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PROGRAMM: MBA

**ASSESSMENT OF FACTORS AFFECTING VERTICAL GROWTH OF
LOCAL PHARMACUTICAL MANUFACTURING IN ADDIS ABABA.**

BY

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JUNE, 2023

ADDIS ABABA, ETHIOPIA

ST. MARY'S UNIVERSITY



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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF
GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR MASTERS DEGREE IN BUSSINESS
ADMINSTRATION (MBA)**

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Sealamlak Molla(Ph.D). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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June 2023

CERTIFICATION

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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June 2023

ST. MARY'S UNIVERSITY



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LIST OF ACRONYMS AND ABBREVIATION

APIs: Active Pharmaceutical ingredients

COMESA: Common Market for Eastern and Southern Africa

EPHARM: Ethiopian Pharmaceuticals Manufacturing

EFDA: Ethiopian Food and Drug Administration

FMOH: Federal Ministry of Health

GDP: Gross Domestic Product

GMP: Good Manufacturing Practices

IBM: International Business Machine Corporation

ICT: Information and Communication Technology

KIP: Kilinto Industrial Park

MNC: Multi-National Corporations

NCE: New chemical entity

OECD: Organization for Economic Co-operation and Development

OTC: Over the Counter

PFSA: Pharmaceutical Fund any Supply Agency

R&D: Research and Development

SME: Small and Medium-size Enterprises

UNIDO: United Nations Industrial Development Organization

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ABSTRACT

The pharmaceutical industry in Ethiopia like in the rest of the world is experiencing the same phenomenon that many other industries have faced in the past. Many companies have been forced to try and reinvent themselves in the face of challenges in their business environment which has had effect on their growth. The objective of the study to assess the factors related to local pharmaceutical manufacturing companies and their influence on vertical growth of this sector in Ethiopia. The study adopted descriptive cross sectional research design and targeted 53 employees and 10 key informant interviews from 3 local registered pharmaceutical manufacturing firms in kiliinto industrial park Addis Ababa Ethiopia. Data was collected using a questionnaire and analyzed using descriptive statistics as well interviews were analyzed using thematic analysis to look at the factors influencing the pharmaceutical manufacturing. The study found that there has been increase in the number of employees in the firms since their start of the firm 10-15 to 50 or more number of employees signifying growth. Government regulations also favored growth of the firms. This could be attributed to government policies aimed at enhancing growth in the sector. The study concludes that the international regulations have benefited the local firms even though they seem to favor multinationals. Further, the study concludes that the cost of production in Ethiopia, largely driven by cost of imported raw materials, and machinery had a significant negative influence on the growth of these firms. The study recommends the government should fully implement the launched National Strategy and Plan of Action for Pharmaceutical Manufacturing Development in policies and regulations that encourage the growth of pharmaceutical manufacturing in Ethiopia

Key words: *competition, Government regulation, International regulations, cost of production, pharmaceutical manufacturing, and growth*

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Background of the Study

The pharmaceutical Manufacturing in Ethiopia like in the rest of the world is experiencing the same phenomenon that many other industries have faced in the past. Many companies have been forced to try and reinvent themselves in the face of challenges in their business environment which has had effect on their growth (MoH, and MoI, 2015, and Banes, 2010).

In 2015, the annual pharmaceutical market in Ethiopia, was estimated at US\$400 to US\$ 500 Million and expected to reach at around US\$ 1 billion by 2018 .Most of the local pharmaceutical manufacturing companies operate below at lower capacity and could only cover about 20% of the local demand (MoH and MoI, 2015). More than 90% of the inputs used for producing pharmaceuticals are imported. A few inputs are locally procured. Raw materials account for 40% of total costs. Most packaging materials are imported, including carton packaging and empty capsules. Most of the companies are engaged in formulation of products using raw materials and group as secondary manufacturing companies (UNCTAD, 2011b). (MoH and MoI, 2015).

The pharmaceutical industry plays an important role of manufacturing of essential generic medicines from both a health and an economic development perspective. However, presently the industry is experiencing the same challenges that many other industries have faced in the past where many companies have been forced to try and reinvent themselves in the face of challenges in their business environment (Kinoti& Njeru, 2013).

The overall outlook for the pharmaceutical manufacturing remains fairly strong; some dark clouds loom in the horizon. The growth of pharmaceutical manufacturing companies in developing countries and in the sub Saharan Africa in particular has been on the decline since the global economic crisis of 2009 (Mackintosh et al, 2016). These companies are exposed to the challenges of globalization, dumping among others. Some of these companies are either contemplating diversification, or changing the line of business and some contemplating total

shutdown. This study will assess the factors affecting growth of pharmaceutical manufacturing in Ethiopia.

1.2 Statement of the Problem

Industry including pharmaceutical companies and system have relocated or restructured their operations opting to serve the local market through importing from low cost manufacturing areas such as Egypt, South Africa and India therefore resulting in job losses (Admasu, T. 2017, Nyabiage & Kapchanga, 2014). This is an indication that many manufacturing firms in Ethiopia are experiencing growth challenges with many reporting profit warnings due to challenges in the operating environment.

The government of Ethiopia is focusing to increase the number of manufacturing companies by 30 by 2020 and 80 by 2025 according to the National Strategy and Plan of Action for Pharmaceutical Manufacturing Development in Ethiopia (2015-2025). There are different supports such as the Engineering Capacity Building Program is a facility designed by the Ethiopian and German governments to assist the standard and technological upgrading of manufacturing enterprises, including the pharmaceutical sector. The priority in the pharmaceutical sector is to assist selected local companies in complying with Good Manufacturing Practices (GMP) in accordance with Pharmaceutical Inspection Co-operation Scheme (MOH, MOI, 2015).

There are approximately 200 importers of pharmaceutical products and medical consumables in Ethiopia. The local industry comprises 22 pharmaceutical and medical suppliers and manufacturers, with 9 involved directly in the manufacture of pharmaceutical products. Most of the manufacturers operate below their capacities and supply only about 20% of the local market. In 2014, local pharmaceutical companies supplied products to the value of US\$ 44.2 million. Local manufacturers have limited product portfolios and are thought to be able to supply only 90 of the more than 380 products on the national essential medicines list. Around 35–40% of their total output is supplied to the private sector at a price premium of 10%. The annual private pharmaceutical market in Ethiopia is estimated to be worth US\$ 100 million. In 2014, the Ethiopian industry exported pharmaceutical products worth almost US\$ 2 million, which was far

below the GTP-I target of US\$ 20 million. The bulk of the exports were accounted for by Sino-Ethiop, which exported empty gelatine capsules. The ownership of the companies is diverse and ranges from two large companies to smaller entities that are joint ventures between Ethiopian entrepreneurs and foreign investors from China, India, Jordan, Saudi Arabia, Sudan and the United Arab Emirates. (MOH, MOI, 2015).

World Bank statistics show that manufacturing companies in Ethiopia including the pharmaceuticals operating in Ethiopia registered stagnation and declining profits for the last five years due to a turbulent operating environment. The local pharmaceutical industries only managed to access 20% government and private sector spending in the pharmaceutical market and almost none from the donor communities. The underutilization of their production capacity means that these firms are not operating optimally and as such may not be meeting their operational costs, hence making losses. This study sought to investigate the factors affecting pharmaceutical manufacturing companies in Ethiopia. Murule (2011) did a study on the strategic response by pharmaceutical manufacturing industry in developing countries where he found the pharmaceutical manufacturing firms to have adopted strategies as pricing, marketing, strategic alliance and ICT. While these studies are beneficial to the researcher, none of the studies was done on the factors affecting growth pharmaceutical manufacturing in Ethiopia, hence a knowledge gap. It will therefore fill this gap that the researcher sought to fill.

1.3 Objective of the Study

To assess factors affecting vertical growth of local pharmaceutical manufacturing companies in Addis Ababa.

1.3.1 Specific Objectives

1. To describe the competition level of vertical growth of local pharmaceutical manufacturing in Addis Ababa.
- 2 To describe government Regulation that affect vertical growth of local pharmaceutical manufacturing companies in, Addis Ababa.
- 2 To identify international Regulation that affect vertical growth of local pharmaceutical manufacturing companies in, Addis Ababa.

4. To describe the cost of productions of local pharmaceutical manufacturing companies in Addis Ababa

1.4. Research Questions

1. What is the competition level of local pharmaceutical manufacturing in Addis Ababa?
2. What are the various government regulations that affect vertical growth of local pharmaceutical manufacturing in Addis Ababa?
3. What are the various international regulations that affect vertical growth of local pharmaceutical manufacturing in Addis Ababa?
4. What are the various costs of productions that affect vertical growth of local pharmaceutical manufacturing in Addis Ababa?

1.5 Significance of the Study

This study will be beneficial to the following: The government and policy makers in particular may gain understanding of the factors that influence growth of local pharmaceutical manufacturing companies in industrial parks and may therefore develop informed policies that would enhance their growth. It will assist the management of pharmaceutical manufacturers to identify the factors hindering or promoting sustainable growth of their companies in Ethiopia. This may help them to design proper ways of managing threats or harnessing positive drivers so as to maximize on their productivity and profits.

Further the study is expected to increase the pool of knowledge by providing information on factors affecting growth of pharmaceutical manufacturers in Ethiopia.

1.6 Scope and limitation of the Study

The study was conducted in areas of pharmaceutical manufacturer in Ethiopia specifically in Addis Ababa.

1.7 OPERATIONAL DEFINITION OF TERMS

Growth is process of increasing in physical size. In terms of firm, growth is capability to increase annual revenues by more the industry average over a sustained period.

Firm growth is the development process that enterprises keep the tendencies of balanced and stable growth of total performance level (including output, sales volume, profit and gross assets) or keeps realizing the large enhancement of total performance and the stage spanning of development quality and level

Internal environmental factors: Refers to the elements within the organization, including current employees, management, and especially corporate culture that impact the operations and growth of the company.

External environmental factors: Refers to all the outside factors or influences that impact the operation of a company.

1.8 organization of the study

The study will be organized into five Chapters. The first chapter include: Background of the study, Statement of the problem, Research questions, Research objectives, Significance of the study, Scope and Limitation of the study, and operational Definition of terms and Organization of the study. Chapter two include: a review of related literature (theoretical and empirical). Chapter three includes research methodology (description of the study area, research design, population of the study, sampling, sampling methods, data collection Tools, the data collection procedures and ends with data analysis, Reliability and validity, and Ethical consideration).Next chapter is chapter four will deals with results of the research and the discussion upon the findings. The last chapter is chapter five will presents a summary of the major findings of the research/conclusion and recommendations based on the findings.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction the chapter is structured as follows: theoretical literature, empirical literature and conceptual framework related to factors affecting the pharmaceuticals manufacturing including competition, national/ international regulations and Cost of production

2.2 Theoretical literature

The study was reviewed on the transaction cost theory and theory of the growth of the Firm

2.2.1 Transaction Cost Economics Theory

Transaction cost economics theory tries to explain why companies exist, and why companies expand or source out activities to the external environment. The transaction cost theory supposes that companies try to minimize the costs of exchanging resources with the environment, and that companies try to minimize the bureaucratic costs of exchanges within the company. Companies are therefore weighing the costs of exchanging resources with the environment, against the bureaucratic costs of performing activities in-house. Coase (1937) set out his transaction cost theory of the firm in 1937, making it one of the first (neo-classical) attempts to define the firm theoretically in relation to the market. A firm's interactions with the market may not be under its control (for instance because of sales taxes), but its internal allocation of resources is within a firm, market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur who directs production. Transaction cost theory concentrates on the relative efficiency of different exchange processes (Tirole, 1988). Transaction costs economics theory is frequently viewed as a subset of new institutional economics. The new trend in transaction costs is to describe firms from a new perspective based on organizational terms, as governance structures, not in neoclassical terms, as production functions. Evidence has shown that the performance of firms which take into consideration transaction costs is better than the performance of firms which do not consider them (Macher & Richman, 2008). Furthermore, it was found that companies that follow the basic transaction costs hypothesis, (i.e. having high costs of finding and negotiating with partners), tend to use a higher

degree of control (Brouthers, 2002). In addition, transaction-costs economics has recognized that the productivity of a value chain is a function of both production costs and transaction costs, and that, moreover, transaction costs are significant and have a major impact on economic efficiency (Dyer & Chu, 2003). From a global sourcing perspective companies get their intermediate products from outside suppliers if the transaction costs of external purchases are lower than domestic ones. In other words, transaction costs determine the governance structure of a supply chain (Bremen, et al., 2010). In the light of globalization, firms have to decide whether to follow a domestic or a global source to supply their needs. Furthermore, firms must consider the costs of negotiating and concluding contracts for each transaction (Coase, 1937). Those costs cannot be eliminated, but the firm can reduce them by making one contract for a longer period instead of many shorter contacts. The firm is treated as an avoider of transaction costs, i.e. of negative costs (Hardt, 2009). Williamson refers to human actors as positive transaction costs and in pragmatic methodology all of them play key roles in the transaction costs treatment of inter firm contracting (Williamson, 2008). In addition, there are vertical integration consequences, i.e. the replacement of the costs of buying and selling on the market by the costs of intra-firm transfers; the existence of vertical integration may suggest that the costs of operating competitive markets are not zero (Williamson, 2008). The idea of zero transaction costs is a fiction (Coase, 1937). Economic approaches to the study of organization and transaction costs focus on efficiency (Williamson, 2008). Therefore, the transaction costs approach is applied at three levels of analysis: first, the firm-wide level (this takes into consideration all operational activities which are related to each other), secondly, operational level, which determines activities will be done inside and outside the firm. Thirdly, human capital organizing approaches (creating harmony between interior structures and work groups). This theory is relevant to this study as it relates to how cost implication is very important in the production system of a firm. The cost is in terms of the cost of doing business such as the taxes, electricity, raw materials among others which have a direct influence of the firms operations and eventual growth.

2.2.2 Theory of Growth of Firm

The theory of the growth of the firm advocated by Edith Penrose (1959) defines a firm as a collection of (productive) physical and human resources. According to Penrose, there is no limit to the growth of firms, it is the rate of growth that is limited in the short run but there is no limit

to the size of the firm (Penrose, 1959). Growth is an administrative planning unit, the activities of which are interrelated and is coordinated by policies which are framed in the light of their effect on the enterprise as a whole. Growth in any period is nonetheless limited by the amount of available managerial attention. Managers who spend too much time focusing on the firm's expansion divert their attention from operating efficiency. This model of the firm has a central managerial discretion responsible for general policies (Penrose, 1959). In neoclassical economic theory, cost for producing one more product is equivalent to the product price. This makes the marginal utility of the product equal to the marginal costs. In the long term within a market with free competition the optimal size of firm unit is obtained once the farmer reaches the lowest average cost for the product. The productive activities of the firm are governed by the productive opportunities as seen by the entrepreneur. The growth gets limited by the fact that the firm doesn't see opportunities for expansion, is unwilling to act upon them, or is unable to respond to them (Penrose, 1959). For a firm, the decision to search for opportunities is an enterprising decision requiring entrepreneurial intuition and imagination, and must precede the economic decision to go ahead with the examination of opportunities for expansion. Hence, the managerial competence of a firm is to a large extent a function of the quality of the entrepreneurial services available to it. Another key concept in Penrose's theory of firm growth is that firms are composed of idiosyncratic configurations of 'resources'. These resources can play a role in ensuring durable competitive advantage if they are valuable, rare, inimitable and non-substitutable (Dierickx & Cool 1989; Eisenhardt & Martin, 2000). Examples of resources are brand names, in-house knowledge of technology, employment of skilled personnel, trade contracts, machinery, and efficient procedures (Wernerfelt, 1984). A firm can decide upon the direction of a growth project by examining the strengths and weaknesses of its existing resource base (Barney, 1986). Economies of growth may emerge from exploiting the strengths associated with the unique collection of productive opportunities available to each firm. The indivisible and interdependent nature of these resources can also be seen to add impetus to a firm's growth (Coad, 2006). In fast-changing markets, however, a firm's competitive advantage may erode if it relies too heavily on certain specific resources. In such circumstances, a firm's performance depends on its abilities to create or release resources and to reconfigure their resource portfolio. These abilities are known as 'dynamic capabilities' (Eisenhardt and Martin, 2000; winter, 2003). This theory is applicable to the study as it seeks to explain the importance of the management

decision in terms of the growth of the firm such as the decision to invest in research and development, implementing competitive strategies to enhance firm's competitive advantage with the aim of enhancing the growth of the firm.

2.2.3 The growth portfolio

According to Penrose (1995), the term 'growth' is often used with two different connotations. It sometimes denotes merely an increase in amount; for example, when one speaks of 'growth' in output, export and sales. At other times, however, it has a primary meaning implying an increase in size or improvement in quality as a result of a process of development, akin to natural biological processes in which an interacting series of internal changes leads to increases in size, accompanied by changes in characteristics of the growing object. Most research has been directed at explaining differences in the amount of growth, while other aspects of the process viewpoint, in other words the qualitative viewpoint on growth, have not been mentioned. Traditionally, the amount perspective of growth is the most referred to. The traditional growth models presented earlier have two main dimensions: time and some growth-in-amount oriented dimension such as sales growth, revenue or the amount of employees. Anyway, it is employment growth which has most relevance to many policy makers, since SME growth has been seen as an important way of reducing unemployment (See e.g. Birch 1979, Robson & Bennett 2000, Storey 1994). According to Hanks & Chandler (1992) the growth of a company has multiple dimensions. Hanks & Chandler (1992) defines organisation growth as the creation of an organisation and its subsequent development in terms of age, size, value, sophistication and complexity. The definition is derived from general definitions of growth, such as 'the action, process or manner of growing within organizations'. However, the definition also includes the idea of an increase of organisation magnitude and size, as well as the development from simpler to more complex organization forms. The dimensions can also be categorised as contextual dimensions and structural dimensions (Hanks et al. 1993). Growth in SMEs is often seen synonymously as both growth in company size and developments within the capabilities of the company. Their interdependency seems to be obvious in some cases, such as with competencies that are needed to increase production volume, for example. However, based on empirical evidence, qualitative development does not necessarily coincide with company growth and, in SMEs, these processes often take place at different times. (See i.e. Garengo & Bernardi 2007). According to Laukkanen

(2000), the growth of a company can be both quantitative and qualitative. Virtanen (1999) mentions these two dimensions of growth too and points out a third one, the growth of the company's market value. In this study, we utilise the two dimensional growth portfolio (See Laukkanen 2000). The portfolio illustrates how a company can grow in terms of an amount perspective (quantitative growth) and a process of development perspective (qualitative growth). In many definitions of growth, the amount perspective is present. The first, the quantitative growth dimension is defined by the quantitative growth of measurable factors, such as the turnover of the company, the amount of personnel, production volume and export volume (See i.e. Laukkanen 2000, Wiklund 1998, Salonen 1995, Penrose 1959). The second, the qualitative growth dimension is defined by a growth of qualitative factors such as organizational development, competence development, and the development of processes. The development of an organisation can be compared to the growth of a human being in such a way that an organization can grow, not only physically, but also mentally (See i.e. Laukkanen 2000, Penrose 1959). An illustration of the growth portfolio is presented in figure 1. In the portfolio, the arrow with a dashed line illustrates a desired combination of resource allocation and the arrow with a continuous line illustrates the realised combination of resource allocation. The line (or vector) between the arrows reflects the gap between the actual (realised) and the (optimal) desired resource allocation.

2.3 Factors Affecting Growth of Pharmaceutical manufacturing Firms

Pharmaceutical companies have a responsibility to their shareholders, investors, employees and patients to operate in a way that will ensure their viability for the long term. That is the only way that they will be able to continue to provide and improve the medicines that societies depend on them to produce. There exists huge opportunity for the pharmaceutical industry to meet the needs of patients in therapeutic areas, as well as and by inference the financial gains they can have in geographies that have been a focus of their business plans but have huge and diverse unmet needs. Yet, the growth of the pharmaceutical firms has been seen to be dwindling due to the changing business environment (Banes, 2010). Various studies have linked the growth of firms to factors such as regulation change and political impact, increased competition, dumping, increasing cost of production among others (Baines, 2010; IMS, 2008).

2.3.1 Competition and Firms Growth

Clougherty and Zhang (2008) review 433 specific airline routes between 1987 and 1992, as well as each airline's number of competitors in its home market and share of passengers on that route. They find that fewer domestic competitors lead to a decrease in an airline's market share on international routes. Private importers from South and East Asia were increasingly generating price-based competition in the Ethiopian medicines market as liberalization took hold. With export figures that in absolute terms remain very modest, it is essential that Ethiopian manufacturers keep upgrading and also control costs in order not only to expand its foreign markets but also to keep up with increasingly demanding technological standards and cheap foreign competition that creates a serious challenge to local producers.

2.3.2 Government Regulations on Firm's Growth

Extensive empirical literature has assessed how the regulatory environment for business affects a broad range of economic outcomes at both the macro and micro levels including productivity, growth, employment, trade, investment, access to finance and the informal economy. Several studies reach this conclusion. Hansen and Mitchell (2000) find that government regulations are significant determinants of firms' performance. In general, existing studies are limited by their reliance on cross-sectional variation in revenues or prices, and their resulting vulnerability to heterogeneity across countries in type of regulation and other determinants of prices. There are some studies that address the heterogeneity problem by analyzing longitudinal data and comparing pharmaceutical expenditure before and after policies take effect. For example, Pavcnik (2002) estimated a 10–26% decrease in drug prices as a result of a reference pricing policy introduced in Germany after 1989. Pekurinen and Häkkinen (2005) suggested that voluntary generic substitution and prescribing policies had no effect on expenditures in Finland, but that compulsory generic substitution decreased prices and led to cost savings in the first year after introduction. However, most of these studies only examine the effects of a limited range of regulations in one country or a small group of countries.

2.3.3 International Regulations and Firms' Growth

Detailed account of the history of pharmaceutical regulation can be found in Lee and Herzstein (1986), and Permanand (2006). In brief, the regulation of pharmaceuticals evolved at the national level in response to the public health concerns (typically, urged by drug disaster that required immediate change and strengthening of safeguards) with globalization of pharmaceutical markets, some aspects of regulation; especially those concerning quality, safety and efficacy were taken to the supranational level. In short, the objectives of regulations can be summarized as including securing a reward to R&D to assure a continuous flow of innovative new medications; ensuring the safety of drugs; and controlling the quantity and enhancing the quality of drug expenditures. The impact of international policy regulations and standards on trade has been an important global policy issue during the past decade. Regulations and standards, in principle, are designed to facilitate production, guarantee quality of products, reduce transaction costs and enhance contestability in the market. However, standards and technical regulations can produce serious distortions in commercial markets: international regulatory systems may deter trade and limit market entry through environmental, health or safety standards (Maskus et al. 2008). Every country establishes their own policies and standards to deal with needs of the national industry. In this context, developing countries fall behind developed country in establishing effective standards and regulations that take international best practices into consideration. Developing countries find it difficult to develop standards that are straightforwardly acceptable by the developed nations, and they have a hard time in meeting standards and regulations set by developed countries (Prasad & Jayasuriya, 2003). A large literature has focused on how international regulations and standards impact productivity growth and trade competitiveness in both manufacturing goods and agricultural products. With respect to regulations and standards, many policy-makers suggested that international regulation may have influence the countries' decision on what to produce, whether to export, and where to export. However, empirical analyses of the impact of policy regulations and standards on exporting firms in developing countries are relatively sparse. Since the initiation of economic reforms and the adoption of the open door policy, international trade economy has experienced dramatic growth. Developing countries integration into the global economy has largely contributed to its sustained economic growth. Some of the industries with comparative advantages began to acquire a high level of specialization, that contribute to achieved a high growth rate of GDP, as well as an enormous

inflow of hard currency and increase in employment. However, some international trade regulations are restrictive as the stakes are sometimes raised so high that the local firms cannot participate but spectate as they lack the capital required and the quality standards may not allow them. This has always locked out the local manufacturing firms in Kenya from participating in the supplies of the pharmaceuticals in the international arena (Odhiambo, 2013).

2.3.4 Cost of Production and Firms' Growth

Drury (2005) defines cost as expenses, which have been consumed in earning revenue. Profitability was as the excess of revenue over cost. In other word, profit is determined by deducting cost from revenue. This shows the linearity of profit and cost. The term “variable” and fixed cost otherwise known as indirect and direct expenses have been traditionally used in the management accounting literature to describe how costs react to changes in activity level. Short-term variable costs vary in direct proportion to the volume of activity that is, doubling the level of activity double the total variable costs. Furthermore, Horngren et al. (2009) added that costs are defined as variable or fixed with respect to a specific cost object and for a given time.

The allocation of costs to products is in-appropriate for cost control, since the manufacture of a product may consist of different operations, all of which are the responsibility of different individual. The product cost will not therefore pinpoint costs to area of responsibility, to overcome this problem, Zengin and Ada (2010) suggested that costs and revenue must be traced to individual who are responsible for their incurrence. This system is known as ‘responsibility accounting’. The centers identified by Drury (2005) are: (a) A cost center where managers are responsible for the expenses that are under their control. (b) A profit centre where managers are accountable for sales revenue and expenses e.g. selling and production department of a company. (c) An investment centre where managers are normally accountable for sales, revenue and expenses, and also responsible for some capital investment decisions and able to influence the size of the investment. McGlaphren (2003) cites that production costs are expenses, such as materials and labor that a company incurs in the course of producing the product to sell to consumers. In general, the lower the production cost, the higher the profit, or the amount left over after subtracting expenses from sales revenue. However, low production costs do not necessarily guarantee a high profit.

A business may have unsustainably high fixed costs, such as rent, or may cut production costs of producing an inferior product that nobody wants. A firm maximizes profit by operating where marginal revenue equal marginal costs. A change in fixed costs has no effect on the profit maximizing output or price. The firm merely treats short term fixed costs as sunk costs and continues to operate as before. This can be confirmed graphically. Using the diagram illustrating the total cost–total revenue perspective, the firm maximizes profit at the point where the slopes of the total cost line and total revenue line are equal. An increase in fixed cost would cause the total cost curve to shift up by the amount of the change (Drury, 2005).

2.3.5 Growth of the Firm

The well-known growth model of Churchill & Lewis (1983) argues that a young company is usually in the survival phase. Despite the fact that there will not be growth immediately, the investing factor will show its impact in the near future. Hence, the investing factor is necessary for young companies to survive. According to the model, younger companies are less experienced and organizationally inefficient. Larger companies on the other hand have sufficient experience and are more efficient. According to Phillips & Kirchhoff (1989), young companies without growth or with negative growth are more likely to fail. Growth enables the company to add value and is a factor which strengthens the organization. In finance, growth rate estimation of dividends, earning and price per share are important factors in determining the value of an investment or a firm. Enterprise growth can be measured in sales and profits which may give a more accurate estimation of growth. However, the entrepreneur may not give accurate figures (Liedholm et al, 2008) so using the measurement of employment growth becomes more practical and prudent. Several studies have used the number of employees as a proxy for the size of the firm.

In contradiction to Ahlström's model the Gibrat's law (1931) states that the growth of a company is a random process. According to the author, the size of a company is independent from firm growth. However, Churchill & Lewis' model (1983) indicated firm size as a growth standard, which is a measure for firm growth.

2.4 Summary of Literature and Research Gaps

The reviewed literature (Drury, 2005; Le Bas, Haned&Colombelli, 2011) has revealed that the competition, the government legislation, international regulations and the cost of production have an influence on the growth of the firms. However, none of these studies were done in Ethiopia hence the findings cannot be used to generalize the status in these settings. Secondly, there studies were done in other sectors and not in the pharmaceutical sector, hence a knowledge gap. This study therefore seeks to assess factors affecting the growth of pharmaceutical manufacturing in Ethiopia.

2.5 Conceptual Framework

The conceptual framework of the study is presented in Figure 2.1

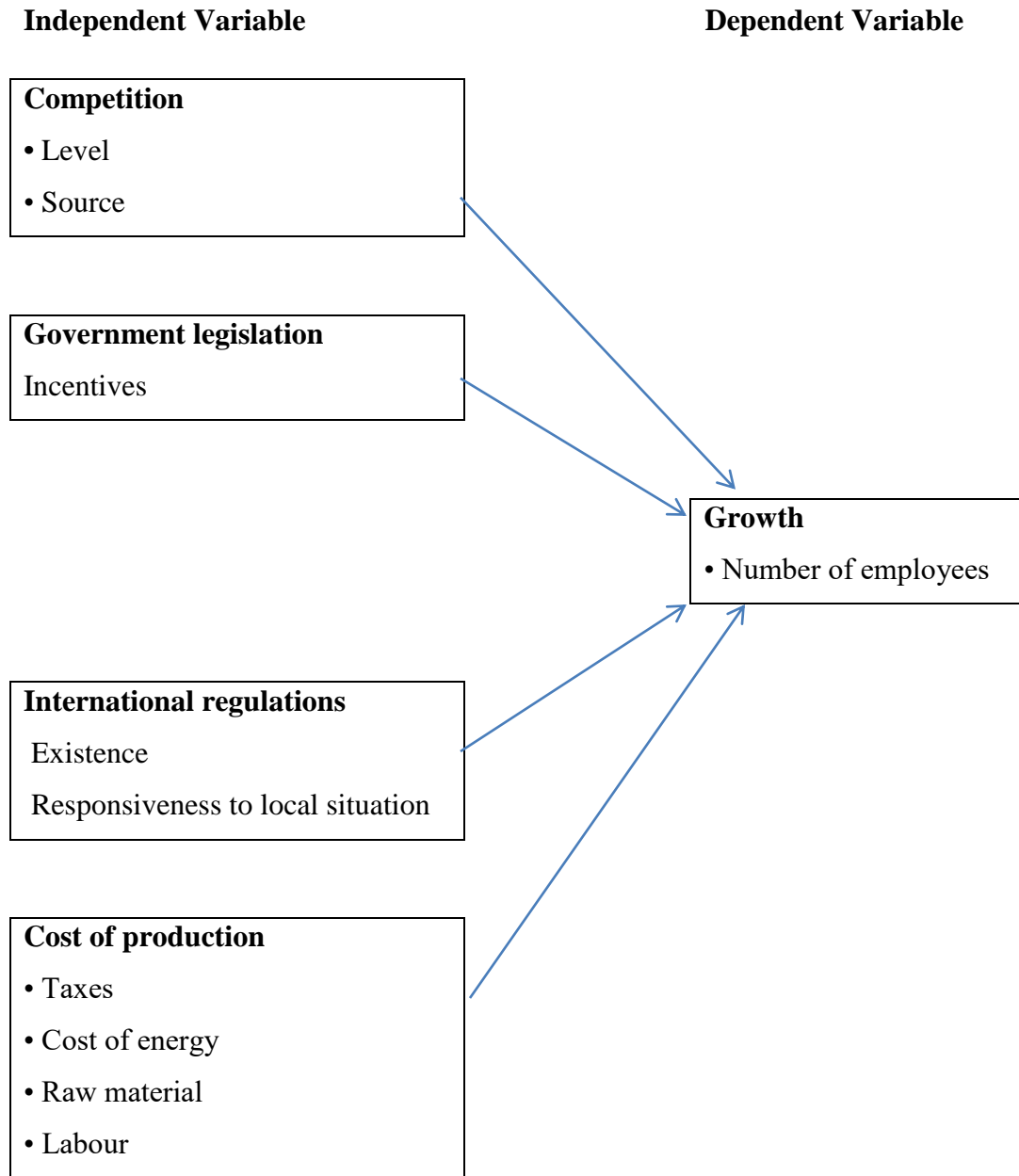


Figure 2.1 Sources (Douglas M.Weru & W.Adu) , 2023

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was used in the study.

3.2 Research Approach

In this study both of Quantitative and qualitative mixed approach were used to undertake the study.

Qualitative research identifies Pharmaceutical manufactures challenges that are affecting to the growth in the industry .it aims to understand the individual's view without making any value judgment during data collection.

Quantitative research is based on the measurement of quantity or amount. In addition, it is applicable to phenomena that can be expressed in terms of quantity (kothari 2004).

3.3 Research Design

The study adopted descriptive cross-sectional research design, which entails collection of data on more than one case at a single point in time with one or more variables. According to Cooper and Schindeler (2003) cross sectional surveys are best applicable where the study seeks to measure the same variables across all the respondents.

A cross-sectional survey design is the most appropriate for investigating the behavior under study (Mugenda and Mugenda, 2003). Many studies in the past have utilized this design in wide surveys to derive their evidence on various strategic management issues affecting the pharmaceutical industry. In this study, the researcher aimed to assess factors affecting growth of local pharmaceutical industries in Ethiopia.

The design of this study was employee descriptive research design. Descriptive research design is considered best for observing, describing recording, analyzing and reporting conditions that exist without alterations, Whereas explanatory study to examine the relationships between variables. A descriptive study deals with what, how and who of a phenomenon; these are also the concerns of this study. This research design was appropriate for this study because the data required meeting the stated objectives can easily be obtained from questionnaire based sampling.

3.4 Target Population

The target population for this study was employees working in three local pharmaceutical manufactures in kilinto industrial park Addis Ababa

3.5 Sampling Procedure and Sample Size

Due to the manageability of the population non probability purposive sampling methods was used. Kilinto industrial pharmaceutical manufacturers' workers were targeted. The researcher conducted a census study in which all the elements of the population were studied. The sample size was therefore the pharmaceutical Manufactures who have more than five years in pharmaceutical manufacturing for quantitative study and 10 key informant interview (KII) was conducted for company top level managers.

3.6 Procedures of Data Collection

The researcher was used questionnaires to collect data from the respondents. The advantage of using questionnaires is that they are an entirely standardized measuring instrument because the questions are always phrased exactly in the same way for all respondents. It is more efficient in that it requires less time to respond to information, permits respondents to remain anonymous in their responses and it is easy to administer (Mugenda and Mugenda, 2003). The questionnaire comprised of five sections, demographic data, competition, government legislation, international regulations and cost of doing business. The researcher then administered the questionnaires as well as KII was conducted after receiving ethical approval from the University.

The procedure for the data that was collected after the respondents are communicated to get their consent. Once their consent was known, the prepared questionnaires are distributed to each participant and interview was conducted by appreciating their participation and devoting their precious time for the research. The questionnaires were collected by checking the completeness of the data.

Finally, the interview was adjourned by appreciating the respondents for the participation.

In instances where the respondents were not given time to respond to the questions immediately, the researcher used the drop and pick method for questionnaires. The questionnaires were left with the respondent to fill at their convenient time and return within a week. The data was collected between April 8-28, 2023.

3.7 Validity and Reliability of the Instruments

3.7.1 Validity of the Instruments

Validity implies the degree to which a question measures what it was intended to measure. The questionnaires were developed on the basis of previous studies and review of related literature. Pharmaceutical manufacturing vertical growth has been evaluated in questionnaires. A pilot study conducted in a new KIP found around Addis Ababa. 10 sample questionnaires were distributed to make the validity of the data collection questionnaire (instrument) a certainty before the actual data collection tool was dispatched to the responders. The feedbacks obtained from pre-testing the questionnaire were amended to avoid errors during data collection. Data entry should be done the same day.

3.7.2 Reliability of the Instruments

The researcher pilot tested the instruments to check reliability. The researcher administered the questionnaires to the same group of persons in the pilot study after one week. The split half method was used to establish instrument reliability. Computation of the correlation between the scores was done by first splitting the tests into two halves. The tests were then being assigned odd and even number items. To compute the coefficient, the researcher used the formula:

Where R_e = reliability of the original test r = reliability of the coefficient resulting from correlating the scores of the odd items with the scores of the even items. Reliability was analyzed with the aid of computer software Statistical Package for Social Sciences (SPSS). The reliability was tested using Cronbach's Alpha coefficient. A high value of alpha of 0.7 and above is often used as evidence that the item measure an underlying (or latent) construct (Gliem & Gliem, R. R. (2003). The study got a value of 0.81 which is higher than the recommended, 0.7, hence the instruments were deemed reliable.

3.8 Data Analysis

The data was cleaned prior to analysis. This involves editing of the primary data to identify and eliminate errors which was made by respondents. The data was analyzed and presented using descriptive statistics such as mean scores and standard deviation to determine the distributions of the variables. The results of analysis was presented in, tables, pie charts as well as graphs.

For Key informant interview the data was probed using the probing questions by taking notes and final thematic analysis was made

In this study effort has been employed to maintain quality of data through the different steps like data entry, analysis, interpretation and representation.

The researcher used descriptive statistics research design to analyze data to allow for meaningful description of data collected using statistics and thematic analysis.

The data collected through questionnaires was coded and entered into the statistical package for social science (SPSSV-20) for analysis of quantitative data in computer to give all analysis.

After the data had been analyzed and transmitted into figures and tables, a conclusion for each question is made to relate the findings and the survey topic together and triangulated to the qualitative thermalized data.

3.9 Ethical considerations

Ethical approval was obtained from St. Mary University Institutional Review Board the participants who accepted willingly to take part in the study will be taken through a consent form systematically for them to understand before they signed it. Participation will be purely on voluntary basis. Participant's names were not included in the data collection tool. Participants will be assigned study numbers in the data collection form instead of their individual or company names. There will be no direct benefits or risks pecuniary to the participants in the study

CHAPTER FOUR: RESULTS AND DISCUSSION

4. Results

4.1 Introduction;In this chapter, data from the field is analyzed and presented from where interpretation of the findings is given. This is done as per the objectives of the study. The findings are presented in figures and tables. A total of 53 questionnaires were given out, out of which, 50 were completed and returned to the researcher. This gave a response rate of **94.3%**, which is above the recommended 31% response rate by Cooper and Schindler (2008) for social sciences.

4.2 Demographic Information

The study sought to establish some demographic information concerning the respondents and respondents firms. These included the nature of the firms' registration, the type of ownership and how long they have been working in the firm and firm years of operation. The findings are presented in the subsequent sections.

4.2.1 Nature of Registration

The study sought to determine the nature of the registration where the respondents firm of the pharmaceutical companies in Kilinito industrial park Addis Ababa Ethiopia. The results are presented in Table 4.2.1

Table 4.2.1 Nature of Firm Registration of the respondents of kilinito industrial park local pharmaceutical manufacturers, Addis Ababa

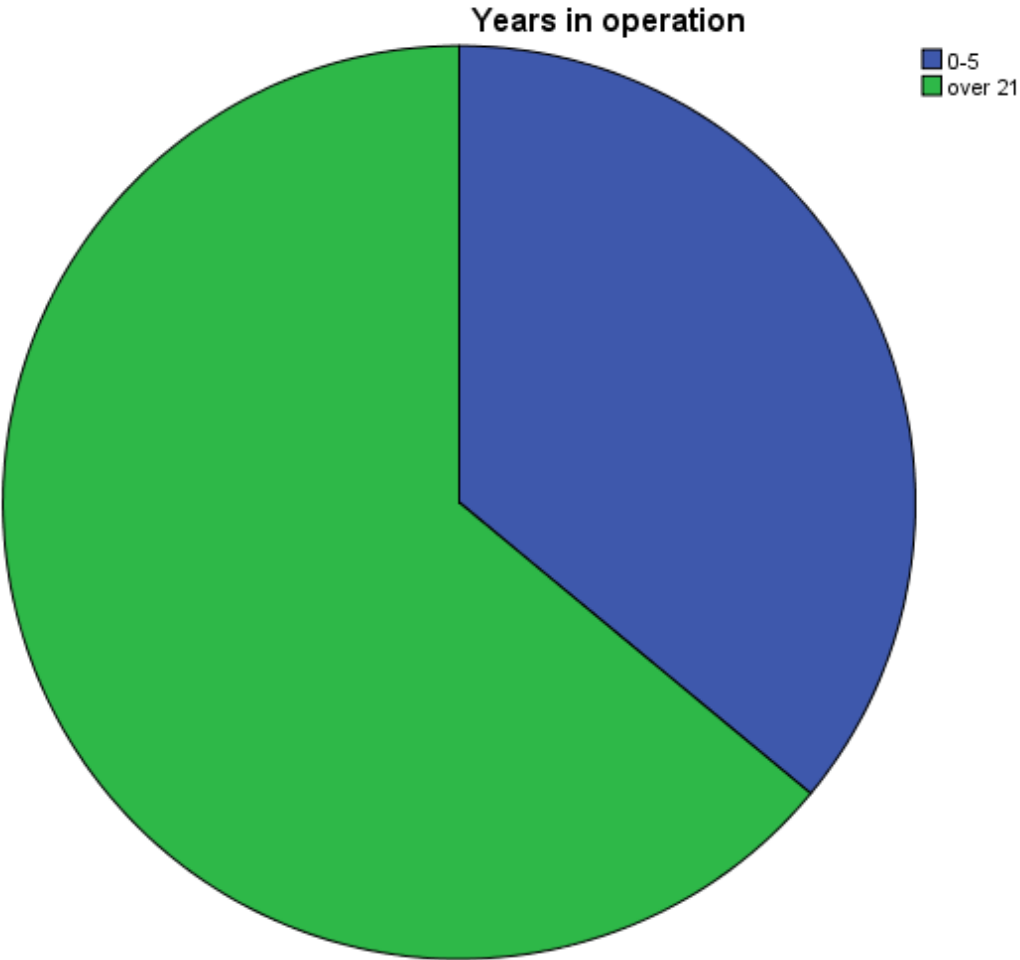
| | Frequency | Percent |
|------------------------|-----------|--------------|
| Partnership | 6 | 12.0 |
| Limited company | 44 | 88.0 |
| Total | 50 | 100.0 |

The findings show that most of the respondents firms (88%) of respondents firm were limited liability companies while 12% were partnerships.

4.2.2 Years of Operation

The study sought to determine the number of years the respondent firms have been in operation in Ethiopia. The results are presented in Figure 4.2.2

Figure 4. 2. 2Years of Operation



Majority of the respondents firms (64%) have been in operation for over 20 years in Ethiopia. The findings also show that 36% of the firms have been in operation for less than five years. The findings mean that most of the respondents firms have been in operation in Ethiopia for several years.

4.2.3 Number of Employees at Start

The study sought to determine the number of employees at start. The findings are presented in Table

Table 4.2. 3. Number of Employees at Start

| | Frequency | Percent |
|-----------------|-----------|---------|
| 10-15 Employees | 3 | 6.0 |
| 15-20 Employees | 47 | 94.0 |
| Total | 50 | 100.0 |

The findings showed that 94 % of respondents are working in the firms that had between 15-20 employees. The results mean that most of the firms started as small companies.

4.2.4 Number of Employees at the Time of Study

The respondents were asked to state the number of employees their firms have currently. The study's findings show that all of the respondent firms (100%) have between above 50 employees. The findings therefore mean that there has been growth in the pharmaceutical manufacturing firms in Ethiopia.

4.3 Competition and Growth of Pharmaceutical Manufacturing Companies in Ethiopia.

This section sought information to determine whether competition in the industry affected growth of pharmaceutical manufacturing firms in Ethiopia.

4.3.1 Level of Competition in the Pharmaceutical Sector in Ethiopia

The respondents were asked to describe the level of competition in the pharmaceutical sector in Ethiopia.

The study findings revealed that majority of the respondents (50%) described the level of competition in the pharmaceutical sector as moderate to low.

The findings mean that the competition in the pharmaceutical sector is not as such competitive. Since there is no much production in pharmaceuticals sector locally

4.3.2 Source of Competition

The study sought to determine where the competition originated from.

The results are presented in Figure 4.3.2.

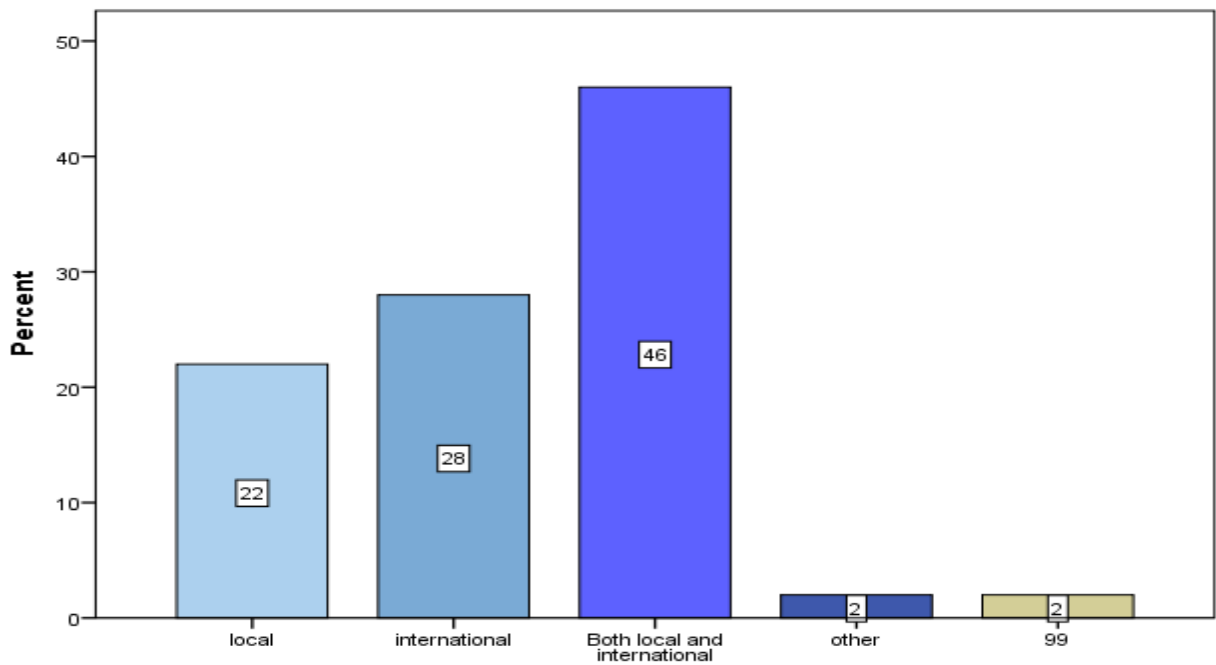


Figure 4. 5: Source of Competition

According to the results of the study, 46% of the respondents noted that the competition in the pharmaceutical sector was both local and international. The results show that 28% of the respondents indicated that the competition was majorly international while 22% indicated that the competition was generally local.

4.3.3 Description of Competition in the Pharmaceutical manufacturing Sector

The respondents were asked to state whether they agreed or not with the statements with regard to the competition in the pharmaceutical sector in Ethiopia. The findings are presented in Table 4.3.3

Table 4.3.3: Description of Competition in the Pharmaceutical Manufacturing

lot of importation of drugs in Ethiopia

| | Frequency | Percent |
|-------------------|-----------|---------|
| Strongly Disagree | 4 | 8.0 |
| Disagree | 3 | 6.0 |
| Neutral | 3 | 6.0 |
| Agree | 21 | 42.0 |
| Strongly agree | 19 | 38.0 |
| Total | 50 | 100.0 |

The study results show that majority of the respondents (80%) agreed and strongly agreed with the statement that there were a lot of imported drugs in the country.

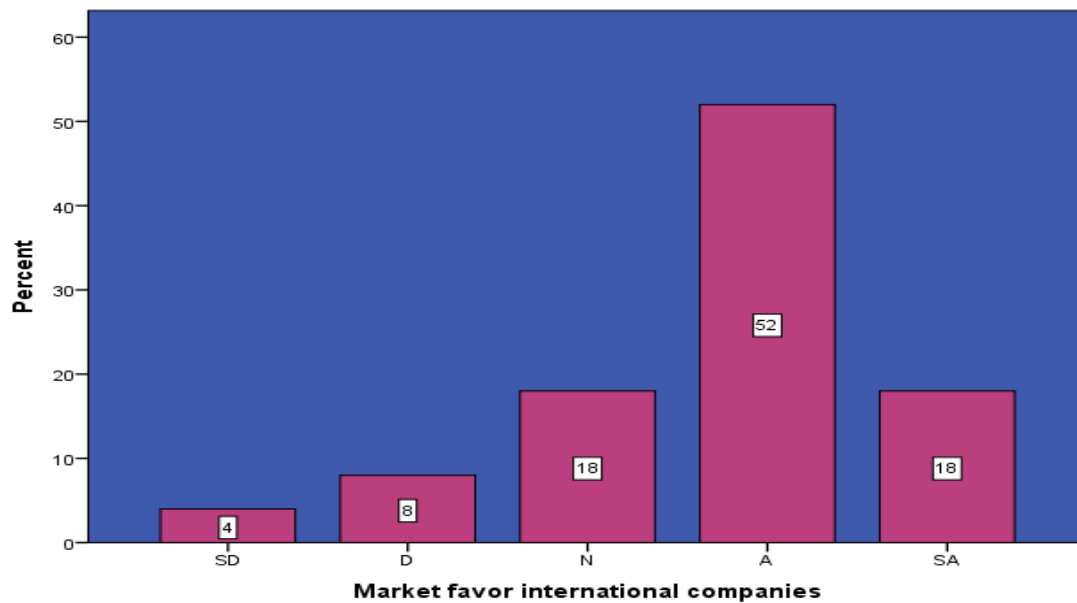


Figure 4.3.4 Market favor international companies

Majority of the respondents (70%) at least agreed that the market favored international companies. The study findings mean that to a large extent, the market did favor the local manufacturing firms in terms of competition

4.3.5 Have Coping Strategies to Counter Competition

The study sought to determine whether pharmaceutical companies in Ethiopia had coping strategies to counter competition. The results of the study revealed that fifty two percent of the respondent firms had coping strategies in place to counter the competition in the sector. Asked to explain their answers, the respondents indicated that they employed strategic sourcing of raw materials. The respondents also stated that their firms had adopted vigorous marketing and distribution systems. The firms also resorted to price reduction strategies so as to be competitive according to some respondents. The respondents further stated that one of the strategies employed to counter competition was to assure quality of their products and ensuring constant availability of the products.

4.3.6 Influence of Competition of Firms Growth

The respondents were asked to state the extent to which the competition in the sector influenced the growth of their organizations. The findings are presented in Figure 4.3.6.

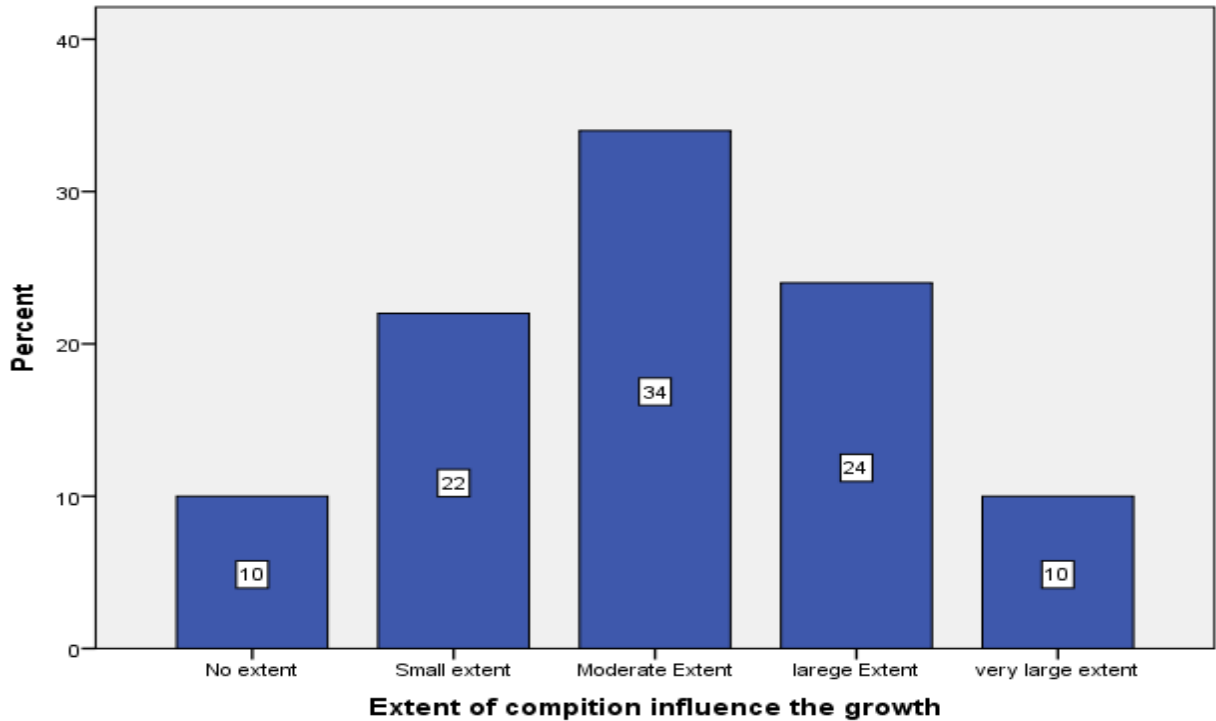


Figure 4.3. 6: Influence of Competition on Firms Growth

The results show that 24% of the respondents indicated that competition influenced the growth of the firms to a large extent. Findings show that 34% of the respondents indicated that competition only affected the growth of the firms only to a moderate extent. The findings mean that competition influenced the growth of the pharmaceutical manufacturing firms in Ethiopia.

Question Asked to state how in their opinion competition influenced the growth of the firms?From KII; Respondents indicated that competition led to the deterioration of sales volumes and margins. The respondents also indicated that due to the competition, their market share was reduced. Respondents indicated that due to the existing competition, their firms have

been forced to diversify especially in the areas of therapeutic which though less competitive, require large capital and marketing budgets which may negatively affect the growth of the firms. On the other hand, the respondents argued that competition has worked for good for their firms. Respondents stated that as a result of the competition, the local pharmaceutical manufacturing firms have had to invest in better premises, equipment and even personnel to enhance the quality of their products and hence remain competitive. The respondents also stated that the local pharmaceutical manufacturing firms have had to focus on marketing and improve on the quality of their products so as to remain competitive. From the above, it is clear that competition has had both positive and negative effects on the growth of pharmaceutical firms in Ethiopia.

4.4 Effect of Government Regulation on Growth of Pharmaceutical Manufacturing Firms

In this section the study sought to determine the effect of government regulation on the growth of pharmaceutical manufacturing firms in Ethiopia. The findings are presented in the subsequent sections 4.4.1 The study sought to determine whether the respondents were aware of any government legislation for the growth of pharmaceutical manufacturing in Ethiopia. The findings are in Figure 4.4.1

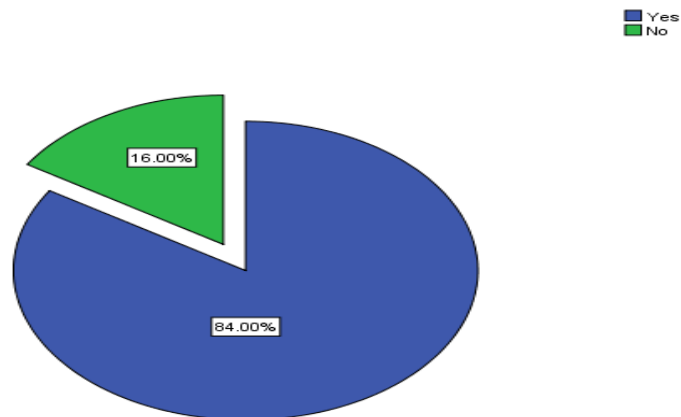


Figure 4. 4.1: Awareness of Government Legislation for Growth of Pharmaceutical Manufacturing in Ethiopia.

Majority of the respondents (84%) stated that indeed they were aware of existence of government legislation for the growth of the pharmaceutical manufacturing firms in Ethiopia. Findings however, show that 16% of the respondents were unaware of such a law. The findings mean that there exists a law regarding the growth of pharmaceutical firms and the respondents are aware of it.

4.4.2 Incentives to Local Pharmaceutical Manufacturing Firms by Government

The respondents were asked whether the government offered any incentive to the local pharmaceutical manufacturing firms to enhance their growth.

The study findings show that majority of the respondents (74%) indicated that indeed the government offered incentives to the local pharmaceutical manufacturing firms. According to a twenty six (26%), of the respondents, the government did not offer any incentive to the local manufacturers. The results mean that to a large extent, the government offered incentive to the local manufacturing firms. Asked to state the incentives by the government, the respondents stated that the government had given a 15% preference for local manufacturers in public procurement. The respondents also stated that there was a duty free importation or tax exemption of raw materials and packaging materials for pharmaceutical manufactures zero rating of VAT on packaging and other inputs among others.

KII -*Respondents also stated that there was a government verbal say on increased local content of buy Ethiopia products, however, this was not fully implemented or enforced.*

4.4.3 Government Legislation Aimed at Enhancing Growth of Pharmaceutical Manufacturing in Ethiopia

The study sought to establish the extent to which the government legislation was aimed at enhancing the growth of pharmaceutical manufacturing in Ethiopia. The findings are presented in Table 4.4.3

Table 4.4.3: Government Legislation Aimed at Enhancing Growth of Pharmaceutical Manufacturing in Ethiopia

| | Frequency | Percent |
|-----------------|-----------|---------|
| Small extent | 13 | 26.0 |
| Moderate extent | 19 | 38.0 |
| Large extent | 18 | 36.0 |
| Total | 50 | 100.0 |

Results show that most of the respondents (36%) stated that the government legislation was aimed at enhancing the growth of the pharmaceutical manufacturing in Ethiopia in large

extent .while 38% to a moderate extent while 26% indicated that this was only to a small extent. The results mean that the efforts by the government were only felt moderate to a small extent.

4.4.4 Government Legislation affecting Growth of Pharmaceutical Manufacturing Firms in Ethiopia

The study researcher to determine the extent the government legislation negatively affected the growth of pharmaceutical manufacturing firms in Ethiopia.

The findings are presented in Table 4.4.4.

Table 4.4.4: Extent to which Government Legislation affected Growth of Pharmaceutical Manufacturing Firms in Ethiopia

| | Frequency | Percent |
|--------------|-----------|---------|
| Small extent | 14 | 28.0 |
| Moderate | 12 | 24.0 |
| large extent | 24 | 48.0 |
| Total | 50 | 100.0 |

The results of the study show that 48% of the respondents stated that the government legislations had affected the growth of the pharmaceutical manufacturing firms in Ethiopia only to a large extent. The results show that 24% of the respondents indicated that the legislation affected the growth of the firms to a moderate extent while 28% indicated that this was to a small extent. The findings mean that the effect of the government legislation on the growth of the pharmaceutical firms is not adequate.

KII-Asked to state in their opinion the legislations the government should put in place in order to enhance the growth of pharmaceutical manufacturing firms in Ethiopia?,

The respondents indicated that the government needed to increase duty (import duty) on pharmaceutical products which can manufacture locally. The respondents also indicated that a specific legislation should be put in place compelling the government to source pharmaceutical products for its healthcare system locally and only procure externally, if they cannot be sufficiently produced locally.

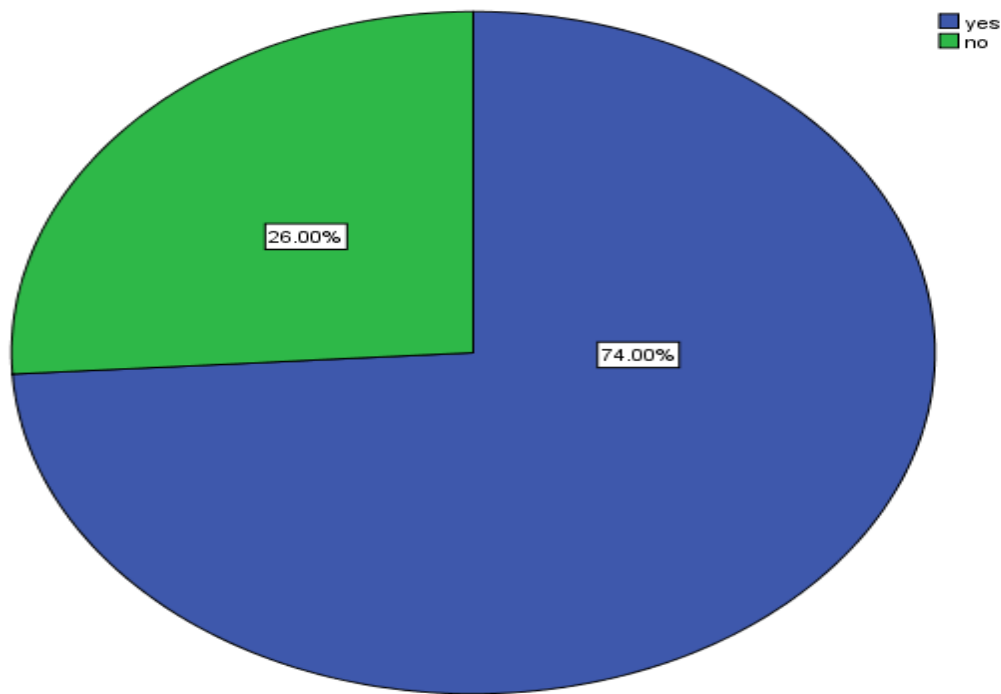
The respondents said that the government should consider removing VAT and other taxes on services and energy to the pharmaceutical firms so as to reduce the cost of production and make the local manufacturers competitive. Further the respondents stated that the government should consider setting up a fund that will enable commercial banks to lend to the pharmaceutical sector at subsidized rates and produce common raw materials Eg sugar processing for syrup formulation of drugs.

4.5 Effect of International Regulations on Growth of Pharmaceutical Manufacturing Firms

In this section the study sought to determine the effect of international regulations on the growth of pharmaceutical manufacturing firms in Ethiopia. The results are presented in the following sub sections.

4.5.1 Awareness of International Regulations Governing Operations of Companies The respondents were asked whether they were aware of the international regulations that governed the operations of pharmaceutical manufacturing companies. The findings are presented in Figure 4.5.1.

Figure4.5.1: Awareness of International Regulations Governing Operations of Companies

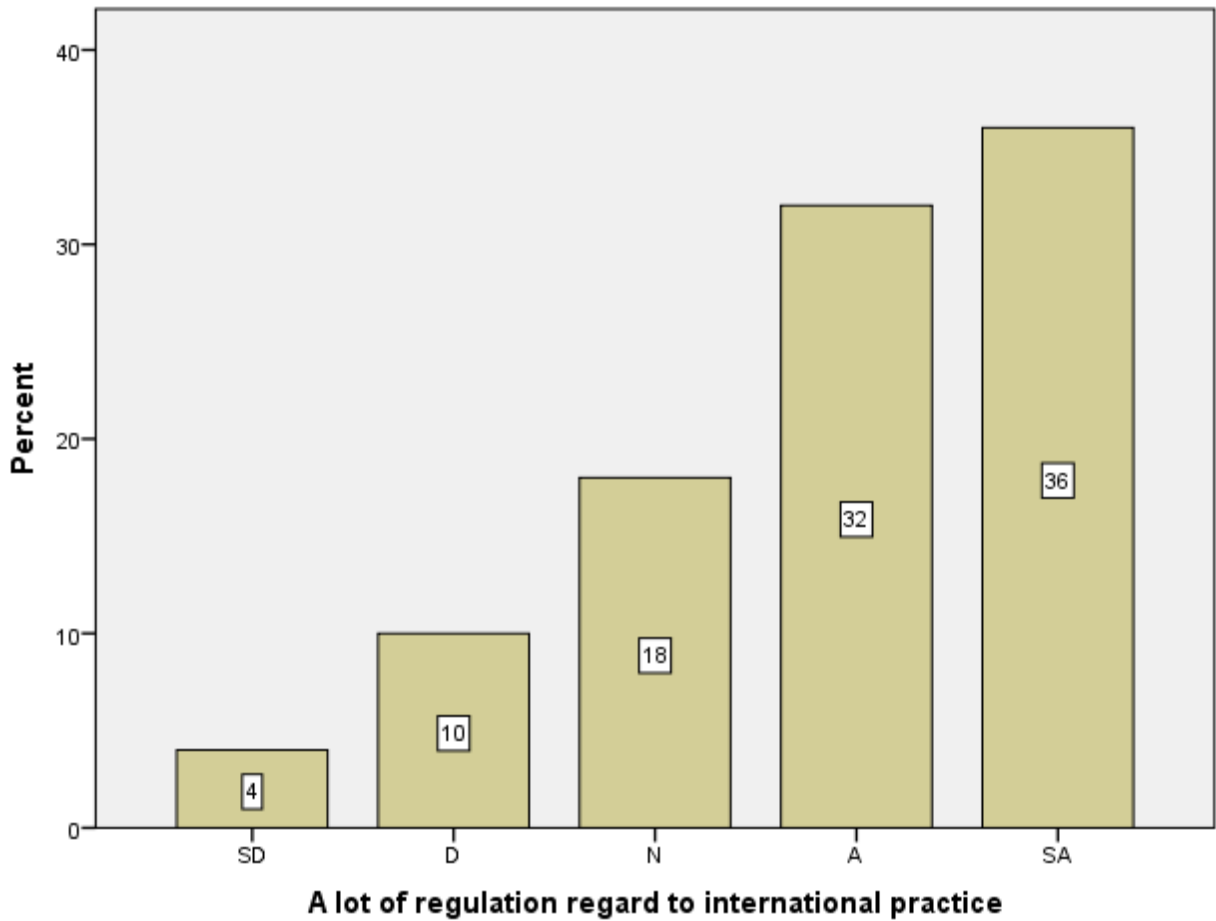


The findings show that 74% of the respondents were aware of the international regulations governing the operations of pharmaceutical manufacturing companies. The findings mean that the respondents knew of the existing international regulations with regard to the manufacturing and sale of products. Asked to describe the international regulations, the respondents with the knowledge of existence of international regulations described the international regulations as being relatively friendly.

4.5.2 Effect of International Regulations on Growth of Pharmaceutical Firms

The respondents were asked to state whether they agreed or not with the statements regarding the effect of international regulations on the growth of the pharmaceutical manufacturing firms in Ethiopia. The findings are presented in Figure 4.5.2.

Figure 4.5.2: A lot of International Regulations on Growth of Pharmaceutical Firms



The study findings show that majority of the respondents (90.0%) agreed that indeed there was a lot of regulations with regard to international practices.

83.3% of the respondents agreed that indeed the international regulations favored the multinational pharmaceutical firms. The findings however, show that majority of the respondents (73.3%) never agreed with the statement that the international regulations favored dumping. The findings imply that the international regulations affected the growth of pharmaceutical firms in Ethiopia

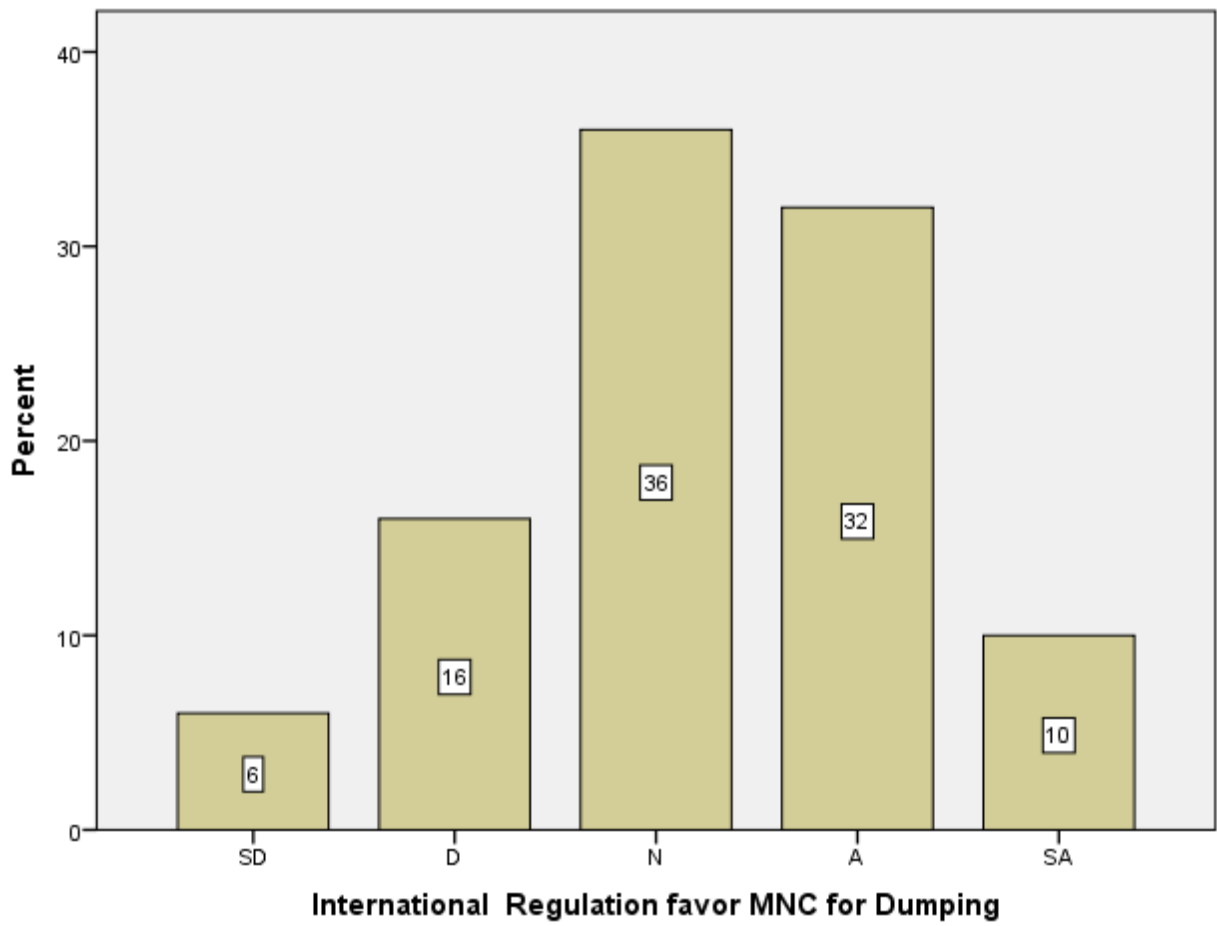
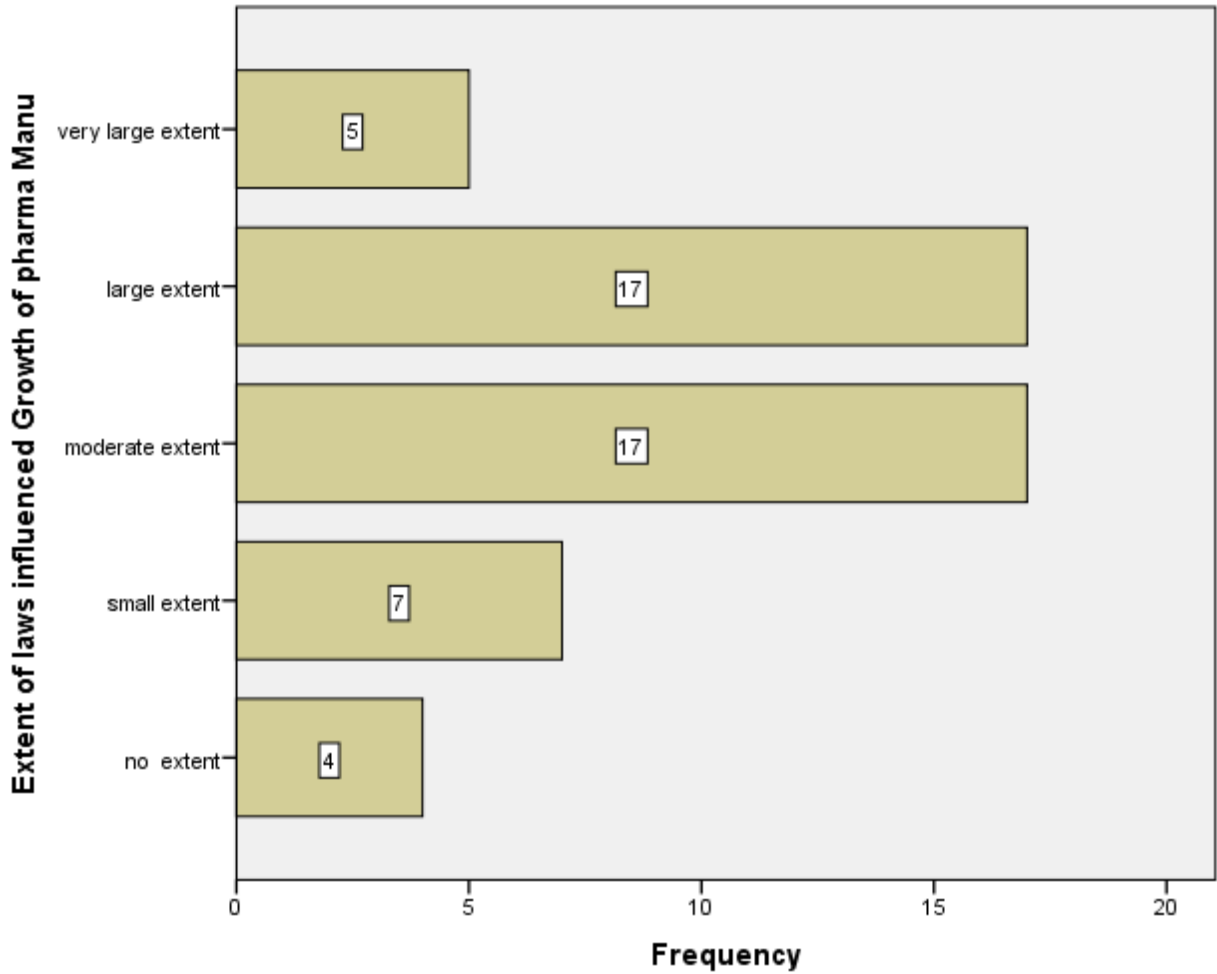


Figure 4.5.4 Extent International Laws Influenced the Growth of Pharmaceutical Firms in Ethiopia



The study findings show that 34% of the respondents indicated international laws had influenced the growth of pharmaceutical firms in Ethiopia to a moderate extent. The findings further show that according to 44% of the respondents, the international laws had influenced the growth of the firms to a large extent. While only 22% of the respondents indicated international laws influenced the growth in small extent. The findings mean that the international laws have to some extent influenced the growth of the pharmaceuticals in Ethiopia.

4.6 Cost of Production and Growth of Pharmaceutical Manufacturing Firms

The researcher sought to determine the effect of the cost of production on the growth of the pharmaceutical manufacturing firms in Ethiopia. The findings are presented in the subsequent sections.

4.6.1 Description of Cost of Producing Drugs in Ethiopia; The respondents were asked to describe the cost of producing drugs in Ethiopia. The results are presented in Figure 4.6.1

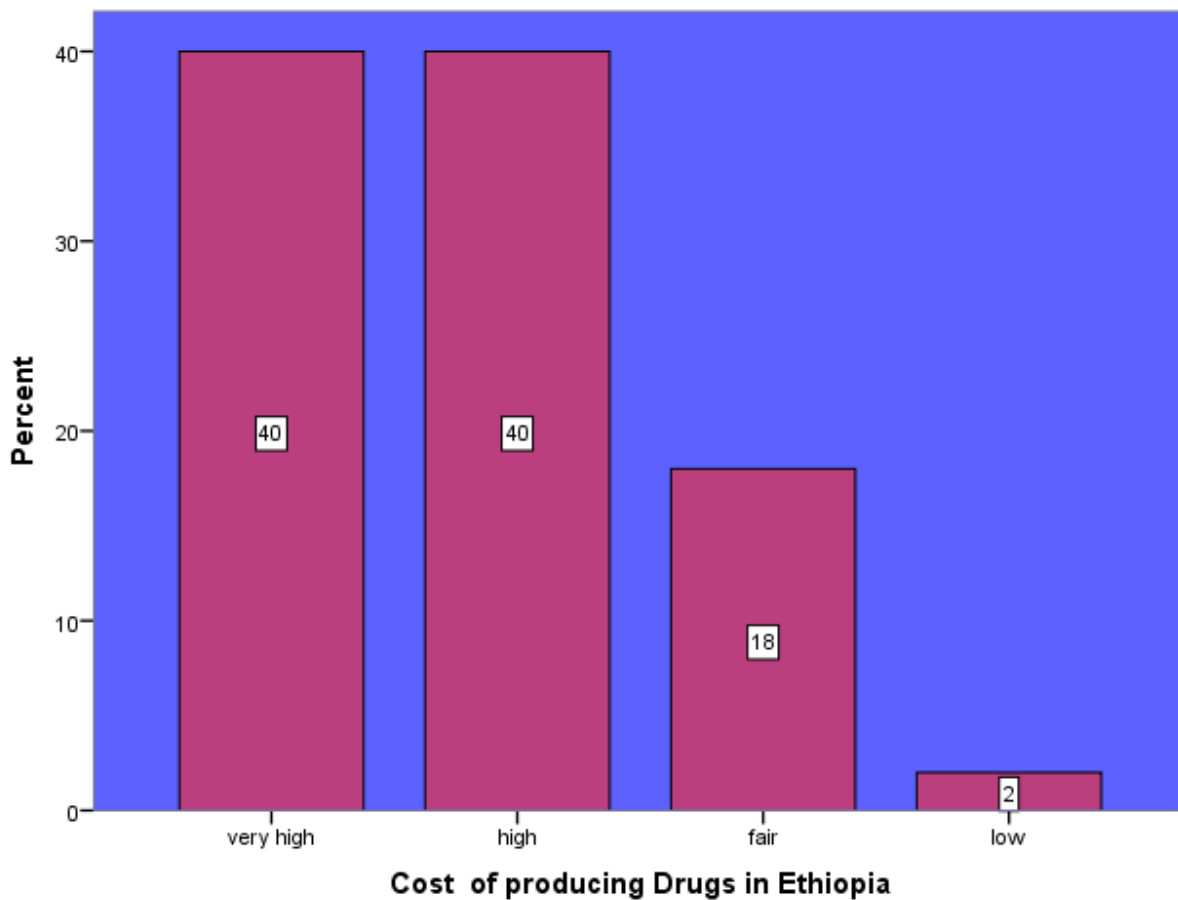


Figure 4. 6.1: Description of Cost of Producing Drugs in Ethiopia

Results show that 80% of the respondents described the cost of producing drugs in Ethiopia as High,18% termed at as fair the remaining 2% was responded as low. The findings mean that the cost of producing drugs in Ethiopia is high.

4.6.2 Drivers of Cost of Producing Drugs the respondents were asked to indicate the main drivers of the cost of producing drugs in Ethiopia. The findings are presented in Figure 4.6.2

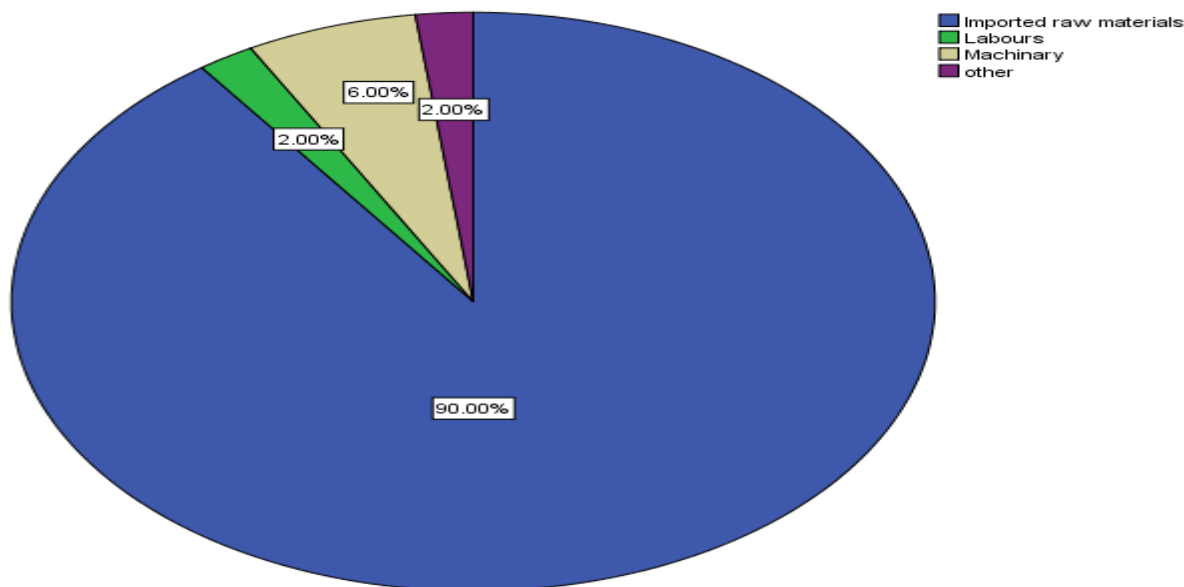


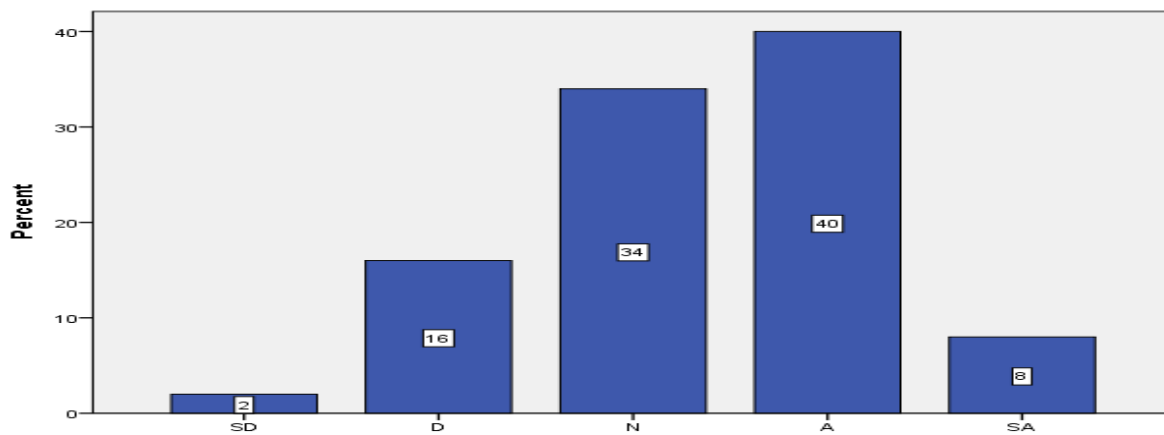
Figure 4.6.2 : Drivers of Cost of Producing pharmaceutical products (Drugs)

The study findings show that all the listed factors including raw material, labour, machinery, and fuel/electricity and were all potential drivers of the cost of producing drugs in Ethiopia. The results show that 96% of the respondents stated that imported raw materials and machinery drove high the cost of production. The results further show that according to 2% of the respondents, labor was a very low cost of producing drugs.

4.6.3 Cost of Production on Organizational Growth

The respondents were asked to state whether they agreed or not with the statements provided with regard to the effect of cost of producing pharmaceutical products/ drugs on the growth of the pharmaceutical manufacturing firms in Ethiopia. The findings are presented in Figure 4.6.3

Figure 4.6.3 Effects of Cost of Production on Organizational Growth



4.6.4 Extent to which Cost of Production has Influenced Growth of Pharmaceutical Manufacturing Firms

The respondents were asked to indicate the extent to which the production cost had influenced the growth of pharmaceutical manufacturing firms in Ethiopia. The findings are presented in Table 4.6.3

| | Frequency | Percent |
|---------------|-----------|---------|
| Small Extent | 9 | 18.0 |
| Medium Extent | 12 | 24.0 |
| Large extent | 29 | 58.0 |
| Total | 50 | 100.0 |

Table 4.6.4 Extent to which Cost of Production has Influenced Growth of Pharmaceutical Manufacturing

The findings show that 58% of the respondents stated that the cost of production had influenced the growth of pharmaceutical manufacturing to large extent. Further 24% of the respondents indicated that the cost of production influenced growth to a moderate extent while 18 % indicated that it did to a small extent. The findings mean that the cost of production significantly influenced the growth of local pharmaceutical manufacturing firms in Ethiopia.

KII Asked to state how the cost of production had influenced the growth of pharmaceuticals manufacturing in Ethiopia?

The respondents stated that due to the high cost of production, the prices of the locally produced drugs remain high and therefore cannot compete favorably with cheap drugs from giants like India and china who have dominated the Ethiopian market and the surrounding regions. The respondents also stated that many firms have had to shut down as they have been rendered irrelevant due to the production of unaffordable pharmaceutical products/drugs specially imported raw materials which related to forging currency shortage which cannot produce and sell both locally and internationally.

4.2 DISCUSSION OF THE FINDINGS

The study established that most of the respondent's pharmaceutical firms (88%) were limited companies. The findings revealed that majority of the respondents pharmaceutical manufacturing companies Ethiopia (68%) have been in operation for over 20 years. The results revealed that 6% of the firms started with 10-15 employees of less while 94% started with between 15 to 20 employees.

However, currently, **all** of the firms have over 50 employees. This is suggestive of growth in the local pharmaceutical manufacturing firms in Ethiopia. This is in contrast with the finding of **Mackintosh et al (2016)**, who asserted that the growth of pharmaceutical manufacturing companies in developing countries and in the Sub Saharan Africa in particular has been on the decline since the global economic crisis of 2009.

The level of competition in the pharmaceutical manufacturing in Ethiopia was described as **high by 56%** of the respondents in the study. According to **46%** of the respondents, the competition in the pharmaceutical sector was both local and international.

Most of the respondents stated that there were a lot of imported drugs in the market (**86%**). The business environment according to most respondents was unfair in favor of some competitors (**66%**), same as the market which favored international companies (**70%**).

Most respondents (**68%**) believed that competition influenced the growth of the firms moderate to a large extent. There was a positive and significant relationship between competition and the growth of the firms. These findings are in line with Odhiambo (2013) who noted that firms that are exposed to more competition in their domestic market are more likely to succeed in the international markets. According to the studies, competition opens up the eyes of the firms to look beyond their domestic markets and start looking at other markets which in the end results in a positive growth. Most of the respondents (**84%**) were aware of the existence of government legislation on growth of the pharmaceutical manufacturing firms in Ethiopia.

Majority of the respondents (**74%**) indicated that indeed the government offered incentives to the local pharmaceutical manufacturing firms. The government has exempted taxation of some raw and packaging materials used in production of pharmaceuticals.

According to most of the respondents (**74%**), legislation was aimed at enhancing the growth of the pharmaceutical manufacturing in Ethiopia; to moderate to large extent. **72%** of the respondents believe that the government legislations affect the growth of the pharmaceutical manufacturing firms in Ethiopia to a large extent.

On the importance of the government incentives, the study finding similar with **Kidan A.(2020) and Zapalska (2001)** who noted that government interventions through incentives and subsidies are particularly important for the development of local companies.

They also argued that the development of local firms relies on the government support policies while enhancing competitiveness is the fundamental guarantee for the firm's survival.

Majority of the respondents described the cost of producing drugs in Ethiopia as **high (80%)**

The drivers of high cost of production in Ethiopia included raw material, and machinery.

According to **96%** of the respondents, imported raw materials and machinery drove high the cost of production.

These findings are **in agreement with Mc Glaphreri (2003)** who noted that the main drivers of the cost of production for many firms included the raw materials. Respondents strongly agreed that the cost of production was too high hence the high cost of the local **drugs (86.7%)**.

According to majority of the respondents (**82%**) the cost of production had influenced the growth of pharmaceutical manufacturing. The results from the regression analysis revealed that there was a negative and significant relationship between the cost of production and the growth of the firms.

These findings **agree with Douglas M. Weru (2018) and Williamson (2008)** who noted that the factors which increased the cost of doing business included the raw materials among others which have a direct influence on the firms operations and eventual growth.

According to the study, a majority of the respondents (**74%**) were aware of the international regulations governing the operations of pharmaceutical manufacturing companies.

Most respondents were in agreement that there were a lot of regulations with regard to international practices (**68%**).

International regulations favored the multinational pharmaceutical firms (**78%**). These findings **support the views of Prasad and Javasuriwa (2003)** who noted that developing countries find it difficult to develop standards that are straightforwardly acceptable by the developed nations and they therefore have hard time in meeting standards and regulations set by developed countries.

According to **78%** of the respondents, the international laws largely extent influenced the growth of pharmaceutical firms in Ethiopia. There was a positive and significant relationship between international regulations and the growth of the firms.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussions and summary of the findings of the study. This is followed by the conclusions based on the findings from where the researcher has made recommendations for action. The chapter also presents limitations of the study and suggestions for further research.

5.2 Summary of the Findings

The firms experienced growth as there was increase in the number of employees over the years for all the firms that participated in the study.

The study established that competition positively influenced the growth of the firms. However, most of the firms described the competition in the industry as high and further stated that there were a lot of imported drugs while at the same time, that the environment favored international companies to dump their product to developing countries.

The results revealed that the most of the respondents were aware of national and international regulations guiding the manufacturing of drugs.

There was a positive effect of the government regulations and international regulations on the growth of the firms in Ethiopia.

However the effect of increase in cost of production was negative affect the growth in the pharmaceutical manufacturing firms.

5.3 Conclusion

The study established that there has been increase in the number of employees by the firms from their inception to date. The firms have experienced an increase in the number of employees which signifies growth. The study established that there has been competition in the sector which had positive effects on the growth of the local pharmaceutical manufacturers. Government regulations also favored growth of the local firms in Ethiopia. This could be attributed to government policies by aimed at enhancing growth in the sector.

The study concludes that the international regulations have worked to the benefit the local firms even though they seem to favor the multinationals.

Further, the study concludes that the cost of production in Ethiopia largely driven by cost of imported raw materials and machinery and had a significant negative influence on the growth of these firms.

5.4 Recommendations

The study made the following recommendations

According to this study, the variation in the growth of local pharmaceutical manufacturers in Ethiopia was explained by four factors competition, government regulations, international regulations and the cost of production. These factors therefore are relevant and may be studied further with larger sample size.

The government should enhance existing regulations and introduce new ones that encourage innovativeness in the industry, protect investments, encourage growth and promote markets. Legislations on regional integration, environmental protection, market access, and Machinery and technology transfers should be enhanced to promote growth of pharmaceutical manufacturing firms in Ethiopia.

Managers of the pharmaceutical manufacturers should adhere to the international regulations so as to enhance their products competitiveness in the international markets. This will ensure sustainable growth.

Finally, the government should review its support especially on establishing favorable environment for production of common pharmaceutical ingredients, to resolve the chronic problem of imported raw materials.

Areas for Further Research

This study was only done on the pharmaceutical manufacturing firms in Ethiopia and specifically KIP. The study suggests that similar large scale studies should be done in common raw materials required for pharmaceutical manufacturing and possibilities to produce it in Ethiopia.

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APPENDIX

Appendix I: Questionnaires for experienced pharmaceutical manufacturer's workers

St. Mary's university department of Business Management and Administration (MBA)

Dear Sir/Madam, I am a postgraduate student at St. Mary's university department of Business Management and Administration. Conducting research on title "Assessment of factors affecting local pharmaceutical manufacturing Vertical growth on the case of KIP Addis Ababa".

The objective of this study is to improve the body of knowledge in the field of pharmaceutical manufacturing with emphasis on growth.

It is purely an academic exercise for the partial fulfillment of master's degree in Business management and Administration.

I would like to extend my deep appreciation to your organization and you for the willingness and cooperation in undertaking this valuable research.

Taking part in this study you will contribute towards alleviating the problem of manufacturing pharmaceutical growth.

I request your cooperation to fill and respond truthfully for the asked Questions.

If you have any question, you can contact me through +251-911 383386.

Thanks.

Yours faithfully,

Wakgari Adu

Section A; Demographic Data

1. Nature of Firm registration: you are working

Sole Proprietorship [] Partnership [] Limited Company []

Other [] specify.....

2. Type of ownership:

Owner-Managed [] Partnership [] Shareholding [] Family-owned []

Other [] specify.....

3. Number of years in operation

0 – 5 [] 6 – 10 [] 11 – 15 [] 16 – 20 [] Over 21 []

4. How many employees did your organizations start with?

Less than 5 [] 6 – 10 [] 10 – 15 [] Over 15 []

5. How many employees are there currently?

Less than 10 [] 10– 20 [] 21– 30 [] 31– 40 [] 41– 50 []

Over 50 employees []

SECTION B: COMPETITION

1. How would you describe the level of competition in the pharmaceutical sector in Ethiopia?

Very high [] High [] Moderate [] Low [] Very low []

2. From where does your competition originate?

Local [] International [] Both local and international []

Others (specify) [] _____

3, State the extent to which you agree with the following statements with regard to competition in the pharmaceutical industry on a scale of 1-5

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

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| <i>There is a lot of importation of drugs in the country</i> | | | | | |
| <i>There are so many counterfeit products in the market</i> | | | | | |
| <i>The generic drugs in the country has resulted into unfair competition</i> | | | | | |
| <i>The business environment is unfair in favour of some competitors</i> | | | | | |
| <i>The market favors the international companies The local companies are not up to the task in terms of competitive advantage</i> | | | | | |
| | | | | | |

4, Do you have coping strategies to counter the competition? Yes [] No []

5. Explain your answer _____

6. To what extent has competition influenced the growth of your organization?

No extent [] Small extent [] Moderate extent []

Large extent [] Very large extent []

6. How in your opinion, has competition influenced the growth of your firm?

SECTION C: GOVERNMENT LEGISLATION

8. Are you aware of any legislation by the government for the growth of the pharmaceutical manufacturing in Ethiopia?

Yes []

No []

9. a) Does the government offer incentives to local pharmaceutical manufacturing firms aimed at enhancing their growth? Yes [] No []

b) If yes, what are the incentives? _____

10. To what extent is there government legislation aimed at enhancing the growth of pharmaceutical manufacturing industry in Ethiopia?

No extent []

Small extent []

Moderate extent []

Large extent []

Very large extent []

11. To what extent has the government legislation affected the growth of pharmaceutical firms in Ethiopia?

No extent []

Small extent []

Moderate extent []

Large extent []

Very large extent []

12. In your opinion, what legislation should the government put in place to enhance the growth of pharmaceutical manufacturing in Ethiopia?

SECTION D: INTERNATIONAL REGULATIONS

13. Are you aware of international regulations governing the operations of the pharmaceutical manufacturing? Yes [] No []

14. If yes, how would you describe these regulations?

Punitive [] relatively friendly [] Very friendly []

15. State the extent to which you agree with the following statements with regard to the effect of international regulations on the growth of pharmaceutical industry in Ethiopia on a scale of 1-5 where 1=Strongly disagree, 2=Disagree, 3=Neutral,
4=Agree, 5=strongly agree

| | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| <i>There is a lot of regulations with regard to international practice</i> | | | | | |
| <i>A lot is demanded from the local manufacturers to export to foreign countries</i> | | | | | |
| <i>The international regulations favour multinational pharmaceutical firms</i> | | | | | |
| <i>International regulations favour dumping</i> | | | | | |

16. To what extent have these laws influenced the growth of pharmaceutical manufacturing in Ethiopia?

No extent [] Small extent [] Moderate extent []

Large extent [] Very large extent []

17. In your opinion, how has the international regulations influenced the growth of pharmaceutical manufacturing in Ethiopia?

SECTION E: COST OF PRODUCTION

18. How would you describe the cost of producing drugs in Ethiopia?

Very high [] High [] Fair []
 Low [] Very low []

19. What are the main drivers of the cost of producing drugs?

Imported raw materials [] Labour [] Machinery []
 Fuel/electricity [] others [] specify

20 State the extent to which you agree with the following statements with regard to the effect of cost of production on the growth of pharmaceutical industry in Ethiopia on a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neutral,

4= Agree, 5= strongly agree

| | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| <i>The cost of raw materials is too high</i> | | | | | |
| <i>The taxes levied on raw materials makes production expensive</i> | | | | | |
| <i>The pharmaceuticals pay government a lot of money as levies for doing business</i> | | | | | |
| <i>The transportation cost and electricity is too high</i> | | | | | |
| <i>The cost of production is generally too high driving up the cost of local drugs</i> | | | | | |

21. To what extent has the cost of production influenced the growth of your firm?

No extent [] Small extent [] Moderate extent []
 Large extent [] Very large extent []

22. In your opinion, how has the cost of production influenced the growth of pharmaceutical manufacturing in Ethiopia?

Thanks

Appendix II: Interview Guide for Top level Managers

1, what challenges does your company experience in manufacturing pharmaceuticals with regard to the following areas:

GOVERNMENT LEGISLATION (Awareness, Incentive,

INTERNATIONAL REGULATIONS (Awareness, adaptability in local context

COST OF PRODUCTION (Raw materials, Taxes, Labor, Machinery, Transport, spare parts, Electricity,/power

COMPETITION (where, source, coping strategies, etc

Other specify (security, corruption, etc

2, Do you think that the challenges of pharmaceutical activity of the company are avoidable?

If yes, Please suggest the possible solutions to the challenges you listed above?

3. On average by how much rate growing your manufacturing company in the past month/yr?
if not , What are the major problems?

4, please indicate your suggestion for the above problem

