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**Addis Ababa University**  
**School of Business and Economics**  
**Department of MBA**  
**Graduate Study**

The Effect of Product External Cues on Pharmacists Decision in  
Selecting Over the Counter Medicines: A Case Study in  
Community Pharmacies in Addis Ababa

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APPROVAL

ADDIS ABABA UNIVERSITY SCHOOL OF BUSINESS AND ECONOMICS

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Selecting Over the Counter Medicines: A Case Study in Community Pharmacies in  
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## Declaration

I, Daniel Tesfaye, hereby declare that the thesis entitled the effect of product external cues on pharmacists in selecting over the counter medicines: A case study in community pharmacies in Addis Ababa is the outcome of my own effort and 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.

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## V. List of Acronyms and Abbreviations

EFDA-	Ethiopian Food and Drug Authority
OTC-	Over The Counter
FMCG-	Fast Moving Consumer Goods
R&D-	Research and Development
COO-	Country of origin
COA-	Country of assembly
COD-	Country of Design
SPSS-	statistical package for social science
ANOVA-	Analysis of variance

## VI. Abstract

This research studied whether pharmacists' decision is affected by three external cues of product namely price, brand and country of origin keeping other factors constant. A conceptual framework was used to see the relationship between pharmacist's decision as dependent variable and price, brand and COO of the OTC medication as independent variable. The research employed quantitative research approach and used explanatory research design to explain and show the causality of the factors. Target population was pharmacists working in pharmacies located in all sub cities of Addis Ababa. The sample was systematically drawn from target population happened to be 302 and managed to analyze 291 sample responses. Likert scale questionnaires were administered to sample respondents and accordingly analyzed using SPSS version 26 software. The major analyses used in this study were descriptive, correlation and multiple regressions. The result showed that pharmacists' decision on selecting OTC medication is significantly affected by Price of medication ( $\beta=0.186$ ), OTC Brand name ( $\beta =0.15$ ) and COO of medication ( $\beta=0.08$ ). Price was found to be a predominate factor affecting decision of pharmacists followed by brand and COO of OTC medication. Additionally, respondent pharmacist's perception towards selected COO was assessed. Effectiveness and Brand of the OTC medication was related with western countries while price positively was related with local and Indian products. The research believed to give a tangible knowledge on why pharmacists choose one OTC medication from another to pharmaceutical companies to adjust their marketing strategies accordingly. Regulatory bodies should use these findings as bench mark to study this finding in national level and give educative action.

Keywords: Over the counter (OTC) medication, Price, Brand, Country of origin (COO)

# CHAPTER ONE

## 1. Introduction

### 1.1. Background of the Study

Customer buying decision is a process of selection from two or more alternative options to choose when they are making a purchase. The consumer can choose if he/she is making a purchase or not, when consumer chose a brand or other, or a certain product with certain attributes (Tudor & Zheng, 2014). Marketers have to go beyond the various influences on buyers and develop an in depth understanding of how consumers actually make their buying decisions (Kotler, 2012).

In the marketing field it is acknowledged that the search for experience goods such as medicine is difficult. Usually, cues are used by customers to assess the product in need. According to marketing literature, these cues can be classified into extrinsic and intrinsic. Extrinsic cues are lower level cues that can be changed without changing the product (e.g. price, packaging, brand name, country of origin), while intrinsic cues are higher-level cues directly related to the product (Aqueveque, 2012) (Rezvani et al, 2012).

A community pharmacist is a professional healthcare provider who people can easily turn to; receive advice for managing minor illnesses. As a result, self-medication with over the counter (OTC) medication after consulting with a pharmacist is common practice among patients (Tran et al., 2019).

In developing countries like Ethiopia, about 60-80 % of patients uses self-medication to alleviate minor to moderate health problems. If it is used properly, self-medication with OTC drugs can be useful in lowering physicians demand and overall cost of the health sector (Wube, 2020). There are currently 93 OTC active ingredients and 25 major categories approved by Food Ethiopian Food and Drug Authority (EFDA) (FMHACA, 2012).

These OTC medications have multiple brands as well as generic substitutes making a list of OTC in a given pharmacy to hundreds and thousands. Additionally, due to poor regulation, there is evidence almost every pharmacy in Ethiopia sells drugs without a prescription such as

antibiotics, mild-analgesics, and many of the anti-inflammatory drugs are all available OTC and dispensed by the pharmacist (Mulugeta et al., 2020).

The patient has a free access to consult a pharmacist in taking the OTC medication. Depending on countries guidelines, advertisement and other sales promotion techniques towards the pharmacists is considered the general approach in promoting the product. Thus, factors affecting pharmacist's selection of OTC medications are considered important in selecting between different OTC medications weather brand or generic upon consultation with patients (Sansgiry et al., 2016).

Currently in pharmaceutical sector, there is an immense competition among both local and foreign manufacturers of medicines for larger market share. There two type of medicines that exist in the market,brand (originators brand) and generic (also called generic brand) (Mikyung and Juyoung, 2017). Once a drug's patent expires, the company can market it under either the brand or generic name. If another company wishes to market the drug after the expiration of its patent, it can create its own brand name, but the generic drug name must remain the same (Wilki,Johnson & White, 2010).

The generic must have the same active ingredients as the brand name and at the same strength and concentration. Brand name and generic medications don't always have the same exact inactive ingredients. They aren't even required to, but there are guidelines the companies must meet before a brand name medication and generic medication can be sold (Warrayat, 2016).

Many consumers believe that the pharmaceutical industry is ~~profit~~ing unjustly, by charging too much money for medications. This becomes important when patients are prescribed a branded product which is expensive. Basically, pharmaceutical products are ~~classified~~ under classical definition as unsought product (RK &Kumar, 2016).

For a particular medicine multiple brands and generics types exists in pharmacies. Most generic products are cheaper than brand medicines. There is also fierce competition between different OTC brands weather generic or originator brand.Pharmacists have full right to select from different generics and brands after consulting his patients. Pharmacist's role in selection and purchase become intensified in OTC medicines that do not need physician prescription. This study assesses scientifically the factors that affect pharmacist's decisions in choosing between

different OTC medications with the same chemical composition. The result of this study could give us a better understanding the basic predictor of selection of OTC in pharmacy.

## **1.2. Statement of the Problem**

Pharmaceutical sector consists of different brand medicines and their generic counterpart. Generic medicines are manufactured by the same molecule as brands and released to the market after the patent of the brand medicine is due (RK &Kumar, 2016).

Thus, in pharmaceutical market, multiple brand medicines weather originator brand or generic brands compete aggressively. Brand medicines uses their time proven quality assurance and other marketing tools to differentiate themselves while generics compete through effective distribution channels, lower price and other sales methods. For the poor country like ours, brand medicines are usually very expensive. On the other hand, Generic medicines are affordable.

On the other hand, healthcare expenditure is increasing steadily and generic medicine utilization is often encouraged as a cost-containment measure, as generic medicines are generally, but not always, less expensive than their proprietary counterparts (Suzanne S. & Colum P., 2015). Even though variety is beneficial to customers, the existence of multiple brand and generic medicine of the same molecule poses a problem to end customers in terms of selecting one. To decrease this confusion pharmacist's role is considered important in selecting among the different OTC brand and generic medications.

Patients have easy and free access toward seeking advice from a pharmacist. Many issues faced by a patient can be easily solved by pharmacists, including product selection, OTC brand name confusion, appropriate product use, and when to take medications. Thus, pharmacists exercise a strong influence on OTC medication purchase and product selection (Sansgiriy et al. 2016).

There are both local and aboard studies that confirms the significance of pharmacists in selection of OTC medication. A study by Kevrekidis et al (2018) from Greece and Wube (2020) from Ethiopia both finds out that pharmacists has a strong impact in influencing customers purchasing OTC medication.

Unfortunately, many of the researches around selection of OTC medication focus on customers. Conversely there is lack of research on how pharmacists are influenced by external cues. It is important to study why pharmacists select a particular OTC from variety of other medicines with

the same chemical compositions. So that manufacturers and suppliers of OTC medication can match pharmacist's selection criteria's to foster in pharmaceutical sector. This study aims to understand the factor that affects pharmacist's decision in selecting OTC drugs with same chemical composition but with different manufacturer, price and country of origin.

### **1.3. Research Questions**

Based on the problem stated above, the researcher is inspired to address the following basic questions.

- What is the effect of price on selection of OTC medicines by the pharmacist?
- What is the effect of country of origin (COO) on selection of OTC medicines by pharmacists?
- What is the effect pharmaceutical brands on selection of OTC medicines by pharmacists?
- What is the predominate factor that affects pharmacists decision in selecting between OTC medicines?

### **1.4. Objective of the Study**

The study will have the following objectives,

#### *General Objective*

The general objective of this paper is to assess the factors that affects decision of pharmacists, working in pharmacies around Addis Ababa, Ethiopia, when selecting between different OTC medications.

#### *Specific Objective*

- To assess the effect of medication price on pharmacist's decision on selection between OTC medication with same chemical composition.
- To assess the effect of COO on pharmacist's decision on selection between OTC medication with same chemical composition.
- To assess the effect of brand name on pharmacist's decision on selection between OTC medication with same chemical composition.
- To assess the predominate factor that affects pharmacist's decision on selection between OTC medication with same chemical composition.

### **1.5. Significance of the Study**

This research work is significant in many ways. Academically, the findings in this research will contribute to the existing body of knowledge as a referral material and will help illuminate on the impact of pharmacist's role in OTC medication selection in the pharmaceutical market.

Furthermore, this research can be an important lead or input to the bigger study conducted in national level weather there is a need to amend or revisit the government policy regarding brand entry and pricing of pharmaceuticals.

At last, the finding of this study will be an important insight in to the current perceptions of a pharmacists regarding their OTC medication selection criteriafor stake holders in pharmaceutical industry so that marketing strategy can be drawn from the findings of this study.

### **1.6. Scope of the Study**

Geographically, the study is limited to Addis Ababa. This is because resource limitation that is needed to cover the population throughout Ethiopia. Conceptually, Because of limited resource and for the sake of focused result, the researcher only considers Price, COO and brand of medication effect on decision of pharmacists. Other factors remain constant. Methodologically: The population of the study is pharmacists working in community pharmacy. Thus hospital pharmacists are not considered in this study. The fundamental reason for selecting community pharmacy is increases in consumption of OTC medication in community pharmacy than hospital. The outcome of the study will be entirely depend on the responses of respondents included in the study. The study will focus on frontline Pharmacists around Addis Ababa, Ethiopia.

### **1.7. Limitation of the Study**

Due to time and other resource constraint the research will be done only in capital city of Ethiopia, Addis Ababa. Furthermore, the study only considers pharmacists working in community pharmacies. Also it is well known that there are many internal and external cues that affects selection criteria, but for this study the researcher only tries to analyze price, COO and brand effects on pharmacist's decision on selecting between different OTC medications.

## 1.8. Organization of the Study

The study will be organized into five chapters:

In Chapter One, deals with background of the study, statement of the problem, research question and objectives, significance of the study and scope of the study will be presented. Chapter two deals with the existing literature on the topic. Chapter three discusses the methodology of the research where the research design and research methods will be explained. Chapter four will present discussion of the result of the study and compare with the literature. Chapter five will presents the summary of findings, conclusions, and recommendations.

## 1.9. Definition of Terms

**Over the counter (OTC) medicines:** are medicines that are sold directly to a patient without a prescription by pharmacy personnel (Mulugeta et al., 2020).

**Prescription only drugs:** are medicines dispensed only to consumers possessing a valid prescription (Mulugeta et al., 2020).

**A brand medication:** is a drug that has a trade name and is protected by a patent (can be produced and sold only by the company holding the patent(Mikyung & Juyoung,2017)

**Generic medicines:** are medicines that are commercialized by their non- propriety name (generic name) released to the market after the patent of the brand medicine is due (Wilki,Johnson & White, 2010).

**Brand:** is a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competition (Kotler & Armstrong, 1999).

**Product:** is anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a need or a want.

**Country of origin effect:** any influence, positive or negative, that the country of manufacture might have on the consumer's choice processes or subsequent behavior (Elliott, 1993).

**Perceived product quality:** is an idiosyncratic value judgment with respect to the fitness for consumption which is based upon the conscious and/or unconscious processing of quality cues in

relation to relevant quality attributes within the context of significant personal and situational variables (Steenkamp, 1990)

**Country Image:** is the representation, reputation, or stereotype of a specific country, which consumers associate with the products (Godey et al, 2012)

## **CHAPTER TWO**

### **2. Literature Review**

This chapter presents related literatures to the constructs of the study. It is organized in three categories 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 Review**

##### **2.1.1. Products External Cues**

Consumers arrive at purchase decision by evaluation of combination of intrinsic (such as design, taste, and performance) and extrinsic (as price, COO, brand name, packaging, and warranties) product features (Elliot, 1994) (Roth, 2009). Intrinsic attribute information generally dominates extrinsic cues for formulating evaluations because it is deemed more useful than extrinsic cues (Miyazaki, Grewal, & Goodstein, 2005).

Generally, consumers rely more on intrinsic attributes when forming their opinions. However, in certain circumstances, consumers prefer extrinsic attributes, finding them more credible and reliable than their own assessment. The use of extrinsic attributes can also relate to situational factors, especially when status or self-image affects the purchase of a product (Godey et al., 2012) (Roth, 2009).

Among the external cues of the product, Teas & Agarwal (2000) proposed that price, COO, brand name and store name to have a fundamental effect on product perceived value and quality. In the following sections, these fundamental extrinsic cues are discussed.

##### **2.1.1.1. Brand**

Branding has been around for centuries as a means to distinguish the goods of one producer from those of another. In fact, the word brand is derived from the Old Norse word brandr, which means “to burn”; as brands were and still are the means by which owners of livestock mark their animals to identify them (Kotler & Armstrong, 1999). Technically speaking, whenever a

marketer creates a new name, logo, or symbol for new products, he or she created a brand (Kotler & Armstrong, 1999).

Recently, business organizations whether service or manufacturing recognized the critical role branding plays in business progress. In contemporary marketing practice, branding has become an effective weapon marketers use to boost their competitive advantage and thereby enhance the achievement of their predetermined objectives (Anabila & Awunyo-Vitor, 2014).

A good understanding of consumer-based brand equity is crucially important in understanding branding and the advantages it offers. 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 that brand identification (Gebremedhin, 2016).

Although a number of different views of brand equity have been expressed, they all are generally consistent with the basic notion Brand equity consists of brand awareness, brand associations, perceived quality, brand loyalty and other proprietary brand assets such as patents, trademarks and channel relationships (Gebremedhin, 2016) (Anabila & Awunyo-Vitor, 2014).

Increasingly these days, it is the brand, which provides the sole means of differentiation, as 'Fortune' magazine famously has said as cited by (Blackett & Robins, 2001):

"In the 21st century, branding ultimately will be the only unique differentiator between companies. Brand equity is now a key asset".

What 'Fortune' is asserting is that sooner or later, given the increasing ubiquity of capital, technology and skilled workforces, most companies in most industries will be competing on a 'level playing field'. In these circumstances, the reputation encapsulated in their brands will become the chief determinant of customer choice (Blackett & Robins, 2001).

#### a. Product vs. Brand

It is important to contrast a brand and a product. According to Philip Kotler 2012, a well-regarded marketing academician, a product may be a physical good (e.g. a cereal, automobile or medicine), service (e.g. bank, airline or insurance company), retail store (e.g. a department store, specialty store, or supermarket), Person (e.g. political leader), organization (e.g. Nonprofit organization, trade organization), or idea (e.g. political or social cause).

A brand is a product but one that adds other dimensions that differentiates it in some way from other products designed to satisfy the same need. These differences may be rational and tangible-related to product performance of the brand or more symbolic, emotional, and intangible or relate to what the brand represents (Kotler, 2012).

What distinguishes a brand from its unbranded commodity counterpart and gives it equity is the sum total of consumers' perception and feeling about the product's attributes and how they perform, about the brand name and what it stands for, and about the company associated with the brand (Kotler,2012).

Therefore extending the previous example, a branded product may be a physical good (e.g.Kellogg's corn flakes cereals,Price tennis racket or ford automobile), a service ( e.g. United States bank of America, allstate insurance company), retail store (e.g. Safeway supermarket) , Person ( e.g. Barak Obama ) and so on (Kotler & Keller, 2012).

#### b. Pharmaceutical brand product

All drugs possess at least two names—a generic name and a brand name—which denote divergent identities of common therapeutic objects. It seems extraordinary that one of the world's largest consumer good markets - pharmaceuticals – should for so long have flourished with little help from brands. In most other industries, manufacturers, suppliers of services and retailers use branding techniques to help secure competitive advantage (Blackett & Robins, 2001).

The pharmaceutical industry, where aggressive competition and market uncertainty exist, brand names are becoming a key assets of the company. Many of the companies believes that objectives of profiting from long lasting market share can only be met by developing or acquiring brand medical products. What makes the pharmaceutical brand different from other product is the existence of increased regulation of marketing and selling drugs (Zahra, 2005).

Brands have come to be recognized, slowly but surely, as powerful wealth creators and vehicles of value by the pharmaceutical industry. Concomitantly, the development of all aspects of the brand has come to be regarded with greater strategic intent. As pipelines produce more diminished returns and as generic medicines prove an ever greater force to be reckoned with, one of the fundamental challenges for the pharmaceutical industry is making that all important transition from the current model of profit maximization before product obsolescence, to one of

brand maximization to prevent obsolescence. This calls for a radical reassessment of the value of brands within the industry and a rethink of how brands are developed, managed and maximized (Robins, 2006).

The front runners in pharmaceutical industries like Pfizer, AstraZeneca and Glasko Smith Kline (GSK) shared common success story in implementing product brand strategy. Generally, pharmaceutical brands are important because one have got to create more value from the molecule above and beyond the obvious benefit. Second, one would want to create an entity that is differentiable from the competitors (Sanjeev, Bilal & Ramesh, 2012).

In the act of branding pharmaceuticals, the brand name plays a unique role. Ultimately, it is the one element of the brand that will endure throughout its lifecycle. Whilst the variables of packaging, promotions and positioning are all subject to change, the brand name will remain constant and therefore frequently acts as the focus for the brand (Robins, 2006).

#### c. Pharmaceutical vs FMCG brands

To better understand the meaning and the impact of branding in pharmaceutical business unit, it is important to compare it to fast moving consumer goods (FMCG) brands which are well developed before pharmaceutical brands.

According to Schuiling et al., (2003) branding in pharmaceutical is implemented much latter than the FCMG sectors. In golden age of pharmaceutical industry that is in 80s and 90s, the pharmaceutical companies repetitively enjoyed double digit growth by three fundamental strategy: i) strong research and development (R&D) ii) defense of patent and iii) strong promotion.

Unfortunately, now a day these three wining factors are becoming less important. The first reason is that new blockbuster drug innovation become harder due to increasing cost of R&D. The second reason is patent expiration of products in parallel with the erosion of price by the threat of generic products. Thirdly sales efforts are reaching a certain saturation level as the industry consolidates, it will not be possible in the future to base success just on increasing the number of sales representatives promoting a product (Schuiling, 2003).

Nevertheless, like any industry, companies in pharmaceutical industries need to market themselves to sustain its existence. As such, the industry revolutionize the branding practices and

adopted mobile marketing activities where by medical sales representatives become the face of the company in front of the educated customers like physicians and pharmacists (Dar & Tariq, 2020).

Corporate branding has been successful method of branding strategy in pharmaceutical industry. Corporate branding is a holistic brand management approach adopted by firms to craft a unique corporate identity. The concept of corporate branding has gained popularity in the marketing literature as corporate brands are said to add value to the products and services offered by the company. Thus not just medical sales representatives but also the entire organization staffs adds to the brand equity of pharmaceutical (ivy, 2016).

In the FMCG industry, brands are source of competitive advantages and started at early stage of product development. Its importance is self-evident by looking to the success of Coca Cola, Pepsi, lifebuoy and the like products. Sometimes the brand name can be so popular that it becomes a name for generic products (Sanjeev, Bilal & Ramesh, 2012). Omo brand for example, is often used as a generic term when associated with powder soap.

The contrast between pharmaceutical and FMCG products has been done by Dar and tariq(2020) and summarized as follows

SN	Branding strategy	Pharmaceuticals	FMCG
1	Branding with brand names	Highly used	Highly used
2	Branding with Free Samples, Reminders & Gifts	Highly used towards pharmacists and physicians	High used both to direct consumers and retailers
3	Branding through Events, Workshops & Conferences	Highly used	Highly used
4	Co-branding & Brand Extension	Rarely used	Highly used
5	Corporate Branding Strategy	Highly used	Highly used

6	Branding through mass media	Rarely used	Highly used
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Table 1: Comparison of pharmaceutical and FMCG branding strategy (Dar & tariq, 2020)

### 2.1.1.2. Price

Price is the only marketing mix variable or part of the offering that generates revenue. Buyers relate the price to value (Kotler & Armstrong, 1999). They must feel they are getting value for the price paid. In addition, getting the price right contributes greatly to business success or failure. Too high a price reduces unit demand, allowing competitors to take away customers; too low a price encourages more unit sales but reduces the profit margin on each sale. Nevertheless, what price is “too high”? Too low? Just right? The answers are determined largely by the motivations of those who set the prices and by what the market will bear. Sellers are motivated by one or more objectives when they adopt a pricing strategy (Kotler & Armstrong, 1999).

Some of the objective of companies when setting price include i) to maximize profit ii) to maximize unit sales iii) to gain commanding market share iv) to discourage market entry v) To create a perception of brand quality or exclusiveness and vi) To encourage trial purchases (Harvard business school press, 2006)

#### a. PricingStrategies

Company set the price by selecting a general pricing approach that includes cost based pricing, value based pricing and Competition based pricing. Cost-based pricing focuses on the cost bases of products and services, competition-based pricing on observations of competitor prices whereas value-based pricing utilizes the value that a product or service delivers to customers. (Johansson et al., 2011).

In organizational practice however, pricing is far more complex than suggested in the pricing literature. For instance, value-based pricing approaches are adopted only by a minority of companies. Research by Hinterhuber as cited by Johansson et al.(2011) indicates that more than 80 per cent of companies base their pricing decisions primarily on costs, or on prices of competitors. The five main obstacles to the implementation of value based pricing strategies that were identified are i) lack of capabilities in value assessment ii) deficits in value communication

iii)lack of effective market segmentation iv) deficits in sales force management v) and insufficient senior management support (Johansson et al. , 2011) .

From a resource-based perspective, for example, pricing is a complex process that requires resources and coordination (Ingenbleek et al., 2013) (Johansson et al., 2011). The means through which firms arrive at price decisions are referred to as pricing practices. In the past, research has examined pricing practices in case studies of pricing processes and in surveys of pricing methods such as value-based, competition-based, and cost-based pricing(Ingenbleek et al,2013).

However, more recent researches showed the success of using information on customer value, competition, and costs in setting prices, is contingent upon relative product advantage and competitive intensity. Only value-informed pricing has a strong direct effect on new product performance. The effectiveness of cost informed and competition-informed pricing depends on whether the product has a high relative advantage and on whether competitive intensity in the market is high. This suggests that there is no generally “best” or “bad” practice, but that a contingency approach is appropriate (Ingenbleek et al, 2013).

#### b. Pharmaceutical price

The World Health Organization (WHO) estimates that almost 30% of the world population lacks access to essential medicines and that the figure will rise to more than 50% in some countries of Africa and Asia. The cost of the pharmaceuticals is the main factor that hampers access to medicines (Mathew, 2015).

Price is one of the most interesting and controversial topics in pharmaceutical marketing. The process of pricing at the company level goes through the same steps as it goes in case of any other product, but the matter becomes totally different when an application is limited with the regulatory bodies for allowing certain price mark up. Additionally, unlike other products, pharmaceutical companies are not allowed to use the mass media for advertising their products afford abilities. There is a strict code of ethics applicable which block them from spending beyond a certain limit on promoting their products. The price of the medicines can only be communicated in pharmacy settings (Imamuddin , Rizwan & Jamshaid , 2014).

#### c. Price of brand and generics drug

The determination of drug prices in the pharmaceutical industry has received a great deal of attention from policy makers. It is widely believed, for example, that innovative drug manufacturers price their drug products differently than generic drug manufacturers to recover the costs of research and development effort. Despite a chemical equivalence, generics are typically sold at substantial discounts from their brand name counterpart (Rizzo & Zeckhauser, 2009).

Generic drugs are typically offered at substantially lower prices than their branded counterparts are. Saving through substitution of originator brands by cheaper generic medicines range of 10-90%. Most national governments like USA and United Kingdoms have been encouraging the use of generic medicines and many healthcare systems have policies of substituting expensive branded original medications with generic medicines (Mathew, 2015).

Evidence suggests that an initial generic entrant is priced at about 75% of the price of its brand-name competitor; with subsequent multiple generic entrants, the prices of generics decline rapidly. Yet price competition may be affected by a variety of other considerations, including the presence of consumer uncertainty about both the prices and quality of brand-name drugs and generics, brand-name advertising, and the costs of drug development (Rizzo & Zeckhauser, 2009).

The model developed in one research shows that price differences between generic and brand-name drugs stemming from market entry due to patent loss may be explained by the market share of drugs, the number of, and the age of both brand-name and generic drugs in the market. The analysis of the basic model indicates paradox findings that the price of brand drugs may go up while the price of generic drugs goes down with generic entry into the market (Kong, 2004).

Another study find that the average price paid by consumers for brand-name drugs falls substantially when generic market share rises: a 10% increase in consumers' generic market share is associated with a 15.6% decline in the average price paid for brand-name drugs by consumers. The patterns we observe are consistent with a model where consumers value the cost savings from generic purchases more than any perceived quality premiums offered by brand-name drugs. Not only does the consumer benefit from the lower generic prices, but also the pattern of switching lowers the average purchase price of branded drugs (Rizzo & Zeckhauser, 2009).

One study findings suggest that broad generic substitution of outpatient prescription drugs could save approximately \$8.8 billion, or approximately 11% of drug expenditures for adults in the United States each year. Although broad generic substitution would only modestly reduce national drug expenditures, the absolute savings, particularly at a time when employers and public programs are struggling with drug expenditures, are significant. Broad dispensing of generic products would achieve savings without compromising safety. Generic drugs are believed to provide therapeutic effects similar to those of their brand-name alternatives. The standards and regulations for manufacturing generic products are the same as for brand-name drugs. Recent efforts to remove barriers to generic drug approval suggest that policymakers see an opportunity to control expenditures through greater use of generic drugs. However, some have argued that greater generic substitution could limit drug development by pharmaceutical companies because of decreased revenue (S. Haas et al., 2005).

#### **2.1.1.3. Country of origin (COO)**

In today's increasingly globalized world, it is common to see multiple country's products compete for larger market share. Among the many factors which are believed to impact international competitiveness, COO is one of them (Al-Sulaiti, 1998). Literature on national stereotypes as well as the perception of nations traces back to the 1930s, but it was not until the early 1960s that the concept of COO gained the attention of marketing scholars (Roth, 2009).

The COO of a product is an extrinsic cue which, similar to brand name, is known to influence consumers' perceptions and lead consumers to cognitive elaboration (Pappu et al., 2006). As such, COO has been recognized in the marketing literature as one of the most important cues target customers use to perceive product quality (Pappu et al., 2006). The COO has been investigated extensively over the years. There is a broad consensus that products from industrialized nations enjoy positive COO effect whereas those from the developing countries suffer from negative COO effect (Bandyopadhyay., 2014).

Most of the COO literatures address the effect of COO on two broad variables called quality/reliability perception and purchase intention. Perception and purchase intentions are related to each other in that perception are more primitive than intentions. That means perceptions are antecedent or determinate of intentions (Peterson, 1995). COO affects consumer's quality perception by mainly the image of the product's COO (Godey et al., 2012).

Other studies on COO and consumer's perception of product quality concluded COO as a surrogate indicator of product quality. The study found out that the effect of COO in combination with other cues like price and brand name. Consequentially, quality and price of products are more significant choice determinants for respondents than COO. But when only COO is the variation among products, or where it is not possible objectively to distinguish between products on the basis of intrinsic quality, consumers perceive product quality to be different from different COO (Elliot & Camerron, 1994).

A ground breaking study by Ahmend & Astous (1996) suggested that COO to be categorized in to country of assembly (COA) and country of design (COD) and try to see consumer's perception tradeoffs between COA, COD and brand name. Their result showed that consumers make a distinction between COD and COA and the overall COO cues seem to perform more strongly than brand cues. Further favorableness of COO or brand cues is considerable modified when consumers are provided with additional product information.

### **Products preference from developed countries**

Another stream of the literature that is relevant to the study of COO is their effect on developing countries. According to Batra et al. (2000) developing countries see COO as determining a brand's desirability for symbolic, status-enhancing reasons (status preference), in addition to suggesting overall quality. Such generalized status preference for nonlocal (foreign) brands has been reported in developing countries, such as The People's Republic of China, Vietnam, Nigeria, the Democratic Republic of Congo, Zimbabwe, Romania and Turkey, and Ethiopia and Peru. In these countries, purchases of non-local products are seen as endowing prestige and cosmopolitanism and, thus, as enhancing the buyer's social identity for especially for high signaling products.

A research from Bangladesh tried to study desirability of products between developing and developed country. It was discovered that the products which originated from advanced developed countries were perceived to be associated with very similar attributes of a very good quality, reliability, performance and good workmanship, and the products originating from developing countries were perceived to be less desirable in quality (Kaynak, Kucukemiroglu & Hyder, 2000).

### **2.1.2. Consumer Behavior in Market Place**

The field of consumer behavior covers a lot of ground: It is the study of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires. Consumers take many forms, ranging from an 8-year-old child begging her mother for a doll to an executive in a large corporation deciding on a multimillion-dollar computer system. The needs and desires we satisfy range from hunger and thirst to love, status, and even spiritual fulfillment (Solomon, 2013).

#### **2.1.2.1. A Model of Consumer Decision Making**

As shown in figure 1 below, a model of consumer decision-making consists of three main components: inputs, process and output. The input component of consumer decision-making model refers to the external influences that provide information about a particular product to consumers, and influence a consumer's product-related values, attitudes and behavior. Among the external influences, there are two main factors: firm's marketing efforts and socio-cultural environment. The firm's marketing efforts are aimed to reach, inform and persuade consumers to buy and use its products through marketing mix strategies including the product itself; mass-media advertising, direct marketing, personal selling and other promotional efforts; pricing policy; and the selection of distribution channels. The socio-cultural environment consists of a wide range of non-commercial factors including friends, family, informal sources, other non-commercial sources, social class, subculture and culture (Tudor & Zheng, 2014).

The process component of the consumer decision-making model is about how consumers make decisions. The psychological field is concerned with the internal influences (motivation, perception, learning, personality and attitudes) that influence consumer's decision-making processes. The consumer decision-making process consists of three steps: need recognition, pre-purchase search and evaluation of alternatives. The need recognition occurs when a consumer is faced with a "problem". Problem recognition occurs when consumers experience a significant difference between their current state of affairs and some state they desire (Tudor & Zheng, 2014).

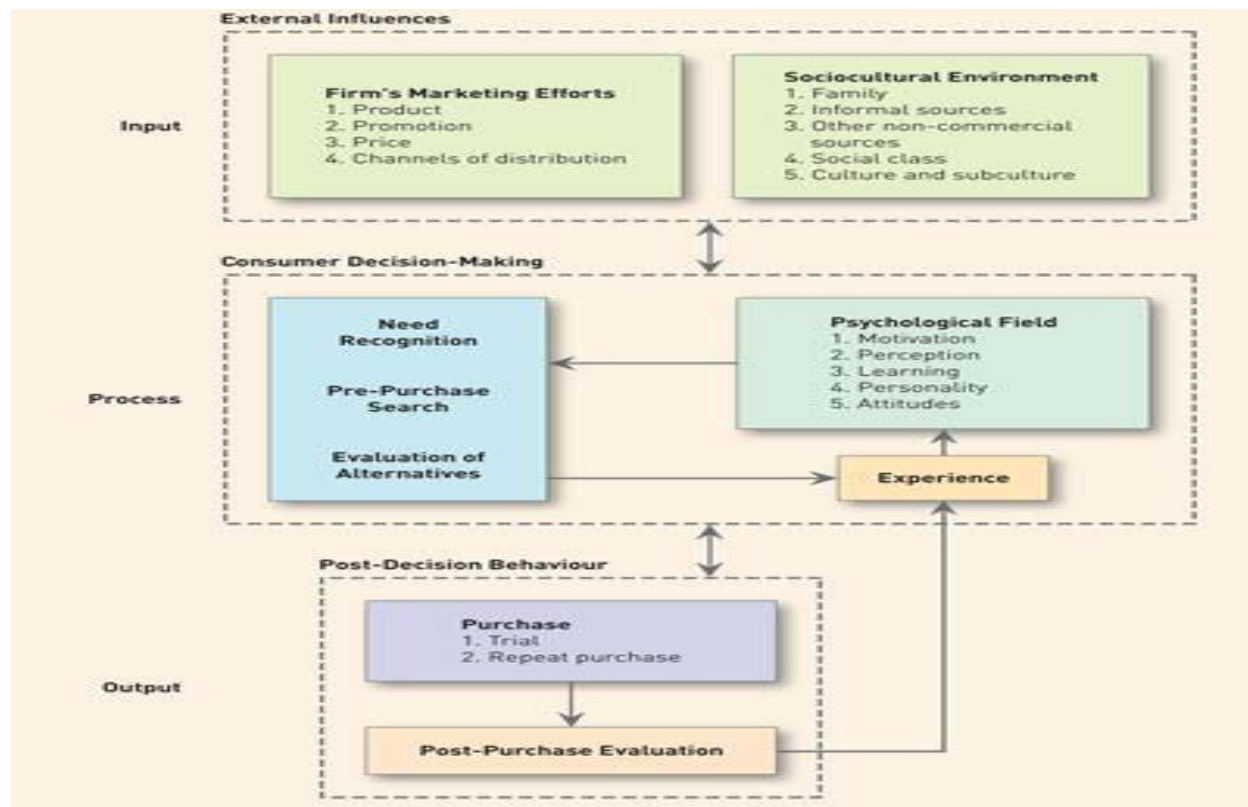


Fig 1: A simple model of consumer decision-making (Tudor & Zheng, 2014)

### 2.1.2.2. Consumer decision making

A consumer purchase is a response to a problem. One consumer situation is similar to that encountered by consumers virtually every day of their lives. Everyday consumers realize that they want to make a purchase and they go through a series of steps in order to make it. These steps can be described as: (1) problem recognition, (2) information search, (3) evaluation of alternatives (4) product choice (5) outcome. After the decision is made, the quality of that decision affects the final step in the process. Learning occurs based on how well the choice worked out. This learning process, of course, influences the likelihood that the same choice will be made the next time when the need for a similar decision occurs (Solomon et al., 2006) An overview of this decision-making process is shown in Figure 2.

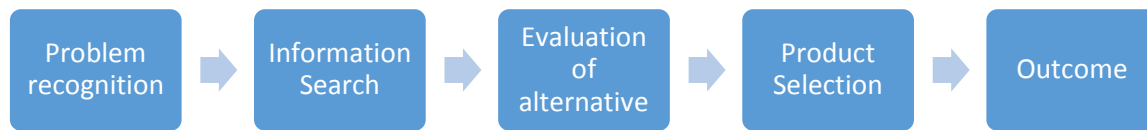


Fig 2 Consumer decision process (Solomon et al, 2006)

## 2.2. Empirical Review

### 2.2.1. Empirical Review on Brand

#### a. Abroad studies

The brand effect on purchase decision is a well-researched area. One research based on United States of America shade light on consumer's attitudes regarding brand and generic OTC medications. In the research, the majority of consumers think both brand and generics have the same quality or effectiveness. More over among consumers who choose brand medications is because of duration of effectiveness, safety profile of brands, and advertisement. When it comes to consumers that choose generic OTC medications lower price and no of doses in bottle was the reason. Factors that do not have a significant impact for purchase decision between generic and brand were advice from healthcare provider, advice from family and friends, look of the package, degree of sickness (mild), taste of the OTC, and greater effectiveness of the OTC (Kohli & Buller, 2013).

A research from emerging countries also gave important insight consumers preference. One such study in Tunisia, an arab-muslim country formerly colonized by France, set out to study the effect of brand, COO and price of OTC medication on consumer preference. It shows that even though COO has a significant impact on preference of OTC medications, it was found to be lower than brand status. Also the results indicate clearly that consumers prefer France over Tunisia as a COO. They prefer a high-priced medicine to a low-priced one and branded drugs over generic drugs. Additionally, drugs from industrialized countries are perceived as being of better quality (Smaoui, Kilani &Touzani, 2016).

One study that examines the pharmacist's selection criteria of OTC medications, named Brand as one of the five factors that affects pharmacist's choice. The remaining factors were product,

customer, economic and professional influences. Pharmacist's choice was most strongly influenced by the product factor like rapid onset of action and prolonged action and least affected by economic influences. Second to product influence, the result showed the brand effect of a medication has strong significant for pharmacist's decision for selection between OTC medications (Tran et al., 2019).

#### b. Local studies

One research that was aimed to determinate the impact of factor of brand equity on preference of brand medication, asked physicians systematically weather brand awareness, perceived quality, price and brand loyalty has an impact on preference of brand medication. As a result, all factors has a strong relation with brand preference from the brand awareness being the highest to price to being the least from the remaining factors. Therefore, preference between Brand medications are highly influence by the brands perceived quality and to lesser extent by the price of brand medication (Gebremedhin, 2016).

Similarly study on brand equity was done on retail pharmacy outlets in Addis Ababa, Ethiopia. The research analyzes brand awareness, perceived quality, brand association and brand loyalty impact on brand equity and the subsequent pharmacist's preference of pharmaceutical products. The result showed that brand's perceived quality has a strong impact on brand equity of the pharmaceutical products (Gizachew, 2017).

### **2.2.2. Empirical Review on Price**

#### a. Aboard Studies

As other extrinsic cues, studies on price effect on pharmaceutical medication preference resulted in contradicted results. Some studies suggest price has a strong impact on selection of medications where as other studies especially conducted in socialist countries resulted in little impact of external cue (business factor as they call them).

A study by Shuai Ge, He & Hu (2014), set out to examine the factors that affects the preference of OTC medication by interviewing pharmacists in Guangzhou and eight main administrative districts in Shanghai, China. The result showed the major factor that dictate the preference between OTC were medical factors or medications intrinsic cues. Factors like efficacy, side effect, drug interactions and contraindications has a strong effect on customer decision makings. Price, brand, packaging and other extrinsic cues do not have a clear effect on selection of

medication. Nevertheless, brand and price were relatively important to customers when compared to packaging and label designs.

In contrary, in Finland, Europe, the customer's preference of OTC medication was found to be strongly affected by price and brand. It is shown that customers were sensitive to price elasticity of OTC medication as it is shown that more than 50% of the respondents are strongly price sensitive. Customer's affordability is also a major factor in deciding which OTC medication with the same chemical composition to use (Halme, Linden & Kaaria, 2009).

Another study conducted in Jordan, pharmacies first classifies the factors that affects OTC purchase by customers into two major categories: internal factor (Brand experience, COO, Age, education and gender) and External factors (professional advice, friend's opinion, Brand advertising and packaging, availability and price). The result showed from internal factor, only brand experience has significant influence on the intention to buy OTC medication. From external factors the researcher finds professional advice, availability, friends opinion, and price to have a significant influence on intention to buy OTC medication (Habash & Al-Dmour,2020).

#### b. Local Studies

One of the recent pivotal studies done on community pharmacies in Addis Ababa, Ethiopia clearly gives insight to the impact of pharmacists and price on the purchase of OTC medication by customers. The research examines the effect of pharmacist advice, price, COO, family & friend's recommendations and previous experience on the purchase decision of OTC medication. As a result, Pharmacist advice, price and COO has a strong influence on the purchase decision of the OTC medication. Even though family and friend recommendation and past experience has a positive relationship with purchase intention, they were statistically insignificant (Wube, 2020).

A study by Yirga (2016) set out to analyze marketing mix of pharmaceutical product such as price, availability, promotional and perceived quality affects customer's preference. The customers in this case were located from kenema chain pharmacies in Addis Ababa, Ethiopia. The result showed only availability are not supported statistically to have significant influence on customer's preference. Price, promotional and perceived quality has a strong influence on the preference of pharmaceutical product.

### **2.2.3. Empirical Review on COO**

#### **a. Abroad studies**

COO effect in pharmaceutical industries has been long studied. One study that conducted on 14 different COO pharmaceutical supplement products confirms that the positive effect of COO on consumers purchase decisions. The study found out that products produced in developed economies are perceived as the ones of better quality. Further, supplements produced in Germany, Switzerland, the USA, France, Japan, Scandinavian countries are rated highest quality. Locally manufactured products were also perceived similarly. But Products from neighboring countries, were seen of poor quality. Overall, the result showed moderate effect of COO in pharmaceutical purchase by consumers and COO were seen behind price and doctor's recommendations (Smaiziene & Vaitkiene, 2013).

A study by Bahrinizadeh et al. (2014) investigated the effect of COO on in pharmaceutical products by asking 134 pharmacists in Bushehr province. The findings suggest that the COO has a strong impact on perceived quality, brand and brand awareness.

Another study tried to look into whether Physicians perceptions to patients is affected by COO of the medication. Further, the research tries to investigate to which drug categories does COO effect is higher? Accordingly, there is a strong COO effect on prescription of anti-asthma, antibiotics and anti-allergic. In contrary Pain killers and steroid medication prescriptions are more affected by other factors like price and quality (Tajdar et al, 2015).

#### **b. Local Studies**

Overall, there is lack of research in pharmaceutical industry especially researches that relate to the impact of COO. One research tried to assess the impact of COO especially made in India products on purchasing intention of customers. The result showed that there is a clear evidence that customers evaluate pharmaceuticals from Europe countries to be superior in quality than other countries. Furthermore, pharmaceuticals from India are not favored by Ethiopians consumers (Ayalew, 2014)

A research by Tujuba (2018), which examines consumers' Attitude towards imported pharmaceutical products purchases concludes that consumer's cognition, social influence, and product attributes has a positive and significant effect on purchase intention of imported

pharmaceuticals. Contrary, normative value and utilitarian value do not have a positive effect on purchase intention of imported pharmaceuticals.

## 2.3. Conceptual Framework

### 2.3.1. Conceptual Model

This research aimed at identifying the factors that affects pharmacist's decision between different OTC medications with the same chemical composition. Accordingly all things remain constant; the research will evaluate the effect of price, brand name and COO on selecting between OTC medications. Figure 3 elaborates the conceptual frame work further.

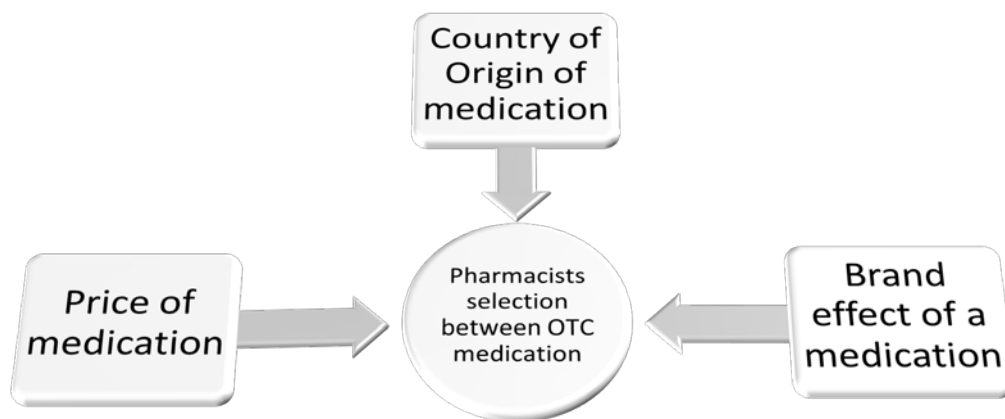


Fig 3: Conceptual frame work of the research [Source: adopted from Shuai Ge , He & Hu,2014 and Wube, 2020]

### 2.3.2. Hypothesis Testing of Variable

Hypothesis 1: Price has a significant effect on pharmacist decision in selecting OTC medication

Hypothesis 2: Brand has a significant effect on pharmacist decision in selecting OTC medication

Hypothesis 3: Country of origin has a significant effect on pharmacist decision in selecting OTC medication

## **CHAPTER THREE**

### **3. Research Methodology**

#### **3.1. Research Design**

Having identified the variables in a problem situation and developed the conceptual framework, the next step is to design the research in a way that the requisite data can be gathered and analyzed to arrive at a solution. Research design is a plan of collecting and analyzing data in an economic, efficient and relevant manner. It is a plan of organizing framework for doing the study and collecting the necessary data (Williams, 2011). Research design is broadly classified as exploratory, descriptive, and explanatory.

Exploratory research is a research aimed at identifying and formulating a research problem or developing working hypothesis. The major concentration in such study is on the discovery of ideas and insights. Exploratory research is used in cases when the problem must be defined more precisely, identify relevant courses of action, or gain additional insights before an approach can be developed (greener,2008).

Descriptive researches are those studies which are concerned with describing the characteristics or function of a particular individual, or of a group or a phenomenon. This study involves the description of the extent of the association between two or more variables (greener, 2008).

On the other hand, explanatory research, aims at establishing the cause and effect relationship between variables. The researcher uses the facts or information already available to analyze and make a critical evaluation of the data/information. Exploratory research is less formal, sometimes even unstructured and focuses on gaining background information and helps to better understand and clarify a problem. It can be used to develop hypotheses and to develop questions to be answer (Williams, 2011).

This study uses descriptive and explanatory research design to describe the factors that affect pharmacist's selection between OTCmedications.

#### **3.2. Research Method**

Research method refers to techniques researcher use in performing research operations. There are two approaches namely inductive and deductive. Inductive approach is initialized by specific observations in a data material from which generalizations are made without conducting

literature reviews. Thus, it is creating new theory from observation, pattern identification and hypothesis. A deductive approach is the opposite, initiating by reviewing and gathering theory from which conclusions are made. Accordingly, the researcher in this study uses deductive research strategy (Williams, 2011).

Interview, questionnaire and focus group discussions are the three known types of research methods. Focus groups are formally organized, structured groups of individuals brought together to discuss a topic or series of topics during a specific period of time. Questionnaire is a method of deciding how the sample is to be surveyed and developing the specific questions that will be used. Interview is qualitative data required to understand in-depth knowledge of person's attitude and feelings (greener, 2008)

This study will use questionnaire to conduct information from respondents because it was helpful to collect large amount of information in short period of time with larger sample size. Second, it was also the easiest method to analyze scientifically than other forms of research methods. Finally, this method is a relatively cost effective and also can be carried out by the researcher or by any number of people with limited affect to its validity and reliability.

### **3.3. Population and Sampling**

#### **3.3.1. Target Population**

Population is defined as the entire collection of individual from which the researcher collect data. It is the entire group that the researcher is interested in all individuals of interest to the researcher are called population (Williams, 2011). The target population in this research is all currently working Pharmacists in community pharmacies located in Addis Ababa, Ethiopia.

#### **3.3.2. Sampling Techniques**

Sampling is the process of selecting a sufficient number of elements from the population, so that a study of the sample and an understanding of its properties or characteristics would make it possible for us to generalize such properties or characteristics to the population elements (Williams, 2011). The population of this research are actively working Pharmacists in community pharmacies in Addis Ababa. This study excludes hospital pharmacies and drug stores.

The list of pharmacies from each of Addis Ababa's sub cities was acquired from corresponding sub city EFDA branches. No of pharmacists working in one pharmacy were assumed to be two.

This assumption was taken after consultation with EFDA senior pharmacy inspector officer which he replied in written letter explaining to consider 2 pharmacists in one pharmacy.

The first reason is all pharmacies in Addis Ababa only hire 2 pharmacists which is mandatory to open a pharmacy. After hiring two full time pharmacist, additional part-time pharmacists can be hired as a part time job. There is a high probability that part time pharmacist has full time job in another pharmacy. Therefore, if we take all working pharmacists in one pharmacy as study population, it could be unrealistically large because one pharmacist can work both full time and part time job in different pharmacies. Thus to minimize duplication and excess population size, the researchers assumes two pharmacists in one pharmacy.

Study Population		
Sub city name	No of pharmacies	No of pharmacists
Gulele	46	92
Lideta	33	66
lemi cura	99	198
yeka	65	130
bole	49	98
kolfe	131	262
Arada	38	76
Akaki kaliti	35	70
Addisu	39	78
Nifas silk	107	214
Kirkos	54	108
Total	696	1392

Table 2: List of sample frame (source researchers own survey from AA sub city health offices and )

### 3.3.3. Sample Size

Sample size determination formula was applied to determine the required sample size. According to Krejcie & Morgan (1970) as cited by Biniam (2017) the formula for determination of sample size with finite population is given by

$$S = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

Where

*S = Required Sample size*

*X = Z value (e.g. 1.96 for 95% confidence level)*

*N = Population Size (1392)*

*P = Population proportion (expressed as decimal) (assumed to be 0.5 (50%)*  
*d = Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error*

$$S = \frac{1.96^2 \cdot 1392 \cdot 0.5 \cdot 0.5}{0.05(1392-1) + 1.96^2 \cdot 0.5(0.5)}$$

$$S = 301.24 \sim 302$$

Thus the sample size happens to be 302 pharmacists. Then a non-response rate of 10 % was added to calculated sample size based on the experience from previous studies making the total sample size 332.

After calculating the sample size, samples that will be taken in each sub cities should be proportional to the sub cities size. Therefore, according to Kothari (2004), the sizes of the samples from the different strata must be kept proportional to the sizes of the strata. if  $P_i$  represents the proportion of population included in stratum  $i$ , and  $n$  represents the total sample

size, the number of elements selected from stratum  $i$  is  $n \cdot P_i$  (Kothari,2004).Accordingly, the calculation for sample size in strata are computed as follows:

Strata sample size determination calculations					
Strata (Sub cities)	No of pharmacists	Pi	n	Pi * n (strata sample size)	Rounding to nearest decimal
Gulele	92	0.07	332.00	21.94	22.00
Lideta	66	0.05	332.00	15.74	16.00
lemi cura	198	0.14	332.00	47.22	47.00
yeka	130	0.09	332.00	31.01	31.00
bole	98	0.07	332.00	23.37	23.00
kolfe	262	0.19	332.00	62.49	62.00
Arada	76	0.05	332.00	18.13	18.00
Akaki kality	70	0.05	332.00	16.70	17.00
Addisu	78	0.06	332.00	18.60	19.00
Nifas silk	214	0.15	332.00	51.04	51.00
Kirkos	108	0.08	332.00	25.76	26.00
Total	1392	1	332	332	332.00

Table 3: Strata sample size determination

Thus allocated numbers of respondents were drawn from each sub cities using systematic sampling method.

### 3.4. Data Source and Types

To get the proper response, both primary and secondary data is used. The primary data collected from Pharmacists working in pharmacies in Addis Ababa and senior EFDA inspection officer. For the sake of reviewing related literatures, secondary data from books, research articles and websites was used.

### **3.5. Method of data Collection**

To collect the primary data from pharmacists, the study will use a structured questioner. The merits for selecting such methods are firstly, it facilitates the collection of information in a systematic and orderly manner as the questions have been formulated in advance. Secondly, influence of the interviewer is minimal. Thirdly, this kind of questioner makes editing easier (Greener, 2008). The questionnaire was adopted from a previous study about the same concept under study and modified to the pharmaceutical industry.

### **3.6. Reliability and Validity Tests**

In order to have a quality research, consideration must be given not only to the results of the study but also the rigour of the research. Rigour refers to the extent to which the researchers worked to enhance the quality of the studies. In quantitative research, this is achieved through measurement of the validity and reliability (Heale & Twycross, 2015)

#### **3.6.1. Validity Test**

Validity is defined as the extent to which a concept is accurately measured in a quantitative study (Heale & Twycross, 2015). In other word, validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested (Kothari, 2004).

One type of validity test is Content validity, which is the extent to which a measuring instrument provides adequate coverage of the topic under study. If the instrument contains a representative sample of the universe, the content validity is good. Its determination is primarily judgmental and intuitive (Kothari, 2004). In this study, content validity was done by the advisor of this research, who looks into the appropriateness of questions and the scales of measurement. Moreover, the pilot test was conducted prior to the actual data collection helped to get valuable comments.

In addition, criterion validity which is described as the extent to which a research instrument is related to other instruments that measure the same variablesconstruct (Heale & Twycross, 2015) was considered as the questioners used in this research were extracted from already developed literatures.

### 3.6.2. Reliability Test

Reliability is another term for consistency or repeatability over time. Reliability is required of research studies so that it can be transparent and clear to the reader to undertake the same method themselves and produce the same result (Kothari, 2004). The three attribute of reliability are internal consistency, stability and equivalence (Heale & Twycross, 2015).

Cronbach's  $\alpha$  is the most commonly used test to determine the internal consistency of an instrument. In this test, the average of all correlations in every combination of split-halves is determined. Instruments with questions that have more than two responses can be used in this test. The Cronbach's  $\alpha$  result is a number between 0 and 1(Heale & Twycross, 2015). An acceptable reliability score is from 0.6 to 0.7 and higherReliability relates to the consistency of a measure (Biniam, 2017).

All individual variables with their Cronbach's alpha are given below.

Dimensions	No of items	Cronbach alpha
Price	9	0.504
Brand	7	0.733
Country of Origin	9	0.636
All Variable	25	0.789

Table 4: Reliability test using cronbach's alpha

Own Survey, computed in SPSS, version 26.

### 3.7. Data Analysis Method

The quantitative raw data will be analyzed using statistical package for social science (SPSS) version 26. The descriptive statistics analysis will be used to represent data using tables and make summary calculations using mean and standard deviations. Additionally, to assess the factors that affects pharmacist's selection between OTC medications, the researcher will use person's correlation and multiple linear regression method.

### **3.8. Ethical Consideration**

The researcher will respect the right and/or interest of respondents to participate voluntarily in this research project. The researcher will not force individuals (participants or respondents) to participate in the questionnaires and also confirm confidentiality of information by informing respondents not to write their names on the questionnaire. The researcher will clearly disclose the aim of the study as if it is anonymously academia. Finally, the study will be done impartially and independently.

## **CHAPTER FOUR**

### **4. Results and Discussion**

#### **4.1. Introduction**

In this chapter, the collected data were summarized and analyzed in order to realize the ultimate objective of the study. The purpose of this study was to examine factors that affects the decision of pharmacists in selecting OTC medication. In particular, the research tries to see weather price, COO and brand name has significant effect on selection of OTC medication with same chemical composition. The demographic profiles of the respondents, determinant factors correlation and hypothesis testing based on multiple regression analysis have been discussed. The data analysis was made with the help of SPSS version 26 software.

#### **4.2. Respondent rate**

During the research 332 questioners were distributed to pharmacies located in Addis Ababa, some of the pharmacists were busy or unable to fill the questioner on time. Accordingly, 35 questioners were not returned back leaving 295 questioners.

Then each questioner was reviewed carefully and it was in this data cleaning stage that 6 more questioners were disqualified from the study because of uncompleted response. Finally, 291 actual respondents were analyzed and presented as follows.

#### **4.3. Descriptive Analysis**

The first section of the questionnaire asked demographic information of respondents and the second section asked the basic research questions that intended to get the effect of price, COO and brand name has on pharmacist's decision on selection between OTC medications. The third section addresses the preference country of origin by pharmacists and why they choose specific country.

##### **4.3.1. Demographic Data**

The study focused on actively working pharmacists in community pharmacies located in Addis Ababa. Accordingly, gender, age, job position and year of experience were used as demographic variable.

Gender

As shown in the figure below, sample female respondent represents 58.4 % of respondents compared to male respondents which were 41.6%. The reason for increase in female proportions can be explained in that female’s workers are traditionally preferred to male in jobs that needs more empathy and patience like that of in health care.

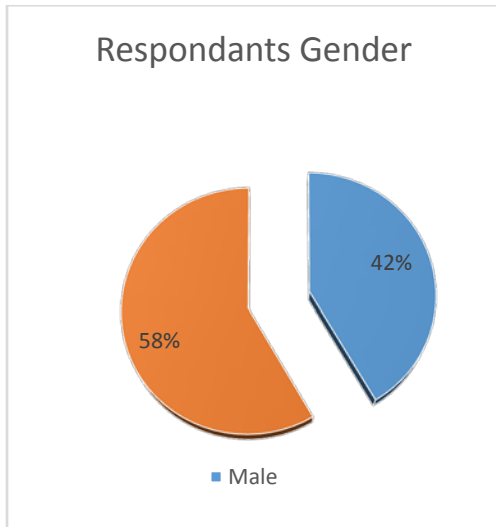


Fig 5: Gender characteristics of the respondent

Age

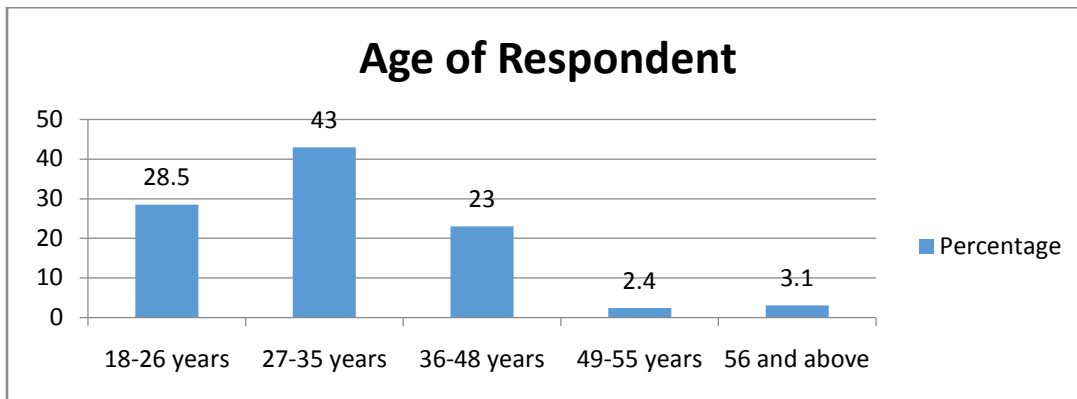


Fig 5: Age characteristics of the respondent

As it can be seen in the table, sample pharmacists that involved in this study constitute form all age group. The majority of the respondents were under 35 years old as this age group constitute 71% of all respondents. Sample respondents aged between 36 and 48 years old constitute 23 %

comes the second dominate age group. Only 6% of the respondents were aged above 49 years. Ages demographic results imply that majority of respondent pharmacists working in the Addis Ababa were young adults. This age group can be easily addressed by pharmaceutical marketing promotional activities.

#### Job Position

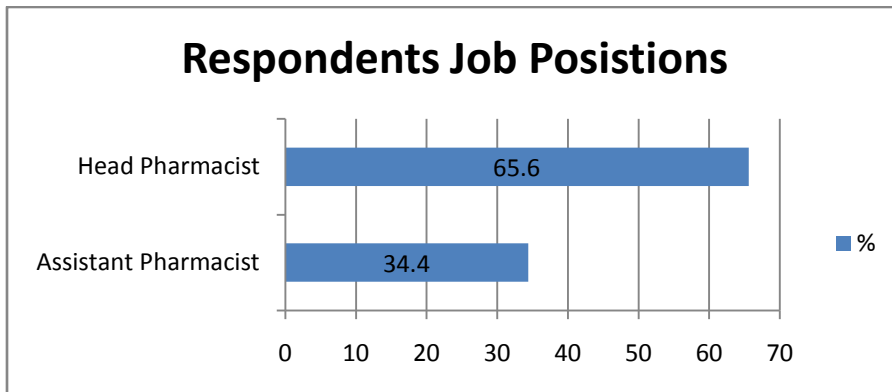


Fig 6: Job position characteristics of the respondent

As it can be shown in the figure 7, all respondents were pharmacists by profession. A pharmacy professional can work in a pharmacy as head pharmacists or assistant pharmacist. Head pharmacist are pharmacists whom is responsible for the overall function and administration of the pharmacy.

To be a head pharmacist, a senior pharmacist license is required. Assistant pharmacists are pharmacists which under the direction of head pharmacists dispenses and consult patients. To be an assistant pharmacist, a minimum of junior pharmacist's license is required. In this research, 65% of the respondents were head pharmacists whereas the remaining 35% were assistant pharmacists. This implies that most of the questioners were filled by head pharmacists who are more knowledgeable in pharmacy a setting which suggests the response is more experience and knowledge based.

#### Year of Experience

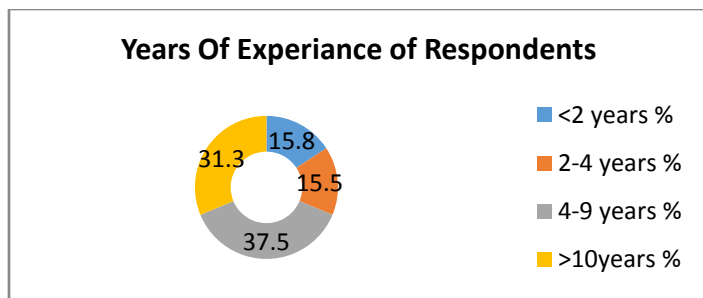


Fig 7: Years of experience profile of the respondent

Pharmacists earn professional license based on their years of experience. For example, Ethiopian Food and Drug Authority (EFDA) gives the following licenses based on years of experience

License Name Given by EFDA	
Experience	License name
0-4 years	Junior Pharmacist
5-9 years	Senior Pharmacist
10-15 years	Expert Pharmacist
> 15 years	Chief Pharmacist

Table 5: Pharmacy license given based on years of experience

The respondent in this research ranges from junior to expert pharmacists. 69% of the respondents has more than 4 years of experience and they hold senior or above pharmacy license. Only 31 % constitutes junior pharmacist respondents. From the findings, pharmacists working in Addis Ababa are mostly experienced thus it is believed that they will not be easily persuaded by marketing promotions.

#### 4.3.2. Descriptive Analysis of Price Effect on Pharmacist's Decision

The mean scores have been computed for all variables. Respondents were asked to rate their perception on a five-point Likert type scale ranging from 1 being strongly disagree to 5 strongly agree for all variable. The first variable which is price effect on pharmacist decision in selection OTC medication is shown in table 6.

The mean score ranges from 3.69 for questioner I chose a OTC medication based on customers affordability/budget to 2.07 for questioner I chose high priced OTC medication because the higher the price the higher is its effectiveness. The overall mean score for price questioners was found to be 2.81 with standard deviation of 0.55, interpreted as the respondent answers for price questions were below average.

Price	N	Mean	Std. Deviation
Low price is one of my criteria when choosing between OTC medication with the same chemical composition	291	3.1168	1.41668
I chose high priced OTC medication because the higher the price the higher is its effectiveness	291	2.0722	1.12875
I Choose a OTC medication based on customers affordability/budget	291	3.6907	1.29210
The price of Brand medication are reasonable compared to generic medication	291	2.7045	1.24649
Increase in price makes my selection to shift to less expensive OTC medication	291	3.2887	1.08557
Promotion of OTC medication usually makes my decision easy in selection between brand and generics that has different price	291	3.0893	1.22006
I usually choose a higher priced OTC medicine to get higher profit so that pharmacy expense like rent and salary are covered	291	2.4296	1.22518
I usually choose a higher priced OTC medicine to achieve a good sales volume	291	2.5808	1.28500
Overall Summary	291	2.81	0.55

Table 6: Descriptive analysis on price effect

Source: researchers own survey findings (2022)

### 4.3.3. Descriptive Analysis on Brand Effect on Pharmacists Decision

The second variable is Brand effect on pharmacist’s decision on selecting OTC medication. As shown in Table 7, the highest mean is happens to be 3.1375 for questioner ‘there is no enough data that supports the difference in quality between brands and generics’. The lowest comes from the questioner ‘I believe the brand name of OTC is my first criteria for choosing between OTC medications’ with score of 2.4639. The overall Brand mean is 2.8 with standard deviation of 0.75. It’s interpreted as the sample respondents answer to brand questions were below average.

Brand	N	Mean	Std. Deviation
A specific brand quickly comes to my mind when I want to dispense OTC medications	291	2.8213	1.23555
I prefer to dispense brand medications than generic medication	291	2.7285	1.14101
I believe brand medications are usually more effective as compared to generic medications	291	2.5086	1.30348
There is no enough data that supports the difference in quality between brands and generics	291	3.1375	1.20129
I found out from my own experience that brand medications are more effective than generic medicines	291	2.8797	1.21880
I found out from promotional material of medication that brand medications are more effective than generic medicines	291	2.7285	1.22271
Overall Summary	291	2.8	0.75

Source: researchers own survey findings (2022)

Table 7: Descriptive analysis on brand effect

### 4.3.3. Descriptive Analysis on COO Effect on Pharmacists Decision

The third descriptive analysis focus on COO effect mean computation is shown in table 9. The mean score registered is 3.8660 for the questioner ‘Many customers believe a country of origin is associated with quality’. The lowest mean is 2.5876 for questioner ‘Country of origin of medicine is more associated with price not quality’. The Overall mean for the COO categories of items is 3.11 with standard deviation of 0.61. The result interpreted as the respondents choose more than average for COO questions

COO	N	Mean	Std. Deviation
I feel like it is important to look for a country of origin when deciding which OTC medicine to dispense	291	2.8522	1.18997
Country of origin of medicine is more associated with price not quality	291	2.5876	1.19556
The demand of OTC medicine is highly influenced by country of origin	291	3.3333	1.17248
There is a considerable difference in effectiveness between the same medicine with different country of origin	291	3.1615	1.20260
Many customers believe a country of origin is associated with quality	291	3.8660	1.04349
I find out from my experience a products country of origin is important to determine the quality of a product	291	2.9313	1.27931
I believe there is no relation between country of origin and effectiveness of the medication	291	2.9691	1.20161
I prefer to dispense OTC medication that are locally manufactured because I believe they are as effective as imported medications	291	3.2268	1.15524
Overall Summary	291	3.11	0.61

Table 8: Descriptive analysis on COO effect

Source: researchers own survey findings (2022)

#### **4.3.4. Descriptive Analysis of Preference for Selected COO**

The fifth part of the questioner asked to choose their preferred country of origin and matched with their reason for selecting. Since this part of the questioner is not main objective of the research, only descriptive analysis was used to analyze the respondents answer. The objective of this analysis was to shed light on the existence of country stereotyping behavior that was seen in other similar studies.

In SPSS, the respondent choice were coded 1 for related COO with factors were and 2 for unrelated. The factors were price, effectiveness and well-known brand. The country to be assessed was Ethiopia, India, Germany, Turkey, and Cyprus.

As it seen on the table 9 below, result for price varies from the highest 1.89 for turkey to the least mean 1.43 for Ethiopia. From the respondents answer, it can be concluded that the majority of the respondents think Ethiopian medications are cheaper followed by India. Medicines from western countries were not related with price, interpreted as higher price exists for these countries.

The second parameter used was effectiveness. In the table below, the highest mean of 1.9 to Indian medication to lowest 1.24 Germany medications. It can be interpreted that Germany medication are sought to be effective by respondents. In Contrary, Indian medications were not recognized as effective medicines.

The third parameter used was well known brand. The result showed that medicines manufactured in India do not relate with well-known brand. Germany medications are highly related with well-known brand. Highest mean is 1.91 for India and 1.23 is the least mean refers to Germany.

To conclude there is country stereotype behavior around respondent pharmacists in that effectiveness and brand are related with western countries and cheaper prices are related with lower income countries. Even though it is a descriptive analysis and the result cannot be translated to a population (unless inferential analysis is done), the indication in sample is consistent with similar studies by (Smaiziene & Vaitkiene, 2013) (Bahrinizadeh et al, 2014) (Tajdar et al, 2015) (Tujuba, 2018) (Ayalew, 2014).

	Selected COO	N	Mean	Std. Deviation
Price	Ethiopia	291	1.43	0.50
	Germany	291	1.80	0.40
	India	291	1.63	0.48
	Cyprus	291	1.78	0.42
	Turkey	291	1.89	0.32
Effectiveness	Ethiopia	291	1.75	0.44
	Germany	291	1.24	0.43
	India	291	1.91	0.29
	Cyprus	291	1.64	0.48
	Turkey	291	1.77	0.42
Well Known Brand	Ethiopia	291	1.85	0.36
	Germany	291	1.23	0.42
	India	291	1.91	0.29
	Cyprus	291	1.77	0.42
	Turkey	291	1.75	0.43
	Valid N (listwise)	291		

Table 9: Descriptive analysis of selected COO relation with price , effectiveness and brand of OTC medication

Source: researchers own survey findings (2022)

#### 4.4. Assumption for Regression Analysis

Most statistical tests rely upon certain assumptions about the variables used in the analysis. When these assumptions are not met the results may not be trustworthy (Osborne and Waters, 2002). Three assumptions for regression analysis used in this study were tested for the individual variables: multi-collinearity, linearity and Normality. In the following sections, each assumption is explained.

#### 4.4.1. Multi-Collinearity

Multi-collinearity is a statistical phenomenon in which two or more independent variables in a multiple regression model are highly correlated. It is highly recommended that diagnose the independent variables are do not violate multi-collinearity assumption of multi regression analysis (Daoud, 2017).

The two well-known methods of detecting multi-collinearity are i) correlation analysis and ii) variance inflation factors (VIF )& tolerance (Daoud, 2017).According to Hill et al. (2003) as sited by Gebremedhin (2016), two independent variables with a bivariate correlation of 0. 7 or more gives sign to existence of Multi-Collinearity.As shown in table 10, bivariate correlation between independent variables in this study is below 0.466 Pearsoncorrelation factor, which means multi-collinearity is not detected.

Bivariate Correlations				
		Price	COO	Brand
Price	Pearson Correlation	1	.420**	0.466
	N	291	291	291
COO	Pearson Correlation	0.42	1	0.403
	N	291	291	291
Brand	Pearson Correlation	0.466	.403**	1
	N	291	291	291

Table 10: Bivariate Correlation analysis result

Source: researchers own survey findings (2022)

Unfortunately, relying only on correlation between pairs of predictors has limitation, the small or large value of correlation is something subjective depends on individual and also on the field of research that is why most of the time to detect the multi-collinearity we use indicator called variance inflation factors (VIF) (Daoud, 2017).The VIF is a tool to measure and quantify how much the variance is inflated. VIF greater than 10 and or Tolerance less than 0.1 suggests existence of multi-collinearity. As it is shown in table below, the all variables tolerance and VIF shows that there is no multi-collinearity.

Variables	Tolerance	VIF
Price	0.726	1.377
Brand	0.74	1.351
COO	0.819	1.221

Table 11: Tolerance and VIF of variables

Source: researchers own survey findings (2022)

#### 4.4.2. Linearity

Multiple regressions can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature. If the relationship between independent variables and the dependent variable is not linear, the results of the regression analysis will under-estimate the true relationship (Osborne & Waters, 2002). Thus it is essential to examine analyses for non-linearity.

One way of linearity detection is examination of residual plots (plots of the standardized residuals as a function of standardized predicted values, readily available in most statistical software (Osborne & Waters, 2002). The scatter plot of standard residuals of variables for the regression models were visually inspected. Upon inspection, as it is shown in the picture below, the majority of the variables were compacted in to the center and outlier rarely seen.

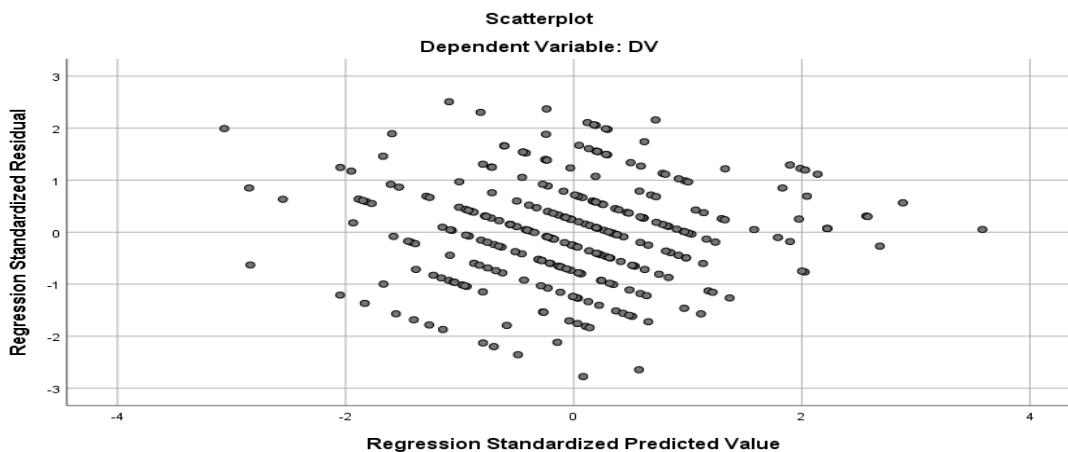


Fig 8: Scatter plot of standardized residual

Source: researchers own survey findings (2022)

### 4.4.3. Normality

Regression assumes that variables have normal distributions. Non-normally distributed variables (highly skewed or kurtotic variables, or variables with substantial outliers) can distort relationships and significance tests. Visual inspection of data plots, skew, kurtosis, and P-P plots give researchers information about normality (Osborne & Waters, 2002)

By using Normal Probability Plot (P-P) graph shown below, it can be said that the variables are normally distributed. And in table 12 below also shows the skewness and kurtosis results. Accordingly all variables are not skewed as it is seen the value for skewness is between -1 and 1. There is no kurtosis as it is shown that kurtosis numbers are low compared to standard error.

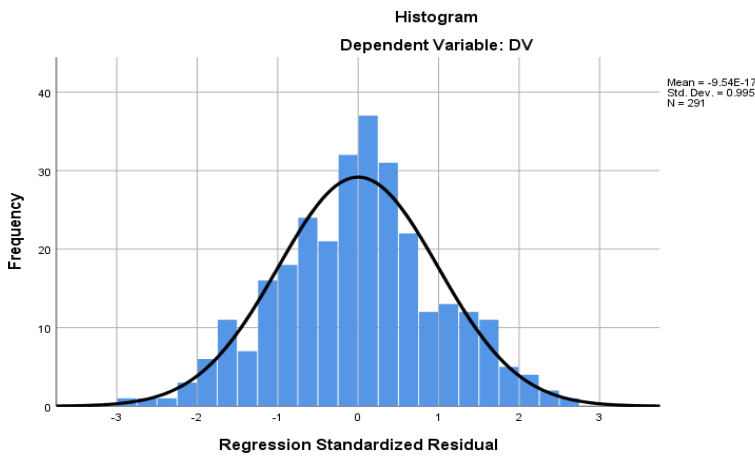
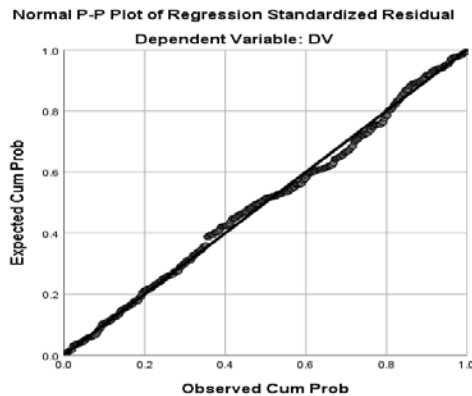


Fig 9: Frequency distribution of standardized residual



Source: researchers own survey findings (2022)

Fig 10: Normal P-P plot

Descriptive Statistics- Measure of skewness and kurtosis					
	N	Skewness		Kurtosis	
Variables	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pharmacists Decision	291	0.01	0.143	-0.318	0.285
Price	291	0.082	0.143	0.375	0.285
Brand	291	-0.05	0.143	0.007	0.285
COO	291	-0.516	0.143	0.233	0.285
Valid N (listwise)	291				

Table 12: Skewness and kurtosis, Source: researchers own survey findings (2022)

#### 4.5. Correlation Analysis

A correlation analysis using SPSS version 26 was done between dependent variable which is pharmacist’s decision and independent variable which are price, COO and brand. Pearson’s correlation (r) is used in this study.

As a result, as shown in Table 13, independent variables are positively and significantly correlated with the dependent variable. That is price, brand and COO of OTC medication has a positive and significant correlation with pharmacists decision.

Correlations

		Price	Brand	COO	Pharmacist Decision
Price	Pearson Correlation	1	.473**	.376**	.511**
	Sig. (2-tailed)		0	0	0
	N	291	291	291	291
Brand	Pearson Correlation	.473**	1	.353**	.478**
	Sig. (2-tailed)	0		0	0
	N	291	291	291	291
COO	Pearson Correlation	.376**	.353**	1	.374**
	Sig. (2-tailed)	0	0		0
	N	291	291	291	291
Pharmacist Decision	Pearson Correlation	.511**	.478**	.374**	1
	Sig. (2-tailed)	0	0	0	

	N	291	291	291	291
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\*\* Correlation is significant at the 0.01 level (2-tailed),

Table 13: Pearson correlation result, Source: researchers own survey findings (2022)

#### 4.6. Regression Analysis

Multiple regression analysis is done to indicate the casualty of the relationship between dependent and independent variable. The regression was intended to show figurative explanatory power of price, brand and COO on pharmacist's decision on selection of OTC medication.

##### Model Summary Interpretation

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594 <sup>a</sup>	0.353	0.346	2.0367

a Predictors: (Constant), COO, Brand, Price

b Dependent Variable: Pharmacists decision (DV)

Table 14: Model summary

Source: researchers own survey findings (2022)

When the overall pharmacists decision is regressed on the price, brand and COO independent variable, the independent variable contribute to statistically significant level p vlaue 0.000. The above table shows the regression coefficient R Square at .353 and an adjusted R-square value of 0.346 which implies the model explains 35.3% of the variability of the dependent variable. Thus the remaining 64.7% variance of the pharmacist decision in selecting OTC medication is explained by other factors that are not part of this study.

##### Analysis of Variance

The ANOVA test shown in table 18 indicates that the findings in this research are statistically significant.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	649.984	3	216.661	52.231	.000 <sup>b</sup>
	Residual	1190.518	287	4.148		
	Total	1840.502	290			

a Dependent Variable: Pharmacists decision

b Predictors: (Constant), Price, brand, COO

Table 15: ANOVA test

Source: researchers own survey findings (2022)

Regression coefficients and developing regression model

Coefficients <sup>a</sup>						
Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-0.268	0.756		0.355	0.723
	Price	0.186	0.032	0.324	5.821	0
	Brand	0.15	0.031	0.269	4.883	0
	COO	0.08	0.027	0.157	2.992	0.003

a Dependent Variable: Pharmacists decision

Table 16: Regression coefficients

Source: researchers own survey findings (2022)

In this study the effect of independent variables on dependent variables is indicated in regression equation with B value as coefficient for independent value. The higher B value for independent value, the higher the explanatory factor it bears on dependent variable.

The general equation of the multiple variables linear

$$Y = \text{Constant} + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Based on table 18, we know the following information

Y = Dependent variable = Pharmacist decision

Constant= y intercept= -0.268

$\beta_1 = 0.186$ ,  $\beta_2 = 0.15$ ,  $\beta_3 = 0.08$ ,  $\epsilon$  error term

X1= Price

X2= Brand

X3=COO

Now this research model can be written as

$$\text{Pharmacist decision} = -0.268 + 0.186 (\text{price}) + 0.15 (\text{Brand}) + 0.08 (\text{COO}) + \epsilon$$

#### **4.7. Discussion of findings**

This study was conducted to answer the researchers four main questions which are listed in chapter one. Namely, 1) what is the effect of price on selection of OTC medicines by the pharmacist? 2) What is the effect of country of origin (COO) on selection of OTC medicines by pharmacists? 3) What is the effect pharmaceutical brand on selection of OTC medicines by pharmacists? 4) What is the predominate factor that affects pharmacists decision in selecting between OTC medicines? Even though there is lack of research studies that directly study pharmacists, this study compiled prior similar studies conducted on consumers and physicians compares them with the result of this research. In the following paragraphs the discussion of the findings of the research questions are discussed.

The first question of the researchers was asked to assess the effect of price on selection of OTC medications. Consequently, it is known from the results of this study that price does have a significant effect on decision of pharmacist's selection between OTC medications working in Addis Ababa, Ethiopia. This result is in line with both abroad (Halme, Linden & Ka'a'ria, 2009) (Habash & Al-Dmour, 2020) and local (Wube, 2020), (yirga, 2016) prior studies on price effect in pharmaceutical consumers.

In contrary, the result has conflicting result with that of (Shuai Ge, He & Hu, 2014) that was conducted in Shanghai, China. In this study, the researcher found out that price does not have a clear effect on selection of medications. Another local study by Gebremedhin (2016) reported physicians are more affected by brand than price of medication.

Further It can be seen that  $\beta$  coefficient of price which is 0.186 happens to be height of all independent variable. It can be said that compared with other variable in theses study, price has a predominant effect on pharmacist's decision on selecting OTC medication.

When we come to the second variable, which is brand, happens to have a significant effect on decision on pharmacist's selection between OTC medications working in Addis Ababa, Ethiopia. As like price there are multiple researches that support the findings of this study. For instance, a study by Tran et al. (2019) that set out to examines the pharmacist's selection criteria of OTC medications, named brand as one of the five factors that affects pharmacist's choice.

In contrary with this study, one research by Kohli & Buller (2013) based on United States of America, shed light on consumer's attitudes regarding brand and generic OTC medications. The finding showed that consumers in USA are indifferent between brand and generic medication.

Local prior studies on health professionals like pharmacists and physician confirm the effect of brand on selection of pharmaceuticals. From the study by Gebremedhin (2016) who reported strong brand preference in selection of pharmaceutical by physicians working in Addis Ababa to a study by Gizachew (2017) that researched the brand equity effect on the subsequent pharmacist's preference goes in line with the finding of this research.

By referring to table 17, it can be concluded that with  $\beta$  coefficients of 0.15, p value  $<0.05$ , brand has a strong and positive impact on pharmacists decision on selection of OTC medication. It is worth noting, based on B coefficient, brand has lesser impact on decision when compared to price and but it has higher impact on decision than COO has.

Thirdly, COO also has a significant effect on pharmacists decision on selection of OTC medication with  $\beta$  coefficients of 0.08 p value  $<0.05$ . Globally, COO was long researched in pharmaceutical industry. Researches on physicians (Tajdar et al, 2015) and customers (Smaiziene & Vaitkiene, 2013) showed the result similar to findings in this research. COO has a significant effect on choosing medications. Specific studies involving pharmacists was researched conducted by Bahrnizadeh et al. (2014) around in Bushehr province reported pharmacists perception of quality is influenced by COO of a medication.

The result of this study also is in line with local studies. According to Ayalew (2014), customers think medicines from Europe and Scandinavian countries are effective and medicines from India are believed to be ineffective. It is worth noting that even if COO has significant effect on Pharmacists decision, it somehow is in lesser level than price and brand has on pharmacist's decision. Table 17 showed that the all hypothesis were supported significant at p value  $<0.05$

Hypothesis	Result	Reason
H1 : Price has a significant effect on pharmacist decision in selecting OTC medication	Supported	$\beta=0.186$ , P value $<0.05$
H2: Brand has a significant effect on pharmacist decision in selecting OTC medication	Supported	$\beta=0.15$ , P value $<0.05$
H3:Country of origin has a significant effect on pharmacist decision in selecting OTC medication	Supported	$\beta=0.08$ , P value $<0.05$

Source: researchers own survey findings (2022)

Table 17: Summary of the overall outcome of the research hypothesis

## **CHAPTER FIVE**

### **5. Summary, Conclusion and Recommendation**

#### **5.1. Introduction**

The last chapter of this study will focus on summary of study, researcher's conclusion and recommendations. The summary of the study will recapture the whole study briefly pointing out the major assumptions, methodologies and findings. The Conclusion of the study will conclude the study by mentioning key findings. Lastly, the researcher will give recommendation for stakeholders in research topics and for further researches.

#### **5.2. Research Summary**

The purpose of this study was to analyze the result of the survey conducted to see the impact of Price, Brand and COO on pharmacist's decision on selecting OTC medications. After reviewing literature, the study conducted the survey on pharmacists working on Addis Ababa pharmacies. The research utilized explanatory method as research method, questionnaire as data collecting method, both descriptive, multiple regressions and correlation analysis was done on the data collected. The result showed pharmacist's decision in selecting OTC medication was significantly affected by price (with Pearson correlation .511,  $\beta=0.186$  pvalue <0.005), OTC's brand (with Pearson correlation of .478,  $\beta=0.15$ , P value <0.05) and COO of the OTC medication (with Pearson correlation of 0.374,  $\beta=0.08$ , P value <0.05). Price effect on pharmacist's decision is higher than that of Brand effect and conversely COO of medication has a lower effect on pharmacist's decision than price and Brand of OTC medication.

#### **5.3. Conclusion**

As per the findings, price, brand and COO of medication have a positive and significant effect on pharmacist's decision. That means the decisions of pharmacists in selecting OTC medication are affected by the price of medication, Brand of medication and COO of medication. Further price of a medication was found to be a predominate factor in affecting pharmacist's decision.

#### **5.4. Recommendations**

Based on the research findings, the researcher wants to address its recommendation for the pharmaceutical companies, regulatory bodies, and academic future researchers.

#### **5.4.1. Pharmaceutical companies**

Pharmaceutical company's weather in manufacturing, importing, wholesale or retail business, the findings of the study is of paramount importance. In light of higher cost of health care, importance of OTC medication after consultation with the pharmacist are becoming widely popular in Ethiopia. Hence answer to what are the selection criteria of the pharmacists between different OTC medications with the same chemical composition? Will highlight pharmacists the significant external products cues that are important for the business to grow and capture bigger market share.

The basic finding of the research indicates the significant effect of price, brand and COO play on pharmacist's decision in selection of TC medication. Pharmaceutical companies can benefit from the findings in different way. For instance, since pharmacists prefer lower price than higher priced medication, Pharmaceutical companies will be better of decreasing per unit profit margins and concentrating on volume sales.

Since the core branding activity of medication started at manufacturers or importers level, these companies should focus on building brand equity, as it is found to influence pharmacist's decision that inturn guides customers to but OTC medication. Important note on building the brand is not for charging premium price but rather foster pharmacist's confidence on the brand and increase repetitive selection. Also it is noted from descriptive analysis, majority of the respondents do not believe in difference in effectiveness between brand and generic.

COO of a medication also happens to have a significant effect on selection of medication by pharmacists. In comparison, respondents see local and India products to have lower effectiveness compared to Germany, turkey and Cyprus ones. Hence combining the findings, It is researchers believe that even though COO has lower impact compared to price and brand, it is important to notice the COO effect and use and/or develop positive COO cue with the product.

#### **5.4.2. Regulatory body**

The result of this study indicates price of the medication is the predominant factor in prescribing OTC medications by pharmacists. Regulatory body like FDA has a huge role in assuring affordability, quality and safety of pharmaceuticals in the market. Above all the regulatory body

should work stabilizing the inflation of price of the medication by supporting local manufacturers, permitting more generic but equivalent medication in to the market.

The finding also suggests there are stereotypes thinking when coming to COO of the medication. COO significantly affects the selection of medication but to lesser extent than price. That is to say if the price of two medications are comparable but their COO affects their decision. The research indicates pharmacists prefer to prescribe a medication from well developed countries than underdeveloped country even though the chemical compositions are the same. The regulatory body should strengthen and promote at the same time the quality control methods and authorizations of locally manufactured so that majority of the pharmacy practitioners gradually believe there is no quality difference between locally made and imported medications.

#### **5.4.3. Future Researchers**

The researcher believes there is many opportunities for academicians to investigate in Ethiopian pharmaceutical industry. During the research, the researcher noticed the following key future research areas

- There is no research to date that investigates the effects of internal and external cues on selection of medication. The researcher only focuses on external cues of the medication but perhaps, increasing the independent variable to include internal cues would give insight to where to focus for future marketer and developers.
- This research concentrated pharmacist in Addis Ababa. Perhaps pharmacist in other major cities can be a good comparison to this study and give further knowledge.

## Reference

*Adina-Gabriela Tudor and Chen Zheng (2014). Product Knowledge, Product Quality and Country-of-Origin effects on Purchase Intention of Personal Computers: A survey of Aalesund University College Students. Aalesund University college, Alesund, Norway*

*Ahmed, S. A., & d'Astous, A. (1996). Country-of-origin and brand effects: a multi-dimensional and multi-attribute study. Journal of International Consumer Marketing, 9(2), 93-115.*

*Andrew Whally (2010). Strategic Marketing. Andrew Whally and Ventus Publishing APS.*

*Bahrinizadeh, M., Esmailpoor, M., & Haraghi, M. (2014). Brand equity and country of origin model in pharmaceutical industry. Kuwait Chapter of Arabian Journal of Business and Management Review, 33(2527), 1-10.*

*Bandyopadhyay, S. (2014). Country-of-origin perceptions, consumer ethnocentrism, and product evaluations in the Indian market. International Journal of Business and Social Science, 5(9).*

*Batra, R., Ramaswamy, V., Alden, D. L., Steenkamp, J. B. E., & Ramachander, S. (2000). Effects of brand local and nonlocal origin on consumer attitudes in developing countries. Journal of consumer psychology, 9(2), 83-95.*

*Biniyam Mingistu (2017), The effects of packaging on over the counter medicine buyers behavior: a case study in chain community pharmacies of Addis Ababa, College of Business and economics, Addis Ababa University*

*C.R. Kothari (2004), Research methodology methods and techniques. second revised edition. New Age International (P) Ltd., Publishers. P 63*

*Claudio Aqueveque, (2006), "Extrinsic cues and perceived risk: the influence of consumption situation", Journal of Consumer Marketing, Vol. 23 Iss 5 pp. 237 - 247*

*Dawit gebremedhin (2016). The Impact of Brand Equity on Brand Preference of Pharmaceutical Products by Physicians in Ethiopia. Department of Marketing Management, Addis Ababa University*

*De Tran, V., Dorofeeva, V. V., Loskutova, E. E., Lagutkina, T. P., & Kosova, I. V. (2019). Factors influencing community pharmacists' recommendation of over-the-counter medications in four Vietnam cities. Tropical Journal of Pharmaceutical Research, 18(2), 421-427.*

*Deborah Ivy (2016). The effect of branding on organizational performace in the retailing of pharmaceutical products, the mediating role of customer service*

Elliott, G. R., & Cameron, R. C. (1994). Consumer perception of product quality and the country-of-origin effect. *Journal of International Marketing*, 2(2), 49-62.

[Food, Medicine and Health Care Administration and Control Authority \(FMHACA\), 2012. Over-the-counter medicines list for Ethiopia. http://www.fmhaca.gov.et \(Access date: 12/07/2021\)](http://www.fmhaca.gov.et)

Ge, S., He, T. T., & Hu, H. (2014). Popularity and customer preferences for over-the-counter Chinese medicines perceived by community pharmacists in Shanghai and Guangzhou: a questionnaire survey study. *Chinese Medicine*, 9(1), 1-8.

Godey, B., Pederzoli, D., Aiello, G., Donvito, R., Chan, P., Oh, H., ... & Weitz, B. (2012). Brand and country-of-origin effect on consumers' decision to purchase luxury products. *Journal of Business Research*, 65(10), 1461-1470.

Habash, R., & Al-Dmour, H. (2020). Factors influencing the intention to buy over-the-counter medicines: empirical study. *International Journal of Pharmaceutical and Healthcare Marketing*.

Halme, M., Linden, K., & Kääriä, K. (2009). Patients' preferences for generic and branded over-the-counter medicines. *The Patient: Patient-Centered Outcomes Research*, 2(4), 243-255.

Imamuddin Khoso, Rizwan Raheem Ahmed, & Jamshaid Ahmed (2014). Pricing strategies in pharmaceutical marketing. *The Pharma Innovation Journal* 2014; 3(7): 13-17

Jamal I. Daoud (2017), *Multicollinearity and Regression Analysis*. *J. Phys.: Conf. Ser.* 949 012009

Jennifer S. Haas, Kathryn A. Phillips, Eric P. Gerstenberger, and Andrew C. Seger (2005). Potential Savings from Substituting Generic Drugs for Brand-Name Drugs: Medical Expenditure Panel Survey, 1997–2000. *Annals of Internal Medicine*, 142(11):891-897

Johansson, M., Hallberg, N., Hinterhuber, A., Zbaracki, M., & Liozu, S. (2012). Pricing strategies and pricing capabilities. *Journal of Revenue and Pricing Management*, 11(1), 4-11.

Kaynak, E., Kucukemiroglu, O., & Hyder, A. S. (2000). Consumers' country-of-origin (COO) perceptions of imported products in a homogenous less-developed country. *European Journal of Marketing*.

Kevrekidis, D. P., Minarikova, D., Markos, A., Malovecka, I., & Minarik, P. (2018). Community pharmacy customer segmentation based on factors influencing their selection of pharmacy and over-the-counter medicines. *Saudi pharmaceutical journal*, 26(1), 33-43.

Khalid I. Al-Sulaiti Michael J. Baker, (1998), "Country of origin effects: a literature review", *Marketing Intelligence & Planning*, Vol. 16 Iss 3 pp. 150 – 199

*Kidist Mulugeta, Ahmed Moges, Kidist Abiye, Berhanemeskel Weldegerima, Chilot Abiyu, Wudneh Simegn & Dawit Kumilachew Yimenu (2020). Knowledge, Attitude, and Practice on Over-the-Counter Drugs Among Pharmacy and Medical Students: A Facility-Based Cross-Sectional Study. Journal of Integrated Pharmacy Research and Practice, Vol 9 135–146*

*Kohli, E., & Buller, A. (2013). Factors influencing consumer purchasing patterns of generic versus brand name over-the-counter drugs. South Med J, 106(2), 155-60.*

*Mathew, P. (2015). Generic drugs: Review and experiences from South India. Journal of family medicine and primary care, 4(3), 319.*

*Meseret Wube (2020). Factors Affecting Consumers' Purchase Decision of Over-The-Counter (OTC) Medicines: Empirical Evidences from Community Pharmacies in Ethiopia. Journal of Medicine, Physiology and Biophysics, Vol 65, SSN 2422-8427*

*Michael R. Solomon (2013). Consumer Behavior Buying, Having, and Being, Tenth Edition. Pearson Education, Inc. United States Of America*

*Michael Solomon, Gary Bamossy, Soren Askegaard, Margarate K. Hog (2006). Consumer Behavior A European Perspective, Third edition. Pearson Education Limited, England*

*Mikyung Ryu and Juyoung Kim. (2017). Perception and attitude of Korean physicians towards generic drugs*

*Miyazaki, A. D., Grewal, D., & Goodstein, R. C. (2005). The effect of multiple extrinsic cues on quality perceptions: A matter of consistency. Journal of consumer research, 32(1), 146-153.*

*Netsanet Ayalew (2014). Country of origin effect on Ethiopian Consumers Evaluation Of Indian Pharmaceutical Drugs. Department of marketing management. Addis Ababa University*

*Nicols Williams (2011). Research methods the basics. Routledge, USA*

*Osborne, Jason W. and Waters, Elaine (2002) "Four assumptions of multiple regression that researchers should always test," Practical Assessment, Research, and Evaluation: Vol. 8, Article*

*Pappu, R., Quester, P. G., & Cooksey, R. W. (2006). Consumer-based brand equity and country-of-origin relationships: Some empirical evidence. European Journal of marketing.*

*Paul Ingenbleek, Marion Debruyne, Ruud T. Frambach, and Theo M.M. Verhallen. Successful new product pricing practice: a contingency approach.*

*Peter Anabila, Dadson Awunyo-Vitor (2014). Assessing the role of branding in the marketing of pharmaceutical products in Ghana: A case of three Pharmaceutical Companies. African Journal of Business Management, Vol. 8(13), pp. 502-510.*

Peterson, R. A., & Jolibert, A. J. (1995). A meta-analysis of country-of-origin effects. *Journal of International business studies*, 26(4), 883-900.

*Philip Kotler (2002). Marketing Management, Millennium Edition. Pearson custom publishing. Boston, Massachusetts*

*Philip Kotler, Gary Armstrong (1999). Principles of Marketing. Eighth edition. Prentice hall of India private limited, New Delhi, India.*

*Philip Kotler, Kevin Lane Keller (2012). Marketing Management. 14<sup>th</sup> edition. Prentice hall of India private limited, New Delhi, India.*

*Pricing it right: Strategies, Applications, Pitfalls. (2006). Harvard Business School Publishing Corporation. Boston, Massachusetts*

*Rebecca Robins (2006). Brand matters: The lingua franca of pharmaceutical brand names. John A.*

*Rebecca Tujiba (2018). The Effect of Consumers' Attitude on the Purchase Intentions of Imported Pharmaceutical Products in Ethiopia. School of commerce, Addis Ababa University*

*Reem Warrayat. (2016) Brand Name vs. Generic Medications. The Wilkes Honors College.*

*Rizzo and Richard Zeckhauser (2009). Generic script share and the price of brand – name drugs: the role of consumer choice. Int J Health Care Finance Econ (2009) 9:291–316.*

*RK Srivastava and Sanjiwani Jayant Kumar. (2014) Understanding of consumer's awareness about brands in pharmaceutical industry: An empirical study. Journal of Medical Marketing , Vol. 14(2–3) 99–107*

*Roberta Heale, Alison Twycross (2015), Validity and reliability in quantitative studies. Evid Based Nurs vol. 18 number 3*

*Roth, K. P., & Diamantopoulos, A. (2009). Advancing the country image construct. Journal of Business Research, 62(7), 726-740.*

*Samin Rezvani, Ghazaleh Shenryari , Goodarz Javadian Dehkordi , Mehrdad Salehi , Neda Nahid and Soheil Soleimani (2012). Country of Origin: A Study over Perspective of Intrinsic and Extrinsic Cues on Consumers' Purchase Decision. Business Management Dynamics Vol.1, No.11, pp.68-75*

Sanjeev Kumar Panchal, Bilal Mustafa Khan and S Ramesh (2012). Importance of 'brand loyalty, brand awareness and perceived quality parameters' in building brand equity in the Indian pharmaceutical industry. *Journal of Medical Marketing* 12(2) 81–92.

[Sangiriy, S. S., Bhansali, A. H., Bapat, S. S., & Xu, Q. \(2016\). Abuse of over-the-counter medicines: a pharmacist's perspective. \*Integrated pharmacy research & practice\*, 6, 1–6. <https://doi.org/10.2147/IPRP.S103494>](https://doi.org/10.2147/IPRP.S103494)

[Schuiling, Isabelle ; Moss, Giles. How different are branding strategies in the pharmaceutical industry versus fast moving consumer goods ?. IAG Working Papers ; 2003/101 \(2003\) <http://hdl.handle.net/2078.1/542>](http://hdl.handle.net/2078.1/542)

Simon Yirga , 2016. *Analyzing marketing mix elements influencing customers' brand preference of medicines in Addis Ababa. School of commerce, Addis Ababa University*

Smaiziene, I., & Vaitkiene, R. (2013). Country of origin effect in a Lithuanian market of vitamins and dietary supplements. *International Business Research*, 6(12), 118.

Smaoui, F., Kilani, F. A., & Touzani, M. (2016). Country-of-origin versus brand: consumers' dilemma when choosing between generic and branded drugs in emerging countries. *Journal of Product & Brand Management*.

Steenkamp, J. B. E. (1990). Conceptual model of the quality perception process. *Journal of Business research*, 21(4), 309-333.

Sue Greener (2008). *Business research methods. Dr. sue greener & ventus Publishing Aps*

Suzanne S. Dunne\* and Colum P. Dunne. (2015). What do people really think of generic medicines? A systematic review and critical appraisal of literature on stakeholder perceptions of generic drugs. *Dunne and Dunne BMC Medicine* (2015) 13:173

Tajdar, S., Ahmad, S., Ahmad, J., & Khan, A. (2015). Customers' prescription of foreign versus local brands in the pharmaceutical industry of Peshawar (Pakistan). *Review of Integrative Business and Economics Research*, 4(2), 378.

Tariq Mehmood Dar, Neelofer Tariq (2020). Comparison of Branding Strategies of Pharmaceuticals & Fast-Moving Consumer Goods: An Analysis of Modern World Need. *Journal of Business and Management Research* Vol. 5, No. 6

Tom Blackett and Rebecca Robins (2001). *Brand Medicine: The Role of Branding in the Pharmaceutical Industry*. 9-26

Teas, R. K., & Agarwal, S. (2000). The effects of extrinsic product cues on consumers' perceptions of quality, sacrifice, and value. *Journal of the Academy of marketing Science*, 28(2), 278-290.

Urael Gizachew (2014). *Pharmacist's Perception of Brand Equity in the Case of Lagap Pharmaceutical. Department of Marketing Management. Addis Ababa University*

Wilkie, D. C., Johnson, L. W., & White, L. (2012). Strategies used to defend pharmaceutical brands from generics. *European Journal of Marketing*.

Yink Kong (2004). *The price premium of generic to brand-names and pharmaceutical price index. Journal of Applied Economics*, 36, 731–737.

Zahra Ladha (2005). *The significance of branding in the pharmaceutical industry. Simon Fraser University*.

Annex

**Addis Ababa University**  
**College of Business and Economics**  
**Department of Management**

**Questionnaire to be filled by Pharmacy practitioners**

This Questioner entitled 'The effect of product external cues on pharmacists in selecting over the counter medicines: A case study in community pharmacies in Addis Ababa' is designed by the final year Msc student of Addis Ababa University for the partial fulfillment of the course MSC thesis.

The information supplied by you will be held strictly confidential and used for academic purposes only. You will not be held responsible for anything arising thereof.

Thank you in advance for your corporation.

For further inquiry, you can contact me with the following address

Name: Daniel Tesfaye

Tel: 0911171957

Email: dtesfaye15@gmail.com

**Instructions**

- You are not required to write your name
- Please use a v mark to respond to the multiple question
- Your timely response is highly appreciated

Part I: Background of responders

1. Sex

A. Male  B. Female

2. Age

A. 18-26 years  B. 27-35 years  C. 36-48 years   
D. 49-55 years  E. 56 and above

3. What is your year of experience in your line of profession?

A. <2 years  B. 2- 4 years  C. 4-9 years  D. >10years

4. What is your current job position in pharmacy

A. Assistant Pharmacist B. Head Pharmacist C. Druggist

Instruction: Dear respondents for the following question uses a five point Likert's scale where: strongly disagree (1), disagree (2), neutral (3) , agree(4),strongly agree (5)

Please give your opiniopn on each of the following statements. By putting this sign (v) next to the option you choose.

Item	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Part II	Price effect on selection of OTC					
1	Low price is one of my criteria when choosing between OTC medication with the same chemical composition					
2	I chose high priced OTC medication because the higher the price the higher is its effectiveness					
3	I Choose a OTC medication based on customers affordability/budget					

4	I believe price of OTC medication is a first criteria for choosing between OTC medications with the same chemical composition					
5	The price of Brand medication are reasonable compared to generic medication					
6	Increase in price makes my selection to shift to less expensive OTC medication					
7	Promotion of OTC medication usually makes my decision easy in selection between brand and generics that has different price					
8	I usually choose a higher priced OTC medicine to get higher profit so that pharmacy expense like rent and salary are covered					
9	I usually choose a higher priced OTC medicine to achieve a good sales volume					
Part III	Brand name effect on selection of OTC					
10	A specific brand quickly comes to my mind when I want to dispense OTC medications					
11	I prefer to dispense brand medications than generic medication					
12	I believe brand medications are usually more effective as compared to					

	generic medications					
13	I believe the brand name of OTC is my first criteria for choosing between OTC medications					
14	There is no enough data that supports the difference in quality between brands and generics					
15	I found out from my own experience that brand medications are more effective than generic medicines					
16	I found out from promotional material of medication that brand medications are more effective than generic medicines					
Part IV	Country of origin effect on selection of OTC medication					
17	I feel like it is important to look for a country of origin when deciding which OTC medicine to dispense					
18	Country of origin of medicine is more associated with price not quality					
19	The demand of OTC medicine is highly influenced by country of origin					
20	There is a considerable difference in effectiveness between the same medicine with different country of origin					
21	Many customers believe a country of					

	origin is associated with quality					
22	I find out from my experience a products country of origin is important to determine the quality of a product					
23	I believe there is no relation between country of origin and effectiveness of the medication					
24	I prefer to dispense OTC medication that are locally manufactured because I believe they are as effective as imported medications					
25	I believe country of origin of OTC is my first criteria for choosing between OTC medications					

Part V: Select your usually preferred country of origin from the list due to the following listed reason by putting this sign (√)

	Country Of Origin					
Particulars	Ethiopia	Germany	India	Cyprus	Turkey	Other
Price						
Effectiveness						
Well-known Brand Name						

Thank You!!

