073	6.858	***	
Brand awareness	<-->	Brand Association	.372	.077	4.835	***	
Brand awareness	<-->	Brand loyalty	.490	.081	6.063	***	
Brand loyalty	<-->	Perceived quality	.546	.071	7.731	***	
Perceived quality	<-->	Brand Association	.623	.073	8.554	***	
Brand awareness	<-->	Perceived quality	.403	.071	5.636	***	

Source: Survey SPSS AMOS result (2014)

Andy Field (2005) defined covariance as about how to variables are deviate from the mean similarly. In the table above for example, strong covariance is observed between brand association and perceived quality, where the covariance estimated is .623 at CR=8.554 at ($p<.001$). Therefore, when brand association deviates from the mean perceived quality do deviate from the mean in a similar way.

The covariance's (unstandardized correlation coefficients) between the four predictor variables are all highly significant by the C.R=8.554 test ($p <.001$). The minimum estimate is between brand awareness and brand association (Estimate= .372); while the maximum estimate of covariance is between perceived quality and Brand association (Estimate=.623). In the same data it is clearly depicted that as one brand equity dimension variables changes the other brand equity dimension variables also changes. (See table 19)

Table 20: Correlations: (Group number 1 - Default model)

			Estimate	Direction/Significance of Correlation
Brand loyalty	<-->	Brand Association	.604	**Range.30 to.70 Moderate correlation**
Brand awareness	<-->	Brand Association	.340	**Range.30 to.70 Moderate correlation**
Brand awareness	<-->	Brand loyalty	.490	**Range.30 to.70 Moderate correlation**
Brand loyalty	<-->	Perceived quality	.724	**Range.700 to.90 large correlation**
Perceived quality	<-->	Brand Association	.754	**Range.70 to. 90 large correlation**
Brand awareness	<-->	Perceived quality	.402	**Range.30 to.70 Moderate correlation**

Source: Survey SPSS AMOS result (2014)

According to Marczyk et al (2005) correlations coefficient can move in the same direction (positive or direct correlation) or opposite direction (negative or inverse correlation). The range of correlation may lie between -1.0 to and 1.o. the former is perfect negative correlation while the later is perfect positive relation still a number of correlation coefficients within the range. If correlations coefficient is equal to zero, it means there is no relationship between the considered variables. In general, correlations of .01 to .30 are considered small, correlations of .30 to .70 are considered moderate, correlations of .70 to .90 are considered large, and correlations of .90 to 1.00 are considered very large

The above table (Table 20) What brand equity dimensions are interrelated?. All dimensions of brand equity are interrelated from a moderate correlation significant to a large correlation significant. Especially, a large correlation is exhibited among brand loyalty with perceived quality, and Brand Association with perceived quality($r>.70$, $P<0.001$). For example, the correlation between Brand loyalty and Perceived Quality is positive and statistically large at ($r = 0.724$, $\boldsymbol{p}< .001$).

4.6.4. Squared Multiple Correlation Analysis

According to Robert (2006) squared multiple correlations is an index of the proportion of the variance of the endogenous variable (E1) 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. Field (2005) stated correlation coefficient squared (known as the coefficient determination, R^2) is a measure of the amount of variability in one variable that is explained by the other.

Table 21: Squared Multiple Correlations: (R^2) (Group number 1 - Default model)

Dependent Variable	Overall Brand Equity
Estimate (R^2)	.54

Source: Survey SPSS AMOS result (2014)

The result of squared multiple correlation is equal to R^2 of the regression coefficient. It is estimated that the predictors of brand equity dimensions explain **54%** of brand equity. Its variance (100%-54%) is unexplained by these independent variables. In other words, the independent variables explain the dependent variable by **54 %**. The remaining **46%** will be attributed to the brand equity itself or other variables other than the independent variables considered in the study.

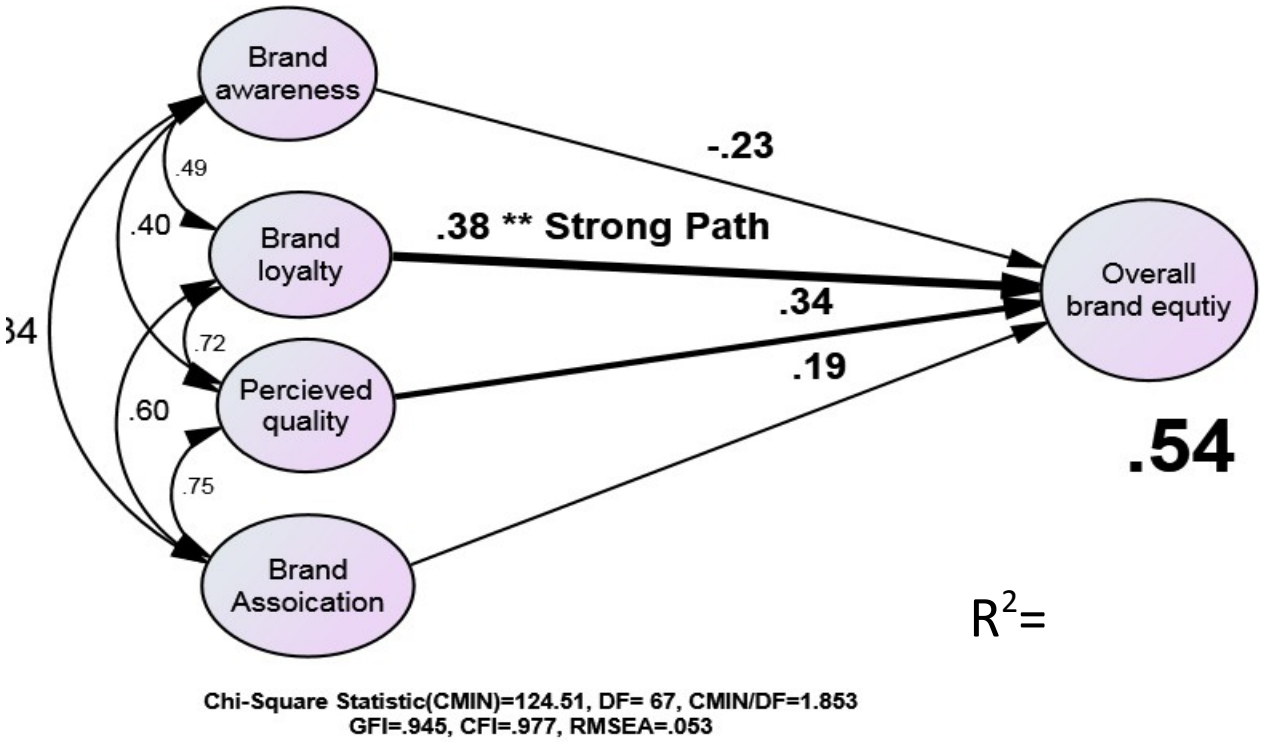
The below figure (Figure 6) a one heading arrow shows the relative degree of influence a brand equity dimensions (sources) had on brand equity it is called recursive model in AMOS.

a) **Brand awareness and Brand equity**: in the same figure brand awareness negatively influencing brand equity than other brand equity dimensions. From the Anova result it was observed that, Meta Beer Scored high degree of awareness even than St. George beer. But, in terms of total market brand awareness is the brand equity dimension that is a minus of brand equity.

4.7. Discussion of Findings

4.7.1. Structural Equation Model: CBBE model of Beer Brands in Ethiopia

Figure 6: AMOS Graphics: SEM of the four independent variables and dependent variable of Ethiopian beer brands.



Source: Survey Result (2014)

The finding shows that the consumers are not able to distinguish the salient features of the beer brand to order. Consumers need aid in retrieving the beer brand they want to drink. It shows that, the brand is not inculcated in their mind so that they unable to retrieve for purchase decision. On top of this, consumers might not differentiate the same packaging design of competing beer brands. When Consumers are not able to distinguish the brands among competitors brands it may indicate confusion created owning to high similarity in brand elements of the competitor beer brands. (Eda et al., 2005), (Million, 2013)

.

b) **Brand Loyalty and Brand Equity**: Brand loyalty a strong base for companies to utilize the pocket of consumers in exchange of value for a life time. In the finding, brand loyalty is a strong source of equity among others, which shows a very strong and significant impact upon the brand equity in the beer market of Ethiopia. In the finding, strong brands have strong loyal customers. Brands such as St. George, Meta Abo beer enjoyed high degree of loyal customers where as Dashen Beer and Bedele Beer brands equity currently sales is low and in the future their equity should be decayed unless marketing interventions are done. Beer industry wise, however, brand loyalty is a key dimensions that create a positive brand equity

The nature of the relationship between brand loyalty and brand equity in the finding though strong, loyal customers in the study were not actively engaging in suggesting the beer brand to their friends(Bl4 one of the brand loyalty construct canceled due to low factor loadings). Referring the brand to friends, relatives and colleagues is one of the fundamental characteristics of a loyal customer.(Eda et al.,2005), (Million ,2013), (Cristina et al. (2013).

c) **Perceived Quality and Brand Equity**: similar to brand loyalty, perceived quality also a positive source to create brand equity in the study. This dimension is related with the credibility, trustworthiness and consistency of the beer brand and the company. Thus, perceived quality can be taken for granted as a source of brand equity in the beer market of Ethiopia (Addis Ababa). Cristina et al. (2013). In the finding individual brands, especially St. George maintained a higher judgmental quality on its beer brand. In contrary, the bottom market follower Dashen, beer suffered from low perceived quality currently and it can be predicted also in the near future unless the brand is revitalized.

d) **Brand Association and Brand equity:** in the study, brand association also recognized as one the sources of brand equity. Consumers have good image towards the beer, towards the company, and beer brand users. Individual brands like St George and Amber beer able to create a good familiarity and image about their brands up on the minds and hearts of their customers than the opposite Dashen and Bedele Beer.

When the findings summarized, brand loyalty, perceived quality, and brand association are identified as a positive sources of brand equity that adds value to the company. In the contrary,

brand awareness is identified as a beer brand equity dimension that reduces the value of the brand in the same case.

Table 22: Sources of Brand Equity and their influence on Brand Equity in the Ethiopian Beer Market

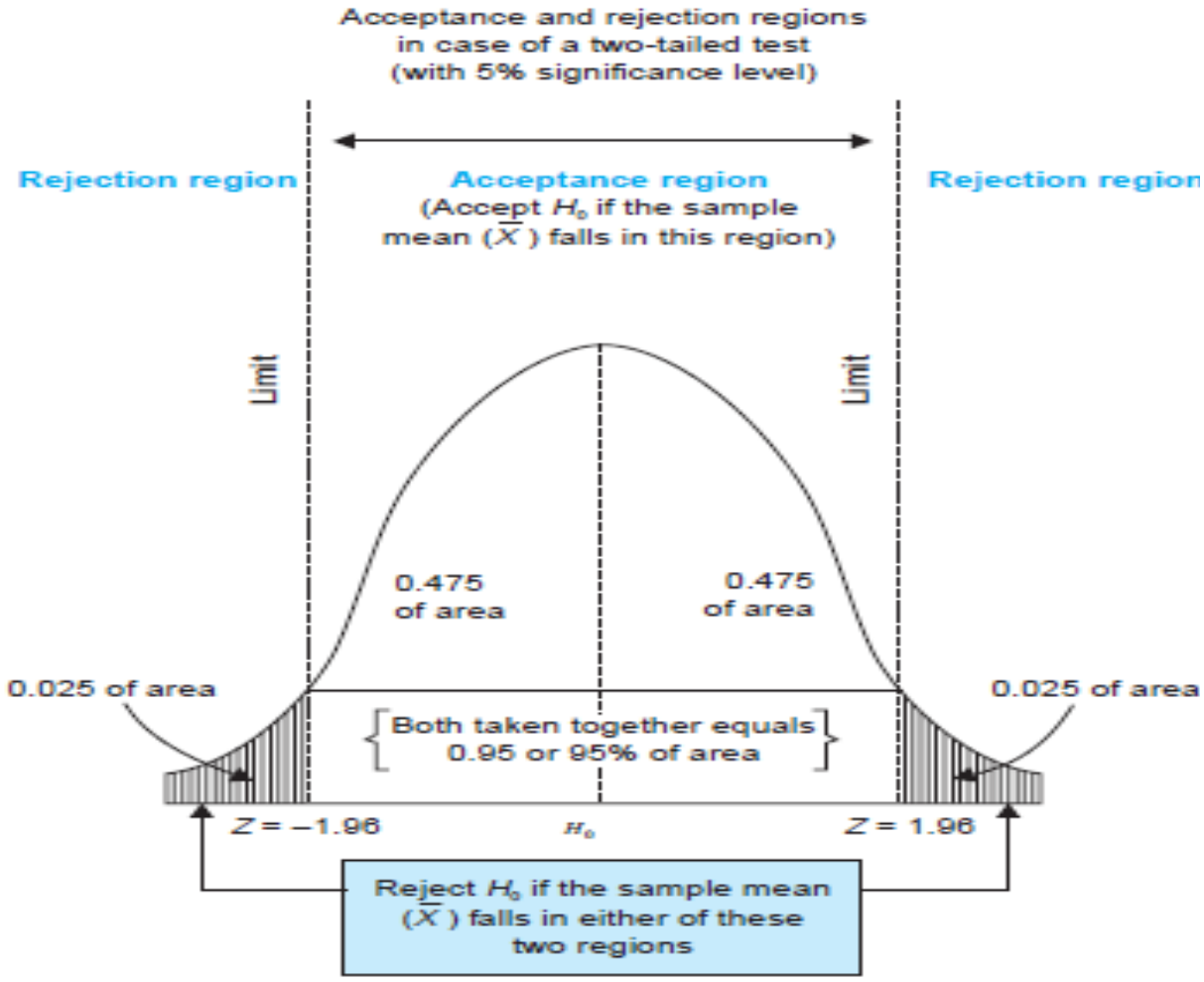
Relations Between Latent Variables	Standard Coefficients(n=305)
Brand Awareness ¿ Brand Equity	$\beta = -0.23$¿
Brand Loyalty ¿ Brand Equity	$\beta = 0.38$¿
Perceived Quality ¿ Brand Equity	¿*¿ $\beta = 0.34$¿
Brand Association ¿ Brand Equity	$\beta = 0.19$¿*¿
*** Significant at P<.001 , ** P< 0.01, *** P<.05**	**R^2(Brand Equity)=0.54**

Source Survey SPSS AMOS result (2014) with own elaboration

Based on this criterion, reject H0 if Z < −1.96 or if Z > +1.96; otherwise, do not reject H0 it can be seen (Table17) that the variables brand loyalty (CR=3.679, at P =.001), perceived quality (CR=3.015, at P < .001), brand association (CR= 2.097, at p< 0.0) are rejected in the null hypothesis test. In other words, the alternate hypotheses are accepted. That is, brand loyalty, perceived quality and brand loyalty are positively and significantly affecting brand equity of the Ethiopian beer market (Addis Ababa). In the contrary, when the rule reject H0 if Z < −1.96 or if Z > +1.96 is applied the critical ratio of brand awareness is found to be -3.60, which is less than -1.96 as a result the null hypothesis is retained.. In other terms, the alternate hypothesis is rejected. That is, brand awareness (CR=-3.603, at P <.001) is found to be negatively affecting brand equity of the Ethiopian beer market.

In this part, the relationships established among the dimensions or sources of brand equity and brand equity is analyzed. Based on this criterion, reject H0 if Z < −1.96 or if Z > +1.96; otherwise, do not reject H0 it can be seen (Table17). Having this decision criterion as a base the null hypothesis is retained at (CR=-3.05 and p<.001) level. That is, brand awareness is bringing a negative consequence up on the value of brand equity in the Ethiopian beer market (especially that of Addis Ababa). Thus, *H1a: Brand awareness has a significant positive consequence on brand equity in Ethiopia (Addis Ababa) beer market* is rejected. Here, brand awareness have an inverse relationship with brand equity in the beer market of Ethiopia, especially that of Addis Ababa.

Figure 7: Acceptance and Rejection decision rules of Null hypotheses at 5% significance level



Source: Kothari 2004 (PP: 188)

It can be stated that, the higher brand awareness the lower the brand equity. In other terminology, brand awareness, is the liability portion of the brand equity in the beer market of Ethiopia, more specifically, that of Addis Ababa. Although in other industry, some recent papers also come up the same conclusion (Xiao Tong, 2009), (Eda et al., 2005)

With regard to the second hypothesis the null hypothesis was:

$H2_0$: Brand loyalty will not have a significant positive effect upon beer brand equity in the Ethiopian (Addis Ababa) beer market.

Based on this criterion, reject null hypothesis, if Z < −1.96 or if Z > +1.96; otherwise, do not reject null hypothesis. The coefficient in Table 17 shows that (Z=CR=3.69 at P<.01). Meaning, the null

hypothesis is rejected. Here, the alternate hypothesis is accepted. That means, brand loyalty creates a positive and significant impact on brand equity of the Ethiopian beer (Addis Ababa) market. The interpretation is the higher the consumer brand loyalty, the higher the beer brand equity. This result, portray the direct and significant impact of brand loyalty up on brand equity. The finding highlights the greatest importance of brand loyalty in the creation, maintaining and sustaining of brand equity. Some recent findings also supported the same result with the current finding (Eda et al., 2005), (Million, 2013), (Cristina et al., 2013) and (Yoo and Bongee, 2001)

$H3_0$: Perceived quality will not have a significant direct impact upon beer brand equity in the Ethiopian (Addis Ababa) beer market.

In connection with *hypothesis 3* above the decision rule of hypothesis testing was done. Reject null hypothesis if Z (CR) is >1.96 or <-.196, otherwise accept decision rule. Since the CR is >1.96 (CR=3.015) then, the null hypothesis is rejected. The result enables to support the alternate hypothesis. *Perceived quality of a product has a significant direct impact on brand equity*. That means, perceived quality has a significant positive impact up on the brand equity of Ethiopian beer market (Addis Ababa) the beta coefficient shows the hypothesis will not be rejected. The constructs like quality, consistency trustworthiness of the brewery company have cumulative direct affect brand equity of the beer market. Some articles support the finding. (Eda et al., 2005), and (Yoo and Bongee, 2001)

Hypothesis 4 was about brand association. It was hypothesized as: *$H40$: Perceived quality will not have a significant and direct impact upon beer brand equity in Ethiopian (Addis Ababa) beer market.*

The beta coefficient in SEM unstandardized regression weight in (table 17) did not support to retain the null hypothesis. Rather, the alternate hypothesis, positive impact of brand association has significant and positive upon beer brand equity dimensions in the Ethiopian beer market it is true for a higher significance level like with a 32% or error in prediction. As a result, hypothesis four is not supported. Some articles such (Eda et al., 2005) come out with the finding that perceived equity does not predict brand equity.

4.7.2. Summary of the Hypotheses Test

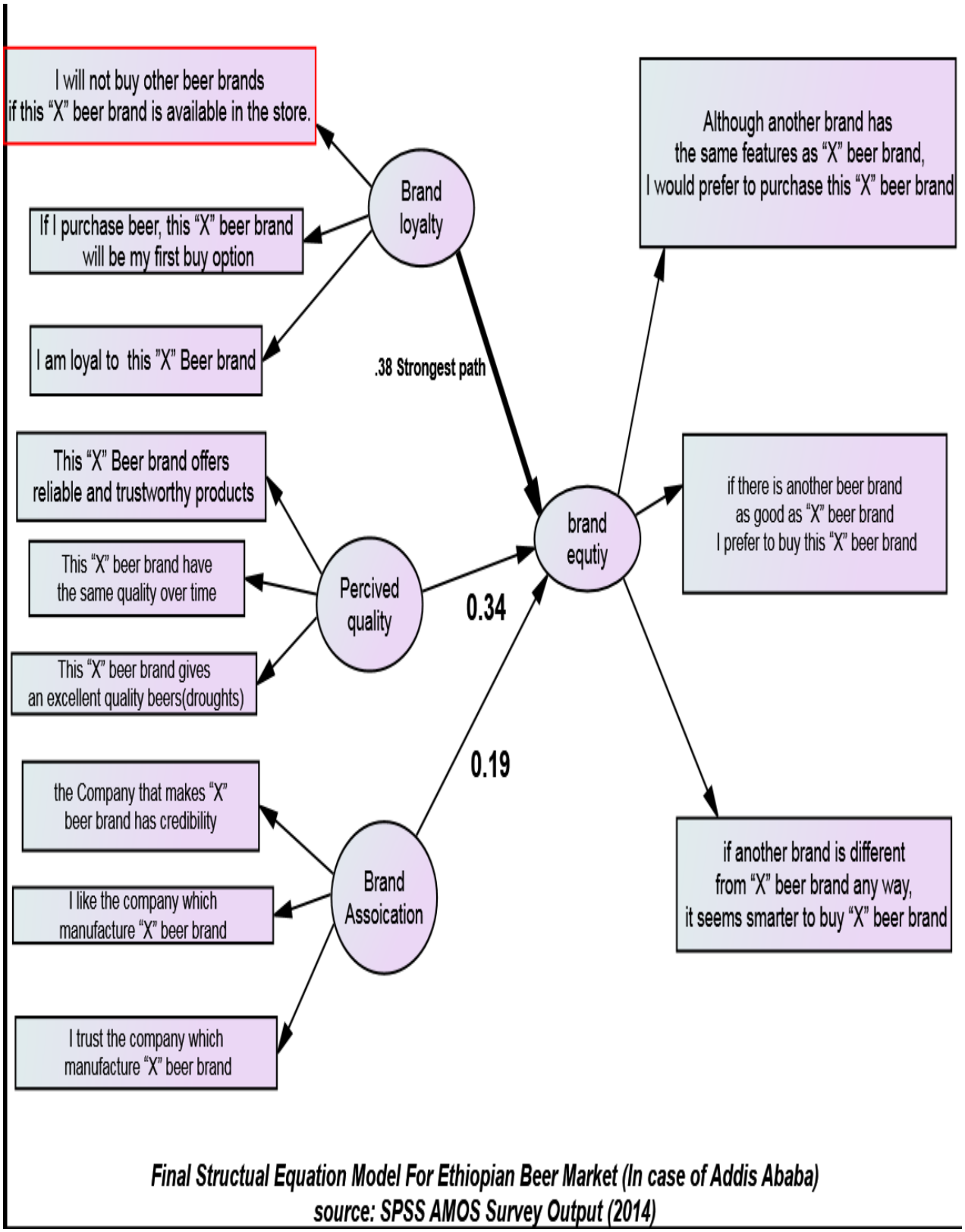
Initially, the study based on the Aaker's brand equity dimension, were proposed brand awareness, brand loyalty, perceived quality and brand association as a positive and significant source of beer brand equity determinants. The following table shows finding of this empirical investigation in the beer market of Ethiopia. The model was tested at 95% confidence interval or 5% degree of error. As far as the measurement of CBBE in the beer market of Ethiopia concerned, all the dimensions of brand equity, is predicting as proposed in the hypotheses except brand awareness is significantly but negatively affecting beer brand equity

Table 23: Acceptance and Not acceptance of proposed research hypotheses

Initial Proposed hypotheses	Results
$H1_a$: Brand awareness has a significant positive consequence on brand equity in Ethiopian (Addis Ababa) beer market.	Not supported
$H2_{a:}$ Brand loyalty has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.	Supported
$H3_{a:}$ Perceived quality has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.	Supported
$H4_{a:}$ Brand loyalty has a significant positive effect on brand equity in the Ethiopian (Addis Ababa) beer market.	supported
$H5_{0:}$ Brand equity dimensions will not be significantly varies among mean groups of demographic characteristics of the consumers of beer in Addis Ababa.	Partially supported
$H6_{0:}$ Brand equity dimensions are equal among mean group's beer brands.	Not supported

Source: own survey result (2014)

Figure 8: CBBE model in Ethiopian BEER market



Final Structual Equation Model For Ethiopian Beer Market (In case of Addis Ababa)
source: SPSS AMOS Survey Output (2014)

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION, LIMITATIONS AND FURTHER AREAS OF RESEARCH

5.1. Conclusion

The study was about measuring consumer based brand equity by empirically investigating the sources of brand equity in the beer across different brands in Addis Ababa beer market. Among CBBE models such as Keller Model, Cause and Effect Model and David Aaker model the researcher Aaker's CBBE model and tested using SEM by considering 305 respondents. To do so, it was hypothesized that brand equity is being positively and significantly influenced by brand awareness, brand loyalty, perceived quality, and brand association at 5% degree of error.

The following major conclusions were extracted from the finding section with regard to the general information of the respondents.

- Most of the beer consumers are youth and adults below the age of 35.
- Males drink beer than their female counters and most of the respondents earn a monthly income between 4001 and 8000 Ethiopian birr.
- St George beer and Castel beer are the most favored and least favored beer brands respectively.
- Most of the beer consumers are educated and drink beer frequently than daily and weekly bases.
- Perceived quality, brand association, and Overall brand equity are significantly varied among mean groups of habit of beer drinking demographic characteristics.
- Among brand equity dimensions three dimensions namely; brand loyalty; perceived quality and brand association are concluded as the determinants that create brand equity in the Ethiopian beer market. These, three variables have a positive and significant influence up on the creation of brand equity as hypothesized. The beer market is mainly characterized by huge investment in branding activities (Eda et al., 2005), (Million, 2013), (Cristina et al., 2013). In connection with this, brand loyalty is the superior source of brand equity where

brand manager's eye should be look up on it to utilize future market. Here, marketing investment made to build loyal customers will pay off the future.

- In contrary, brand awareness found to have a negative relationship with brand equity. Meaning, any increase in brand awareness will results in a decrease in brand equity in the context of Ethiopian beer market. (Aaker ,1991) defined brand equity as a "set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and /or to that firm's customers". In the study, brand awareness is founded as a set of brand liability that subtract from the value offered by the beer brands.

- The four dimension of brand equity are correlated. In the finding section, positive correlation was exhibited between different dimensions of brand equity from moderate to high correlations strength. For example, first Brand association and Perceived quality found to have a large correlation. Here, the trusty worthiness, credibility and consistency of beer products may create positive image upon the mind of the consumers an image associated with. Then, the correlation between brand loyalty and perceived quality is also large. Third, strong inter correlation is displayed between brand loyalty and brand association

In a nut shell, the finding of the study supports to conclude that Aaker's brand equity attributes. Amongst, the initially proposed brand equity dimensions, brand loyalty, brand association, and perceived quality have a direct and significant impact on the creation of brand equity in the beer market of Ethiopia. Especial emphasis must be given to brand loyalty dimension, which is so significantly create a positive source of brand equity than others.

5.3. Recommendation

Traditional marketing mix elements are not the only factors, consumers used to make decisions now a days than ever before. Rather, branding issues such as awareness, associate (image) and perceived quality of the brand is a key ingredient in decision making. This will be, more true, if the quality or ingredient of the generic product of the category is less likely to be differentiated such as the beer market.

The following recommended points might help brand managers in order to minimize the liability that decays the brand equity and also to maximize and utilized the positive brand equity continuously in the beer market of Ethiopia.

a) **Brand Awareness as a source of Brand Equity**

Brand awareness in the study founded as a variable that decay the positive brand equity in the beer industry. That is, it shows a liability sign. Awareness: when the consumer does not have a clear knowledge about the company and the beer brands the negative equity may be created. Relatively the Meta Abo beer has a better brand awareness than other beer brands considered in the study.

In order to increase brand awareness breweries (beer brand) managers should research the frequency and length of advertisement so as to aware customers about their beer. To minimize negative brand awareness, thus, firms can involve how their brands are being distinguished from others through their salient brand elements like brand name, logo, color, packaging size and other distinguishing factors. This can be done by involving users in active or passive learning of the brand and its basic features that distinguish from competitor brands.

Brand managers should advertise about their beers to their target through integrated marketing communication media that voice the same message. For example, TV ad, magazine, social network, radio ad and other communication devices can be used to increase the brand knowledge of their consumers. So that, this brand knowledge help consumers to properly order the beer they want to drink.

b) **Brand Loyalty as a source of Brand Equity**: Loyal customers are a life time value for any marketers. Because a number of benefits obtained from them such as premium price, less cost to serve them, suggest our brand to their brands, and they can be a strong market base if we

develop new products. In order to earn customers loyalty for a long term, customer relationship management programs should be employed by these companies. For example, using data base marketing brand managers may offer product information, company progress; invite customers in ceremonial scenarios and similar activities will strength the relationship. In the study, brand loyalty is found to be contextually strong path in the beer industry. No brand shows a unique significant claim on brand loyalty.

c) **Perceived Quality as a source of Brand Equity:** maintaining the existing brand equity sometimes may be difficult where new players are entering in to the market and the existing beer brand are becoming tough ever. Here, claiming quality and communicating properly to the target market via a fit media is the task of the brand managers. Perceived quality judgment found in the customers mind should be strengthening through claiming quality based on: standards, beer ingredients, the process (technology) of malting, the packaging, distribution and other positioning unique features. On top of these, creating a brand community may further strength the brand loyalty, since, marketing information from Fun beer brand clubs will be more persuasive than marketing information created by the company .

For example, St George, Amber, Meta Abo beer and Meta Premium beer able to maintained a high perceived quality value than Dashen beer and Harar beer. Here, the former brands should utilize the existing quality in order and maintain their position via reminder advertising. But, the later brands should create persuasive message and deliver accordingly so that they can improve their less quality up on the consumer judgment.

d) **Brand Association as a source of Brand Equity:** consumers should have a positive image about the beer brand to consume. This positive image should be revitalized and maintained through different marketing programs. Leveraging secondary (external to the brand) associations are some of the mechanisms to strengthen the image found in the mind of consumers. For example, Dashen Beer (The peaks mountain in Ethiopia) can be associated as the peak quality of all beers. Meta Abo Beer through ingredient branding. The beer that malt with pure water, Bedele as a sporting or cultural events (through sponsorships). These examples can be used on individual or combination bases based on the need and competition in the market.

Some marketing strategies like Cause-marketing (Kotler and Keller,2012) is donating a percentage of revenues to a specific cause based on the revenue occurring during the announced period of support) will assist brand managers in creating brand equity through increasing beer brand knowledge, creating loyal customers, arouse quality perception of customers and increasing the likability of their beer brand up on the minds and hearts of the customers. Specifically, from a branding point of view, cause marketing can (1) Build brand awareness, (2) enhance brand image, (3) establish brand credibility, (4) Evoke brand feelings, (5) create a sense of brand community, and (6) elicit brand engagement.

5.4. Limitations and Direction of further Area of research

The study was about measuring consumer based brand equity in beer market of Addis Ababa across brands. It was bounded only on the perspective of the consumer. Further area of research will be valuable if first, brand equity measured by incorporating both firm and consumer side scales. Such studies may offer the extent of match and mismatch between what the breweries or beer brands are positioning and what actually there in the mind of the consumers.

Second, a comparative study of individual brands, the market leader brand and the brand with the lowest market share based on updated market share figure, would be elegant to see how the brand equity sources are affecting the two extreme brands.

Third, since habit of drinking is found to be the only demographic characteristics that vary among brand equity dimensions in the study, measuring brand equity based on the segmentation based on (**usage rate** as: of light, medium and heavy users, because every product has its nonusers, ex-users, potential users, first-time users, and regular users.) (Kotler and Keller, 2012) may shed light on what kind of strategies that firm's will devise in order to deal with brand equity dimensions on these categories of consumers. Still, the study was only about beer a beverage category but, if the brand equity measurement is applied in beverage industry throughout the country as a whole a wide spectrum of branding and brand management insight might be obtained.

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APPENDICES

Appendix A: Questionnaire in English

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE
DEPARTMENT OF MARKETING MANAGEMENT
Questionnaire to be filled by Beer Brand Consumers of Addis Ababa to measure CBBE in Beer market of Ethiopia: An Empirical investigation

Dear Respondent

I really appreciate your genuine response for this questionnaire. This questionnaire is designed and given to you to collect data about your knowledge, feelings and attitudes about Ethiopian Beer Brands. My name is Wasihun Ejigie, MA candidate at Addis Ababa University School of Commerce conducting a research under the title of ***"measuring consumer based brand equity: empirical evidence from the beer market of Ethiopia (In Case of Addis Ababa)***" as a partial fulfillment of the requirement of my second degree. .Here, I promise you that your response will be kept absolutely confidential and used only for the consumption of this paper.

For any further inquiry you can contact me via -911-036591 ewasihun@gmail.com Thank You!

I. **General Information: please insert a check mark "✲ " in the box you select and no need of writing your name.**

1 Age : 18-25 o 26-30 o 31-35 o 36-40 o 41-50 o >51o
2 Gender : Male o Female o
3 Monthly Income Level(Ethiopian Birr): up to 2000 o2001-4000 o4001-6000 o 6001-8000 o > 8000 o
4 Educational level: Below high school o High school completed o Diploma o Degree o Master o PhD o
5 Marital status: Married o Single o Divorced o Widowed o
6 Occupational Status: Employed o self-Employed o unemployed o
7 Which brand of beer that you drink frequently? 1. St. George Beer o 2. Amber Beer 3. Castle Beer 4. Meta Beer o 5. Meta Premium Beer o 6. Harar Beer o 7. Bedele Beer o 8. Bedele especial Beer if others please specify_____
8 How frequent do you drink beer? Daily o Once per week o several times per week o occasionally o Several times per year o

II. Basic research question: please put a check mark "ᵻ " among the five alternative in the following table that best explain your attitude in the scale

Items	D. Brand Association	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BAS1	This "X" Beer Brand has the personality I like					
BAS2	This "X" Beer Brand is interesting					
BAS3	I have a clear image of the type of people who drink "X" beer brand					
BAS4	I trust the company which manufacture "X" beer brand					
BAS5	I like the company which manufacture "X" beer brand					
BAS6	the Company that makes "X" beer brand has credibility					
Items	**Overall Brand Equity**	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
OBE 1	It makes sense to buy "X" beer brand instead of any other beer brand, even if they are the same.					
OBE2	Although another brand has the same features as "X" beer brand, I would prefer to purchase this "X" beer brand					
OBE3	if there is another beer brand as good as "X" beer brand I prefer to buy this "X" beer brand					
OBE4	if another brand is different from "X" beer brand any way, it seems smarter to buy "X" beer brand					
	"This "X" beer brand have the same quality over time					
PQ3	This "X" Beer brand offers reliable and trustworthy products					
PQ4	This "X" beer brand have excellent features					

Appendix B: Questionnaire in Amharic/የጥናቱ መጠይቅ በአማርኛ

አዲስ አበባ ዩኒቨርስቲ የንግድ ስራ ትምህርት ቤት
የገበያ አመራር የትምህርት ክፍል
በኢትዮጵያ ደንበኛን መሰረት ያደረገ የቢራ ብራንዶችን ሀብት ለመለካት የተዘጋጀ በተለይም
አዲስ አበባ በሚኖሩ የቢራ ተጠቃሚዎች የሚሞላ መጠይቅ

የተከበሩ ምላሽ ሰጪዬ

እውነተኛ ምላሽዎን ለመስጠት ሰዓትዎን ስለመደቡልኝ ከልቤ አመሰግናለሁ። ይህ መጠይቅ በኢትዮጵያ በተለይም ደግሞ በአዲስ አበባ ደንበኛን መሰረት ያደረገ የቢራ ብራንዶችን ሀብት ለመለካት እንዲቻል የተዘጋጀ ነው ። በኢትዮጵያ ስላሉ የቢራ ብራንዶች ያልዎትን እውቀት፣አመለካትና አስተሰሳብ በመሰብሰብና በመተንተን የብራንዱ ባለቤቶች የተጠቃሚዎችን ፍላጎት መሰረት ያደረገ የገበያ አመራር ውሳኔዎችን እንዲወስዱ ያስችላል ተብሎ ይታመናል። በተጨማሪም ይህ መጠይቅ ለ 2 ኛ ዲግሪዬ ማሚያ ጥናት በመሆኑ የሚሰጡኝ መረጃ በሙሉ በሚስጢር የሚያዝና ለዚሁ ጥናት ፍጆታ ብቻ የሚውል መሆኑን ላረጋግጥልዎ እወዳለሁ።

ለበለጠ መረጃ +**251-911-036591** ወይንም **ewasihun@gmail.com** ዋሲሁን እጅጌ ብለው ሊያገኙኝ ይችላሉ።

አመሰግናለሁ!

I. ጠቅላላ መረጃዎች። እባክዎ በመረጡት ሳጥኑ ውስጥ ይህን "ᵡ " ምልክት ያድርጉ። ስም መጻፍ አስፈላጊ አይደለም።

1. እድሜ : 18-25 o 26-30 o 31-35 o 36-40 o 41-50o >51o
2. ጸታ : ወንድ o ሴት o
3. የትምህርት ደረጃ: ከ 2 ኛ ደረጃ በታች o 2 ኛ ደረጃ ያጠናቀቀኩ o ዲፕሎማ o ዲግሪ o 2 ኛ ዲግሪ o ዶክትሬት ዲግሪ o
4. ወርሃዊ የገቢ ሁኔታ እስከ 2000 o 2001-4000 o 4001-6000 o 6001-8000 o > 8000 o
5. የጋብቻ ሁኔታ: ያገባሁ o ያላገባ/ች o ፈት o ባለቤቴ በሞት የተለየ/ች o
6. የስራ ሁኔታ፡ ተቀጣሪ o ራስን ቀጣሪ o ስራ ላይ ያልተሰማራ o
7. ከሚከተሉ በሰንጠረዥ ከተመለከቱ የቢራ ብራንዶች መካከል የርሶ ምርጫ የትኛው ነው?

ቅ.ጊዮርጊስ ቢራ o	2. አምበር ቢራ o	ካስትል ቢራ o	ሚታ አቦ ቢራ o	ሚታ ፕሪሚዬም ቢራ o
ሐረር ቢራ o	7. በደሌ ቢራ o	8.በደሌ እስፔሻል ቢራ o		9.ዳሸን ቢራ o

ምርጫዎ ከላይ ከተጠቀሱት የቢራ ብራንዶች ውጭ ከሆነ እባክዎ የቢራ ብራንዱን ስም ይፃፉ_____

8. የቢራ አጠጣጥ ልማድ/ድግግሞሽ በየቀኑ o በሳምንት ወስጥ ለበርካታ ጊዜ o
በሳምንት አንዴ o አለፎ አልፎ o በአመት ለበርካታ ጊዜ o

II. ዋና የጥናቱ መጠይቆች ቀጥሎ ያለው ሰንጠረዥ መጠይቅ ከላይ በተራ ቁጥር 7 በተሞላው ሰንጠረዥ መሰረት ከመረጡት እንዲሁም ስሙን በክፍት ቦታው ላይ ከጻፉት የቢራ ብራንድ የሚነሳ ነው ። እባክዎን በሰንጠረዡ በቀኝ በኩል ካሉ የመልስዎ ደረጃዎች በሚለው ስር ካሉ አምስት ምርጫዎች መካከል አንዱ ላይ ይህን ᵻ ምልክት በማስቀመጥ ይተባበሩኝ።

ተ.ቁ	አመላካቾች መጠይቆች	የመልስዎ ደረጃዎች					
		አጥብቄ አልስማማም	አልስማማም	አስ/ልስማማም		አጥብቄ እስማማለሁ	እስማማለሁ
	ሀ ፱፱ የቢራ ብራንድ ግንዛቤ (Brand Awareness)						
1	ስለዚህ ቢራ ብራንድ ሰምቼ አውቃለሁ						
2	ይህ የቢራ ብራንድ ስለቢራ ብራንዶች ባሰብኩ ቁጥር ወደ አዕምሮዬ ይመጣል።						
3	ይህን የቢራ ብራንድ ተላምጃለሁ።						
4	ይህን ብራንድ በደንብ አውቀዋለሁ።						
5	ይህን ቢራ ከተወዳዳሪ ብራንድ ቢራዎች መካከል ለይቼ አውቀዋለሁ።						
	ለ ፱፱ ለቢራ ብራንዱ ያለን ታማኝነት (Brand Loyalty)	አልስማማም					እስማማለሁ
6	ለዚህ የቢራ ብራንድ ታማኝ ነኝ።						
7	ቢራ ለመግዛት ከወሰንኩ ይህ ቢራ ከመጀመሪያ ምርጫዎቼ ውስጥ ይካተታል።						
8	ይህ የቢራ ብራንድ በቢራ መሸጫዎች ካለ ሌላ ቢራ ፈጽሞ አልገዛም።						
9	ለጓደኞቼም ይህን ቢራ እንዲጠጡ አስተያየታዊ ምክር እለግሳቸዋለሁ።						
	ሐ ፱፱ የቢራ ብራንዱ ጥራት በደንበኞች እይታ (Perceived Quality)	አልስማማም					እስማማለሁ
10	ይህ የቢራ ብራንድ ከፍተኛ ጥራት ያላቸውን የቢራ ምርቶች ያመርታል።						
11	ይህ የቢራ ብራንድ በተከታታይነት ጥራቱን የጠበቀ ምርት ያመርታል።						
12	ይህ የቢራ ብራንድ ልተማማንባቸውና ልመካባቸው የምችላቸውን የቢራ ምርቶች ያመርታል።						
13	ይህ የቢራ ብራንድ ምርጥ ባህርያት ያሏቸውን ምርቶች ያመርታል።						
	መ ፱፱ ከብራንዱ ጋር ያለ ዝምድና (ግንኙነት) (Brand Association)	አልስማማም		እስማማለሁ		አጥብቄ	እስማማለሁ
14	ይህ የቢራ ብራንድ እኔ የምወደው ስብዕና አለው።						
15	ይህ የቢራ ብራንድ ማራኪ ነው።						
16	ይህን የቢራ ብራንድ የሚጠጡ ሰዎች ምን አይነት ሰዎች እንደሆኑ ጥርት ያለ ምስል አለኝ።						
17	ይህን የቢራ ብራንድ የሚያመርተውን ድርጅት እተማመንበታለሁ።						
18	ይህን የቢራ ብራንድ የሚያመርተውን ድርጅት እወደዋለሁ።						
19	ይህን የቢራ ብራንድ የሚያመርተው ድርጅት የሚተማመን ነው።						

Appendix C: Reliability analysis (inter-Item analysis)

Overall Reliability Statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.913	.916	15

Reliability Statistics of Brand Awareness

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.873	.874	2

Reliability Statistics of Brand Loyalty

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.757	.766	3

Reliability Statistics of Perceived Quality

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.880	.881	3

Reliability Statistics of Brand Association

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.866	.866	3

Reliability Statistics of Overall Brand Equity

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.852	.859	3

Table 24: Attitude of respondents based on brand preference

$items*brand preference Cross tabulation												
		Items[a]										Total
		Strongly disagree		Disagree		Neutral		agree		strongly Agree		
		c	WI	c	WI	c	WI	c	WI	c	WI	C
Brand Preference of the respondents	St. George Beer	121	42.9%	141	31.0%	119	38.4%	913	44.4%	582	49.9%	134
	Amber Beer	12	4.3%	15	3.3%	4	1.3%	139	6.8%	96	8.2%	19
	Castle Beer	10	3.5%	13	2.9%	18	5.8%	48	2.3%	37	3.2%	9
	Meta Abo Beer	13	4.6%	54	11.9%	61	19.7%	315	15.3%	215	18.4%	47
	Meta Premium Beer	22	7.8%	40	8.8%	17	5.5%	154	7.5%	89	7.6%	23
	Harar Beer	48	17.0%	59	13.0%	10	3.2%	212	10.3%	49	4.2%	27
	Bedele Beer	19	6.7%	51	11.2%	30	9.7%	161	7.8%	33	2.8%	21
	Bedele Special Beer	16	5.7%	37	8.1%	29	9.4%	72	3.5%	56	4.8%	15
	Dashen Beer	21	7.4%	45	9.9%	22	7.1%	43	2.1%	9	.8%	10
Total		282		455		310		2057		1166		305
Percentages and totals are based on respondents.												
a. Group										Key: C = Counts WI= With in items		

Table 255:Anova table of Brand Equity dimensions and mean group difference of Habit of Beer Drinking

		Sum of Squares	df	Mean Square	F	Sig.
Brand Awareness	Between Groups	5.750	4	1.437	1.078	.367
	Within Groups	400.032	300	1.333		
	Total	405.782	304			
Brand Loyalty	Between Groups	11.588	4	2.897	3.398	.010
	Within Groups	255.762	300	.853		
	Total	267.350	304			
Perceived Quality	Between Groups	15.033	4	3.758	4.339	.002
	Within Groups	259.829	300	.866		
	Total	274.862	304			
Brand Association	Between Groups	21.679	4	5.420	5.489	.000
	Within Groups	296.195	300	.987		
	Total	317.874	304			
Overall Brand Equity	Between Groups	26.646	4	6.662	7.001	.000
	Within Groups	285.472	300	.952		
	Total	312.118	304			

Source: own survey SPSS result (2014)

dependent Variables	Age		sex		Educational level		Monthly income		Marital Status		Employee status		Habit of Beer Drinking	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Brand Awareness	.830	.529	.201	.654	1.676	.140	2.016	.092	.372	.829	2.179	.091	1.078	.367
Brand Loyalty	.574	.720	.008	.930	1.529	.180	1.231	.298	.063	.993	1.751	.157	3.398	.010
Perceived Quality	1.527	.181	.522	.471	.852	.514	.279	.892	.206	.935	1.149	.329	4.339	.002
Brand Association	.616	.688	2.128	.146	.762	.578	.462	.764	.534	.711	4.619	.004	5.489	.000
Overall Brand Equity	.700	.624	2.970	.086	1.789	.115	.809	.520	.669	.614	1.556	.200	7.001	.000

Table 266: Demographic variables and Brand Equity dimensions Anova analysis

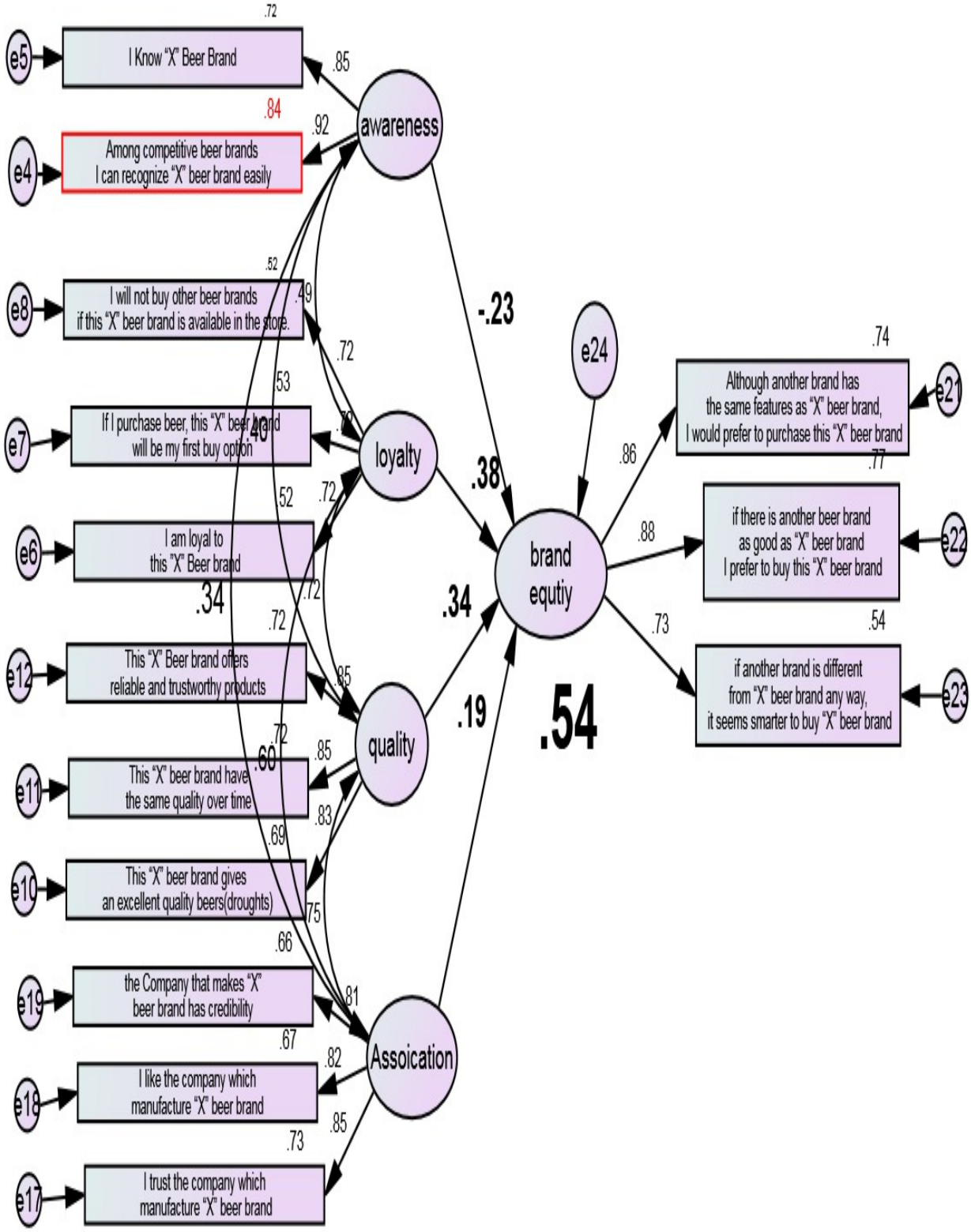
Source: Source: own survey SPSS result (2014)

Table 27: Anova table of Brand Equity dimensions and mean group difference of beer brand preference

Bonferroni **Multiple Comparisons**							
Dependent Variable	brand preference (I)	brand preference (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Brand Awareness	St. George Beer	Meta Abo Beer	-.69268*	.19199	.013	-1.3123	-.0730
	Meta Abo Beer	St. George Beer	.69268*	.19199	.013	.0730	1.3123
Perceived Quality	St. George Beer	Harar Beer	.66676*	.19216	.022	.0466	1.2870
		Dashen Beer	1.24577*	.29862	.001	.2820	2.2096
	Amber Beer	Harar Beer	.93502*	.27278	.025	.0546	1.8154
		Dashen Beer	1.51404*	.35588	.001	.3654	2.6627
	Meta Abo Beer	Harar Beer	.71815*	.21997	.044	.0082	1.4281
		Dashen Beer	1.29716*	.31723	.002	.2733	2.3210
	Meta Premium Beer	Dashen Beer	1.13188*	.34505	.042	.0182	2.2455
	Harar Beer	St. George Beer	-.66676*	.19216	.022	-1.2870	-.0466
		Amber Beer	-.93502*	.27278	.025	-1.8154	-.0546
		Meta Abo Beer	-.71815*	.21997	.044	-1.4281	-.0082
	Dashen Beer	St. George Beer	-1.24577*	.29862	.001	-2.2096	-.2820
		Amber Beer	-1.51404*	.35588	.001	-2.6627	-.3654
		Meta Abo Beer	-1.29716*	.31723	.002	-2.3210	-.2733
		Meta Premium Beer	-1.13188*	.34505	.042	-2.2455	-.0182
Brand Association	St. George Beer	Dashen Beer	1.25075*	.32357	.005	.2064	2.2951
	Amber Beer	Dashen Beer	1.68070*	.38563	.001	.4361	2.9253
	Meta Abo Beer	Dashen Beer	1.37163*	.34374	.003	.2622	2.4811
	Dashen Beer	St. George Beer	-1.25075*	.32357	.005	-2.2951	-.2064
		Amber Beer	-1.68070*	.38563	.001	-2.9253	-.4361
		Meta Abo Beer	-1.37163*	.34374	.003	-2.4811	-.2622
Overall Brand Equity	St. George Beer	Dashen Beer	1.46269*	.31883	.000	.4337	2.4917
	Amber Beer	Dashen Beer	1.39474*	.37997	.010	.1684	2.6211
	Castle Beer	Dashen Beer	1.64815*	.44688	.010	.2058	3.0904
	Meta Abo Beer	Dashen Beer	1.27305*	.33870	.007	.1799	2.3662
	Meta Premium Beer	Dashen Beer	1.23913*	.36840	.031	.0501	2.4282
*. The mean difference is significant at the 0.05 level.							

Source: own survey SPSS result (2014)

APPENDIX D: SEM AMOS GRAPHICS AND MODEL FIT DATA



Source: AMOS Own survey result (2014)

(Hong-Bumm Kim, 2003)Analysis Summary

Date and Time

Date: Friday, May 16, 2014
Time: 10:43:50 PM

Title

May 17 sem: Friday, May 16, 2014 10:43 PM

Notes for Group (Group number 1)

The model is recursive.
Sample size = 305

Variable counts (Group number 1)

Number of variables in your model:	34
Number of observed variables:	14
Number of unobserved variables:	20
Number of exogenous variables:	19
Number of endogenous variables:	15

Parameter Summary (Group number 1)

	Weights	Covariance's	Variances	Means	Intercepts	Total
Fixed	**20**	**0**	**0**	**0**	**0**	**20**
Labeled	**0**	**0**	**0**	**0**	**0**	**0**
Unla	**13**	**6**	**19**	**0**	**0**	**38**

Your model contains the following variables

(Group number 1)

Observed, endogenous variables
BAW4
BAW5
BL1
BL2
BL3
PQ1
PQ2
PQ3
BAS4
BAS5
BAS6
OBE2
OBE3
OBE4

Unobserved, endogenous variables
Brand _equity
Unobserved, exogenous variables
Awareness
e5
Loyalty
e6
e7
e8
Quality

e10
e11
e12
Association
e17
e18
e19
e21
e22

	Weights	Covariance's	Variances	Means	Intercepts	Total
beled						
Total	33	6	19	0	0	58

e23
e4
e24

Appendix E: SEM AMOS OUTPUTS

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	105
Number of distinct parameters to be estimated:	38
Degrees of freedom (105 - 38):	67

Result (Default model)

Minimum was achieved
Chi-square = 124.151
Degrees of freedom = 67
Probability level = .000

Maximum Likelihood Estimates

Table 28: Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
brand_ equity	<---	awareness	-.187	.052	-3.603	***	
brand_ equity	<---	loyalty	.415	.113	3.679	***	
brand_ equity	<---	quality	.363	.120	3.015	.003	
brand_ equity	<---	Association	.185	.088	2.097	.036	

			Estimate	S.E.	C.R.	P	Label
BAW4	<---	awareness	.875	.078	11.165	***	
BAW5	<---	awareness	1.000				
BL1	<---	loyalty	1.045	.096	10.874	***	
BL2	<---	loyalty	.785	.072	10.893	***	
BL3	<---	loyalty	1.000				
PQ1	<---	quality	1.000				
PQ2	<---	quality	1.003	.058	17.278	***	
PQ3	<---	quality	1.071	.062	17.232	***	
BAS4	<---	Association	1.037	.064	16.123	***	
BAS5	<---	Association	.968	.063	15.471	***	
BAS6	<---	Association	1.000				
OBE2	<---	brand_ equity	.955	.067	14.306	***	
OBE3	<---	brand_ equity	1.044	.072	14.514	***	
OBE4	<---	brand_ equity	1.000				

Table 29: Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
awareness	1.328	.165	8.043	***	
loyalty	.752	.114	6.598	***	
quality	.756	.088	8.590	***	
Association	.902	.110	8.192	***	
e24	.407	.065	6.307	***	
e5	.255	.108	2.368	.018	
e6	.750	.080	9.328	***	

	Estimate	S.E.	C.R.	P	Label
e7	.419	.045	9.299	***	
e8	.701	.075	9.392	***	
e10	.341	.037	9.254	***	
e11	.290	.033	8.677	***	
e12	.336	.038	8.732	***	
e17	.363	.046	7.879	***	
e18	.413	.046	8.909	***	
e19	.470	.051	9.135	***	
e21	.286	.038	7.610	***	
e22	.284	.042	6.778	***	
e23	.759	.072	10.522	***	
e4	.398	.087	4.562	***	

Table 30: Squared Multiple Correlations: (R^2)(Group number 1 - Default model)

Brand_equity	OBE4	OBE3	OBE2	BAS6	BAS5	BAS4	PQ3	PQ2	PQ1	BL3	BL2	BL1	BAW5	BAW4
0.538	0.537	0.772	0.737	0.657	0.672	0.727	0.721	0.724	0.689	0.518	0.525	0.523	0.839	0.719

Table 31: SEM Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	38	124.151	67	.000	1.853

Table 32: RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.048	.945	.914	.603

Table 33: Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.951	.934	.977	.968	.977

Table34: Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.736	.700	.719

Table 35: NCP

Model	NCP	LO 90	HI 90
Default model	57.151	29.673	92.452

Table 36: FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.408	.188	.098	.304

Table 37: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.053	.038	.067	.352

Table 38: AIC

Model	AIC	BCC	BIC	CAIC
Default model	200.151	204.095	341.523	379.523

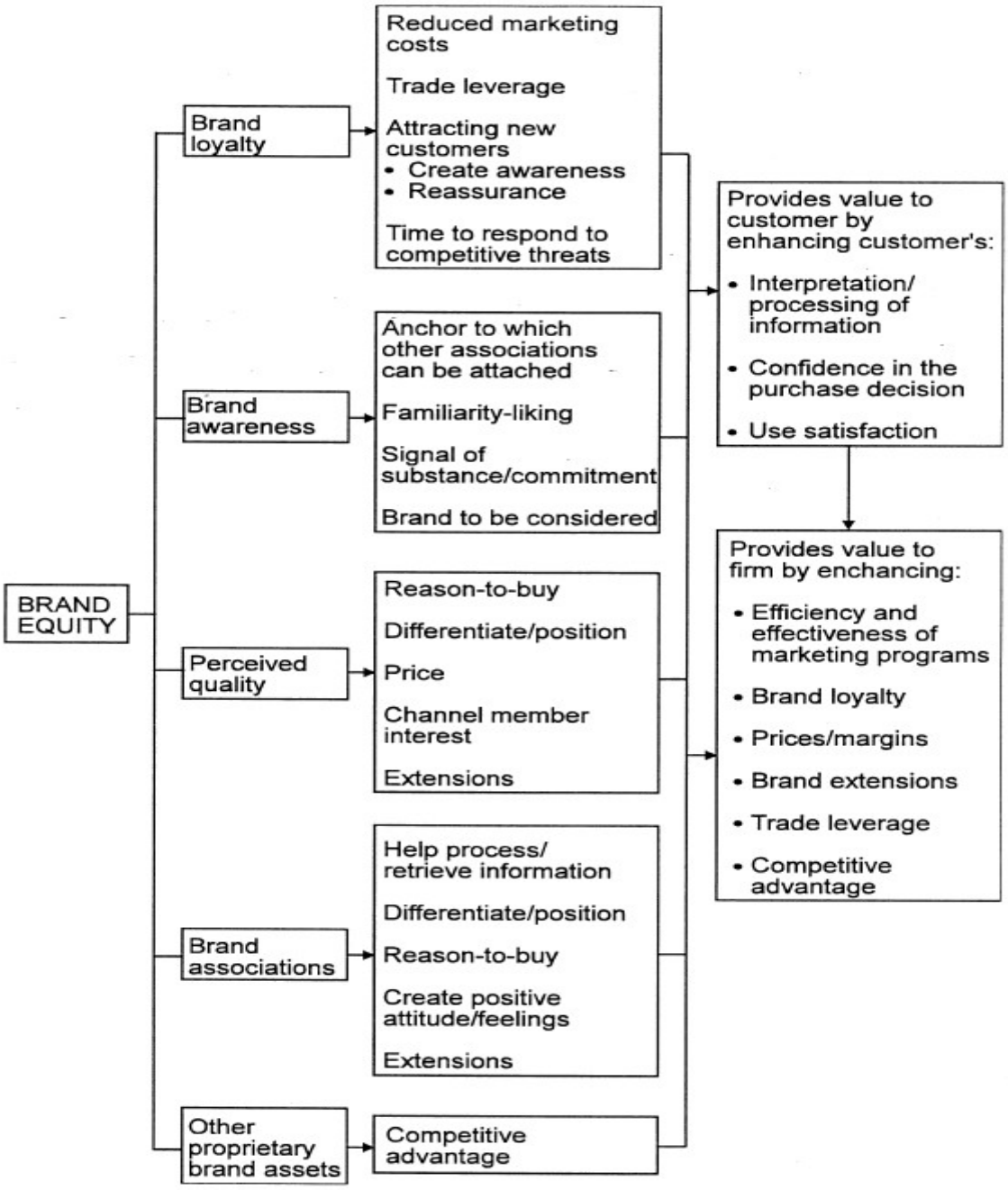
Table 39: ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.658	.568	.775	.671

Table 40: HOELTER

Model	HOELTER .05	HOELTER .01
Default model	214	238

Figure 9: Source of Brand Equity model Aaker 1991



SOURCE: BRAND EQUITY MODEL AAKER 1991 PP: II