



**ST.MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**THE IMPACT OF BRAND EQUITY ON BRAND PREFERENCE OF  
PHARMACEUTICAL PRODUCTS: THE CASE OF PRIVATE  
HEALTH SECTOR**

**BY**  
**EYERUSALEM SHIFERAW**  
**ID: SGS/0016/2006**

**June, 2015**  
**ADDIS ABAB, ETHIOPIA**

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**A THESIS SUBMITTED TO ST.MARYS UNVERSITY SCHOOL  
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## Acronyms

EFDRE:-Federal Democratic Republic Of Ethiopia

MOH:- Ministry of Health

WHO:- World Health Organization

FMHACA: - Ethiopian Food medicine and health care Administration and control authority

DACA:- Drug Administration and Control Authority

GSK:- Glaxo Smith Klein

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## Abstract

*This study was aimed at examining and identifying the major factors that determine brand equity and preference among pharmacists, druggists and physician working in private clinics and hospitals in Addis Ababa. The study was an explanatory type of study applying quantitative methods. A total of 522 pharmacists, physicians and druggists working in private clinics and hospitals were involved in the study. The factors that the study focused as determinants of brand equity are brand awareness, brand association, brand loyalty, perceived quality, availability, packaging, price and promotion. The findings of the study revealed that brand association, promotion and packaging are the major determinants of brand equity. Whereby specific recommendations towards the focus areas of execution are given. Based on the result, the author of the study put recommendations that should be implemented by regulatory authority, pharmaceutical companies and product users towards the highly influencing factors. For pharmaceutical companies in order to have a successful marketing activities they should rely on the above mentioned three factors and regulatory body should intensify their quality control procedures and implementation of quality guidelines and health care professionals should highly act in ethical and technically acceptable manner so as to find a balance between all the factors of brand equity.*

*Key Words: Brand equity, Brand Preference, Private Health Sector, Pharmaceutical Products*

# CHAPTER ONE

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## INTRODUCTION

### 1.1 Background of the study

The Ethiopian pharmaceutical market is mainly composed public and private sector where they constitute 70% and 30% coverage respectively (EFDRE-MOH, WHO, 2003). Structurally the public sector is organized from public supply agency, public hospitals, health centers and clinics all over the nation. And the private sector is made of importing companies, Wholesalers and pharmacies (independent, public and chain) whereas the local manufacturing goes to both the public and private market. Accordingly, from the supply point of view, the market is supplied with 85% from imported products and 15% from the local source (Andualem, Kafil, 1995). The supply channels apart from the importers can get their supply either from the public as well as from the private market according to different parameters (Supply availability, Price, brand/company choice, customer preference).

When we consider the consumption pattern of the pharmaceutical products, there is a regulatory body (Ethiopian Food medicine and health care Administration and control authority) (FMHACA) to control the movement and provide a license for business operation to the respective stake holders. (EFMHACA Proclamation No.661/2009). Any product to be distributed for consumption it has to be registered by the regulatory body first (DACA, 2002). This regulatory body is also responsible for regulating the entrance of medications by checking the Quality and appropriate standards needed to be met for market entrance.

Then the product will be placed in the market through public and private supply channels. Basically the original source of the product could be an originator's drugs belong to the drug companies who were first to discover the particular active ingredient. Therefore, a patent right is given to own the brand of the compound and made into a preparation. As soon as the product patent expires, manufacturers will start to produce their brand of the product extensively in the market as a generic version of the originator brand.

In the Ethiopian market both are available where the generic takes the lion's share of the coverage.

Though the market is supplied with the both generic and originator products, it's with their professional right for health care professionals to choose among from available type the product mix. Moreover, the manufacturing companies have a local agent to import their products mainly for the privet market and these companies have also a sales team who does a professional/technical promotion to the health care professionals and the sales and distribution activity (Andualem, Kafil 1995).

There is a significant market competition in between these companies to get the maximum coverage and to increase their business turnover from time to time. While they are building their market share they implement a variety of tools and different market strategy whereby at the end of the day they are focusing on creating a credible brand equity so that they will have a justifiable market share.

In Ethiopia the majority imported products are from India (cadilla pharmaceuticals), Turkey (Bilim pharmaceuticals), Cyprus (Remedica), England (GSK), France (Sanofi), Germany (Merck, Sandoz). These companies made their products available in the market and creating a number of choice to the health care industry. Hence the customer, in this case constitute the physicians, patients, pharmacists will have vast products to choose from. But for the mentioned customers making a drug choice among from the available competing brands is not an easy task. These companies are required to build their company image and also brand image. The market has different choices and hence will all depend on the branding of the company, the quality of the product, country of origin, the price affordability, the promotion impact, sales and distribution related services etc... and these all are the attributes of brand equity. Brand equity is defined as the value premium a company realizes from a product with a recognizable name as compared to its generic equivalent.

It will help to define first what is meant by Brand to get a clear understanding of what brand equity is. A brand is a name that will register the product in the consumer's mind as a set of tangible and intangible benefits. And Brand equity is the differential positive that brand

knowledge has on consumer response to the marketing of a brand. A brand with a high brand index is often described as a strong brand. (Anabila & Awunyo, 2013).

Brand equity can also be discussed from the perspective of the investor, the manufacturer, the retailer, or the consumer. Clearly, brand names add value to each of these groups. Investors have a financial motivation for extracting the value of a brand name from the value of a firm's other assets. Manufacturers and retailers, on the other hand, are motivated more by the strategic implications of brand equity. To the manufacturer, brand equity affords a differential advantage that enables the firm to generate greater volume and greater margins. Brand equity provides a strong platform for introducing new products and insulates the brand against competitive attacks. From the perspective of the trade, brand equity contributes to the overall image of the retail outlet. It builds store traffic, ensures consistent volume, and reduces risk in allocating shelf space. (cobb-walgreen, et al., 1995)

Several studies support the relationship between brand equity constructs and brand preference. Customer based brand equity has been thought of as a prerequisite to brand preference, which in turn affects consumer's intention to purchase. (Ahmed, 2011)

Keller (2003) summarized the benefits created by strong brand equity as 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.

## **1.2 Statement of the problem**

Making the right choice among from pharmaceutical products to treat a particular illness does not always lie under the professional decision of the health care professionals, but also depends on the other determinant factors concerning the attached value of products with regard to the activities of the responsible companies.

Among from these attached values of the products, brand equity covers majority of the attributes that constitutes the decision making justifications for a customer, mainly the physician and the pharmacist.

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

Different products from different companies have their own special features to be chosen by the customers. Choosing a product from the point of view of one or two of best attributes may not end up in having a confidence that the others factors are also within the same range of parameters. In choosing a product one has to try to consolidate the advantages of a particular product to outweigh the less value attributes. The parameters of brand equity will be with a great use if they are considered appropriately.

According to its nature the impact of brand equity with regard to the preference of pharmaceutical products is expected to have a significant value in the eyes of the decision maker. With the same consideration and as it is a market where there are a significant number of competing products, the Ethiopian pharmaceutical market is also expected to have the same feature where brand equity realize a high value whenever a pharmaceutical product is chosen by a particular users. So this study will focus on identifying the most important determinants and also highlights the impact of those determinants on brand preferences of pharmaceutical products in the private health sector.

### **1.3 Basic Research questions**

This study addresses the following research questions:

- Does brand equity of pharmaceutical product have impact on brand preference of pharmaceutical products?
- Which dimensions of the brand equity are having a significant relationship with brand preference?
- Does a relationship exist between customer's preference of pharmaceutical product and the portrayed brand equity by the pharmaceutical company?
- What activities do pharmaceutical companies perform to have brand equity?

## **1.4 Objective of the study**

### **1.4.1 General objective**

The general objective of the study was to examine and identify the major factors that determine brand equity and preference among pharmacists, druggists and physician working in private clinics and hospitals in Addis Ababa

### **1.4.2 Specific Objective**

The specific objectives will be tailored as:

- To assess the impact of brand equity on brand preference on pharmaceutical products.
- To identify the most significant dimensions of brand equity on pharmacists, druggists and physicians working in private clinics, hospitals and drug stores in Addis Ababa.
- To measure the relationship between customer's preference of pharmaceutical product and the portrayed brand equity by the pharmaceutical company.
- To evaluate the activities of pharmaceutical companies in building a brand equity.

## **1.5 Definition of terms**

Brand: - A brand is a name that will register the product in the consumer's mind as a set of tangible and intangible benefits. (Anabila & Awunyo, 2013).

Brand Equity: - The value of a brand. From a consumer perspective, brand equity is based on consumer attitudes about positive brand attributes and favorable consequences of brand use. American Marketing Association (<https://www.ama.org/resources/pages/dictionary>)

Brand preference: - Is the degree of brand loyalty in which a customer definitely prefers one brand over competitive offerings and will purchase this brand if it is available. (Dibb, et al., 2006)

Consumers :- Includes pharmacists, druggist and physicians working in the private sector.

## **1.6 Significance of the study**

This study aims to assess the relationship between brand equity and brand preference of customers of pharmaceutical products. It helps to direct pharmaceutical companies to relay their focus on building their brand equity and hence will be benefited by the marketing activities done and increase their return on investment.

Building a brand especially when the brand itself and the market is new, has a significant cost. Therefore, if pharmaceutical companies would be able to evaluate and differentiate the respective value of brand equity and its associated impact, it would be economical to define the marketing activities accordingly and maximize the benefit associated with it. It will serve as a stepping stone or spring board for other researchers to investigate relationship between brand equity and brand preference in other product categories.

## **1.7 Organization of the Study**

The study will be organized in five parts. The first chapter includes background of the study, Statements of the problem, objectives, significance of the study and methodology. The second chapter deals with different literatures written on the subject matter. The third chapter discusses all the methodologies utilized,

The fourth chapter consists of the major presentation, analysis and interpretation of the data collected and based on the result the findings are discussed. Finally, in chapter five conclusion and recommendation of the study was made.

## **1.8 Delimitation of the Study**

Due to limited capacity of the researcher the study is conducted in Addis Ababa area only. In addition, the study covers only the private sector which consists both pharmacists and physicians. The physicians covered are those working in clinics and hospitals. Additionally, the pharmacists consists those who are working in pharmacies, drugstores and chain pharmacies. This is due to the resource limitation, time constraint and accessibility of physicians.



# Chapter Two

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## Review of related literatures

### 2.1 Concept of branding

In earlier times banding was used to identify one's own property from the other. There was a time when some marks were used to keep one's cattle separate from other people's cattle, so that they can identify their own herd. However, in today modern world concept of branding has come to include much more than just creating a way to identify a product or company. (Hampf & Lindberg-Repo, 2011).

Brands and branding are by no means a new phenomenon, neither for academics nor the business world. It is possible to trace back the use of brands all the way to the Stone Age, when hunters used weapons of specific "brands" to succeed in the hunt. It was during the 16th century, however, that brands similar to those we see today have started to take shape. Some of the earliest-known brands were established by the English ceramist Josiah Wedgwood and the French fashion designer Rose Bertin. Since the 18th-century England and France, there has been a massive development of the knowledge, procedures, and theories within branding. Contemporary branding theories have their origin and evolutionary starting point in the mid-20th century, primarily due to the development of commercials in mass media (Peter, 1989).

Moreover, the most important aspects of any business, large or small, retail or business to business is branding. An effective brand strategy gives you a major edge in increasingly competitive market.

Branding has the propensity to distinguish one product from another by creating different brand elements, "name, logo, symbol, and package design" and it can create value for a firm resulting in financial profit (Keller, 1998). The American Marketing Association's (2008) definition of a brand is the one that is supported by many authors and found in various literatures. It defines a brand as "as a name, term, sign, or combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of the competition."

A brand for a new product is shaped by creating a new name, logo, or symbol and as a result of this it receives “awareness, reputation, and prominence in the marketplace” (Keller, 2002).

## 2.2 Concept of brand equity

The concept of brand equity emerged in the early 1990s. It was not defined precisely, but in practical terms it meant that brands are financial assets and should be recognized as such by top management and the financial markets. Brand equity includes not only the value of the brand, but also implicitly the value of proprietary technologies, patents, trademarks, and other intangibles such as manufacturing know-how (Tuominen, 1999).

The content and meaning of brand equity have been debated in a number of different ways and for a number of different purposes, but so far no common viewpoint has emerged. It can be discussed from the perspective of the manufacturer, retailers or consumers. While manufacturers and retailers are interested in the strategic implications of the brand equity, investors are more sympathetic for financially defined brand equity as the total value of a brand which is a separable asset- when it is sold or included in a balance sheet. While Aaker defined brand equity as a set of assets and liabilities linked to the brand, which add value to or subtract value from a product in its relationship with customers (Aaker, 1991).

When marketing practitioners use the term brand equity they tend to mean brand description or brand strength referred to as customer based brand equity to distinguish it from the asset valuation meaning. The customer based brand equity definitions approach the subject from the perspective of the consumer whether it is an individual or an organization. They contend that for a brand to have value it must be valued by consumers. Then the power of a brand lies in what customers have, felt, seen and heard about the brand as a result of their experiences over time. A customer based definition of brand equity is stated as the differential effect that brand knowledge has on consumer response to the marketing of that brand. (Atilgan, et al., 2005)

A basic idea of brand equity is that the power of a brand lies in the minds of consumers and what they have experienced and learned about the brand over time. Brand equity provides value for both the customer and the firm. Aaker (1991) discovered that the value of brand equity results

from five brand equity assets; brand loyalty, brand awareness, perceived quality, brand associations, and other proprietary brand assets.

Whereas, Keller (1993) revealed brand equity as the differential effect of brand knowledge on consumer response to the marketing of the brand and measure the brand equity based on two assets; brand awareness and brand image. Keller highlighted the importance of consumer brand knowledge which is descriptive and evaluative information about brand, and recorded in consumer memory. He further criticized that consumers are able to recognize and recall the brand image only if they are aware of the brand existence and have knowledge about the brand. As such, addressing the brand awareness alone does not explain on consumer's familiarity with the brand. Hence brand awareness and brand image together create the brand knowledge.

In general, different studies states that a key to branding is that consumers must not think that all brands in the category are the same. Thus, establishing a high level of brand awareness and a positive brand image in consumer memory produces the knowledge structure that can affect consumers' response and produce different types of customers based brand equity.

Brand equity reflects certain consumer attitudes and associations with a branded product that, in the aggregate, yield specific consequences, such as incremental volume, price premiums, and profit. These product-market outcomes quantify the incremental benefit due to the brand name and "reflect a culmination of the various mechanisms by which the brand name adds value". These outcomes are also an important means of quantifying the value of a brand because they are inextricably linked to market forces. (Slotegraaf & Pauwels, 2008)

### **2.3 Measurements of brand equity**

In talking about measuring brand equity, a number of alternative methods have been suggested. The techniques tend to be either financial or consumer-related. Among the financial measures, Carol & Sullivan (1993) used movements in stock prices to capture the dynamic nature of brand equity, on the theory that the stock market reflects future prospects for brands by adjusting the price of firms. Some researchers used the potential value of brands to an acquiring firm as an indicator of brand equity. Another financial measure (applicable only when launching a new product) is based on brand replacement, or the requirements for funds to establish a new brand,

coupled with the probability of success. One of the most publicized financial methods is used by *Financial World* in its annual listing of worldwide brand valuation. Their formula calculates net brand-related profits, then assigns a multiple based on brand strength (defined as a combination of leadership, stability, trading environment, internationality, ongoing direction, communication support, and legal protection).

Within the marketing literature, operationalizations of brand equity usually fall into two groups: Those involving consumer perceptions (e.g., awareness, brand associations, perceived quality) and those involving consumer behaviors (e.g., brand loyalty, willingness to pay a high price). Among the perceptual measures, one technique uses consumer preference ratings for a branded product versus an unbranded equivalent (Aaker 1991).

Another approach, used by several authors, treats brand equity as brand name importance, since the name of a brand is often its core indicator. (Keller 1993) offered the following perceptual definition: "the differential effect of brand knowledge on consumer response to the marketing of the brand." Brand knowledge was decomposed into brand awareness (recall and recognition) and brand image (a combination of the favorability, strength, and uniqueness of brand associations). Some methods relying more on consumer behavior used scanner data to come up with three measures of brand equity.

Their first measure—perceived value was defined as the value of the brand which cannot be explained by price and promotion. Their second measure brand dominance ratio provided an objective value of the brand's ability to compete on price. Their third measure— intangible value—was operationalized as the utility perceived for the brand minus objective utility measurements. Aaker (1991) is one of the few authors to incorporate both attitudinal and behavioral dimensions in his definition. He suggested using a brand-earnings multiplier that is based on a weighted average of the brand on five key components of brand equity (awareness, associations, perceived quality, loyalty, and other proprietary assets such as patents and trademarks).

There are some advantages to combining both consumer perceptions and actions into a single marketing measure of brand equity. It is well documented that attitudes alone are generally a poor predictor of marketplace behavior. On the other hand, consumer perceptions are clearly a

precursor to behavioral manifestations of brand equity. And Consumer behavior is, at root, driven by perceptions of a brand. While behavioral measures of purchase describe the existence of equity, they fail to reveal what is in the hearts and minds of consumers that is actually driving equity. (Cobb-Walgren, et al., 1995)

## **2.4 Determinants of brand equity**

### **2.4.1 Brand Awareness**

Brand awareness is the first and prerequisite dimension of the entire brand knowledge system in consumers' minds, reflecting their ability to identify the brand under different conditions: the likelihood that a brand name will come to mind and the ease with which it does so.

Brand awareness can be depicted into brand recognition (consumers' ability to confirm prior exposure to the brand when given the brand as cue) and brand recall (consumers' ability to retrieve the brand when given the product category, the needs fulfilled by the category, or some other cues). Brand awareness is essential in buying decision-making as it is important that consumers recall the brand in the context of a given specific product category, awareness increasing the probability that the brand will be a member of the consideration set. Awareness also affects decisions about brands in the consideration set, even in the absence of any brand associations in consumers' minds. In low involvement decision settings, a minimum level of brand awareness may be sufficient for the choice to be final. Awareness can also influence consumer decision making by affecting brand associations that form the brand image (Keller, 1998).

Considering approach of brand equity, the accessible attitude he refers to is related to how quickly a consumer can retrieve brand elements stored in his/her memory (brand awareness). The attitude activation is sometimes "automatic" (it occurs spontaneously upon the mere observation of the attitude object) and sometimes "controlled" (the active attention of the individual to retrieve previously stored evaluation is required). It was also proven that only high accessible attitudes (brands with a high level of awareness) can be relevant when purchasing or repurchasing a brand. (Peter, 1989)

Laurent, et al., (1995) suggest three classical measures of brand awareness in a given product category: spontaneous (unaided) awareness (consumers are asked, without any prompting, to name the brands they know in the product category – in this case the unaided awareness of a brand is the percentage of interviewees indicating they know that brand), top of mind awareness (using the same question, the percentage of interviewees who name the brand first is considered) and, respectively, aided awareness (brand names are presented to interviewees – in this case the aided awareness of a brand is the percentage of interviewees who indicate they know that brand)

Aaker (1991) mentioned several levels of brand awareness, ranging from mere recognition of the brand to dominance, which refers to the condition where the brand involved is the only brand recalled by a consumer. He defines brand awareness as “the ability of the potential buyer to recognize and recall that a brand is a member of a certain product category”. According to Keller, brand recall refers to consumers’ ability to retrieve the brand from memory, for example, when the product category or the needs fulfilled by the category are mentioned. Keller (1993) argued that “brand recognition may be more important to the extent that product decisions are made in the store”. Customer-based brand equity occurs when the consumer has a high level of awareness and familiarity with the brand and holds some strong, favorable, and unique brand associations in memory.

#### **2.4.2 Brand Association**

It is argued that a brand association has a level of strength, and that the link to a brand (from the association) will be stronger when it is based on many experiences or exposures to communications, and when a network of other links supports it. Brand associations may reflect characteristics of the product. Product associations and organizational associations are taken as the two mostly referred categories according to Chen’s (2001) brand association typology. Further, Aaker (1991) suggested that brand associations could provide value to the consumer by providing a reason for consumers to buy the brand, and by creating positive attitudes/feelings among consumers. Rio et al., (2001) proposes that brand associations are a key element in brand equity formation and management. In this respect, high brand equity implies that consumers have strong positive associations with respect to the brand.

According to Aaker (1991), brand associations are the category of a brand's assets and liabilities that include anything linked in memory to a brand. Keller (1998) defines brand associations as informational nodes linked to the brand node in memory that contain the meaning of the brand for consumers. Brand associations are important to marketers and to consumers. Marketers use brand associations to differentiate, position, and extend brands, to create positive attitudes and feelings toward brands, and to suggest attributes or benefits of purchasing or using a specific brand. Consumers use brand associations to help process, organize, and retrieve information in memory and to aid them in making purchase decisions (Low & Lamb, 2000).

### **2.4.3 Perceived Quality**

Perceived quality is another important dimension of brand equity. Perceived quality is not the actual quality of the product but the consumer's subjective evaluation of the product (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 profitably 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. (Jalilvand, et al., 2011)

In the context of quality of medicine, it is little more than doctor perceptions as to "how well a particular drug from a particular pharmaceutical firm will perform for a particular patients conditions". Quality of medicine comes first which is aimed at building brand image and increasing market share because its primary service is the patient's recovery or the exchange of trust. Domestic and multinational companies are competing with each other for their establishment and doctors have different perceptions of each pharmaceutical product regarding quality. (Jalilvand, et al., 2011)

### **2.4.4 Brand Loyalty**

Brand loyalty is a major component of brand equity. Brand loyalty is a situation which reflects how likely a customer will be to switch to another brand, especially when that brand makes a change, either in price or in product features. Javalgi & Moberg, (1997) defined brand loyalty according to behavioral, attitudinal, and choice perspectives. While behavioral 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, behavioral approach, and attitudinal approach (Rundle-Thiele & Bennett, 2001).

Oliver, (1997) defines brand loyalty as a deeply held commitment to rebuy or repatronise a preferred product or service consistently in the future, despite situational influences and marketing efforts having potential to cause switching behavior. Oliver's definition emphasizes the behavioral dimension of brand loyalty, whereas Rossiter & Percy (1987) argued that brand loyalty is often characterized by a favorable attitude towards a brand and repeated purchases of the same brand over time. Brand loyalty is also conceptualized based on an attitudinal perspective. Chaudhuri & Holbrook (2001) argued that "attitudinal brand loyalty includes a degree of dispositional commitment in terms of some unique value associated with the brand". From an attitudinal perspective, brand loyalty was defined as "the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice" (Yoo and Donthu, 2001, p. 3).

## **2.5 The concept of 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 behaviour. The economic view of preference had been criticised for assuming that preferences are stable and endogenous. An individual's preferences are not stable and can be endogenous or exogenous. Generally, The term brand preference refers to the degree of brand loyalty in which a customer definitely prefers one brand over competitive offerings and will purchase this brand if it is available. However, if the brand is not available, the customer will accept a substitute brand rather than expending additional effort finding and purchasing the preferred brand (Dibb et al., 2006).

In marketing literature, the word preference means the desirability or choice of an alternative. Preferences are above all behavioural tendencies (Zajonc & 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 favours one brand over another. Moreover, there is difference between brand preference and brand loyalty. Brand preference represents the attitudinal brand loyalty excluding the action of repeat purchasing; the brand-oriented attitudinal loyalty. The main theme is that the first three decision-making phases of brand loyalty constitute the focal of brand preference. Thus, brand preference is related to brand loyalty; however, brand loyalty is more consistent depicted by the long term repeated purchasing behavior. (Ebrahim, 2011)

## **2.6 Consumer buying behavior**

Consumer behavior is important from a number of different points of view. From the perspective of marketing, the study of consumer behavior is important as it helps forecast and understand consumer demand for products as well as brand preferences. To better understand the choice of brand from consumers' perspective it is important to have an idea of consumers' behavior and be familiar with consumer buying behavior theories. Understanding consumer behavior is not simple. However, studying consumer behavior is crucial factor for companies' success. Marketers, considering that, dedicate a lot of efforts in trying to specify the exact needs and wants for their customers and target markets, they also try to determine the best products characteristics that can satisfy the target market from the consumers own perspective. Consumer behavior is the consumer's decision with respect to the acquisition, consumption, and disposition of goods, services, time, and ideas by human decision-making units. Thus in order to understand consumers buying behavior company's need to study characteristics of consumers and other influencing factors of consumers acquisition, consumption and disposition of products. (Jalilvand, et al., 2011)

## **2.7 Empirical Frame work**

Different researches have been done to analyze determinants of brand equity on brand preference. Or link the impact of brand equity determinants with consumers brand preference. Additionally empirical evidence indicated that brand equity can affect purchase intention in various contexts, out of this brand awareness plays an important role in consumer decision

making by bringing three advantages; these are learning advantages, consideration advantages, and choice advantages. Brand associations also represent basis for purchase decisions and also create value to the firm and its customers. Different researchers have listed benefits of brand associations as follows: helping to process/retrieve information, differentiating the brand, generating a reason to buy, creating positive attitudes/feelings, and providing a basis for extensions. Similar to brand associations, perceived quality also provides value to consumers by providing them with a reason to buy and by differentiating the brand from competing brands.

According to Tesfaye, (2013), there is a positive effect of advertisement, product quality, package design, brand availability and price, depending on their order of importance from most determinant factor to the least. This indicates that the more consumers exposed to brand advertisements, their tendency to choose the advertised brand will increase. Perceived quality also has a major factor in brand preference due to the fact that if consumers perceive a brand has high quality they will definitely prefer that brand than any other equivalent brand available in the market. Regarding packaging and also design, it was found out that the more appealing and the more attractive the packaging of a brand is the more positive feedback it gets and hence greater brand preference. When discussing about availability, the value of a brand is highly seen if it is easily found and readily accessible. Cobb-Walgreen, et al., (1995) also studied specifically the promotion aspects of brand equity and the substantial feedback from it. It was found out that the brand which was highly promoted was found to have higher brand equity than the same equivalent brand which was less intensely promoted. In turn, the brand with the higher equity generated significantly greater preferences and greater purchase intentions.

In different studies of brand equity components on purchase intention showed the perceived value angle for preferring a brand. It was seen that the country of origin label on the packaging of different brands adds some value to a brand. The consumer perceptions about the country almost transfer to the originality of a brand that a brand with a country of origin of good image is perceived to have a greater value than the other brand with a less desirable image. Ahmed, et al., (2013) in their work showed that quality of medicine associated with a brand plays a significant role affecting brand loyalty. They agree that brand image from different companies play a major role in pharmaceutical products. The brand produced by multinational companies is perceived more valuable hence higher perceived quality, those produced by any generic companies and

produced domestically are seen to have lower perceived quality than the others. It was also seen that having a label of country of origin in the packaging of a brand can highly influence the decision making process of a consumer.

## **2.8 Conceptual Framework**

Pharmaceutical product users' characteristics and choice determinants can be explained by consumers' stimulus-response model of user behavior. Thus, the stimulus response model that show the interaction of determinates of brand equity and decision process of product users towards the final brand choice or preference will be considered as a framework for this study. In making a preference decision, consumers respond to the stimuli deployed by the selling company. The greater the company's knowledge is about the reactions these stimuli elicit, the greater the competitive advantage for that company (McDonald & Christopher, 2003).

Although product users do not follow a formal process in evaluating and use of a particular brand of pharmaceutical product, they employ a certain decision rule. Product users seek information about brands and the extent of the information search, are influenced by an array of factors such as time pressure, previous experience, advice from friends, and so on. Thus, before making a decision to use knowingly or unknowingly users will consider a certain criteria to choose a brand. These criteria might be related with marketing stimuli, consumers own characteristics and other external factors. In this research, marketing mix related factors will be considered as determinants of consumers brand choice decision. The conceptual framework that shows the variables of consumers' choice criteria is illustrated below.

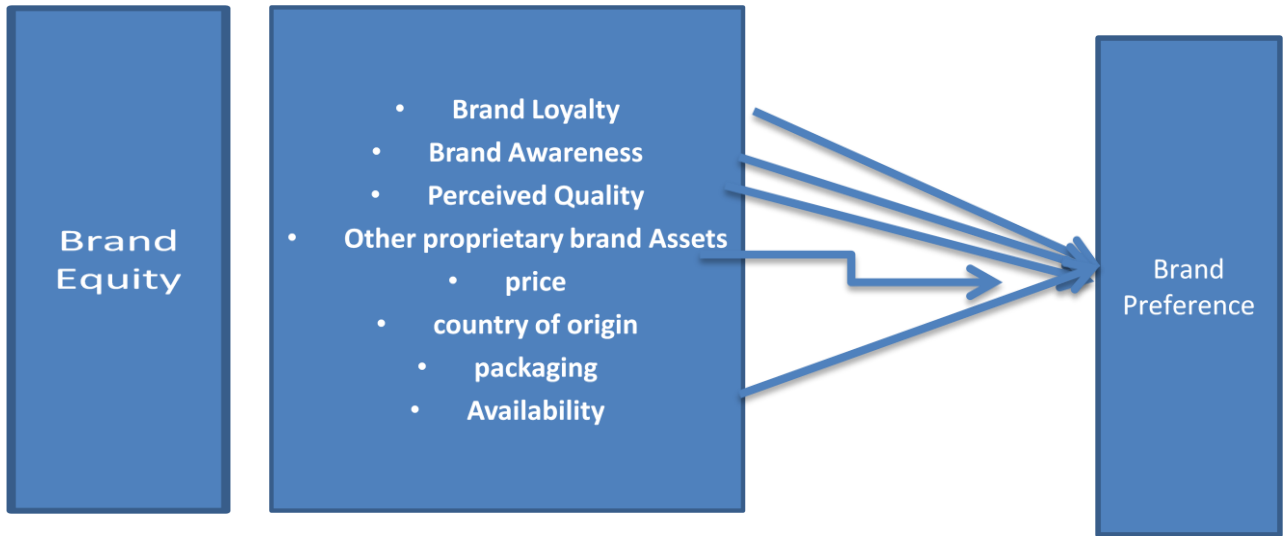


Figure 2.1 Illustration of conceptual frame work of the study

## 2.9 Hypothesis

**Hypothesis 1** Ho: Brand Loyalty does not have significant impact on brand preference.

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

**Hypothesis 2** Ho: Brand Awareness does not have a significant impact on brand preference.

H2: Brand awareness has a significant impact on brand preference.

**Hypothesis 3** Ho: Perceived quality does not have a significant impact on brand preference.

H3: Perceived quality have a significant impact on brand preference.

**Hypothesis 4** Ho: Promotion does not have a significant impact on brand preference.

H4: Promotion has a significant impact on brand preference.

**Hypothesis 5** Ho: Price does not have a significant impact on brand preference.

H5: Price has a significant impact on brand preference.

**Hypothesis 6** Ho: Packaging does not have a significant impact on brand preference.

H6: Packaging has a significant impact on brand preference.

**Hypothesis 7** Ho: Availability does not have a significant impact on brand preference.

H7: Availability has a significant impact on brand preference.

**Hypothesis 8** Ho: Brand Association does not have a significant impact on brand preference.

H8: Brand Association has a significant impact on brand preference.

# CHAPTER THREE

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## Research Design and Methodology

### 3.1 Research Design

The research design was explanatory research design consisting of quantitative research methodology. Survey questionnaire was developed and applied as data collection tool to collect primary data. The quantitative data was mainly focused on the profile of the study participants and the determinants of brands. It also paid attention to the analysis of the factors that influence brand equity.

### 3.2 Sampling technique

The study had involved pharmacists, druggists and physicians working in private sector as a source of data. Nevertheless, the unit of analysis was the factors that affect brand equity from the perspectives of these people. As a result the sampling units were the physicians, druggists and pharmacists working in such organization. In view of this, the list of the private clinics, drug stores, and hospitals was prepared along with the appropriate personnel related to the indicated field of practices. This list was taken from FMHACA registration archive and taken as a sampling frame for the study. The total number of physicians and pharmacists who are practicing in private hospitals and clinics was found to be 1560. Then, based on the list individual respondents were selected using systematic random sampling technique. The overall population was listed consisting of the physicians, pharmacists and druggist and from the list every third person was selected by systematic random sampling.

#### **Physicians working in private sector:**

These groups of practitioners are relatively supplied with a better Variety of products to choose from. This is a main target area where the manufacturing companies are competing to get the maximum market share as possible as they can. This is an area of the market where the drug companies are investing hugely because the end users can afford the cost.

### **Pharmacists working in the private sector:**

This group of professionals also shares the same characteristics with physicians working on the same sector. In similar case these groups interact more on the commercial aspect of the preference among from pharmaceutical products. (Andualem, Kafil 1995).

For the purpose of this study and according to its scope representative samples will be selected from private sectors by systematic random sampling.

### **3.3 Sample size**

The sample size was determined based on sample size for estimation of proportion for a finite population (Kothari, 2004).

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + z^2 \cdot p \cdot q}$$

n= sample size

N=population number (1560)

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

P= sample proportion of success 0.4(determined based on previous studies)

q= 1-p (0.6)

e=acceptance error(the precision) 0.037

Sample size 471, then a non-response rate of 20 % was added based on the experience from previous studies making the total sample size 565.

Nevertheless, it was 522 completed questionnaires that were collected.

### 3.4 Data source, data collection tools and methods

The sources of data for the study were pharmacists, druggists and physicians working in private clinics and hospitals. Primary data was used as the only source of data in the study. For this purpose structured questionnaire were used as main tools to collect the data needed through survey. This questionnaire was developed by the researcher in order to test the different factors involved in the study.

The questionnaire had three sections. The first section covered the profile of the study participants. Sex, age, professional background and place of work were collected in this regard. The second section was structured as a likert scale of 1-5 wherein 1 represented strong disagreement with the indicated statement while 5 indicated strong agreement with the statement. The rating scale covered major factors considered to affect brand equity and choice of brands. These included promotion, perceived quality, price, brand awareness, brand association, packaging, availability, and brand loyalty.

The questionnaire were distributed Starting from May 1- 31<sup>st</sup> for all the sample size and mainly focused on the possible impacts of the attributes of brand equity. Moreover, it focused on the possible reaction for those impacts and systems of managing the impact.

### 3.5 Procedures of Data Collection

**Questionnaire:** Primarily six data collectors were chosen and they were highlighted about the nature and purpose of the study. Then an attachment for the questionnaire was prepared which explain the purpose of the study and information about significance of the study. Getting access by issuing consent will be followed just like the above procedure. Some assistant will be given to clarify if there will be questions from the respondents. Then questionnaire was collected up on the agreed time between the data collector and the respondent.

Pilot survey was conducted on a small group (20 respondents) of a mix of both the strata prior to the field survey. The pilot test was used to check if there are inconsistencies in the questions and confirm the validity of the content of the questions.



## 3.6 Reliability and Validity

### 3.6.1 Reliability

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 2.1 Cronbach's alpha test*

S.N	Variable	Cronbach's alpha values
1.	Promotion	0.736
2.	Perceived quality	0.864
3.	Price	0.728
4.	Packaging	0.705
5.	Availability	0.738
6.	Brand loyalty	0.762
7.	Brand awareness	0.810
8.	Brand association	0.715
9.	Overall(the 8 major constructs)	0.735

### 3.6.2 Validity

In order to ensure the quality of this research design content and construct validity of the study will be checked. The content validity will be verified by the advisor of this research, who looks into the appropriateness of questions and the scales of measurement. Moreover, the pilot test that was conducted prior to the actual data collection helped to get valuable comments.

### **3.7 Method of Data Analysis**

Different statistical techniques were applied to analyze the quantitative data. Both descriptive and inferential statistics were applied in the study. The quantitative data was addressed by using percentage computation and factor analysis. In addition, regression analysis was employed for hypothesis testing and also correlation was added in order to analyze the factors chosen and show its impact. Factor analysis was also employed to examine the validity of the theoretical constructs of brand equity in the research setting. In connection to this, factor analysis was conducted for promotion, perceived quality, price, Packaging, availability, brand locality, and brand awareness, brand association. In doing so, the conceptual constructs of these components were filtered in the same manner. After screening the most important and significant components of the constructs indexes were created for brand equity based on the summation of the values of the constructs. The primary approach was maximum likelihood with Varimax rotation. While the issue of the number of factors to retain is ultimately judgmental in this study the selection was done based on eigenvalue of greater than 1 (which define the proportion of variance accounted for by each of the factors extracted).

The KMO Index measure of sampling adequacy tests whether the partial correlations among variables are small. The KMO should be greater than 0.5 for a satisfactory factor analysis to proceed. In this study all of the variable's KMO indexes are greater than 0.5 except brand association and perceived quality. These data interpret that there is relative compactness of correlation in the data matrix. These data also clarify that factor analysis is highly appropriate for these data.

### **3.8 Ethical Considerations**

While conducting this study ethical considerations will be taken in to consideration. Adequate care will be taken to select appropriate time to distribute questionnaires and to conduct interviews, Circumstances such as busy and high peak office task hours will be avoided so that respondents can give answer to the questions in a relaxed manner. By explaining the purpose and objective of the study, maximum effort will be made to make respondents feel secured and confidentiality is maintained so that no harm can happen to them. And the researcher will make sure all participants are involved in voluntary basses.

# CHAPTER FOUR

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## RESULTS AND DISCUSSION

This chapter presents the data analysis and discussion of the research findings. The data analysis was made with the help of Statistical Package for Social Science.

### 4.1 Sample characteristics

A total of 522 professional engaged in the pharmaceutical business were involved in the study. This comprises physician, pharmacist, and druggist. Most of the respondents were from the private pharmacy which accounts for 54% of the participants. 46% of the study participants were physician, around 42 % pharmacists and around 12% were druggists. This indicates as the people interviewed were appropriate personnel to give information on the factors that influence the choice of brand in the pharmaceutical business in the study context.

**Table 4.1 Study participants by profession and place of work**

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		Count	Percent
Occupation	Physician	240	46.0
	Pharmacist	218	41.8
	Druggist	64	12.3
Private Clinic	Private	161	30.8
	Hospital		
	Private	79	15.1
Pharmacy	Private	282	54.0

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*Source : ( Own Survey, 2015)*

The mix of the professionals also indicates that the involvement of the private clinics, private hospitals and private pharmacy was properly accounted. This helps to have a better picture of the factors in the business. The sex and age distribution of the people participated in the study further shows that the mix of female and male professionals is more or less balanced. Yet, the

percentage of male was slightly higher than that of female, constituting around 58 percent of the respondents.

**Table 4.2 Sex and age of the study participants**

		Count	Perception
Sex	Female	221	42.3
	Male	301	57.7
Age	18-30	204	39.1
	31-40	143	27.4
	41-50	150	28.7
	51-60	25	4.8
	60+	0	0.0

*Source: (Own Survey, 2015)*

The majority of the study participants were in the age category of 18-30, followed by those in the age group of 41-50 and 31-40. The rest around 5 percent were in the age group of 51-60. This shows as most are veterans in the field, putting them at the right position to reflect about the practice in the business.

## 4.2 Promotion

As a construct of promotion selecting a brand which is promoted intensively, influence of promotion over the type of brand of medication prescribed/dispensed, choosing a brand that has left behind label for better memory, choosing a brand that a medical representative recommended, and choosing a brand of a company that organizes different marketing activities were considered.

In connection to this, 56 percent of the study participants reported as promotion influence their choice, 54 percent reported as MR recommendation influences their choice and an equal percentage of participants, around 41 percent, reported as MR recommendation and leaving label behind affect their decision in the choice of brand.

In identifying the major factors that explain the variability in the sub scale using a factor analysis, influence of promotion and recommendation of MR were found to explain around 70 percent of the variability in the effect of promotion. The results indicate that influence of promotion and recommendation of an MR can have an impact on the choice of a specific brand.

Effect of promotion as a determinant factor was reported by 40% of the study participants. This result can be supported by Belch & Belch (2003), which explains promotion as a valuable promotional tool for making sure a brand is included in the evoked set, which increase the chance of the brand to be selected by the consumer.

**Table 4.3** *Factor Analysis for Promotion*

**Total Variance Explained**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.456	49.115	49.115	2.456	<b>49.115</b>	49.115	1.863	37.254	37.254
2	1.028	20.570	69.685	1.028	<b>20.570</b>	69.685	1.622	32.431	69.685
3	.772	15.442	85.127						
4	.445	8.891	94.018						
5	.299	5.982	100.000						

Extraction Method: Principal Component Analysis.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Intensive Promotion	.849	.114
Influence of Promotion	.857	.096
Leaving Behind a Label	.593	.504
Recommendation of MR	.236	.850
Marketing Activities	.033	.789

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

### 4.3 Perceived quality

Around 85 percent of the study participants reported as they choose a brand of a drug which they perceive has a high quality. This shows as quality is taken in to account while making a decision in brand choice. This is well reflected in the fact that 74 percent of the respondents expressed as they choose a brand that is produced by the innovator pharmaceutical company. Besides, 85% reported as they choose a brand of a drug that is produced in Europe while around 75% expressed as they choose a brand of a drug that has been manufactured in America. On the contrary, only 20% of the respondents indicated as they choose a brand of a drug that is produced in Ethiopia, 22 percent reported as they choose a brand of a drug that is produced in Middle East (Gulf), and 15% choose a drug that is manufactured in Asia.

This result indicates that price and quality are not the only factors affecting the purchasing process but also other factor such as country of origin. Many consumers are used to some stereotypes like country of origin to assess the quality of brands. (Yasin, et al., 2007) Studies prove this point that the label indicating the country of origin is very important for consumer while evaluating product.

The KMO Index measure of sampling adequacy tests for the construct was below 0.5 and thus the factor analysis results are not reported. See table...below for the result of the test

**Table 4.4** *KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.421
Approx. Chi-Square	422.064
Bartlett's Test of Sphericity	21
Sig.	.000

#### **4.4 Price**

In this study, the price domain had three dimensions. Affordability, low and high price. Here it should be noted as high price was considered separately as a signal for high quality. In describing the effect of three dimensions on their choice of brands, the majority (54%) reported as affordability influences them. Likewise, around 36% expressed as they consider low price as their priority while making a brand choice. The percentage of those who reported as they choose a drug that is highly priced because they believe as it is of high quality was 13%.

From the consumers' perspective, price is what is given up or sacrificed to obtain a product Thus, consumers undergo a cognitive or rational model of decision making to arrive at the perceived value of a product.

An explanatory factor analysis of the constructs of the domain also revealed that around 43% of the variability is explained by affordability. This indicates that when consumers consider purchase of the products, they may be conditioned to assess the trade-off between the cost of

making the monetary sacrifice for the branded products versus the benefit of ensuring the product quality and the certainty of the performance of a brand.

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.555
Approx. Chi-Square	29.978
Bartlett's Test of Sphericity	3
Sig.	.000

Table 4.5 Factor Analysis for Price

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.281	42.698	42.698	1.281	42.698	42.698
2	.903	30.110	72.808			
3	.816	27.192	100.000			

Extraction Method: Principal Component Analysis.



### Component Matrix<sup>a</sup>

	Component
	1
Affordabl for me	.712
Prioritize Low Price	.632
High Price High quality	.612

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

### 4.5 Packaging

Packing was one of the factors considered in the model proposition of the study. In view of this the study participants were asked as what of kind of packaging influence them to choose a brand. This covers the size of the packaging, visually appealing quality and being appropriately packed (in terms of qualifying the standard). In light of this, most of the study participants indicated as they choose a brand of a drug that is appropriately packed. Around 38 percent reported as they prefer a brand of a drug, which has medium size while 37 percent reported preference for brands with visual appealing. Brands with big size packages were reported as the least preferred one, Five percent reported as they prefer brands with big size.

The result of the explanatory factor analysis also confirmed that appropriate packaging explain around 44 percent of the variability. Further as can be seen from table 4.6 the component matrix, big size of packing negatively affects choice of a certain brand.

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.632
Approx. Chi-Square	192.857
Bartlett's Test of Sphericity	6
Sig.	.000

*Table 4.6 Factor Analysis for Packaging*

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.760	43.993	43.993	1.760	43.993	43.993
2	.919	22.987	66.980			
3	.760	19.005	85.985			
4	.561	14.015	100.000			

Extraction Method: Principal Component Analysis.

### Component Matrix<sup>a</sup>

	Component
	1
Medium Size Packaging	.496
Big Size Packaging	-.703
Visual Appeal of Packaging	.658
Appropriate Packaging	.766

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

A factor analysis by using an extraction of a fixed number of factors rather than the eigenvalue of 1, showed that large size, visually appealing quality and medium size explain around 86 percent of the variability in brand choice. This highlights that the significance of medium size packaging and visual appeal has an impact in the selection of pharmaceutical products.

### 4.6 Availability

A factor analysis with extraction rule of a eigenvalue of more than 1 rather than fixed number of factors indicated that the presence of sustainable supply system is the major explanatory factor, accounting for about 68 percent of the variation. On the other hand, when analyzed by changing the rule and fixing the number of factors to 2, the result indicated as being readily available and possibility of easily switching as the major explanatory factors, explaining around 79 percent of the variation.

The result of the frequency analysis of the responses was consistent with the factor analysis. The majority of the respondents reported as a sustainable supply system of a drug is one of their top

priority criteria in choosing a brand of a specific drug. On other on the other hand, around 79 percent of the participants of the study expressed as they usually incline to a brand of a drug that is readily available.

In line with most academic studies such as Chimboza & Mutandwa, (2007), this result has proven the importance of brand availability in determining consumer preference of pharmaceutical brands. Moreover, Peter & Donnelly, (2007) explain that products that are convenient to buy increase the chance of consumers finding and preferring them.

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.500
Approx. Chi-Square	75.079
Bartlett's Test of Sphericity	1
Sig.	.000

Table 4.7 Factor Analysis for Availability

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.367	68.341	68.341	1.367	68.341	68.341
2	.633	31.659	100.000			

Extraction Method: Principal Component Analysis.

### Component Matrix<sup>a</sup>

	Component
	1
Readily Available	.827
Sustainable supply system	.827

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

#### 4.7 Brand loyalty

From marketing strategy point of view, customer brand loyalty is considered as one of the most significant upshots. Brand loyalty is considered to provide greater leverage to trade, condensed marketing costs and building an augmented market share. Brand value or brand equity is mainly caused by brand loyalty. Aaker (1996) stated that most of brand's value depends on the number of people who regularly buy it. Regular buyers have significant value because they represent a stable income stream for company. Thus, the concept of "brand loyalty" is a critical component of brand equity and has a direct and positive effect on brand equity.

A significantly larger percentage of the study participants (83 percent) indicated as they are usually comfortable in re buying a brand if they get good feedback from a product. Likewise, around 65 percent of the respondents indicated as they are comfortable in sticking to a brand even if other equivalent brands are highly promoted to them. This may be due to that consumers have a tendency to select brands that they are accustomed to. And it usually is difficult to break this trend. It was 15% of the study participants who reported as they switch from familiar brands.

Regarding the shift to other brands if the alternatives are cheaper, the reaction of the study participants was almost the same for both directions. While around 38 percent of the respondents reported as they will not shift even if the price are cheaper, around 39 percent reported as they will switch to other brands if the price is cheaper. The rest were in different in reporting their inclination. Accordingly it can be stated that price and previous experience of a specific brand play a role in brand loyalty.

Tabl 4.8 .shows the variation explained by the factors, dimensions of brand loyalty considered in the study. As can be seen from the table 68 percent of the variation is explained by two factors i.e not switching to other brands and re-buying after a positive feedback.

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.504
Approx. Chi-Square		604.038
Bartlett's Test of Sphericity	df	10
	Sig.	.000

Table 4.8 Factor Analysis for Brand loyalty

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.014	40.281	40.281	2.014	40.281	40.281	1.939	38.779	38.779
2	1.405	28.102	68.383	1.405	28.102	68.383	1.480	29.604	68.383
3	.842	16.837	85.220						
4	.444	8.887	94.107						
5	.295	5.893	100.000						

Extraction Method: Principal Component Analysis.

### Rotated Component Matrix<sup>a</sup>

	Component	
	1	2
Rebuying after good feedback	-.014	.903
Rebuying even if there are equivalent brands	.428	.612
Sticking to a brand regardless of promotion of others	.669	-.476
Do not switch from familiar brands	-.882	-.122
Sticking to a brand even if there are less expensive ones	.728	.222

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## 4.8 Brand awareness

Brand awareness refers to “the ability for a buyer to recognize or recall a brand is a member of a certain product category”. Mostly brand awareness is represented either as brand recognition or brand recall.(Piron, 2000) More than half of the study participants (54 percent) reported as a specific brand quickly comes to their mind when faced with a disease category to prescribe a

medication. Further, 51 percent of the respondents said that there is one dominant brand that they select for treatment from the available brand options when faced with a disease category. This could be due to Consumers' brand awareness is likely to be high when they perceive the quality of the brand to be high (Kayaman & Arasli, 2007). On the contrary, 12 percent reported a specific brand does not quickly come to their mind when faced with a disease category.

Though the KMO Index measure of sampling adequacy tests for the construct was 0.5, the factor analysis results were reported. Accordingly, 65 percent of the variation was found to be explained by the major factor.

### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.500
Approx. Chi-Square	49.190
Bartlett's Test of Sphericity	1
Sig.	.000



Table 4.9 Factor Analysis for brand awareness

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.301	65.029	65.029	1.301	65.029	65.029
2	.699	34.971	100.000			

Extraction Method: Principal Component Analysis.

**Component Matrix<sup>a</sup>**

	Component
	1
Associate diseases with a specific brand	.806
A dominant brand for a specific disease	.806

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

**4.9 Brand association**

In this study, around 40 percent of the study participants indicated that they associate a specific disease indication/patient with a specific brand of medication. Likewise, 45 percent of the respondents reported association a specific disease indication/patient with a specific generic

medication. A relatively lower percentage of respondents reported as they do not associate a specific disease indication or patient with a specific brand of medication (22 percent) they disagree on associating a specific disease indication or patient with a specific generic medication (30 percent).

previous experience with a brand specification was analyzed as an element of the brand association domain. The result of the frequency revealed that it is one of the major factors that influence the brand choice of the study participants. Previous experience with a brand of medication impacts their brand choice. This comprises around 71 percent of the study participants.

The KMO Index measure of sampling adequacy tests for the construct was below 0.5 and thus the factor analysis results are not reported. See table 4.10 below for the result of the test

**Table 4.10** *Factor Analysis for brand association*

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.497
Approx. Chi-Square	148.871
Bartlett's Test of Sphericity	3
Sig.	.000

**4.10 Determinants of brand equity**

Up on the detailed analysis of each of the constructs of the brand equity, the major determinants of brand equity were analyzed using exploratory factor analysis. The test of Kaiser-Meyer-Olkin Measure of Sampling Adequacy indicated below shows that the sampling is adequate and factor analysis could be employed in identifying the major factors. The Bartlett's Test of Sphericity also indicated that the matrix is not an identity matrix,  $p < 0.001$ .

After making sure that factor analysis is appropriate for the variables concerned, an exploratory factor analysis was conducted. The result showed that Brand association, promotion and packaging are the major determinants of brand equity. Brand association explains around 27 percent of the variation, promotion explains 20 percent of the variation and 17 percent of the variation is explained by packing.

**Table 4.12** Factor Analysis for the major Determinants of brand equity

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.296	28.698	28.698	2.296	28.698	28.698	2.187	27.338	27.338
2	1.612	20.151	48.849	1.612	20.151	48.849	1.560	19.506	46.843
3	1.231	15.389	64.238	1.231	15.389	64.238	1.392	17.395	64.238
4	.761	9.515	73.753						
5	.700	8.753	82.506						
6	.615	7.686	90.193						
7	.459	5.734	95.926						
8	.326	4.074	100.000						

Extraction Method: Principal Component Analysis.

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Promotion	-.168	.759	.250
Perceived quality	-.748	.113	.037
Price	.742	.215	-.205
Packaging	-.180	.178	.826
Availability	.534	.538	-.232
Brand loyalty	-.102	-.691	.200
Brandawareness2	.176	-.347	.679
Brand association	.831	-.077	.219

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

## 4.11 Correlation Analysis

This study employs the correlation analysis, which investigates the strength of relationships between the studied variables. Pearson correlation analysis was used to provide evidence of convergent validity. Pearson correlation coefficients reveal magnitude and direction of relationships (either positive or negative) and the intensity of the relationship (-1.0 to +1.0). Correlations are perhaps the most basic and most useful measure of association between two or more variables (Marczyk, et al., 2005). As per Marczyk, et al., (2005) general guidelines 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.

As can be seen from Table 4.12 there was a significant positive correlations between the three factors specifically Promotion, brand association and packaging and brand preference. And the result was found to be statistically significant at ( $P < 0.01$ ) for each variables. This shows that the factors have moderate correlation and have an impact on brand preference of pharmaceutical products in the private health sector.

**Table 4.13** *Correlation Analysis for the major factors*

**Correlations**

		Influence of brand determinants of brand equity on brand preference
Packaging	Pearson Correlation	.421 **
	Sig. (2-tailed)	.003
	N	522
Promotion	Pearson Correlation	.670 **
	Sig. (2-tailed)	.000
	N	522
Brand association	Pearson Correlation	.564 **
	Sig. (2-tailed)	.010
	N	522
Influence of brand determinants of brand equity on brand preference	Pearson Correlation	1 **
	Sig. (2-tailed)	
	N	522

## 4.12 Hypothesis Testing

Table 4.14 Regressions for Consumers Brand Choice

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.196	.506		8.294	.000
Promotion	.182	.040	.203	4.504	.000
Perceived quality	.179	.078	.108	2.285	.023
Price	-.163	.042	-.179	-2.495	.024
Packaging	.180	.069	.162	2.357	.026
Availability	.290	.052	.275	5.542	.000
Brand loyalty	.110	.046	.107	2.389	.017
Brand association	.190	.052	.195	3.642	.000
Brand awareness	.253	.044	.255	5.795	.000

a. Dependent Variable: Influence of brand determinants of brand equity on brand preference

Referring to table 4.13, the P value for all the variables was found to be < than 0.05. Hence all the alternative hypothesis have found to be accepted.

**Table 4.15** *Summary of the Overall Outcome of the Research Hypotheses*

<b>Hypothesis</b>	<b>Result</b>	<b>Reason</b>
H1: Brand loyalty has a significant impact on brand preference. Ho: Brand Loyalty does not have significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .107$ ; $P < 0.05$
H2: Brand awareness has a significant impact on brand preference. Ho: Brand Awareness does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .255$ ; $P < 0.05$
H3: Perceived quality have a significant impact on brand preference. Ho: Perceived quality does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .108$ ; $P < 0.05$
H4: Promotion has a significant impact on brand preference. Ho: Promotion does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .203$ ; $P < 0.05$
H5: Price has a significant impact on brand preference. Ho: Price does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = -.179$ ; $P < 0.05$
H6: Packaging has a significant impact on brand preference. Ho: Packaging does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .162$ ; $P < 0.05$
H7: Availability has a significant impact on brand preference. Ho: Availability does not have a significant impact o	Ho: Rejected H1: Accepted	$\beta = .275$ ; $P < 0.05$



on brand preference.		
H8: Brand Association has a significant impact on brand preference. Ho: Brand Association does not have a significant impact on brand preference.	Ho: Rejected H1: Accepted	$\beta = .195; P < 0.05$

# CHAPTER FIVE

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## 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, promotion, perceived quality, price, packaging, availability, brand loyalty, brand awareness and brand association of consumers have been assessed. The factor analysis of the determinants shows that there is a significant relationship among promotion, Perceived quality, availability, brand loyalty, brand awareness and brand association. It can be concluded that in preferring a specific brand of pharmaceutical product all the factors impact significantly in choosing a brand.

Out of brand association, previous experience with a brand of medication impacts their brand choice greatly. This shows that consumers are highly influenced by the extent of their exposure and the greater their exposure to a specific brand, the greater their likelihood of preferring the specific brand.

More than half of the study participants reported as a specific brand quickly comes to their mind when faced with a disease category to prescribe a medication. The higher their awareness about a specific brand the greater their choice of a specific pharmaceutical brand.

In considering brand loyalty, consumers are highly comfortable in re-buying a pharmaceutical brand if they have positive previous experience from the brand. Even though they agree with the above fact, due to the reality on the ground that means the financial status of the consumer this may not be always true. This means sometimes as it has been found on the study they tend to change their brand preference to a less affordable product.

Regarding price as a determinant factor of brand equity, This was found to be a significant determinant factor. As it shown in the result of the study, the majority reported as affordability influences them. The hypothesis testing showed that its beta coefficient was found to be

negative. This shows that it has inverse relationship with brand preference. Hence, consumers are dependent on the variability of brand price.

In summary, the main determinant factors that are shown in the study with significant variance from the other factors considered are brand association, promotion and packaging respectively. The results of correlation indicates that the factors (promotion, packaging and brand association) were significantly correlated with brand preference and impacts the preference of pharmaceutical products in a considerable matter. This implies that as these factors are subjected to company manipulation, pharmaceutical companies can play a big role in positioning their product to be superiorly preferred by the consumer. On the other hand, if companies have failed to focus on these factors, the lesser their impact on consumer's brand preference and the return on investment as well.

## 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.

So as 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 areas for execution.

### **Pharmaceutical Companies**

As shown in the conclusion part, the three main influencing factors can be under the control of pharmaceutical companies marketing activities. Therefore it is highly advisable that pharmaceutical companies should really focus in managing these factors. Specifically, they should focus on their promotional strategy, promotional materials and generally their marketing plan.

In addition to promotional factors, pharmaceutical companies need to consider their presentation (packaging) of their brands. Meaning, products should be appealing enough or attractive enough for consumers to be their preferred product.

### **Regulatory Body**

Pharmaceutical product users were seen to be loyal to a specific pharmaceutical brand. This comes from their background knowledge about a product quality. They associate a quality product with a country of origin. It is as this point where regulatory bodies should act as they are responsible to develop and control product standards. Thus, they need to reassure and educate the consumers about product quality standards. This means product quality does not depend on country of origin rather on specification standards.

In line with this, they need to intensify their quality control procedures and implementation of quality guidelines.

### **Health care professionals (product consumers)**

Pharmaceutical product consumers are placed in the center of the matrix of the product use. Their position gives them a higher degree of decision making. This implies that their reference towards decision making have a significant impact on the product use. As shown in the study, they can be highly influenced by the pharmaceutical companies. (eg. Promotion). Therefore, they should act in a highly ethical and technically acceptable manner so as to find a balance between all the factors for brand preference.

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## **Appendix :**

### **Anex 1 - Questionnaire**

#### **A questionnaire on the impact of brand equity on brand preference of pharmaceutical product**

Dear Respondent, I am Eyerusalem Shiferaw a post graduate student at St. Mary University, school of post graduate studies. Currently, I am undertaking a research to identify “the impact of brand equity on brand preference of pharmaceutical products that are imported to Ethiopia.” The result of the study will assist pharmaceutical companies in delivering a better product and a better marketing strategy to satisfy Health care professionals and also patients. Your participation in this survey is voluntary. The information you provide will be used only for the purpose of the study and will be kept strictly confidential. Please do not write your name or contact details on the questionnaire.

**Thank you in advance for your kind cooperation.**

**Part I: General Information please put your response agreement to each question by encircling the appropriate number.**

1. Gender:

- 1) Female      2) Male

2. Age:

- 1) 18-30      2) 31-40      3) 41-50      4) 51-60      5) 60 +

3. Occupation:

- 1) Physician      2) Pharmacist      3) Druggist

4. Place of Work

- 1) Private clinic      2) Private Hospital      3) Private pharmacy

**Part II: Determinants of Brand Equity**

Please select the degree of agreement/disagreement with the following statements associated with the determinants of your brand choice (**encircle the alternative number that best describe your view**)

Where 1= Strongly Disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly Agree

Key: SD= Strongly Disagree DA= Disagree N= Neutral A= Agree SA= Strongly Agree

A. Promotion	SD	DA	N	A	SA
1. I select a brand which are promoted intensively.	1	2	3	4	5
2. promotion has an influence over the type of brand of medication I prescribe/dispense.	1	2	3	4	5
3. I choose a brand that has leave behind label because It reminds me.	1	2	3	4	5
4. I choose a brand that a medical representative recommended.	1	2	3	4	5
5.I choose a brand of a company that organises different marketing activites.	1	2	3	4	5
<b>B. Perceived Quality</b>					
6. I choose a brand of a drug, which I perceive has a high quality.	1	2	3	4	5
7. I choose a brand that is produced by the innovator pharmaceutical company	1	2	3	4	5
8. I choose a brand of a drug that is produced in Ethiopia	1	2	3	4	5
9. I choose a brand of a drug that is produced in Middle East (Gulf)	1	2	3	4	5
10.I choose a brand of a drug that is produced in America	1	2	3	4	5
11. I choose a brand of a drug that has been manufactured in Europe.	1	2	3	4	5
12. I choose a drug that is manufactured in Asia.	1	2	3	4	5
<b>C. Price</b>					
13.I choose a brand of a drug that is affordable for me.	1	2	3	4	5
14. Low price is one of my priorities when making a brand choice.	1	2	3	4	5
15. I choose a brand of a drug that is highly priced because I believe that it is of high quality.	1	2	3	4	5

<b>D. Packaging</b>					
16. I choose a brand of a drug, which has medium size.	1	2	3	4	5
17. I prefer a brand of a drug which has a big size.	1	2	3	4	5
18. Visual appeal of packaging influences my brand choice.	1	2	3	4	5
19. I choose a brand of a drug that is appropriately packed (qualify the standard).	1	2	3	4	5
<b>E. Availability</b>					
20. I usually incline to a brand of a drug that is readily available.	1	2	3	4	5
21. If I don't find one brand of a drug in the market I will switch to another easily.	1	2	3	4	5
22. Sustainable supply system of a drug is one of my top priorities in choosing a brand of a specific drug.	1	2	3	4	5
<b>F. Brand Loyalty</b>					
23. I am usually comfortable in re buying a brand if I get good feedback from it	1	2	3	4	5
24. I am comfortable in re buying a brand even if there are equivalent brands in the market	1	2	3	4	5
25. I am comfortable in sticking to a brand even if other equivalent brands are highly promoted to me	1	2	3	4	5
26. I do not easily switch to a new brand from the brand I am familiar with	1	2	3	4	5
27. I am comfortable in sticking to a brand even if there is less expensive brands available	1	2	3	4	5
<b>G. Brand Awareness</b>					
28. When faced with a disease category, to prescribe a medication, usually a specific brand quickly comes to my mind	1	2	3	4	5
29. When faced with a disease category there is one dominant brand that I select for treatment from the available brand options.	1	2	3	4	5
<b>H. Brand Association</b>					
30. I associate a specific disease indication or patient with a specific brand of medication	1	2	3	4	5
31. Previous experience with a brand of medication impacts my brand choice	1	2	3	4	5
32. I associate a specific disease indication or patient with a specific generic medication	1	2	3	4	5

33. Please rate (from 1-5) the extent to which each of the following determinants of brand equity influences you significantly with regard to your brand preference

A. Promotion \_\_\_\_\_

B. Availability \_\_\_\_\_

C. Quality \_\_\_\_\_

D. Price \_\_\_\_\_

E. Packaging \_\_\_\_\_

**Part III: Brand Preference**

1. Determinants of Brand Equity extremely influence me to select a specific brand.

1. Strongly Agree

2. Agree

3. Neutral

4. Disagree

5. Strongly Disagree

## Anex 2 - List of Sample frame

No.	Name of Institution	Type	No. respondents
1	Ayertena Higher clinic	Private clinic	8
2	Ayinalem Higher clinic	Private clinic	8
3	Abdi Higher clinic	Private clinic	7
4	Abinet Higher Clinic	Private clinic	8
5	Halsted HC	Private clinic	8
6	Geta Higher clinic	Private clinic	8
7	Shebele Higher clinic	Private clinic	8
8	Addis Hiwot Hospital	Private Hospital	5
9	Amin Hospital	Private Hospital	4
10	National Hospital	Private Hospital	3
11	Gebriel Hospital	Private Hospital	4
12	Yehulisht clinic	Private clinic	6
13	Addis General Hospital	Private Hospital	3
14	Girum Hospital	Private Hospital	3
15	Bethel Hospital	Private Hospital	3
16	Korea Hospital	Private Hospital	4
17	International Hospital	Private Hospital	3
18	Haleluya Clinic	Private clinic	8
19	Bethzatha Hospital	Private Hospital	4
20	Bethzatha Higher clinic	Private clinic	7
21	Bankoch Clinic	Private clinic	8
22	Tzna Hospital	Private Hospital	3
23	Teklehaimanot Hospital	Private Hospital	5
24	Addis Cardiac Hospital	Private Hospital	5
25	Bethel Hospital	Private Hospital	5
26	Kadisco Hospital	Private Hospital	5
27	Yerer Hospital	Private Hospital	6
28	Yealem Clinic	Private clinic	7
29	Selam Employees clinic	Private clinic	8
30	Brook Higher clinic	Private clinic	8
31	Senay Higher clinic	Private clinic	7
32	Hamaressa Clinic	Private clinic	8
33	Saris Higher Clinic #1	Private clinic	9
34	Zenbaba Hospital	Private Hospital	5

35	Birhane Selam Higher clinic	Private clinic	7
36	Atlas Higher clinic	Private clinic	8
37	Hayahulet Matoria Clinic	Private clinic	8
38	Hemen Hospital	Private Hospital	4
39	BGM Hospital	Private Hospital	5
40	St. Mary Higher clinic	Private clinic	7
41	MesereteSelam Drug Store	Private Drug Store	3
42	Gotera Pharmacy	Private Pharmacy	6
43	Aksum Pharmacy	Private Pharmacy	5
44	Soloda Pharmacy	Private Pharmacy	6
45	Gerji Pharmacy	Private Pharmacy	7
46	Yomi Pharmacy	Private Pharmacy	6
47	Adey Pharmacy	Private Pharmacy	5
48	Tena Pharmacy	Private Pharmacy	6
49	Emmanuel Pharmacy	Private Pharmacy	4
50	Nathan Drug Store	Private Drug Store	2
51	Gishen Pharmacy	Private Pharmacy	6
52	Hibir Addis Pharmacy	Private Pharmacy	6
53	Akotet Pharmacy	Private Pharmacy	4
54	Addis Ababa Pharmacy	Private Pharmacy	6
55	Fire AB Pharmacy	Private Pharmacy	5
56	Saris Abo Pharmacy	Private Pharmacy	4
57	Mati Drug Store	Private Drug Store	3
58	Sheger Drug Store	Private Drug Store	3
59	Desent Drug Store	Private Drug Store	2
60	Tiru Pharmacy	Private Pharmacy	6
61	Genet drug store	Private Drug Store	3
62	Ayertena pharmacy	Private Pharmacy	5
63	Tana drug store	Private Drug Store	4
64	Arsema Pharmacy	Private Pharmacy	6
65	Hilina Pharmacy	Private Pharmacy	5
66	St. George drug store	Private Drug Store	2
67	Abyssinia Pharmacy	Private Pharmacy	6
68	Soloda Pharmacy 2	Private Pharmacy	4
69	Tamiru drug store	Private Drug Store	3
70	Lemlem Pharmacy	Private Pharmacy	6
71	Hibret Pharmacy	Private Pharmacy	5
72	Meseret Pharmacy	Private Pharmacy	5
73	Stiff drug store	Private Drug Store	2



74	Unique Pharmacy	Private Pharmacy	5
75	National Pharmacy	Private Pharmacy	6
76	Galenic Pharmacy	Private Pharmacy	7
77	KKM Pharmacy	Private Pharmacy	5
78	Nile Pharmacy	Private Pharmacy	6
79	Hosa Pharmacy	Private Pharmacy	4
80	Axum Pharmacy	Private Pharmacy	7
81	Nabfe drug store	Private Drug Store	3
82	Efrata drug store	Private Drug Store	4
83	Mintesinot drug store	Private Drug Store	3
84	Mubarek drug store	Private Drug Store	2
85	Godolias drug store	Private Drug Store	3
86	Jemo drug store	Private Drug Store	4
87	Kerod drug store	Private Drug Store	3
88	Chora drug store	Private Drug Store	3
89	Dallas Pharmacy	Private Pharmacy	6
90	Roha Pharmacy	Private Pharmacy	7
91	Amenti Pharmacy	Private Pharmacy	4
92	Edilawit drug store	Private Drug Store	2
93	Memis Pharmacy	Private Pharmacy	5
94	Asnakech drug store	Private Drug Store	3
95	Emanuel Drug Store	Private Drug Store	4
96	Rudo Pharmacy	Private Pharmacy	5
97	Mineab drug store	Private Drug Store	3
98	Dalga Pharmacy	Private Pharmacy	4
99	Garlic Pharmacy	Private Pharmacy	6
100	Zamalik Pharmacy	Private Pharmacy	6
101	Yabetse Pharmacy	Private Pharmacy	5
102	Jima ber Pharmacy	Private Pharmacy	6

## DECLARATION

I Eyerusalem Shiferaw, hereby declare that the thesis entitled “The impact of brand equity on brand preference of pharmaceutical products, the case of private health sector” is my original work and submitted by me for the award of the Degree in Master of Business Administration of St. Mary University school of graduates study at Addis Ababa and it hasn't been presented for the award of any other Degree, Diploma, Fellowship or other similar titles of any other university or institution and that all sources of material used for the study have been appropriately acknowledged.

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Name  
St. Mary's University, Addis Ababa

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Signature  
June,2015

## **ENDORSEMENT**

This is to certify that Mrs. Eyerusalem Shiferaw has completed her thesis work entitled “The impact of brand equity on brand preference of pharmaceutical products, the case of private health sector”. As I have evaluated, his research is original work and appropriate to be submitted as a partial fulfillment requirement for the Award of Degree in Masters of Business Administration.

Advisor: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_