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The Impact of Brand Equity on Brand Preference of Pharmaceutical Products by Physicians in Ethiopia

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APPROVAL

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Declaration

I, Dawit Gebremedhin, hereby declare that the thesis entitled the impact of brand equity on brand preference of pharmaceuticals by physicians in Ethiopia is the outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged. This study has not been submitted for any degree in this University or any other University. It is offered for the partial fulfillment of the degree of MA in Marketing Management.

Acknowledgement

Foremost, I would like to thank Almighty God for giving me the opportunity to join and complete this study. This research project would not have been possible without the support of many people. I would like to express my gratitude to my advisor Dr. Rakshit Negi who was abundantly helpful and offered invaluable assistance, support and guidance.

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Abstract

Brands have become a major player in modern society. In fact they are everywhere. They penetrate all spheres of our life: economic, social, cultural, sporting, even religion. Brands have financial value because they have created assets in the minds and hearts of customers, distributors, prescribers, opinion leaders. Although current research focuses on building and concept of brand equity, so far it does not create the general consensus on the impact of brand equity on preference and the degree of influence that the different brand equity elements have on brand preference. The objective of the study is to examine the impact of brand equity on brand preference of pharmaceuticals by physicians in Ethiopia. A conceptual framework was use to see the relationship between brand equity variables and brand preference. A quantitative approach is chosen in this research. In order to collect primary data, a structured questionnaire was adopted and was given to the physicians taken as a sample. The SPSS version 20.00 for windows was used to process the primary data which was collected through questionnaire. The findings show that the results of the correlation on the determinants; brand awareness, price and perceived quality were significantly correlated with brand preference and impact the preference of pharmaceutical brands in a considerable amount. This implies that this factors being easily manipulated by the pharmaceutical companies, the companies can play a big role in positioning their product in the minds of their customers to be more preferred than other competitor brands in the market. The regulatory bodies also should give a high emphasis to this in improving and controlling the standard protocols in assessing the quality of the pharmaceutical brands in the market. Last but not least, physicians should act in a highly ethical and technically acceptable standard so as to find a balance between their choice of brand and patient as priority

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List of Abbreviations

NSPAMD: National strategy and plan of action for pharmaceutical manufacturing development in Ethiopia

GSK : Glaxo smith klein

MSD: Merck Sharp and Dohme

USA : United states of America

UK: United Kingdom

FMHACA: Food, Medicine and health care administration and control authority of Ethiopia

CMEs: Continuous Medical Educations

SPSS: Statistical Software Package for Social Science

CHAPTER ONE

INTRODUCTION

This chapter presents the background of the study, statement of the problem and continuing to research questions, significance of the study, scope, and finally limitation of the study were addressed.

1.1. Background of the study

Brands have become a major player in modern society. In fact they are everywhere. They penetrate all spheres of our life: economic, social, cultural, sporting, even religion. (Klein, 1999). Brands have financial value because they have created assets in the minds and hearts of customers, distributors, prescribers, opinion leaders. These assets are brand awareness, beliefs of exclusivity and superiority of some valued benefit, and emotional bonding. This is what is expressed in the now classic definition of a brand: 'a brand is a set of mental associations, held by the consumer, which add to the perceived value of a product or service' (Keller, 1998). These associations should be unique (exclusivity), strong (saliency) and positive (desirable).

The official Marketing Science definition of brand equity is 'the set of associations and behavior on the part of a brand's customers, channel members and parent corporation that permits the brand to earn greater volume or greater margins than it could without the brand name' (Leuthesser, 1988).

Brand equity is the differential effect that brand knowledge has on consumer response to the marketing of that brand and is separated it into two components: awareness and association (Keller, 2003). Aaker (1991) grouped it into five categories: perceived quality, brand loyalty,

brand awareness, brand association and other non proprietary brand assets such as patents, trademarks, and channel relationships. Strong brand equity means that customers have high brand name awareness, maintain a favorable brand image, perceive that the brand is of high quality, and are loyal to the brand.

Building a brand driven culture is a lifelong commitment to a mindset and a way of life that takes time, planning and perseverance that produce intangible outputs which include greater customer satisfaction, reduced price sensitivity, fewer customer defections, a greater share of customer's wallets, more referrals and a higher percentage of repeat business(Knapp, 2000).

In other perspective, the benefits created by strong brand equity can also be improved perceptions of product performance, increased quality, less vulnerability to competitive marketing actions, larger margins, more inelastic consumer response and increased marketing effectiveness and so on. A strong brand increases the consumer's attitude strength toward the product associated with the brand. Attitude strength is built by experience with a product. The consumer's awareness and associations lead to perceived quality, inferred attributes, and eventually, brand loyalty (Keller, 1993).

The annual pharmaceutical market in Ethiopia is estimated to be worth US$ 400 to US$ 500 million and growing at an impressive rate of 25% per annum. A 2012 estimate by Frost & Sullivan suggests the Ethiopian pharmaceutical market could witness growth rates of "slightly over 14%" to reach an approximate value of just under US$ 1 billion by 2018. (NSPAPMD, 2015).

Steady economic growth, improvements in the delivery of health care, and introduction of social health insurance coverage across the country in July 2015 all lead to growing demand. These developments are encouraging international pharmaceutical companies to invest in Ethiopia, as evidenced by activities of Cadila, Julphar, GlaxoSmithKline, Sandoz and Hikma Pharmaceuticals. (NSPAPMD,2015).

There are approximately 200 importers of pharmaceutical products and medical consumables in Ethiopia. The local industry comprises 22 pharmaceutical and medical suppliers and manufacturers, with 9 involved directly in the manufacture of pharmaceutical products. Most of the manufacturers operate below their capacities and supply only about 20% of the local market. In 2014, local pharmaceutical companies supplied products to the value of US$ 44.2 million. Local manufacturers have limited product portfolios and are thought to be able to supply only 90 of the more than 380 products on the national essential medicines list. Around 35–40% of their total output is supplied to the private sector at a price premium of 10%. The annual private pharmaceutical market in Ethiopia is estimated to be worth US$ 100 million. (NSPAPMD, 2015).

The private market is supplied majorly by the products which are being imported from different companies from different continents. Some of the companies which bring their products to Ethiopia include: GSK (England), MSD(USA), Astra Zenneca(UK), Sanofi Aventis(France), Aurobindo(India),Cadilla(India), Bilim(Turkey), and Remedica(Cyprus). Though the market is supplied by both Innovator and generic products, its their professional right for the health professionals to choose among the available product brands. Moreover the manufacturing

companies have a local agent to import their products mainly for the private market and these companies have also a sales team that does a professional/technical promotion to the health care professionals and the sales and distribution activity (Andualem ,Kafil 1995).

Only those drugs registered by the Authority shall be promoted. When advertising to health professionals, pharmaceutical companies are obliged to contain information like;

- The name(s) of the active ingredient(s) using either international non proprietary names (INN) or the approved generic name of the medicament.
- The brand name, (if any)
- Content of active ingredient(s) per dosage form or regimen,
- Approved therapeutic uses.
- Dosage form or regimen.
- Side-effects and major adverse drug reactions.
- Precautions, contra-indications and warnings.
- Major interactions
- Name and address of manufacturer or distributor.
- Reference to scientific literature as appropriate
- Storage Condition (FMHACA , 2008).

There is also a high competition between these companies to have a maximum market share from the overall market, which necessitates the focus on their branding activities.

Brands have become a major player in modern society. In fact they are everywhere. They penetrate all spheres of our life: economic, social, cultural, sporting, even religion. (Klein, 1999). Brands have financial value because they have created assets in the minds and hearts of

customers, distributors, prescribers, opinion leaders. These assets are brand awareness, beliefs of exclusivity and superiority of some valued benefit, and emotional bonding. This is what is expressed in the now classic definition of a brand: 'a brand is a set of mental associations, held by the consumer, which add to the perceived value of a product or service' (Keller, 1998). These associations should be unique (exclusivity), strong (saliency) and positive (desirable).

The official Marketing Science definition of brand equity is 'the set of associations and behavior on the part of a brand's customers, channel members and parent corporation that permits the brand to earn greater volume or greater margins than it could without the brand name' (Leuthesser, 1988).

1.2. Statement of the problem

In addition to focusing on the role of a drug's constituents, and therefore of the intimate link of the active ingredients with the success of the drug, prescribers consider pharmaceutical brands when writing prescriptions to their patients. Medical Doctors do not prescribe products, but brands. Science comes to us not in the form of the international scientific denomination of the chemical compound, but in the form of its brand name: Zantac, Tagamet, Clamoxyl, Prozac, Viagra and so on, not to mention medicines sold without prescription (Kapferer, 2008).

Brand marketing is often the starting point, the distinction between goods and services provided and products are in competition in the market, so it is critical to the success of organizations. In recent years the issue of brand and particular brand equity (BE) has attracted attention of researchers the field of marketing and institutions that are evaluating brand equity. As defined by Aaker brand equity shows the price difference between strong brands in comparison with average brand in sales.

In addition, 70 percent of the company's intangible assets can be created by brand (kotler, 2006). So brand include intangible assets that is allocated a significant share of this value to self (Aaker & Jacobson, 2001). This compared has been different in different industries and different years.

Although current research focuses on building and concept of brand equity, so far it does not create the general consensus on the impact of brand equity on preference and the degree of influence that the different brand equity elements have on brand preference.

Brand equity has a great role when a Physician has to choose between different brands of a product not because it is unique term rather it constitutes a range of determinant factors (Keller, 2003).

Many Pharmaceutical companies in Ethiopia have their own marketing team who are working to build their brands. They invest a significant amount of resources in trying to get a better market share every time. They regularly visit their focus physicians, wholesalers, Retailers and others every time with a brochure, medicine samples, promotional gifts, etc. They sponsor professional associations by investing significant amount of money, present CMEs(Continuous medical education) to collaborate with the professionals and health institutions; All done hoping for a brand preference better than their competitors and a final return on investment. So, this study will aid in identifying the most important determinants for brand preference regarding brand equity to help pharmaceutical companies in allocating their resources according to the importance of the factors.

1.3. Research questions

The following research questions are established:

1. Does brand equity have impact on brand preference in the pharmaceutical market?
2. Does brand awareness have impact on brand preference in the pharmaceutical market?
3. Does perceived quality have impact on brand preference in the pharmaceutical market?
4. Does price have impact on brand preference in the pharmaceutical market?
5. Does brand loyalty have impact on brand preference in the pharmaceutical market?
6. What is the order of priority of the dimensions of brand equity for physicians brand decision?

1.4. Research objectives

1.4.1. General objective

- To examine the impact of brand equity on Physicians brand preference of pharmaceutical products.

1.4.2. Specific objectives

- To identify the main factors those determine brand equity and brand preference among physicians working in the private health sectors.
- To prioritize the dimensions of brand equity based on their importance.

1.5. Significance of the study

There are many pharmaceutical companies that are currently marketing their products in Ethiopia. This happens through selected distributors in the country involved in the pharmaceutical business. To sell their products at the consumer level, companies have their own marketing team, which influence their customers (Prescribers and retailers) and they invest a lot of budget to successfully accomplish this.

This study will describe how brand equity affects the brand preference of pharmaceutical products by physicians and prioritize the factors according to their impact. This will help the pharmaceutical companies marketing their products in Ethiopia to know how important building brand equity is, to assess their current position in building strong brand equity and allocate appropriate budget by seeing the most important factors of brand equity for brand preference.

This paper will also be very important for the middlemen, which buy the products on cash on advance basis from the manufacturing company and sell on a credit basis to the retailers in the business. It will be important in the sense that if the middlemen know the impact of brand equity in the product preference, they will also collaborate in building strong brand equity.

Another party that will benefit from this research are the Medical representatives working in the pharmaceutical companies. It will be beneficial for them on focusing of their efforts on the most important brand equity parameters to be effective in the selling process and in return achieve their sale target and gain career development.

1.6. Scope of the study

Conceptually, the study will consider the factors affecting brand equity to be brand awareness, brand loyalty, perceived quality and price. According to Aaker's model of determinants of brand equity, there are other factors like brand association, package, availability and some other non proprietary brand assets that this study does not include. But, because of limited resources and for a focused result, the researcher has decided to include only the above listed ones variables.

Geographically also, the study considered only the physicians practicing at Addis Ababa and Adama city.

And finally, The researcher used quantitative research approach only and did not consider the influence of experience of physicians on their brand preference.

1.7. Definitions of terms

Brand: - A brand is a name, term, sign, symbol, or design, or a combination of them intended to identify the goods or services of one seller from among a group of sellers and to differentiate them from those of the competitors.(Pekka, 1999)

Brand Preference: - Brand preference is defined variously as the consumer's Predispositions toward a brand that varies depending on the salient beliefs that are activated at a given time; the consumer biasness toward a certain brand; the extent to which a consumer favors one brand over another. (Raheem et al, 2011 p 4)

Brand Equity: - is 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. (Aaker,1991,)

1.8. Organization of the paper

To give a clear and concise understanding to the reader this study is wrapped up as follows. Chapter one has already introduced the very essence of branding, brand equity and its background followed by problem statement which were extracted from the literature gap of the study area.

The second chapter deals with the theoretical framework about brand, brand equity and measurement of brand equity by detailing about the two known models for the determinants of brand equity: Aaker's and Kotler's model of brand equity, Empirical framework and the conceptual framework of the study and justification of the model applied to analyze the study.

Chapter three is dedicated for the methodological part. It explains about the nature of the study, the sampling design and techniques applied; the sources of data collection and the means of analysis applied to execute the study.

The fourth chapter deals with the analysis part of the study like the correlation and regression analysis with major findings and discussion as well as the testing of the hypothesis proposed in chapter one.

Finally, the fifth chapter summarizes the whole journey by summarizing, concluding recommending and giving some directions for future research

CHAPTER TWO

Literature Review

This chapter presents related literatures to the constructs of the study. It is organized in three category containing the theoretical framework (which talks about what the concepts are and what they contain), the empirical framework (which reviews journals related to the study) and the conceptual framework and hypothesis.

2.1. Theoretical framework

2.1.1. What is a Brand?

Curiously, one of the hottest points of disagreement between experts is the definition of a brand. Each expert comes up with his or her own definition, or nuance to the definition. The problem gets more acute when it comes to measurement: how should one measure the strength of a brand? What limited numbers of indicators should one use to evaluate what is commonly called brand equity? In addition there is a major schism between two paradigms. One is customer-based and focuses exclusively on the relationship customers have with the brand (from total indifference to attachment, loyalty, and willingness to buy and rebuy based on beliefs of superiority and evoked emotions). The other aims at producing measures in Dollars, Euros or Yen. Both approaches have their own champions.(Kapferer, 2008)

2.1.2. Brand equity

In a general sense, brand equity is defined in terms of the marketing effects uniquely attributable to the brand. That is, brand equity relates to the fact that different outcomes result from the marketing of a product or service because of its brand element, as compared to outcomes if that same product or service did not have hat brand identification. Although a number of different views of brand equity have been expressed, they all are generally consistent with the basic notion

that brand equity represents the ”added value” endowed to a product or a service as a result of past investments in the marketing for the brand. Researchers studying brand equity at least implicitly acknowledge that there exist many different ways that value can be created for a brand; that brand equity provides a common denominator for interpreting marketing strategies and assessing the value of a brand; and that there exists many different ways in which the value of a brand can be manifested or exploited to benefit the firm. (Keller 1993; Keller 1998,)

Brand equity offers certain strategic benefits to companies. It is important for adding line extension. When a product category has entered the decline stage of the product life cycle, strong brand equity can help a brand survive longer than its competitors. Likewise, in periods of economic downturn, brand equity provides a platform that keeps the brand afloat at a profit long after competing products without strong brand identification begin to flounder. The power of brand equity is especially important in international marketing. Global brands have international presence and visibility, and this”equity” makes it easier for them to expand. Brand equity is also what enables branded products or services to charge premium prices. Many major brands are positioned as quality products, and many people are willing to pay more for a quality product they are familiar with, particularly if the brand has an image with which they would like to be associated. The challenge is to find the point where the premium price is still acceptable in exchange for the confidence embedded in the brand. (Keegan, Moriarty, Duncan 1995) brand equity can be regarded as a managerial concept, as a financial intangible asset, as a relationship concept or as a customer-based concept from the perspective of the individual consumer.(Pekka, 1999).

Aaker(1991) and Aaker and Biel(1993) say that the concept of brand equity has become one of the hottest topics in the marketing literature and it is easy to see why, when noting that there is evidence that a product's brand equity positively affects future profits, long term cash flow and consumer willingness to pay premium prices, (Yoo and Donthu, 2001). Broadbent (2000) accentuates this point by indicating that for many manufacturers, brand equity is their most valuable and potentially longest lasting property.

Aaker(1996) formed his brand equity model around the five categories of brand assets, which includes brand loyalty, brand awareness, perceived quality, brand associations and other proprietary assets. Aaker(1996) determines the five categories as the main determinants of brand equity which deliver positive or negative values to the customer and organization. Each category can be seen as a brand asset that creates value. These are displayed in the figure below.

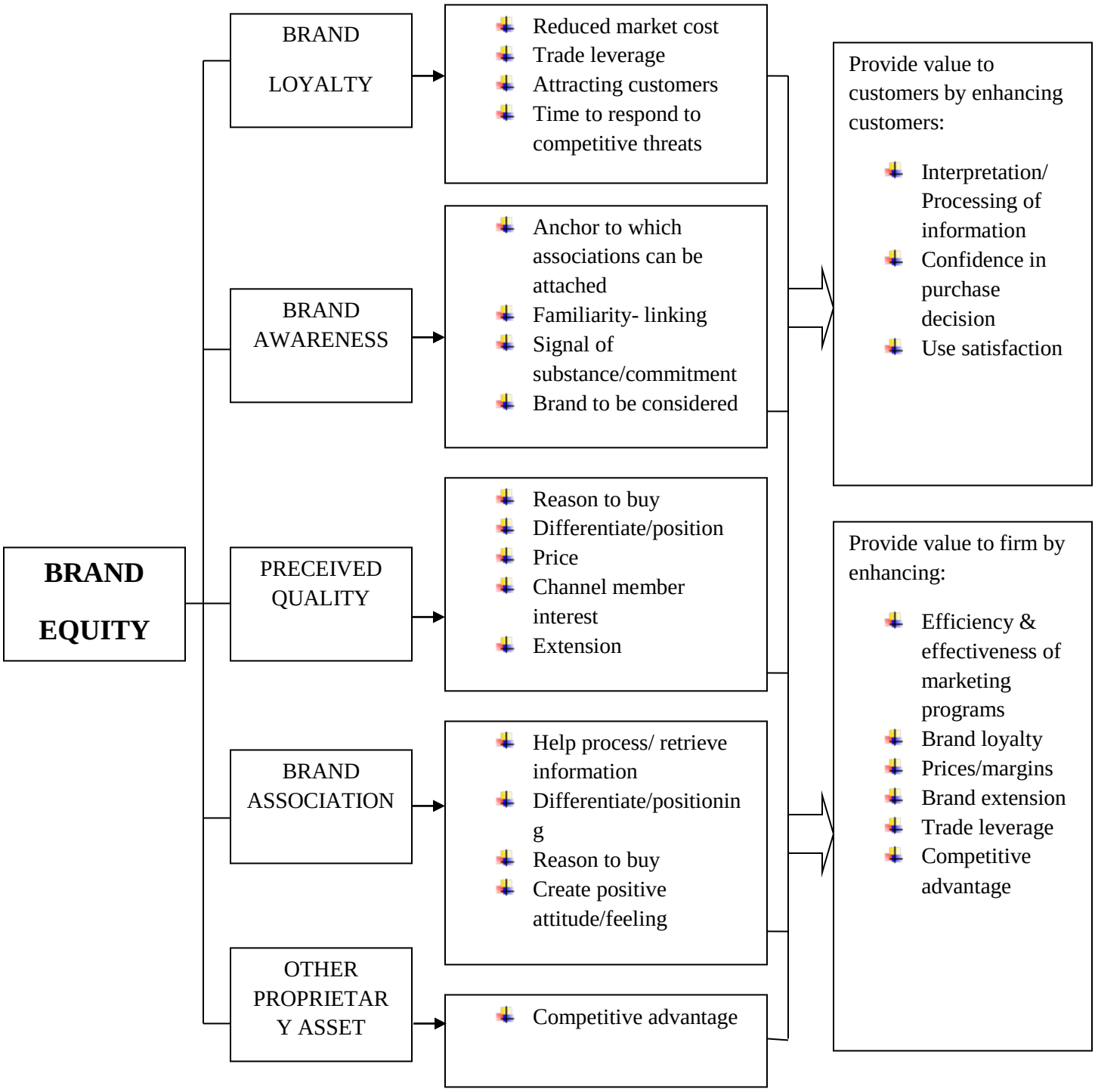

Figure 2.1 Aaker's model of brand equity (Aaker, 1996)

Keller (2008), in a different perspective also in his customer based brand equity model builds around four steps from bottom to top, where each next step is conditional to the success of achieving the objectives of the previous step. The four steps of customer based brand equity model pyramid are structured in six core building blocks with a rational route on the left side: Performance and judgment, and emotional route on the right side: Imagery and feeling. The objective of each step in ascending order, are as follows:

- Presence: Do I know about it?
- Relevance: Does it offer me something?
- Performance: Can it deliver?
- Advantage: Does it offer something better than others? and
- Bonding: Nothing else beats it.

2.1.3. Measurement of brand equity

Although qualitative measures are useful in identifying the range of possible associations with a brand and some initial insights into their strength, favorability, and uniqueness, marketers often want a more definitive portrait of the brand to allow them to make more confident and defensible strategic and tactical recommendations. Quantitative measures of brand knowledge can help to more definitively assess the depth and breadth of brand awareness; the strength, favorability, and uniqueness of brand associations; the positivity of brand judgments and feelings; and the extent and nature of brand relationships.

2.1.3.1. Brand Awareness

Recall that brand awareness is related to the strength of the brand in memory, as reflected by consumers' ability to identify various brand elements like the brand name, logo, symbol,

character, packaging, and slogan under different conditions. Brand awareness describes the likelihood that a brand will come to mind in different situations, and the ease with which it does so given different types of cues. Marketers use several measures of awareness of brand elements. Choosing the right one is a matter of knowing the relative importance of brand awareness for consumer behavior in the category and the role it plays in the success of the marketing program. (Keller, 2013).

2.1.3.2. Brand Loyalty

In brand loyalty research, the main challenge centres on defining the brand loyalty construct and its measurement. Javalgi and Moberg(1997) defined brand loyalty according to bevavioural, attitudinal, and choice perspectives. while behavioural perspective is based on the amount of purchases for a particular brand, attitudinal perspective incorporates consumer preferences and dispositions towards brands. Definitions regarding the choice perspective focus on the reasons for purchases or the factors that may influence choices. These brand loyalty definitions were empirically researched under three major categories:multi domain approach, behavioural approach, and attitudinal approach.(Rundle Thiele and Bennet, 2001).

2.1.3.3. Perceived quality

Perceived quality is defined as the customer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives.(Zeithaml, 1988). It is a competitive necessity and many companies today have turned customer-driven quality into a potent strategic weapon. They create customer satisfaction and value by consistently and profitability meeting customer's needs and preferences for quality. Kotler (2000) draws attention

to the intimate connection among product and service quality, customer satisfaction, and company profitability.

2.1.4. Brand Preference

The notion of preference has been considered in different disciplines such as economists, psychologists, sociology. However there is no commonly agreed definition of preference among these disciplines. For example, economists believe that preferences are exogenous, stable, and known with adequate precision and are revealed through choice behavior. The economic view of preference had been criticized for assuming that preferences are stable and endogenous. An individual's preferences are not stable and can be endogenous or exogenous.

In marketing literature, the word preference means the desirability or choice of an alternative. Preferences are above all behavioural tendencies (Zajonc and Markus, 1982). Brand preference is defined variously as the consumer's predispositions toward a brand that varies depending on the salient beliefs that are activated at a given time; the consumer biasness toward a certain brand; the extent to which a consumer favors one brand over another.(Reham et al. 2011)

2.2. Empirical framework

Table 2.1 Review of related journals

S.No	Researchers	Topic	Major findings
1	Isabel Buil et.al. (2013)	The influence of Brand equity on consumer responses, Proposing and testing of model in two European countries	Results indicate that brand equity dimensions inter-relate. Brand awareness positively impacts perceived quality and brand associations. Brand loyalty is mainly influenced by brand associations. Finally, Perceived quality, brand associations and brand loyalty are the main drivers of overall brand equity.
2	Mohammad Doostar,et al (2012)	Impact of Brand Equity on Purchase Decision of Final Consumer Focusing on Products with Low Mental Conflict, the case of Rasht, Iran	Results of this study indicate that dimensions of brand equity has a direct impact on purchase decisions, consumers feel by dimensions of brand equity brand for the first time after consumption and then tend to make purchase decisions, they consume brands that is somewhat familiar with its equity and express quality that this value has created for them. Dimensions of brand equity have a direct impact on purchase decisions.
3	Zahra Ladha et. Al, 1998	The significance of branding in the pharmaceutical industry	Based on the results of both primary and secondary research discussed in the paper, it is evident that branding for pharmaceutical industry has become a paramount step in successfully marketing and selling products. With all the changes and challenges facing the industry, it is important for these companies to implement effective strategies for branding their products so that even after patent expiry, the product can survive in the competitive industry inundated with other brands as well as generic drugs.
4	Eda Atilgan et. al.(2005)	Determinants of the brand equity, a verification approach in the beverage industry in Turkey	This study aimed to test the applicability of Aaker's brand equity model, as the most common conceptual framework among several. Even though the findings do not completely support all of Aaker's brand equity dimensions, brand loyalty was found to have a dominant effect on brand equity. Furthermore, brand awareness and brand association dimensions were not clearly dispersed, suggesting that they are inter-related concepts and the scale has not enough discriminatory power for explaining the conceptual dimensions.
5	Dmytro Karpov (2015)	Effects of pharmaceutical promotion. the case of a firm within the market of hepato protectors in ukraine	This study is seeking the answer to three questions: what promotion effect has direct to consumer advertisement, brand-switching or market-expanding; what kind of promotion is more effective for the firms, direct to consumer advertisement or detailing; whether the firm makes its advertising decision endogenously or not. Comparing the results obtained of the basic and alternative model, DTCA is found to have market-expanding effect rather than brand-switching. However, the effect of DTCA is economically weak (+0.0197 for market share and +0.06 for sales) But nevertheless, the results are statistically and economically significant and should be taken into account by managers. Detailing is found to have somewhat

			higher promotion effect than DTCA. Taking into account peculiarity of OTC drugs, the fact that detailing to pharmacists has higher effect (+0.0495 on market share and +0.15 on sales) than detailing to doctors (+0.0495 on market share and +0.15 on sales) appears to be reasonable. Thus, more attention to detailing to pharmacists should be paid by managers of the company. The results suggest that the company should use detailing rather than DTCA in order to increase its sales and market share.
6	Justin Beneke et al(2013)	The influence of perceived product quality, relative price and risk on customer value and willingness to buy: A study of private label merchandise	The results show strong relationships between perceived relative price and perceived product value, as well as between perceived product value and willingness to buy, were found to exist. A negative relationship was observed between perceived product quality and perceived risk. The results indicate that establishing a value perception is critical in the buying process.
7	Tanmay Chattopadhyay et al (2009)	Determinants of brand equity - A blue print for building strong brand: A study of automobile segment in India	The results show that, On one hand reports show that most of India's automobile growth is driven by consumers who are multiple time car buyers. On the other hand multiple time car buyers are not expected to be influenced by factors which influence the first time buyers as they are expected to be better aware of the features of the category in question. The study shows that there are factors which impacted brand equity for multiple time car buyers across car categories. Factors like better mileage, smooth driving experience, brand connoting hi tech status and international image are becoming important across car categories. We term these factors as primary cues affecting brand equity.

2.3. Conceptual framework and Hypothesis

2.3.1. Conceptual Framework

The researcher will use the following Aaker's Brand equity mode as a conceptual framework.

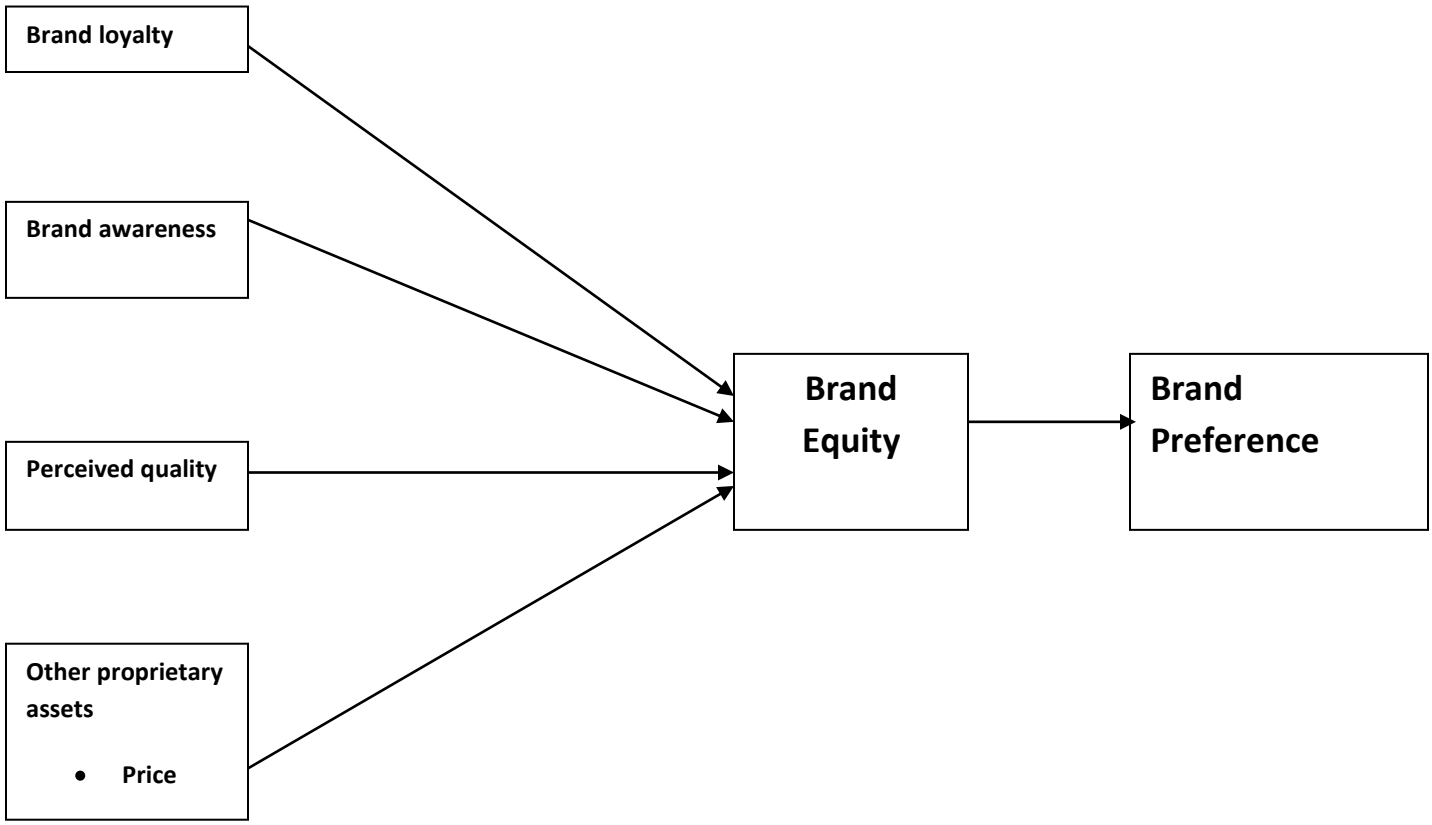

Figure 1, Conceptual framework

2.3.2. Hypothesis

Hypothesis 1:

Ho: Brand awareness does not have a significant impact on brand preference.

H1: Brand awareness has a significant impact on brand preference.

Hypothesis 2:

Ho: perceived quality does not have significant impact on brand preference.

H1: perceived quality does not have significant impact on brand preference.

Hypothesis 3:

Ho: Price does not have significant impact on brand preference.

H1: Price has significant impact on brand preference.

Hypothesis 4:

Ho: Brand loyalty does not have significant impact on brand preference.

H1: Brand loyalty has significant impact on brand preference.

Chapter Three

Research Methodology and Research Design

This chapter presents the research approach, research method, research design, population and sampling, data collection instruments, reliability and validity, data analysis techniques and ethical considerations.

3.1. Research Design

Research can be classified as qualitative research and quantitative research when the issue at hand is the approaches to be employed in conducting research. Qualitative research involves studies that do not attempt to quantify their results through statistical summary or analysis. Qualitative research seeks to describe various aspects about behavior and other factors studied in the social sciences and humanities. In qualitative research data are often in the form of descriptions, not numbers. Quantitative research is the systematic and scientific investigation of quantitative properties and phenomena and their relationships. The objective of quantitative research is to develop and employ mathematical models, theories and hypotheses pertaining to natural phenomena. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of an attribute.(Abiy Zegeye T.M. 2009). As a result to realize this relationship, the research mainly applied quantitative type of research design.

Quantitative research involves attaching numbers to relationships between variables (Kothari, 2004). Quantitative research uses objective measurements and statistical analysis of data. Thus, in this paper both Explanatory and inferential statistics methods are applied. The reason is that these methods are suitable to explain and interpret relations of variables in the study. Descriptive

analysis refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs and inferential statistics are the statistical procedures that are used to reach conclusions about associations between variables. Because the research typically concentrates on measuring or counting and involves collecting and analyzing numerical data and applying statistical tests, the researcher will use the quantitative research design. The study used cross- sectional survey

3.2. Research Approach

Research can be classified as descriptive and explanatory depending on the specific purpose that the research tries to address**.** Descriptive research sets out to describe and to interpret what is. It looks at individuals, groups, institutions, methods and materials in order to describe, compare, contrast, classify, analyze and interpret the entities and the events that constitute the various fields of inquiry. Surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events. (Abiy Zegeye T.M. 2009). The researcher used a descriptive and explanatory types of research methods and Surveys was be used as method to gather information from the sample population.

3.3. Population and sampling

The study population was that of prescribing physicians that are currently practicing in private sectors at Addis Ababa and Adama cities. The reason for the selection of this cities is because the researcher believes that their current place with regard to the practice of marketing from pharmaceutical companies is relatively high as seen by the higher number of physicians and the concentration of pharmaceutical company offices on these cities. The total list of prescribers in

private setups was obtained from FMHACA for Addis Ababa and Oromia health bureau for that of Adama city.

Sampling is the process of selecting a number of study units from a defined study population. Often research focuses on a large population that, for practical reasons, it is only possible to include some of its members in the investigation. Because of the presence of a sampling frame in the authorities, probability sampling will be used; In addition, to avoid bias simple random sampling technique will be used (Abiy Zegeye T.M.. 2009).

The sample size will be determined based on the formula used to determine sample size for a finite population.(Kothari, 2004)

$$\mathrm{n} = \frac{z^2.\,\mathrm{p}.\,\mathrm{q}.\,\mathrm{N}}{e^2\ N-1\ +z^2.p.q}$$

Where,

n=Sample size

N= total Population (1082; 1018 from Addis Ababa and 64 from Adama city)

Z= the value of standard variate at a given confidence level(95% CI) 1.96

P= Sample proportion of success based on previous studies (0.5)

q= 1-p (0.5)

e= acceptance error (0.05)

The sample size becomes 283.

3.4. Data collection instrument

The research involved numerical or statistical data. Therefore, emphasis is on the quantifiable observations of the research i.e. numbers involved. The type of research is mainly objective.

Data was collected from physicians in the private sector using survey through structured questionnaire. A questionnaire is a type of survey where respondents write answers to questions posed by the researcher on a question form. A number of respondents are asked identical questions, in order to gain information that can be analyzed, patterns found and comparisons made. This was to make the research to the point and avoid unnecessary concepts being raised which will make the research unable to measure the constructs under study. The questionnaire was prepared to be inclusive of the constructs measured in the study.

The questionnaire has three sections. The first section covered the demographic profile of the participants like age, sex and place of work. The second section was structured on a likert scale of 1-5 to show their degree of agreement or disagreement to the sentences about the constructs under study. The questionnaire was adopted from a previous study about the same construct under study and was modified to the pharmaceutical industry without modifying the concepts in the construct.

3.5. Reliability and Validity

To evaluate the research instruments, reliability is one of the major criteria. Reliability estimates the consistency of the measurement or simply, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. Reliability is essentially about consistency. That is, if we measure something many times and the result is always the same, then we can say that our measurement instrument is reliable. (John Adams,

Research methods, 2007). It is preferred that outcomes (and covariates) be assessed with relatively little measurement error. Other things being equal, unreliability increases unexplained variation within groups and reduces the power of the analysis. In practice, it may be impractical to assess the reliability of measurement procedures within the scope of a given study, but the selection of measurement instruments should certainly take this factor into consideration. On the other hand, if a study involves observations or ratings by judges, some effort must be undertaken to assure consistency of measurement across raters or judges.(Abiy Zegeye et. al. 2009).

In this research Cronbach's alpha was used to test the reliability of the measures. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the ''underlying construct''. Construct is the hypothetical variable that is being measured (Hatcher, 1994).

Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous (that is, questions with two possible answers) and/ or multi point formatted questionnaires or scales(that is, rating scale: 1= poor, 5=excellent). The higher the score, the more reliable the generated scale is. Nunnaly (1978) has indicated 0.7 to be an acceptable reliability coefficient.

In selecting a relevant measure for an outcome variable, it is critical that logical inferences can be made from the operationalizations upon which the measure was based to the theoretical constructs relevant to the study. Construct validity refers to the degree to which inferences of this type can legitimately be made. The content and construct validity was be checked to ensure the the quality of the research design.

3.6. Data analysis techniques

Both descriptive and inferential statistics were used to analyze the quantitative data gained through structured questionnaire. All the variables were coded and entered into the SPSS to analyze data obtained through questionnaires.

Descriptive statistics was used by the researcher to describe the usefulness of the data set and examine relationships between variables. In order to describe the data, preliminary descriptive statistics such as frequency, percentages, and mean scores were computed. To view the internal consistency of the scale items, Cronbach coefficients (alpha) were computed.

Multiple regression analysis was performed using the four selected brand equity dimensions as independent variable and the brand preference as dependent variable. The main aim was to see the extent to which brand preference is affected by the brand equity dimensions shown in terms of coefficient of determination(R square value), the regression coefficient (Beta coefficient) and the P-values for the significance of each relationship.

Correlation coefficients were used to quantitatively describe the strength of the association between the variables. According to Hair et al. (2002) the Pearson correlation coefficient measures the degree of linear association between two variables. It varies between -1.00 to +1.00, with 0 representing absolutely no association between two variables, and -1.00 or +1.00 representing a perfect association between two variables negatively and positively respectively.

3.7. Ethical considerations

Confidentiality of their response of the respondents was maintained at a high level to make the respondents feel comfortable so that their responses are non- biased and reflect the truth about the situation in question. The voluntariness of the participants was also taken into consideration.

Chapter Four

Data Presentation and Analysis

This chapter presents the data analysis including the sample and response rate, descriptive statistics, reliability test, correlation assumption testing for regression analysis, the regression analysis, hypothesis testing and the discussion.

The purpose of the study is to examine the impact of brand equity on physicians brand preference of pharmaceutical products. 283 questionnaires were distributed to private health institutions found in Addis Ababa and Adama City and 247 of them were returned.

4.1. Sample and respondent rate

Table 4.1 distribution of questionnaires to the different sub cities of Addis Ababa and Adama city.

Sub cities	Distributed questionnaires	Percentage	Returned questionnaires	Percent	Unreturned	Improperly filled
Kirkos	48	17%	41	16.6%	6	0
Addis Ketema	40	14.1%	34	13.8%	5	0
Lideta	34	12%	30	12.1%	4	0
Yeka	30	10.6%	25	10.1%	5	0
Kolfe Keranio	28	9.9%	24	9.7%	4	0
Bole	21	7.4%	21	8.5%	0	0
Arada	18	6.4%	18	7.3%	0	0
Nifas silk laphto	18	6.4%	15	6.1%	3	0
Gulele	16	5.6%	13	5.3%	3	0
Adama city	20	7.1%	16	6.5%	4	0
Akaki Kality	10	3.5%	10	4%	0	0

Source:Researcher's survey findining(2016)

4.2. Descriptive Statistics

4.2.1. Data Coding

Coding is the process of assigning a numerical score or other character symbol to previously edited data". (Zikmund et al. 2010). After the data file was checked and adjusted, the coding phase was followed.

Consequently, the demographic characteristics of the respondents were coded first. They include male coded as 1 and female coded as 2; other demographic factors were coded from 1 to 5 in the case of age and 1 and 2 in the case of place of work.

The second part of the questionnaire, which dealt with the variables, brand loyalty, price, perceived quality and brand awareness, were coded with a five point scale. In this scale, strongly disagree was coded as 1 and strongly agree was coded as 5. The responses in between were coded as 2, 3 and 4.

4.2.2. Respondents profile

Demographic analysis included sex, age and place of work. These variables help to identify the background of the respondents.

Table 4.2 Summary of Demographic Variables

	Variables	Frequency	Percentage	Cumulative percentage
Sex of respondents	Male	193	78%	78%
	Female	54	22%	22%
	Total	247	100%	100%
Age of respondents	18-30	34	13.8%	13.8%
	31-40	103	41.7%	41.7%
	41-50	71	28.7%	28.7%
	51-60	29	11.7%	11.7%
	60+	10	4.1%	4.1%
	Total	247	100%	100%
Place of work	Private hospital	86	34.8%	34.8%
	Private clinic	161	65.2%	65.2%

Source: Researcher's survey finding, 2016

As listed in the above tables, 78% of the respondents were found to be male and the remaining 22% of the respondents are female.

The respondents' age category was divided into five intervals. 13.8% of the respondents were 18-30 years old, 41.7%% were 31-40 years old, 28.7% were 41-50 years old, 11.7% were 51-60 years old and the rest 4.1% were above 60 years old. Most of the respondents involved in the study are from 31-50 years old. The researcher believes they are mature enough to provide reliable answers to the questions asked.

4.2.3. Descriptive analysis of variables

4.2.3.1. Descriptive analysis of Brand awareness

The brand awareness analysis results show in table 4.3. The mean score for the items range from 3.80 (i.e. when faced with an ailment and a need to prescribe a medication) usually a specific brand quickly comes to my mind) to 3.85 (there is one dominant brand that I select for treatment from the available brand options). The overall mean for Brand awareness measurement is 3.84, which is above average.

Table 4.3 Descriptive statistics of Brand awareness

Brand awareness	N		Mean	Standard deviation
	Valid	missing		
When faced with an ailment and a need to prescribe a medication, usually a specific brand quickly comes to my mind	247	0	3.86	1.111
When faced with a specific disease category, there is one dominant brand that I select for treatment from the available brand options	247	0	3.81	1.051

Source: Researcher's Survey finding (2016)

4.2.3.2. Description analysis of perceived quality

Similarly, perceived quality is further divided into seven items. As it is shown in the table below, the choice of a brand with a perceived high quality was the highest rated dimension relative to the rest six with a mean value of 3.53 and with standard deviation of 0.982. The choice of an Asian brand was the least rated dimension with a mean score of 2.82 and standard deviation of 1.22. The overall mean for perceived quality is 3.34, which is above average.

Table 4.4. Descriptive statistics of perceived quality

Perceived Quality	**N**		**Mean**	**Standard deviation**
	Valid	**missing**		
Choice of brand with high perceived quality	247	0	3.53	0.982
Choice of brand from an innovator company	247	0	3.49	1.072
Choice of brand produced in Europe	247	0	3.53	1.108
Choice of brand produced locally	247	0	3.12	1.021
Choice of brand produced in Asia	247	0	2.82	1.22
Choice of brand produced in America	247	0	3.51	1.028
Choice of brand produced in Arab regions	247	0	3.41	1.126

Source Researcher's survey finding (2016)

4.2.3.3. Descriptive analysis of price

Furthermore, three items were included under price as shown in table 4.5. the mean scores of price range from 3.51 (for the item, high price not as a priority in choosing a brand) to 4.22 (for the item I choose a brand that I think is affordable). The overall mean for price is 3.82, which is above average.

Table 4.5 Descriptive statistics for price

Price	N		Mean	Standard deviation
	Valid	missing		
Low price is one of my priorities when making a brand choice	247	0	3.72	1.12
I don't choose a brand that is High price because I don't believe high price is associated with high quality	247	0	3.51	1.33
I Choose a brand that I think is affordable	247	0	4.22	1.01

4.2.3.4. Descriptive analysis of brand loyalty

Table 4.6 describes the brand loyalty measurement, where the means range between 3.27 (of the item, not switching brand to a lesser & expensive and same quality brand available) to 4.22 (for the item re-using a brand with a good patient feedback). The overall mean for brand loyalty is 3.71, which is above average.

Table 4.6. Descriptive statistics for brand loyalty.

Brand Loyalty	N		Mean	Standard deviation
	Valid	missing		
Re using a brand with a good feedback	247	0	4.11	1.21
Re using a brand even when less expensive and equivalent brand is available	247	0	3.27	1.44
Not easily changing prescription to another brand	247	0	3.77	1.74

Source: Researcher's survey (May, 2016)

4.3. Reliability tests.

Reliability is one of the major criteria for evaluating research instruments. Reliability measures the internal consistency of the model. In this research Cronbach's alpha was used to test the reliability of the measures for each of the sub scales as well as for the major domains.

The reliability check for the variables is presented in the table below.

Table 4.7. Cronbach's alpha test

S.N	Variable	Cronbach's alpha Values
1	Brand awareness	0.810
2	Perceived Quality	0.864
3	Price	0.728
4	Brand Loyalty	0.762

Source:Researcher's survey findining(2016)

Machotra, (2007) suggests that an alpha of 0.60 or greater should be considered adequate to develop new questionnaires.

4.4. Assumption Testing for Regression analysis

Meeting the assumptions of regression analysis is necessary to confirm that the obtained data truly represented the sample and that researcher has obtained the best results (Haire et al., 1998). Three assumptions for regression analysis used in this study were discussed for the individual variables: multi–collinearity, linearity and Normality. In the following paragraphs, each assumption is explained.

4.4.1. Multi – Collinearity

Hill et al., (2003) explain that economic variables may move together in systematic ways when the data are the result of an uncontrolled experiment. Such variables are believed to have problems with collinearity or multi-collinearity rises, it will complicate the interpretation of the variables because it is more difficult to confirm the effect of any single variable, owing to their interrelationship (Hair et al., 1996). According to (Hill et al., 2003), multicollinearity is not a violation of the assumptions of regression but it may cause serious difficulties. Hill et al., (2003) propose that these serious difficulties include: (1) variances of parameter estimates may be

unreasonably large; (2) parameter estimates may not be significant; and (3) a parameter estimate may have a sign different from what is expected.

The initial inspection of the Pearson Correlation Matrix for the regression models revealed that the correlations between the independent variables did not exceed 0.80. While checking, the independent variables showed significant relationship with the dependent variable (above 3 preferably). Also the researcher checked that the correlation between each of independent variables is not too high. Hill et al., (2003) suggest that you think carefully before including two variables with a bivariate correlation of, say, 7 or more in the same analysis. With regards to collenearity statistics shown below, the tolerance and VIF showed that there was no multicollinearity because VIF of all variables were less than 10.

Table 4.8 Multicollinearity problem test of VIF and tolerance.

Variables	Tolerance	VIF
Brand awareness	.851	1.175
Perceived quality	.814	1.228
Price	.862	1.160
Brand loyalty	.871	1.148

Source: Researcher's survey(2016)

4.4.2. Linearity

The linearity of the relationship between the dependent and independent variable represented the degree to which the change in the dependent variable is associated with the independent variable (Hair et al., 1998). In a simple sense, linear models predict values falling in a straight line by having a constant unit change (*slope) of the dependent variable for a constant unit change of the independent variable (Hair et al., 1998). Conventional regression analysis will underestimate the relationship when nonlinear relationships are present, i.e., R2 underestimates the variance explained overall and the betas underestimate the importance of the variables involved in the non – linear relationship (Malhotra et al. 2007).

The scatter plot of standardized residuals versus the fitted values for the regression models were visually inspected

4.4.3. Normality of the Error Term Distribution

In terms of this assumption, a check for normality of the error term is conducted by a visual examination of the normal probability plots of the residuals . Malhotra et al. (2007) propose that normal probability plots are often conducted as an informal means of assessing the non-normality of a set of data. According to Hair et al. (1998), the plots are different from residuals plots in that the standardized residuals are compared with the normal distribution. In general, the normal distribution makes a straight diagonal line, and the plotted residuals are compared with the diagonal (Hair et al., 1998). If a distribution is normal, the residual line will closely follow the diagonal (Hair et al., 1998). Malhotra et al. (2007) explain that the "correlation coefficient" will be near unity if the data fall nearly on a straight line. The "correlation coefficient" will become smaller if the plot is curved.

The normality probability plots were plotted to assess normality. The P-P plots were approximately a straight line instead of a curve. Accordingly, the residuals were deemed to have a reasonably normal distribution, as suggested by Hair et al. (1998). The skewness value provides an indication of the symmetry of the distribution while kurtosis provides information about the peakedness of the distribution. A positive skewness value indicates right(positive) skew while a negative value indicate left(negative) skew. The higher the absolute value,the greater the skew.(Tabachnick and Fidell, 2001)

Table 4.9 Skewness and Kurtosis

Statistics						
		Brand Awareness	Perceived quality	Price	Brand loyalty	Brand Preference
N	Valid	247	247	247	247	247
	Missing	0	0	0	0	0
Skewness		.901	.641	.758	.156	.133
Std. Error of Skewness		.131	.131	.131	.131	.131
Kurtosis		1.582	2.678	0.422	0.915	0.114
St. Error of Kurtosis		.247	.247	.247	.247	.247

Source: Researcher's Survey(2016)

4.5. Correlation analysis

Like the demographic factors, the data from the scale typed questionnaire were fed to the SPSS software version 20.00, to process the correlation analysis. Based on the questionnaires, the following correlation analysis was made.

4.5.1. Correlation analysis between brand awareness and brand preference

Pearson correlation test was conducted to know the degree of relationship between the independent variable, which is brand awareness, and the dependent variable, brand preference. The results of the correlation between these variables are shown in table 4.10. As it is indicated in the table there is a significant correlation between brand awareness and brand preference. In other words brand awareness and brand preference have positive relationship ($r = 0.714$ with $p<0.01$).

Table 4.10 Correlation between brand awareness and brand preference

		brand awareness	**brand preference**
brand awareness	Pearson correlation	1	.714
	Sig. (2 tailed)		.000
	N	247	247
brand preference	Pearson correlation	.714	1
	Sig. (2 tailed)	.000	
	N	247	247

**. Correlation is significant at the 0.01 level (2-tailed).

Source:Researcher's survey findining(2016)

4.5.2. Correlation analysis between Price and brand preference

Pearson correlation test was also conducted for Price and brand preference and the results are as shown in table 4.11. As it can be seen from the table, there is significant negative correlation between Price and brand preference. This is to say that Price and brand preference are correlated in a relationship (r =0.601).

Table 4.11: Correlations between Price and brand preference

		Price	**brand preference**
Price	Pearson correlation Sig. (2 tailed) N	1 247	.601 .000 247
brand preference	Pearson correlation Sig. (2 tailed) N	.601 .000 247	1 247

**. Correlation is significant at the 0.01 level (2-tailed).
Source:Researcher's survey findining(2016)

4.5.3. Correlation analysis between Perceived quality and brand preference

For these variables, Perceived quality and brand preference, also Pearson correlation test was conducted and the results shown in Table 4.12 were able to be acquired. As it is shown in the table, there is significant correlation between Perceived quality and brand preference. This implies that Perceived quality and brand preference have high relationship (r = 0.660).

Table 4.12: Correlations between Perceived quality and brand preference

		Perceived quality	brand preference
Perceived quality	Pearson correlation	1	.660
	Sig. (2 tailed)		.000
	N	247	247
brand preference	Pearson correlation	.660	1
	Sig. (2 tailed)	.000	
	N	247	247

**. Correlation is significant at the 0.01 level (2-tailed).
Source:Researcher's survey findining(2016)

4.5.4. Correlation Analysis between Brand loyalty and Brand Preference

In order to see the correlation between brand loyalty and brand preference, Pearson correlation test was conducted, and the results found were like shown in table 4.13. As it is clearly indicated in the table, there is significant positive correlation between brand loyalty and brand preference. In other words brand loyalty and brand preference have moderate relationship or correlation (r = 0.674).

Table 4.13: Correlations between brand loyalty and brand preference

		Brand loyalty	brand preference
Brand loyalty	Pearson correlation	1	.674
	Sig. (2 tailed)		.000
	N	247	247
brand preference	Pearson correlation	.674	1
	Sig. (2 tailed)	.000	
	N	247	247

**. Correlation is significant at the 0.01 level (2 tailed).
Source:Researcher's survey findining(2016)

4.6. Regression Analysis

To indicate the causality of the relationship between the dependent & independent variables regression analysis was conducted. In other words, Regression was conducted in order to determine the explanatory power of the independent variables brand awareness, perceived quality, price and brand loyalty in the variance of the dependent variable brand preference. Adjusted R square was used to measure the percentage of variance in the dependent variable explained by the independent variables brand awareness, perceived quality, price and brand loyalty. From the multiple regression equation, the standard regression coefficient (beta weight) was determined to compare the effect of each independent variable had on the variability of the overall brand preference.

According to Sinn, on his SPSS Guide–Correlation & Regression, explained the model summary of the regression analysis gives you the r-value & the r_2 value. Coefficients gives you a & b values, and the p-value to check for significance. We reject Ho if p<=0.05. This means the relationship is reliable and can be used to make predictions.

Based on Table 4.14 model summary result, when overall Brand preference was regressed on the four independent variable (brand awareness, perceived quality, price & brand loyalty), the independent variables contribute to statistically significant level p-value 0.000. And the coefficient of determination R_2 was found to be 0.295 which indicate that 29.5% of the variability of overall brand preference was explained by the four independent variables. The other variables that were not considered in this study contribute about 70.5% of the variability of brand preference.

Table 4.14 Model summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.541	.295	.293	.3309

a. Predictors: (Constant), brand awareness, perceived quality, price, brand loyalty

Source:Researcher survey findining(2016)

As per the coefficient table 4.15, the result of standardized regression equation (Beta weight) for Brand awareness, perceived quality, price & brand loyalty were 0.364, 0.279, 0.051 & 0.351 respectively. This shows that the effect of brand awareness is greater than brand loyalty; brand loyalty is greater than perceived quality and perceived quality is greater than price in explaining the variability of overall customer loyalty.

Accordingly, the relative importance of independent variable in contributing the variation of overall brand preference was found to be significant for all the variables at p-value <0.05. Therefore, this particular finding confirms the Hypothesis H_1, H_2, H_3 & H_4 that brand awareness, Perceived quality, price & brand loyalty has a positive & significance effect on Brand preference is supported hence the p-value <0.05 i.e. sig=.000 the null hypothesis is not supported. Based on the significance result of the four independent variables of brand equity, the General Hypothesis that Brand equity has positive & significant effect on brand preference is accepted.

Table 4.15 Regression Analysis of Independent and Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.286	.140		2.037	.034
Brand awareness	.312	.041	.364	7.813	0.000
Perceived quality	.263	.041	.279	6.582	0.000
Price	.048	.043	.051	1.104	0.001
Brand loyalty	.309	.038	.351	8.391	0.000

Source: Researcher's survey finding (2016)

Table 4.16 Summary of the overall outcome of the research hypothesis

Hypothesis	**Result**	**Reason**
H1: Brand awareness has a significant impact on brand preference H0: Brand awareness does not have a significant impact on brand preference	H1:Supported H0: Not supported	β=.364 P<0.05
H1: Perceived quality has a significant impact on brand preference H0: Perceived quality does not have a significant impact on brand preference	H1:Supported H0: Not supported	β=.279 P<0.05
H1: Price has a significant impact on brand preference H0: Price awareness does not have a significant impact on brand preference	H1:Supported H0: Not supported	β=.051 P<0.05
H1: Brand loyalty has a significant impact on brand preference H0: Brand loyalty does not have a significant impact on brand preference	H1:Supported H0: Not supported	β=.351 P<0.05

Source: Researcher's survey result (2016)

Chapter Five

Conclusion and Recommendation

5.1. Conclusion

The study was initiated to investigate the impact of determinants of brand equity on brand preference of pharmaceutical products specifically on the private health sector. More specifically brand awareness, perceived quality, price and brand loyalty have been assessed.

Out of all the determinants of brand equity assessed, brand awareness was found to be with the highest influence on the brand choice of pharmaceuticals by physicians. More than half of the participants responded that a specific brand quickly comes to their mind when faced with a disease category to prescribe a medication. This shows that the higher their awareness about the brand, the greater the choice of that specific pharmaceutical brand.

As it is shown in the study, the majority of the participants reported that they prefer a brand that they believe is affordable in contrary to preferring a low priced brand for their patients. This shows that the prescribers are majorly concerned about the benefit of the brand to the patient rather than the lower price of the brand to their patients.

When we consider the determinant brand loyalty, majority of respondents said they are highly comfortable in re- prescribing a pharmaceutical brand if they have a positive previous experience from the brand. Even though the respondents said this fact, they were not very much brand loyal if they believe there is a more affordable version of the brand which is equivalent to the former brand they prescribe.

When we come to the last determinant, which is perceived quality, more than half the respondents choose a brand which they perceive as having a high quality. When analyzing the

perceived quality of the brands, European and American brand were a priority in selection of a brand by the respondents. Asian brands were found to be the least in priority to select their brand of pharmaceuticals. This shows that prescribers have a doubt in the quality of the brands that come from Asia.

In summary, the results of the correlation indicate that the determinants; brand awareness, price and perceived quality were significantly correlated with brand preference and impact the preference of pharmaceutical brands in a considerable amount. This result comes in agreement with a study done in two European countries on the influence of brand equity on consumer response by Isabel Buil in 2013; Which in this study the concluded that perceived quality, brand association and brand equity to be the main drivers of overall brand equity. This implies that this factors being easily manipulated by the pharmaceutical companies, the companies can play a big role in positioning their product in the minds of their customers to be more preferred than other competitor brands in the market. On the contrary, the lesser the focus of pharmaceutical companies on these determinants, the lesser their impact on their customers brand preference and the lesser their return on investment.

5.2. RECOMMENDATIONS

Depending on the findings of the study and conclusions made, the researcher came up with some important recommendations that can be used to influence the way consumers make brand choice decision.

To make the recommendations easily understandable and can be converted to implementation, it is presented in such a way that it specifically address the focus area for execution.

5.2.1. For Pharmaceutical companies;

As shown in the conclusion, the three main influencing factors can be under the control of pharmaceutical marketing activities. Therefore, it is advisable that pharmaceutical companies marketing their products in Ethiopia to should really focus in managing their customers regarding these factors that can have an influence on the customers brand choice. Their marketing strategy including their promotional activities and their pricing policy should be in line with these determinants so that they can have a better preference from their customers and in return, a better return on investment.

5.2.2. For Regulatory bodies;

As seen in the results of the study, prescribers were seen to be more inclined to the brands that come from the countries like America and Europe while they would not like to prefer the brands from Asian countries. This indicates that the food, medicine and healthcare administration and control authority of Ethiopia should give a high emphasis to this in improving and controlling the standard protocols in assessing the quality of the pharmaceutical brands in the market. They also need to make post marketing surveillance which includes checking of the products quality not only at the time of entry but also after they are marketed. They also need to educate their consumers that country of origin and product quality are not always related. But, hand in hand with this education they need to intensify their quality control procedures and implementation of these procedures.

5.2.3. For Physicians (Prescribers);

Pharmaceutical product prescribers are placed in the center of the matrix of the product use. Their position gives them a higher degree of decision making. As shown in the study, they can be highly influenced by pharmaceutical companies (e.g Brand awareness). Therefore, they

should act in a highly ethical and technically acceptable standard so as to find a balance between their choice of brand and patient as priority.

5.3. Limitation and Future research area

Students working in this area for the future can follow the following untapped area. First, in this study, Aaker's Model of brand equity is used instead of Keller's. So, it is an area of future research to use Keller's model. Any party interested in this area can also study the impact of brand equity on preference on other area of business other than used in this study, which is the pharmaceutical market. In other words, replication can also be tested in different business to business sectors.

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Annex – Questionnaire

Dear respondent,

My name is Dawit Gebremedhin. I am doing a paper for the fulfillment of a Masters degree in the Arts of Marketing Management. I kindly request for your cooperation in filling this questionnaire. The information you provide will only be used for the results of the study and it is strictly confidential. Please do not write your contact details on the questionnaire. Thanks for your cooperation.

I. General information.

Please encircle the appropriate response.

1. Gender
    A. Male
    B. Female
2. Age
    A. 18-30
    B. 31-40
    C. 41-50
    D. 51-60
    E. 60+
3. Place of work
    A. Private hospital
    B. Private clinic

II. Determinants of brand equity

Please select your degree of agreement or disagreement with the statements that follow. Please put one of the following numbers on the space that best describes your answers.

1= Strongly disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly agree

A. Brand Awareness	Strongly disagree	disagree	Neutral	Agree	Strongly agree
1. When faced with an ailment and a need to prescribe a medication, usually a specific brand quickly comes to your mind.					
2. When faced with a specific disease category, there is one dominant brand that I select for treatment from the available brand options.					
B. Perceived quality					
3. I choose a specific brand that I perceive has a high quality					
4. I choose a brand that is manufactured by the innovator pharmaceutical company					

5. I choose a brand that is produced in Europe					
6. I choose a brand that is produce locally.					
7. I choose a brand that is produced in Asia					
8. I choose a brand that is produced in America					
9. I choose a brand that is produce in the Arab regions					
C. Price					
10. Low price is one of my priorities while making a brand choice					
11. I don't choose a brand of a drug that is highly priced because I don't believe high price is associated with high quality.					
12. I choose a brand that is affordable for me.					
D. Brand Loyalty					
13. I usually re prescribe a brand I get a good feedback from my patients					
14. Even if there are equivalent					

brands that are presented to me, I usually re prescribe the same brand to my patients					
15. I do not easily change my prescription to another brand					
16. I don't easily switch to another brand even if there is an equivalent brand available					

III. Brand preference

1. Determinants of brand equity influence me to select a specific brand
    a. Strongly agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly disagree