

**DETERMINANTS OF COMPETITIVENESS OF PHARMACEUTICAL
MANUFACTURERS IN KENYA: A CASE OF AUTOSTERILE EAST AFRICA,
KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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This project has been submitted for examination with my approval as University Supervisor.

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DEDICATION

I dedicate this study to my family.

ACKNOWLEDGEMENT

The following individuals and groups of people deserve my appreciation for their contributions in the production of this project. First and foremost, I thank God for giving me strength to come this far in my project, secondly my supervisor Isabella Sile for her patience and guidance in compiling my project. I cannot forget the staff in the Management University of Africa for their encouragement and support as well as my family for their motivation to keep soldiering on in my studies and even aim higher. I also thank Autosterile East Africa for allowing me to do my study in the company and being cooperative during data collection process.

ABSTRACT

This study investigated the determinants of competitiveness of pharmaceutical manufacturers in Kenya: a case of Autosterile East Africa, Kenya. The specific objectives were to examine how economic growth, management efficiency, business environment efficiency and business facility infrastructure influence competitiveness of locally manufactured goods in Autosterile East Africa, Kenya. This study used descriptive survey design. This study used census sampling to involve 69 respondents; 8 top level employees, 22 middle level employees and 39 lower level employees in Autosterile East Africa. Questionnaires used in the survey formed the primary data and was analyzed by use of Statistical Packages for Social Science version 25. Multiple regression analysis was done to test the relationship between the independent and dependent variables. The study findings found out that economic growth, management efficiency, business environment efficiency and business facility infrastructure all have a positive relationship with competitiveness of locally manufactured goods. Business environment efficiency was the most significant determinant of competitiveness of locally manufactured goods. From the findings, it was highlighted that a large number of respondents agreed that the GDP has influenced the competition among our competitors a mean of 1.23 and a standard deviation 0.12. A large number of respondents agreed that organization structure of firms dictates its competitive advantage over other firms as shown by a mean of 1.22 and a standard deviation 0.15. A majority agreed that demand for goods and services influences competition of goods and services as shown by a mean of 1.58 and a standard deviation 0.29 while a large number agreed that political stability has an impact in competition among firms as shown by a mean of 1.68 and a standard deviation 0.64. The government of Kenya need to boost the Economic Growth in order to enhance the competitiveness of Locally Manufactured Goods. This can be done by providing subsidies to business owners and fund the SMEs in starting up business. The locally manufactured goods firms should enhance their management efficiency so as to better their competitiveness of their locally manufactured goods. This can be done by the firm's management developing leadership structures that are efficient.

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ABBREVIATIONS AND ACRONYMS

AEA	:	Autosterile East Africa
APP	:	Asset Process Performance
ERP	:	Enterprise Resource Planning
FDI	:	Foreign Direct Investment
GCI	:	Global Competitiveness Index
GDP	:	Gross Domestic Product
HCT	:	Human Capital Theory
IFC	:	International Financing Corporation
IV	:	Intravenous Fluids
KAM	:	Kenya Association of Manufacturers
KNBS	:	Kenya National Bureau of Statistics
OECD	:	Organisation for Economic Co-operation and Development
OST	:	Open System Theory
PVC	:	Polyvinyl Chloride
R&D	:	Research and Development
SPSS	:	Statistical Package for Social Sciences
WEF	:	World economic Forum

OPERATIONAL DEFINITION OF TERMS

Business environment efficiency refers to the proficiency of the systems where there is business adaptability, an adaptable labour market and business guidelines that are friendly.

Business facility infrastructure: refers to the general physical frameworks of a business, district, or country for example, transportation frameworks, network of communication, sewage system, water, and electric frameworks.

Competiveness of locally manufactured goods: refers to a bit of leeway over contenders realized by offering customers more noteworthy value either by methods for lower costs or by giving items that give the customer more prominent advantages and services that have a justification for a higher cost.

Economic growth: refers to an expansion in the measure of production of services and goods per person in a population over some undefined time frame.

Management efficiency: refers to the effectiveness of the managers in achieving the organizational goals.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the background of the study, statement of the problem, research objectives, significance and scope of the study.

1.1 Background of the Study

Kalimeris (2012) referred to competitiveness as how much a country can create products and enterprises that can sell in the worldwide business sectors, under the states of a free market and reasonable trade, while keeping up and expanding the real incomes of its citizens over a long time. Past ideas supplement the World Economic Forum WEF (2015) meaning of country competitiveness is the organizations' approaches and factors that decide the degree of productivity of a nation. The degree of productivity, thus, sets the degree of flourishing that can be achieved by an economy.

Drivers of competitiveness vary from one country to another and can be gathered into 2 key areas; microeconomic and macroeconomic. Macroeconomic competitiveness is determined by an array of institutions policies and public good investments that set the background for the whole economy. Social business facility infrastructure (education, healthcare and public safety) and political institutions describe the wider context where productive economic activity takes place (Suh & Lee, 2018). Microeconomic are the aspects that have a direct impact on the productivity of a company and labor force conscription and includes factor endowments and demand conditions.

European specialists highlighted three main variables controlling the worldwide competitive status of a place; that is the accessibility and business facility infrastructure; human resources; business environment that, thus, incorporate certain sub-factors. Sub-factors under business facility infrastructure and accessibility include basic business facility infrastructure, technological business facility infrastructure, and business facility infrastructure of knowledge and habitat quality. Human assets include demographic trends and highly skilled labour force. Industrial environment include factors such as entrepreneurial culture, sectoral concentration, internationalization, specialization, innovation, nature and pattern of competition, sufficiency of manufacturing resources, Government and institutional capability (Brykova, 2007).

Different researches prescribe that the management planning to wander into the difficult field of internationalization should make a serious edge that causes them to exhibit the unrivaled capacities of their organization (Porter, 2011). Be that as it may, dread of the obscure prevents supervisors from venturing out of their nation of origin and profiting by internationalization since development markets will in general be unpredictable as they encourage rivalry (Thai and Chong, 2013). A business to business plan of action of conveyance permits supervisors of global firms to effectively manage passage obstructions and enter easily into an unfamiliar market and successfully address the multifaceted nature of a spot that offers high capability of development to their organizations (Yan, 2012).

A wholesaler at the same time inspires the passage of several firms with competing goods into the market and draws in miniature level little and medium firms in the nearby market for selling (Wetering, 2015). Since wholesalers offer different comparative and competing items to members, markets being served through partners become serious for worldwide brands. Rivalry in a market urges contending firms to show their capacity to creatively serve clients

(Leischnig & Kasper-Brauer, 2015). Absence of inside and out local information in such business sectors is a significant inadequacy for firms preparing to internationalize on the grounds that it reduces their capacity to improve their promoting linked strategic approaches by predicting the business environment and designs in the consumption examples of the unfamiliar market (Wu, Yeh, & Woodside, 2014). Merchants and affiliates have a significant task to carry out in the effective infiltration of an unfamiliar market demonstrating that a worldwide firm builds up its capacity to imaginatively showcase its items through affiliate networks that should be perceived.

Shuffling performed for modifying and reworking the activities of the brand dependent on its normalized approaches and the prerequisite of a nearby market can bring about the revelation of a creative showcasing thought that is very setting explicit and encourages the smooth working of the brand in a light-footed circumstance (Jaksic, Rakicevic, & Jovanovic, 2018). Such activities in a serious market when seen from the angle of asset advantage hypothesis lead to the desire that the achievement of shuffling relies on the assets required and the appointment of motivations foreseen from the creative advertising thought.

As per Rodríguez-Pose and Crescenzi (2008), spontaneous creation, change, enlargement or change of existing channels of exchange using innovation can lessen exchange costs. Inventive advertising without the utilization of innovation in an exchanging arrangement rather requires asset based focal points for starting trade of information and data about circumstances accessible in the commercial center. The trading of field notes among purchaser and dealer firms can encourage the investigation of unpredicted events and the distinguishing proof of original plans to address accidental chances.

Competitiveness of economy ought to be related with financial development, as the essential target of states isn't to be competitive, yet to guarantee monetary development as a wellspring of additional economy advancement and ways of life for populace. It is important to endure as a main priority that the determining factor of financial development fluctuate in time and in space. Jaksic, (2018) reveals that the present advancement is portrayed by two elements: the world economy globalization alongside the linked world exchange progression measure and the other is the quick improvement of data and correspondence advances. These viewpoints are replicated in comprehending the nature, sources and indications of intensity in the current time frame (Machova, Mura, Haviernikova, & Toth, 2017). Kalimeris (2012) proposes that there is an immediate and positive connection between monetary development, Foreign Direct Investment (FDI) and seriousness, particularly in the midst of worldwide financial emergency.

From a more extensive perspective upper hand in competition can be gotten through items that are of high quality, predominant clients care, having the option to charge at the lowest costs, better geographical area, specialized skills in the firm, proficient supply chain management, brand picture and notoriety of the firm (Malesky, Nguyen, Bach, & Ho, 2020). As indicated by Johnson et al., (2009), supporting bases of competition is probably going to require a connected arrangement of hierarchical skills which contenders discover hard to copy and additionally the capacity to accomplish a lock-in position to turn into the "industry standard" perceived by the purchasers and providers.

The private sector plays a significant role in providing and financing health care in sub Saharan Africa, yet several aspects of private sector health delivery are not well understood, including specific areas of operational deficiency. The available data which could inform

public policy, support business decisions, and encourage social and commercial investments is usually in an inconvenient form (IFC, November 2011).

The Ministry of Health has attempted to enlarge admittance to reasonable, excellent medical services through improved assignment of assets to the medical care industry. This extended expense inside the public division, combined with rising private consumption and more noteworthy degrees of protection inclusion will drive the further development of the clinical gadgets and drug enterprises. The drugs and clinical gadgets markets in Kenya got incomes of \$208.6 million and \$40.4 million individually, in 2007, and are assessed to reach \$558.5 million and \$85.6 million separately, in 2014 (Frost & Sullivan, seventeenth December 2008).

Expanded public and private expense in medical services, combined with expanding levels of medical insurance inclusion and proceeded with foreign subsidizing, are making noteworthy open doors for development inside the Kenyan drug and medical ventures. Notwithstanding, helpless implementation of guidelines has brought about a multiplication of low quality and fake items available that have disintegrated the development of the conventional market. These items are typically lower valued than genuine and more excellent items, and accordingly, obstruct the development of the conventional market (Frost & Sullivan, 17th December 2008).

Additionally, the government is still the main buyer of medical equipment and drugs in the market. Government tenders are mainly given on the foundation of cost, and therefore, tenders are given to international companies that are able to supply inexpensively to government at the expense of local manufacturers (Bhandari, 2020). As the acceptance of capital equipment is mainly limited in this price sensitive market, local medical device manufacturers and

distributors must therefore consider pursuing a business model incorporating the placement of capital equipment for mass production in order to beat competition. Growth in the healthcare industry in Kenya must be supported by increasing expenditure on healthcare, within both public and private sectors. This must be paralleled by improved regulatory enforcement that will ensure a reduction of mushrooming of unregistered pharmaceutical companies in order to bring down competition from poor quality and counterfeit products fronted by global firms (IFC, November 2011).

Companies today therefore can no longer afford to pay attention only to their domestic markets, no matter how large they are. Locally manufactured goods meet stiff competition not only by local producers but also from global firms who have lower cost and higher brand awareness (Wiprächtiger, Narayanamurthy, Moser, & Sengupta, 2019). The increasingly competitive local Pharmaceutical markets call upon local manufacturing firms to look beyond their present situation and develop long term strategy to meet changing position in the industry. The rightfully positioning of local pharmaceutical manufacturing firms within the industry is therefore key, if they are to achieve their objectives, maximize the opportunities arising from it and use their resources to achieve uniqueness within the industry.

Based on data from (2012) Kenya Association of Manufacturers (KAM), the manufacturing sector that comprises of more than 700 members have an important role in the general performance in economy in the nation. The manufacturing sector is the third biggest sector in the country and represents 11 percent of the GDP. In 2011, total manufacturing output stood at 1.01 trillion having increased from 842 billion in 2010. Kenya manufacturing sector employs directly more than 275,000 people. An added 1.4 million persons are engaged in the supply and distribution chain, representing 13% of the nation's entire employment (KNBS -

Economic survey, 2012). The sector is mostly agro based and characterized by comparatively low value addition, capacity consumption and export volumes partially due to weak connections to other sectors. The sector is extremely import dependent because Kenya's intermediate and capital goods businesses are under-developed. Moreover the sector is extremely disjointed with more than 2,000 manufacturing components with nearly 50 percent of the firms employing 50 workers or less. Majority of manufacturing organizations are family owned and operated.

Manufacturing is one of the 6 main sectors under the economic support with the extreme ability in realization of Kenya's vision 2030. The vision for the manufacturing sector is to develop a robust, diversified and competitive manufacturing sector with an overall goal of increasing its influence to GDP by at least 10 percent per year. The sector is also expected to raise market share in regional markets from 7 percent to 15 percent and entice at least 10 large strategic investors in key agro processing businesses. At the current 7%, the share of Kenyan products in the US \$11 billion regional market shows that the Eastern African market is overwhelmed by imports from outside the locale. This means that there is an enormous potential to improve Kenya's seriousness in the district by supplanting outside providers slowly (Economic Survey, 2013).

Autosterile East Africa was established in 2003 and started operations in 2004. The main objective was to provide the domestic health care industry with a differentiated product in Intravenous fluids in PVC bag (Autosterile East Africa, 2020). The company invested in the technology with anticipated of high acceptance of the superior product in terms of infection control and flexibility in its usage by health care givers and associated safety to the patients. Marketing strategies have been formulated and implemented but the product uptake still ranks

low in the competitive domestic market. The main competitors are the global firms with their subsidiaries in Kenya besides the single local producer. Most of these products are packaged in bottles as AEA products had been targeted to serve the private and the government hospitals both of which have demonstrated with time to be price sensitive and unwilling to pay the premium for the differentiated products (Autosterile East Africa, 2020). This has resulted into low returns on investment as may be demonstrated by the company's financial performance, sales and the production volumes through the years.

Autosterile has an installed annual capacity of 5 Million units of capable of realizing 200M worth of sales. In the year 2011, the company produced 0.6M units which realized 24M worth of sales, while a slight performance was noted in 2012 with sales worth 72M. This has been the general performance of the firm since it started operations in the year 2004 (Autosterile East Africa, 2020). The total domestic market for IV Fluids is currently estimated to be 100Million units which implies that AEA capacity should be fully utilized to serve only a 5% of the requirements of the domestic market. This realization has triggered the need to investigate the reasons why the AEA is unable to capture and retain this small fraction of the market. This situation is also aggravated by the fact that there are only two local manufacturers of the IV Fluids in the country, and therefore competition might not be the only aspect of the poor performance. It has therefore become necessary for management to redefine the competitive constraints the products are experiencing in the market and address the same for better performance.

Table 1.1: Autosterile (EA) limited performance

Year	Sales turnover (Millions)	Profit	%
2016	116.3	32.8	28.2
2017	102.7	26.6	26.0
2018	94.8	23.2	24.5

Table 1.1 indicates that the performance of Autosterile organization has been decreasing in terms of sales turnover and profit from the year 2016 to 2018. This means that competitiveness of locally manufactured goods by Autosterile is decreasing over time. This leads to the researcher being interested in finding out what influences the performance of locally manufactured goods taking a case of Autosterile East Africa, Kenya.

1.2 Statement of the Problem

An organization is deemed to be competitively advantageous when it is actualizing a worth making technique not being implemented by other players in the industry (Clulow, Gerstman, & Barry, 2016). Competitive advantage connotes the ability of a firm to remain in front of present or expected rivalry, henceforth unchallenged guaranteeing market administration. It likewise gives the understanding that assets held by an organization and the business system intensely affect manufacturing competition. Tudose and Rusu, (2015) sees business system as an instrument that controls the assets and make competitive advantage, therefore, suitable business technique may not be sufficient except if it have authority over extraordinary assets that can make such an extraordinary bit of leeway. More or less, competition is a main determining factor of principal execution and guarantees endurance and unmistakable setting of a firm in the market. Where Superior execution being a definitive wanted objective of a firm, competitive advantage turns into the establishing featuring the noteworthy significance whereupon rivalry is overseen.

Autosterile East Africa Limited has been a manufacturer of various health product majorly IV Fluid that are used largely in the health sector. The products are produced locally by two major firms in Kenya with the third one coming into play soon (Autosterile East Africa, 2020). Despite the fact that there are only two firms producing the products locally for the country

vast health sector, the competition has been very stiff by the global firms with their subsidiaries in Kenya. Autosterile has a capacity of 5 Million units but has been producing an average of 1.2 Million units while the total market requirement is 100Million units. Total production of Autosterile would contribute only 5% of the total requirements in the domestic market, yet this is far from realization. This has resulted into a dismal fronted performance of the Autosterile East Africa Limited in Kenya prompting their management to re-think their marketing strategy.

The Autosterile East Africa Limited is a key player in pharmaceutical sector in Kenya and therefore requires that their marketing strategies are effectively implemented and any challenges faced in the process are overcome (Autosterile East Africa, 2020). It is against this background that the researcher has proposed to conduct a study to find out constraints in Autosterile East Africa competitiveness in the domestic market. The research questions the researcher wants to address is what are the competitive challenges facing Autosterile East Africa products in domestic market and how does the company deal with these challenges?

1.3 Research Objectives

The general objective of this study was to investigate the determinants of competitiveness of pharmaceutical manufacturers in Kenya: A Case of Autosterile East Africa, Kenya.

1.3.1 Specific Objectives

The objectives of the study were:

- i. To explore the influence of economic growth on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya.

- ii. To assess the effect of management efficiency on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya.
- iii. To establish the influence of business environment efficiency on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya.
- iv. To determine the influence of business facility infrastructure on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya.

1.4 Research Questions

The research questions of the study were:

- i. What is the influence of economic growth on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya?
- ii. To what extent does management efficiency affect competitiveness of locally manufactured goods by Autosterile East Africa, Kenya?
- iii. How does business environment efficiency influence competitiveness of locally manufactured goods by Autosterile East Africa, Kenya?
- iv. What is the influence of business facility infrastructure on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya?

1.5 Significance of the Study

This study was of benefit to the Ministry of Planning that include the policy makers and planners to make sound rules and regulations to govern competition in Kenya. This will help them formulate regulation that will enhance fair competition among locally good manufacturing companies.

The findings is also of help to the business managers, and other stakeholders in the locally manufactured goods industry since it reduces uncertainty by providing information that improves the decision-making process. The decision making related with the sustainable competitive advantage includes four interrelated stages: Identifying issues or openings; Diagnosing and surveying issues or openings; selecting and actualizing a game-plan; and evaluating the strategy.

This study findings will enrich other studies done by other researchers on competitiveness of locally manufactured goods. This will be done by providing theoretical literature and findings that will guide their studies.

1.6 Scope of the Study

The study investigated the determinants of competitiveness of locally manufactured goods: the case of Autosterile East Africa, in Nairobi, Kenya. It specifically focused on four determinants; economic growth, management efficiency, business environment efficiency and business facility infrastructure. This was a case study research that focused on Autosterile EA.

This study involved 8 top level management, 16 middle level employees and 40 lower level employees at Autosterile East Africa. The study was guided by resource advantage theory. The study was limited to Autosterile East Africa determinants of competitiveness of locally manufactured goods traverse all organizations in Kenya.

This study was done for a duration of one year; from September 2019 to September 2020.

1.7 Chapter Summary

This chapter has presented the background of the study on the determinants of competitiveness of goods both globally, regionally and locally. It has also presented the problem statements

regarding the choice of Autosterile East Africa, Kenya as the area of study. The chapter also presents the objectives and research questions and the significance of the study as well as the scope.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter deals with the review of literature related to the study. Literature exploring the influence of economic growth, management efficiency, business environment efficiency and business facility infrastructure on competitiveness of locally manufactured goods. This chapter presents the theoretical literature review, empirical literature review, summary and research gaps, conceptual framework, operationalization of variables and the chapter summary.

2.1 Theoretical Literature Review

A firm competitive advantage must be identified with the first theoretical structures that make it more competitive inside the business. By unequivocally plotting and seeing some type of hypothesis, it become simpler to clarify the motivation behind why a mediation may attempt to incite arranged change. Different theories have been built up that clarify what cause a firm to turn out to be seriously supportable inside the business. This study was guided by Resource Based View theory, Open system theory, Resource Dependence Theory and Human Capital Theory (HCT).

2.2.1 The Resource Dependence Theory

The Resource Dependence theory by Pfeffer and Salancik, (1978) is the anchorage of this study and holds that no single organization has all the essential resources so as to be self-

reliant, to survive in a competitive environment, all organizations need to participate in interchange associations with other companies. The necessity to obtain capitals, generates dependences among diverse firms, strategic alliances remain a significant way for an organization to decrease uncertainties (Blodgett, 1991).

The theory is concerned with the motivation that makes firms seek strategic alliances with those firms endowed with resources and stronger competitive advantage in a certain market or production function. Further, it supports strategic alliances and performance which is the independent and dependent variables of this study respectively. The theory sets the argument that all firms have heterogeneity of resources plus capabilities even if they operate within the same environmental and industrial confine (Leiblein, 2003).

This theory however has shown major weaknesses and challenges. For instance it does not take into account the effect of a single resource on the firms operation if it is assumed in the bunch of other resources deemed important to a firm. The theory further does not link directly how the resources deemed necessary in a firm affects the overall performance or how it depends on the environment in question. Thus, it only makes assumptions on how environment and key actors intertwine in achieving organizational objectives. The theory also does not come out clearly on the aspect of uncertainty and how firms can engage resources to reduce environmental or management risks.

The study argues that pooling critical resources through strategic alliances for enhanced performance is paramount in an integrated economic community. It points that firms entering in to strategic alliances can take advantage of the integrated common market while considering the macro environmental situation to enhance their performance. Further, it

supports that manufacturing firms should engage in exchange relationships within the region to enable them attain their desired performance.

2.1.2 Resource Based View Theory

This study was guided by Resource Based View (RBV) Theory by Penrose (1959) and further advanced by Barney (1991). RBV is a strategy for dissecting and recognizing a company's vital preferences dependent on analyzing its particular mix of benefits, aptitudes, abilities, and intangibles as a firm. Its hidden reason is that organizations contrast in major manners on the grounds that each firm has an exceptional "pack" of assets. Each firm creates abilities from these assets and when progressed admirably, they become the wellspring of the association's competitive advantage.

Once a firm's "bundle" of resources has been recognised, the RBV applies strategies to regulate which of those resources signify strengths or weaknesses that are core proficiencies for sustainable competitive advantage. These strategies originate from the idea that resources are more valuable when they are critical to being able to meet a customer's need better than other alternatives, are scarce, drive a main portion of a firm's overall profits and are durable or maintainable overtime (Barney, 1991; Porter, 1998).

The 1st assumption is that organization own critical resources that are dissimilar even when they are functioning in a comparable industry (Peteraf & Barney, 2003). The 2nd assumption is that the resource alterations might be sustained for a while due to the difficult of selling and buying of resources across the firms. This difficult in doing business makes it likely for paybacks from various incomes to be constant over period (Barney & Hesterly, 2012). Resources confer competitive advantages to an organization in as far as they are rare, in-

imitable and are valuable in so far as they enable implementation of strategies that improve organizational efficiency and effectiveness.

The critiques is that the theory assumes that resources are heterogeneously distributed across firms and that this can be continued in a long period. It offers dissimilar resource factors leaving out other variables, for instance the view of variable coalignment; a competence that might enhance performance (Chathoth, 2002). In this research, this theory hypothesizes the dispute that organizational performance is improved when organizations use unique resources that they own and configured to enable the firm attain competitive advantage position and performance. It points out that regional integration and macro environment can influence connection between determinants of competitiveness and performance of firms in an integrated market.

The underlying premise can be related to the influence of economic growth management efficiency and business environment efficiency on competitiveness of locally manufactured goods. Each firm differ in fundamental ways because each firm possesses different amounts of resources.

2.1.3 Open System Theory of a Firm

Open system theory postulated by Ludwig von Bertalanffy (1956), indicates that competition procedure usage can be analyzed from framework point of view. This theory sees association as open framework in dynamic trade with climate. It means interdependency, interconnectedness, and interrelatedness among components in a set that comprises a recognizable entire or gestalt (Wendell & Cecil, 1999). Cole, (2004) characterize system as assortment of parts which structure some entirety. Drawing from Katz, Kahn and Hanna in

(Wendell & Cecil, 1999), all open frameworks are input-throughput-yield, they take from the environment in type of energy, data, cash, individuals and crude materials and by means of throughput changes or convert the contribution to conclusive yield that are traded to environment.

A firm marketing policy is set in relation to their interaction with other firms within the industry. The system theory suggests that a firm competitive strength arise from three fundamental processes. Thus sources of the firm inputs or supplies affect how they price their products for effective competition. It also look into firm transformational process that will produce high quality goods that attract customers and finally it looked at the market for the finally products and whether a firm has capability to consolidate that market for their products.

An open framework is a framework which constantly associates with its current circumstance. Open frameworks hypothesis conceptualizes that associations are firmly impacted by their current circumstance and that climate comprises of different associations that apply different powers of a financial, political, or social nature (Bastedo, 2004). The climate likewise gives distinct advantages that support the association and lead to change and survival. Open System Theory (OST) was at first evolved by Bertalanffy, (1956) a scholar, however was quickly relevant over all orders. Points of view of Open System Theory (OST) were additionally best in class from crafted by Emery and Trist (1960). Open framework Theory is a cutting edge framework dependent on changed administration hypothesis and intended to make sound, creative and strong associations and networks in the present quick changing and eccentric conditions.

Firms ceaselessly go up against the vulnerability of new difficulties and issues that they need to address in a convenient, proficient, and successful way for their endurance. In this way, associations pass on or are changed when the necessities fulfilled by them do not exist anymore or have been supplanted by different requirements (Emery and Trist, 1960). A system view considers a firm as a lot of cooperating capacities that procure contributions from the climate, measure them, and afterward discharge the yields back to the outer climate (Luo & Peng, 1999). Best associations, as indicated by frameworks hypothesis, adjust to their surroundings. Pfeffer and Salancik depicted the climate as the occasions happening on the planet that have any impact on the exercises and results of an association. Conditions run from "static" on one extraordinary to "dynamic" on the other. Static conditions are moderately steady or unsurprising and don't have incredible variety, though powerful conditions are in a consistent condition of motion. Since conditions can't be totally static or continually changing, associations have shifting degrees of dynamic or static conditions.

This model, nonetheless, isn't deprived of certain weaknesses. The primary weakness identifies with estimation, and the second is the issue of whether the methods by which a firm endures truly matter. As per Robbins (1990), its attention is on the methods important to accomplish viability as opposed to on hierarchical adequacy itself. Estimating the methods, or cycle, of an association can be troublesome when contrasted with estimating

Open framework models center around occasions happening outer to the firm that impact changes inside the firm. Kenyan manufacturing firms in the EAC market have an open and dynamic versatile relationship with their outside environment and accordingly utilizing ideas of Open Systems Theory (OST), the investigation will draw out the job that large scale climate is playing in impacting the connection between key collusions and execution. The study will

also provide an opportunity for further empirical investigations on environmental dynamism and how that affects the relationship between competitiveness and performance of firms.

2.1.4 Human Capital Theory (HCT)

The Human Capital theory proponent Gary Becker (1976) reveals that in today's competitive environment, organizations are interested in outmaneuvering and outdoing each other by use of resources at their disposal in order to continue being pertinent and supply satisfactory revues and profits. One of the critical resources organizations use in this search is human capital. Human capital is distinct as "productive wealth embodied in labor, skills and knowledge" (OECD, 2001) and it refers to any stock of knowledge or the innate/ acquired characteristics a person has that contributes to his or her economic productivity (Garibaldi, 2006).

HCT proposes that education rises the output and incomes of persons and their value to an organization. There is an increasing understanding among researchers and consultants comparable that in current business environment the only truthfully exclusive resource of business organizations is their human capital (Dirani & Ardichvili, 2015). This insight is beached in the Resource Based view of an organization that portrays businesses as exclusive mixtures of productive resources (Wernerfelt, 1984) and deliberates human resources as one of the greatest significant givers to a business's resource based competitive advantage. Persons, with their skills, education, and expert experience, control chances and borderlines for organizational development.

The critique of human capital theory concerns the fundamental principle underpinning the belief that persons' learning capacities are of comparable value to other resources involved in

the firms' actions that fail to link learning capabilities and the outcome predicted in the recognition of the envisioned purposes (Ghemawat & Rivkin, 2002). Further connecting human capital advantages for financial aspects includes the way toward preparing and building up the workforce to improve performance, in a perfect world making a more gainful and competitive firm to profit the public, or worldwide economies cannot only rely on training and development of human capital but also how their knowledge can be put in to proper use to achieve what was planned. As a main competency, the improvement of the business power is significant in light of the fact that the center competency speaks to an upper hand and upper hands speak to the establishment of a firm's corporate system (Viswanathan & Olson, 1992; Ghemawat & Rivkin, 2002). In order to improve salesforce performance there must be the conveying of expertise to sales people by training to rise results and ultimately arouse their behavioral and result performance. In the present research, HCT theory will be used to investigate the effect of management efficiency on the competitiveness of locally manufactured goods.

2.2 Empirical Literature Review

According to Garner, (2010) empirical review are studies done previously, or past that relate to given variables. It includes orderly identification, area, and examination of archives containing data identified with an exploration issue under scrutiny. The empirical literature review covers the relationship between economic growth, management efficiency, business environment efficiency and business facility infrastructure and competitiveness of locally manufactured goods.

2.2.1 Economic Growth and Competitiveness of Locally Manufactured Goods

According to a descriptive study by Sayed and Slimane, (2014) a significant macro-economic factor taken as an expected determinant of competitiveness is the rate of inflation taken as yearly rate and consumer prices. The impact of inflation on competition can be considered from two perspectives. Along these lines, on one hand, if the inflation builds, it tends to be recorded as an expansion in business openings on the grounds that a more significant level of costs for items and administrations can prompt expanded desires for the income of business people, business advancement and supporting competition. Then again, expansion can have a negative effect since it expands costs for beginning a business and all the expenses available (Salman, 2014). Accordingly, the connection among competition and inflation can be either positive or negative.

The findings of Suh and Lee, (2018) revealed that the drivers of competitiveness can be grouped into two main areas: macroeconomic and microeconomic. Macroeconomic competitiveness is driven by a range of institutions, policies, and public good investments that set the context for an entire economy. Social business facility infrastructure (education, healthcare and public safety) and political institutions define the broader context in which productive economic activity takes place. Microeconomic factors are those that have a direct influence on company productivity and labor force mobilization and includes factor endowments and demand conditions.

As indicated by Hollensen (2010), countrywide conditions establish an environment where organizations can increase worldwide competitively however it relies upon the firm whether it uses the chance to increase its competitive advantage. Additionally the study proposes that outer elements are pretty much uniform for all contending organizations and it is a company's

attributes and activity that decide its competitiveness. Competition in performance is shown by profitability, cost, quality and budgetary, innovation and global performance. The APP framework can be useful for firms in the recognizing and seeking after valuable activity, if relationships between various competitive factors is precisely established.

Ajitabh and Momaya (2004) center on the primary competition sources at an organization level and order competition related studies in the Asset Processes Performance (APP) structure. Their methodology incorporates two key levels: resources and execution, and cycles. Creators propose that competition intensity relies upon the mix of unmistakable and impalpable resources for example HR, material sources of info, industry foundation, innovation, notoriety, brand names and cycles inside association, which together give upper hand and can be named as wellsprings of seriousness. Seriousness measures incorporate those ones that help recognize the significance and execution of center cycles, for example, key administration measures, HR measures, activities the executives cycles, and innovation the board measures.

The competitiveness is affected by a progression of macro-economic and business pointers environment, markers which we have picked as the illustrative factors of our models. The yearly information for the illustrative factors are acquired from the World Development Indicators information base (World Bank, 2017) and Eurostat (European Commission, 2017). For the reliant variable, the yearly information are gotten from the Global Competitiveness Index Historical Data-set and the Global Competitiveness Reports (World Economic Forum, 2017). We have picked seven possible determinants of intensity, to be specific: Gross

Domestic Product, expansion rate, charge rate, unfamiliar direct venture, exchange, work profitability, and cost of business fire up system.

In light of the reviewed literature, researchers distinguished macro and micro financial sources of competitiveness of companies. Micro-economic elements, directly affecting organization competitiveness comprise: modernity of company's tasks and methodology, amount and nature of creation variables, innovation and developments just as supporting or related ventures and bunches (Notta & Vlachvei 2010). Macroeconomic climate (money related and financial strategy, the standard of lawlessness and the nature of social and political establishments) sets general conditions making open doors for higher corporate competitiveness.

As concerns farming and agro food segments, the research Herath (2013) indicate that efficiency upgrade and advancements are focal drivers of their global competitiveness, at any rate in the event that it goes to the developed economies. The investigation of agribusiness in Canada distinguished thirty features of competitiveness including cost in production, process duration, scale, adaptability, item upgrade, new items and cycle advancements, showcasing and organization. The competition of Greek food and drink producing firms is demonstrated to be dictated by aggregate and TV publicizing (Notta & Vlachvei 2010). In South Africa, the competitiveness both of little scope and asset helpless farmers just as little scope agrarian producers is improving through the bunching, joining and linkages of farmers, providers, processors, showcasing specialists, and markets (Boonzaaier, von Leipzig 2009).

Podobnik, Horvatić, Kenett, and Stanley (2012) have examined the connection between G.D.P. also, competitiveness, and demonstrated a positive useful reliance between G.C.I. as an

intermediary for competition and G.D.P. Their decisions were that, as a rule, rich nations are viewed as more competitive than helpless nations, inferring that there is a practical reliance between G.C.I. what's more, G.D.P. The researchers likewise saw that, for all E.U. nations, during the ongoing financial decline, the decrease of G.D.P. was fundamentally little in more competitive nations than in less competitive nations. Different researches (Dobrinsky & Havlik, 2014; Korez-Vide & Tominc, 2016) additionally demonstrated that financial development (estimated by G.D.P. development rates) and worldwide competitiveness of a nation (estimated by the Global Competitiveness Index scores' development rates) are emphatically identified with one another. Consequently, we likewise anticipate a positive connection between G.D.P. what's more, G.C.I., particularly for more competitive nations.

Kalimeris (2012) proposes that there is an immediate and positive connection between monetary development, Foreign Direct Investment (FDI) and competitiveness, particularly in the midst of worldwide financial emergency. The inquiry in this manner and ascents: Do methodologically dependable sources that measure the competitiveness of South American nations exist? A survey of worldwide financial aspects and business diaries features the absence of a solitary characterizing study that looks at the competitiveness of the South American locale. The reason for this exploration is hence to fill this innate gap.

Brykova (2016) propose that as worldwide competitiveness gets serious, the main determinants of guaranteeing the competitiveness of nation districts are the resulting elements: bunches; human resources; undertakings and level of advancement of local organizations; developments and local development frameworks; nature of organization and institutional structure (sort) of an area; provincial foundation; venture appeal and nature of unfamiliar

direct speculation. Considering the particular neighborhood qualities is a vital condition for distinguishing the components of local competitiveness.

2.2.2 Management Efficiency and Competitiveness of Locally Manufactured Goods

In a study by Tongzon and Cheong, (2014), the findings indicated that there are a few factors that affects business competitiveness, for example, expenses of production in which salary costs comprise a significant segment especially in the process of labour production, the board quality, costs, nature of the administration, trade rates, government arrangements, political security, interests in human and physical foundation and different components that set a nation in front of its rivals.

A study by Barney (2012) revealed that for an organization to achieve low cost leadership therefore control of cost drivers is key but more so it must have the ability to realize economies of scale, gains from learning/experience curve, better manage linked cost, Adopt vertical integration, manage cross functional co-ordination, pay attention to the timing of the strategic moves and increase the percentage of capacity utilization.

Drucker, (2017) descriptive study revealed that effectiveness and competitiveness improving overflows may affect the modern improvement of an area or nation. Overflows from unfamiliar direct speculation may go with such ventures. Information overflows that stream from Research and Development (R&D) may prompt better indigenous innovation, while improved human capital could improve efficiency. The utilization of gifted architects and unrivaled gear by one firm or industry can cause innovation overflows between them, as organizations come into contact with each other.

This is a nonexclusive technique that calls for being the minimal effort maker in an industry for a given degree of value. In supporting this position (Johnson et al., 2009) saw that an association seeking after low-estimating might be set up to acknowledge the diminished edge either in light of the fact that it can sell more volume than contenders or it can cross-finance that specialty unit from somewhere else in its portfolio henceforth become an industry cost pioneer. This value war can be won if the association has cheaper structures or it has 'further pocket' to fund short to medium term misfortunes with the point of driving out rivals in the long haul. For instance, Wal-Mart being one of the organizations that persistently endeavors to diminish costs has the picture of provider of items at the most minimal costs. It catches the business sectors and takes out the contenders by method of making sure about the provisions inside the chain. Economies of scale and effectiveness structure the center around which Wal-Mart executes its procedure. (ALAGSE) Companies seeking after cost administration system think about every single action along their worth chain with contenders and are resolved to outperform them. Subsequently advancement in such organizations is centered around measure enhancements (both steady and quantum) as opposed to on items. Indeed organizations seeking after cost authority procedure target mass business sectors with demonstrated items.

It can also attain low cost leadership by re-vamping the value chain through simplifying the product design, cutting out extra benefit or services, relocating closer to suppliers or customers, reengineer core business processes, using Information and Communication Technology to achieve efficiency and effectiveness and engendering a cost – conscious culture within the industry. Cost leadership therefore focuses on the firm ability to adopt efficient scale, Standardization, design for low production cost, control of overheads and constant

Research and Development as well as avoiding marginal customers (Porter, 1985). Low costs leadership strategy work well in a situation where customers are price sensitive, standard products in the market, few ways of achieving product differentiation, product with a common use, buyers incur low switching costs and where buyers are large and powerful.

A study done in Spain by Cabrer-Borras, and Serrano-Domingo (2007) found out that spatial overflows across topographical space improve intensity. Where firms are in nearness, for example, in a similar industrial region or district, there is a more noteworthy chance that they may team up in creative exercises. Provincial overflows increment neighborhood development and in the long run advance nearby and local financial development. There exists a reciprocal data trade between ventures yielding better yields on advancement endeavors. He found that areas where comparable businesses share clients and providers among firms, creation proficiency is higher because of agglomeration points of interest, for example, the accessibility of gifted work and radiating innovation overflows.

A study by Kleynhans (2016) study found out that firms and colleges can benefit from common cooperative energy that joint examination adventures offer. While firms can give finances, colleges have the information and gifted labor. Firms think that it's profitable to connect with colleges, as this may deliver admittance to free exhortation. This may, nonetheless, additionally lead towards a free-rider issue, as firms exploit the speculations of others. He recommended that R&D by colleges may likewise prompt swarming out impacts. These angles merit more consideration, which accentuates the significance of the ebb and flow research. It was found that opposition among firms may prompt degenerate or unscrupulous exercises by firms. They may disregard government guidelines with respect to value control,

contamination and passage methodologies, particularly where assessment tolerance exists. The accompanying area clarifies the system followed by the current investigation.

2.2.3 Business Environment Efficiency and Competitiveness of Locally Manufactured Goods

As indicated by a study by Hollensen (2010), public conditions establish an environment where organizations can increase worldwide upper hands yet it relies upon the firm whether it gets the chance to increase upper hand or not. Likewise they proposed that outer components are pretty much uniform for all contending organizations and it is an association's qualities and activity that decide its gainfulness.

It was revealed in a study by Hall and Jones, (2016) that the drivers of competitiveness vary from one country to another and can be grouped into two main areas: macroeconomic and microeconomic. Macroeconomic competitiveness is driven by a range of institutions, policies, and public good investments that set the context for an entire economy. Social business facility infrastructure (education, healthcare and public safety) and political institutions define the broader context in which productive economic activity takes place. Microeconomic factors are those that have a direct influence on company productivity and labor force mobilization and includes factor endowments and demand conditions.

Dima, Begu, Vasilescu, and Maassen, (2018) study indicated that Porter had a place with the gathering of initiators of this research science, as he researched business competitiveness and comprehended the nearby connection among miniature and large scale levels The business environment makes conditions for the intensity of endeavors, which is then reflected in the nation's competitiveness. The premise of this framework are the abilities, choices, and genuine

execution of organizations. Nonetheless, more refined systems and more beneficial exercises require more taught individuals, better data, more successful government choices, better foundation, created research establishments, etc. In this manner, a greater, efficiency, and market achievement of business production is reflected in the nation's export performance, in its monetary development, and, eventually, in the better quality of living of its occupants.

As per Tudose, and Rusu, (2015), the examination of competitiveness permits a valuation for the degree to which the different economies of the world's nations have figured out how to handle monetary difficulties. The competitiveness has been and stays a need in the arrangement of the logical discussion, yet additionally a significant worry for every single world economy. Financial approaches and institutional changes were acknowledged as fundamental apparatuses for an expansion in force of the intensity and feasible exhibition. A nation's competitiveness is differently estimated and the degree of competitiveness includes numerous factors of financial thriving. The different determinant variables of competitiveness and nation explicit macroeconomic pointers permit order of the world economies in various phases of improvement.

Brykova (2007) study proposed that as worldwide competitiveness gets serious, the main determinants of guaranteeing the seriousness of public areas are the accompanying components: bunches; human resources; ventures and level of improvement of nearby organizations; developments and local advancement frameworks; nature of organization and institutional structure (sort) of a district; local foundation; speculation engaging quality and nature of unfamiliar direct venture. Considering the particular neighborhood qualities is a vital condition for distinguishing the elements of provincial competitiveness.

Pearce and Robinson, (2015) highlights the ever changing environment that continually provides opportunities and threats to organizations. To ensure survival and success, firms need to develop their capabilities to manage threats and exploit the emerging opportunities. Competitive advantage thus is a broader formula on how firms are positioning themselves to compete within the industry. It is the means of what a firm can use to achieve the market. It consists of approaches and initiatives a firm undertake to attract customers and fulfil their expectation better than the competitors.

Dobbs (2014) study distinguished five principle determinants of competitiveness: admittance to business sectors, area comparative with crude materials, transportation costs, accessibility and cost of energy assets, and work costs. A survey of econometric examinations correspondingly found that generally the essential variables impacting site determination by organizations were admittance to work (estimated for the most part by the flexibly of work), work expenses (and unionization), transportation (number of thruways and closeness of railways), admittance to business sectors, and admittance to crude materials. Additionally built up a model that clarifies the various determinants that either advance or repress competitiveness.

As indicated by Rodríguez-Pose and Crescenzi (2018), study extemporization, adjustment, growth or change of existing channels of exchange using innovation can decrease exchange costs. Creative showcasing without the utilization of innovation in an exchanging arrangement rather requires asset based favorable circumstances for starting trade of information and data about circumstances accessible in the commercial center. The trading of field notes among purchaser and dealer firms can encourage the investigation of unpredicted events and the identification of original plans to address serendipitous chances.

2.2.4 Business Facility Infrastructure and Competitiveness of Locally Manufactured Goods

A study by Brykova, (2014) found out that European experts single out three groups of key factors determining the international competitive status of a region: business facility infrastructure and accessibility; human assets; industrial environment that, in turn, include certain sub-factors. Sub-factors under business facility infrastructure and accessibility include basic business facility infrastructure, technological business facility infrastructure, and business facility infrastructure of knowledge and habitat quality. Human assets include demographic trends and highly skilled labour force. Industrial environment include factors such as entrepreneurial culture, sectoral concentration, internationalization, specialization, innovation, nature and pattern of competition, sufficiency of manufacturing resources, Government and institutional capability.

Baldwin and Dixon (2014), study highlights isolated foundation into three gatherings: apparatus and hardware, structures, designing structures. The field of our examination incorporates just the essential physical framework, aside from the social, natural and institutional foundation (schools, emergency clinics, detainment facilities, and so forth.). In such a way, under the framework we mean the essential physical foundation comprising of: transport framework, water framework, media transmission framework and energy framework. This business facility infrastructure will be known as the public foundation since it makes benefits for an enormous number of clients.

Mamatzakis et al. (2008) study recommend that the framework is a significant part of financial action in Greece. His assessments show that the public foundation diminishes costs in the most

assembling ventures, as it fortifies the development of profitability of assets. The proficient foundation underpins financial development, improves personal satisfaction, and it is significant for public security (Baldwin, Dixon, 2008). The specialists examine the effect of foundation in different viewpoints: territorial seriousness, monetary development, salary disparity, yield, work profitability, the effect on the climate and prosperity (in time and cost reserve funds, expanded wellbeing, the improvement of data organizations). A few creators contend that interest in framework can animate hierarchical and the board changes: the development of the railroad framework will prompt the normalization of the timetable, which prompts expanded income notwithstanding having rail line administration. Public foundation gives the geographic convergence of financial assets and more extensive and more profound business sectors for yield and work (Macdonald, Tamai & He 2009). It influences the business sectors and assets of the completed item, assists with deciding the spatial examples of improvement and gives a broad organization of individual clients at low costs. Public framework is by and large observed as an establishment on which to fabricate the economy (Macdonald, Tamai & He, 2009).

Burinskiene and Rudzkiene (2009) have led an examination of the execution of maintainable advancement strategies, they note the improvement of framework as one of the most significant angles in the field of vital anticipating feasible spatial and financial improvement of the nation. He affirms that the public foundation is the premise of the personal satisfaction: great streets lessen the quantity of mishaps and increment public security, water gracefully framework decreases the degree of illness, squander the executives improves the wellbeing and style of the climate.

Palei (2015) study ascribed to the wellsprings of business facility infrastructure performance. He propose that social capital business facility infrastructure has a huge positive effect on profit, the interest for private methods for creation and conveyance of items in 12 OECD nations. The consequences of the appraisals that were made affirmed that gainful public interest in streets emphatically impacted by the general increment in labor profitability in the Spanish areas.

Macdonald (2009) investigated the effect of public framework fair and square of private production and found that private business facility infrastructure is indispensable for the private assembling area. Organizations are taking a gander at social capital as an unpaid factor of creation while boosting benefits. Nijkamp (1986) affirms that the business facility infrastructure is one of the apparatuses for the locale advancement. It can influence, legitimately or by implication, on the social-monetary exercises and other provincial limit, just as variables of creation. The creator underscores that business facility infrastructure strategy is a state of the provincial improvement strategy: it doesn't ensure territorial seriousness, yet makes the vital conditions for accomplishing local advancement goals. Snieska and Draksaite (2007) state that the seriousness of the economy is controlled by various elements, and pointer of framework is one of them.

Snieska and Bruneckiene (2009) recognized business facility infrastructure as one of the pointers of the intensity of areas inside the nation. It alludes to the physical framework (comprising of street transport foundation, media communications, recently manufactured property, outer availability of the district via land, air and water) as a pointer of the elements of production, serious conditions in the area. Martinkus and Lukasevicius (2008) solidify that the business facility infrastructure administrations and physical framework are factors that

influence the venture atmosphere at the nearby level and increment the engaging quality of the district. Further, we inspect the degree of the business facility infrastructure impact for worldwide intensity and sources.

Martinkus and Lukasevicius (2008) recognized business facility infrastructure as one of the markers of the intensity of areas inside the nation. It alludes to the physical foundation (comprising of street transport framework, broadcast communications, recently constructed property, outer openness of the district via land, air and water) as a marker of the components of creation, serious conditions in the locale. They combine that the framework administrations and physical foundation are factors that influence the venture atmosphere at the nearby level and increment the engaging quality of the area. Further, we analyze the degree of the framework impact for worldwide competitiveness and sources.

Baldwin and Dixon (2010), as per these highlights, separated framework into three gatherings: hardware and gear, structures, designing structures. The field of our examination incorporates just the fundamental physical foundation, aside from the social, ecological and institutional framework (schools, clinics, detainment facilities, and so forth.). In such a way, under the framework we mean the fundamental physical foundation comprising of: transport framework, water framework, media transmission foundation and energy foundation. This framework will be known as the public foundation since it makes benefits for countless clients.

2.3 Summary and Research Gaps

As per an examination by Rodríguez-Pose and Crescenzi (2018), act of spontaneity, change, increase or change of existing channels of exchange using innovation can diminish exchange costs. Creative advertising without the utilization of innovation in an exchanging arrangement

rather requires asset based points of interest for starting trade of information and data about circumstances accessible in the commercial center. This study did not relate business environment efficiency towards the competitiveness of locally manufactured goods.

For an organization to achieve low cost leadership therefore control of cost drivers is key but more so it must have the ability to realize economies of scale, gains from learning/experience curve, better manage linked cost, Adopt vertical integration, manage cross functional coordination, pay attention to the timing of the strategic moves and increase the percentage of capacity utilization. (Barney, 2014). This study did not relate management efficiency towards the competitiveness of locally manufactured goods.

2.4 Conceptual Framework

A conceptual framework is an arrangement of variables the investigator operationalized in order to achieve the set objectives (Jwan 2010). Competitiveness of locally manufactured goods was the dependent variable while economic growth, management efficiency, business environment efficiency and business facility infrastructure were the independent variables. The study presumed that there exists a relationship between these variables which the study intends to explore as summarized in Figure 2.1.

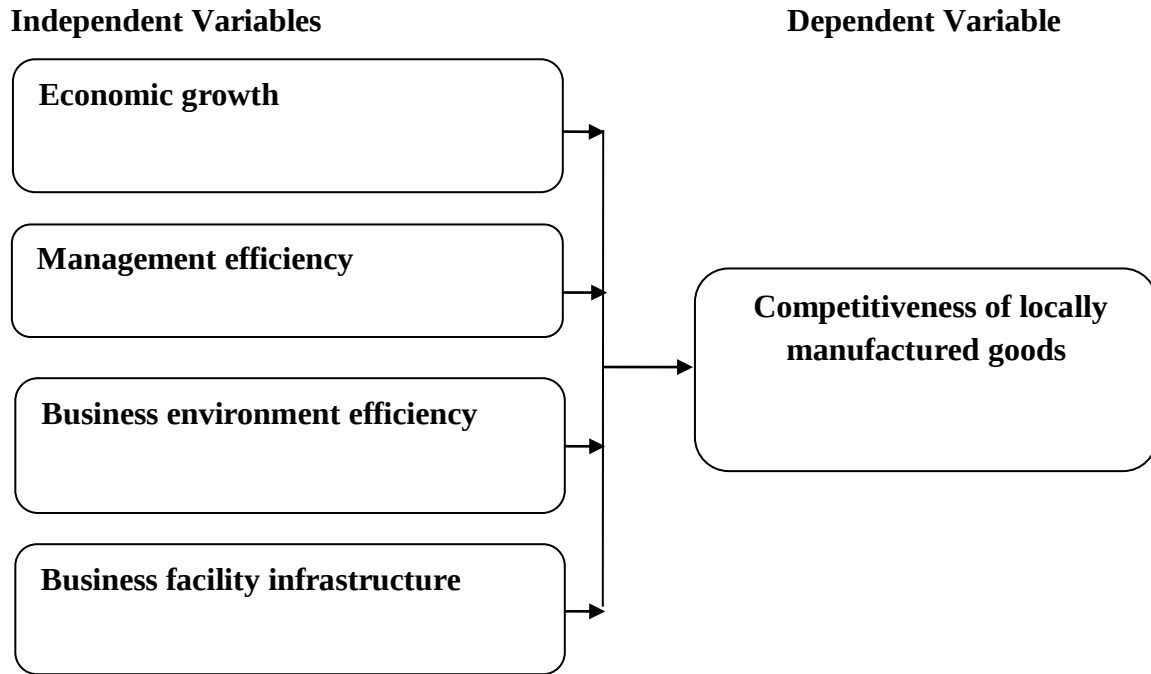


Figure 2.1: Conceptual framework

2.5 Operationalization of Variables

The variables are operationalized to enable quantitative measurement. Operationalization helps to interpret abstract notions of contracts into observable characteristics so that they can be measured (Garner, 2010). The dependent variable is competitiveness of locally manufactured goods and the independent variable is determinants of competitive advantage that include economic growth, management efficiency, business environment efficiency and business facility infrastructure. The variables are operationalized in line with the objectives of the study as shown in Table 2.1.

Table 2.1: Operationalization of Study Variables

Variables	Indicators	Measurements	Questions
Economic growth (Independent Variable)	- Gross Domestic Product - Inflation rate - Tax rate	5-point Likert type scale	Section II

Management efficiency (Independent Variable)	• Organizational structure • Product cost • Leadership	5-point Likert type scale	Section III
Business environment efficiency (Independent Variable)	• Demand for goods and services • Political stability • Regulations	5-point Likert type scale	Section IV
Business facility infrastructure (Independent Variable)	• Technological • Human assets • Buildings and structures	5-point Likert type scale	Section V
Competitive advantage (Dependent Variable)	• Technological advantage • Customer base • Products expansion • Market power	5-point Likert type scale	Section VI

2.6 Chapter Summary

This chapter presents the theoretical literature review, empirical literature review, summary and research gaps, conceptual framework, operationalization of variables and the chapter summary.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter describes the research design, data collection and the various techniques for data analysis to be used in the study. It explains the research design types, population of the study, data collection method and data analysis and interpretation.

3.1 Research Design

A research design is the masterplan for collecting, measuring and analysing data on the basis of research questions or hypothesis being examined (Garner, 2010). It can also be defined as a structure for the specification of the relationships between the variables being studied as well as the blueprint that outlines the various procedures ranging from the hypothesis of the study to the data to be analysed. According to the positivists approach, a particular research design has to provide sufficient assurance to a community of scientists that the results delivered from following that design captured the true facts and have reliability and validity levels of a high standard.

The study is modeled for a case study design. According to Kothari (2004) a case study is a form of qualitative analysis which involves a careful and complete observation of a social unit be it a family, a person, a cultural group, or an entire community or institution. The study focused on in establishing competitiveness of Autosterile East Africa Limited products in the domestic market. The results are expected to provide an insight on how on sort coming that the firm needs to improve in order to remain competitive in the current turbulent and sometimes hostile environment. Mugenda and Mugenda (2003), also points out that a case study allows an investigation to retain the holistic and meaningful characteristics of real life

events. It is a method of study in depth rather than breadth and lays more emphasis on a limited number of events and other interrelations.

3.2 Target Population

Jwan (2010) defined a population a set of individuals, administrations, components and occasions, gathering of things or family units that are being investigated. Target population comprises the whole or entirety of the things under investigation (Kothari, 2004). The population comprised of the top, middle and lower level employees at Autosterile East Africa.

Table 3.1: Target Population

Respondents	Frequency
Top level employees	8
Middle level employees	22
Lower level employees	39
Total	69

3.3 Sample Size and Sampling Technique

Sampling frame is a published list in which, there are a set of directions for identifying a population (Borg & Gall, 2007). It is the source material or device from which a list of all elements within a population that can be sampled is drawn (Jwan, 2010). The sampling frame was top, middle and lower level employees at Autosterile East Africa.

Sample of responding staff was drawn from the 8 top level employees, 22 middle level employees and 39 lower level employees working at Autosterile East Africa where census sampling technique will be used (Mugenda & Mugenda, 2003).

Neuman (2000) argues that the main factor considered in determining the sample size is the need to keep it manageable enough. Also this enables the researcher to derive from it detailed data at an affordable cost in terms of time, finances and human resource (Mugenda & Mugenda, 2003). The study adopted census sampling technique to involve all the respondents

in the firm. The study divided the number of respondents in the different level of staff. Consequently, the sample size for the current study was as indicated in Table 3.2.

Table 3.2: Sample Size

Respondents	Sample Size
Top level employees	8
Middle level employees	22
Lower level employees	39
Total	69

3.4 Instruments

A well-planned and carefully constructed questionnaire was used to collect data. This increased the response rate and to facilitate the summarization and analysis of the collected data (Creswel, 2003). The questionnaire designed in this study comprised of two sections. The first part was designed to determine fundamental issues including the demographic characteristics of the respondent, while the second part consisted of questions focusing on the four variables. The structured questionnaire was designed in line with the objectives of the study. To enhance quality of data to be obtained, Likert type of questions were included whereby respondents indicated the extent to which the variables are practiced on a five point Linkert scale (Garner, 2010).

The structured questions were used in an effort to conserve time and money as well as to facilitate easier analysis as they are in immediate usable form; while the unstructured questions were used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information ((Mugenda & Mugenda, 2003). Secondary data is data that are already available; published or unpublished (Kothari, 2004). Secondary data was collected from the Autosterile East Africa annual reports, Government

performance contracting evaluation reports, Vision 2030, and Autosterile East Africa websites.

3.5 Pilot Study

Pilot testing means, trying out the questionnaire in the field in order to reveal any deficiencies (Jwan, 2010).

3.5.1 Validity

Validity is a measure of the degree to which data obtained from the instrument accurately and meaningfully represents the theoretical concept and in particular how the data represents the variables. It is the degree to which the analyzed data is the true picture of a given phenomenon being studied (Saunders et al., 2019). Validity is normally explained as the degree that items in the instruments represent a satisfactory operational definition of the construct of concern. There are a variety of validity tests including face to face validity, content validity, construct validity, criterion (predictive) validity and convergent validity. For this study, construct validity and face to face validity tests were employed. This was because these tests measure the degree that the set of questions (scale items) determine the existence of the target constructs (Saunders et al., 2019).

Where validity has been established, any inferences made from such data was accurate and meaningful (Mugenda & Mugenda, 2003). Validity was determined in by the researcher discussing the items in the instrument with the experts including supervisor, lecturers from the department and colleagues. These people was expected to indicate by tick or cross for every item in the questionnaire if it measured what it was supposed to measure or not.

3.5.2 Reliability Test

Reliability refers to the level of consistency with which the tool measures a given attribute. As indicated by Saunders et al., (2019) it is important to test on whether the instrument produces steady results at various conditions and at different timings, for example, with various respondents. External/Stability reliability involves either test-retest and split half reliability.

According to Kothari (2004) reliability of the questionnaire should be established. Reliability was increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. The study selected a pilot group of 10% of the sample to involve seven (7) respondents from the staff working in IVEE aqua limited to test the reliability of the research instrument.

The pilot study allowed for pre-testing of the research instrument (Kothari, 2004). The clarity of the instrument items to the respondents is necessary so as to enhance the instrument's validity and reliability. The aim was to correct inconsistencies arising from the instruments, which will ensure that they measure what is intended. The pilot data was not included in the actual study. Cronbach's Alpha was applied to measure the co-efficient of internal consistency and therefore reliability of the instrument. A reliability coefficient of at least 0.7 was considered high enough for the instruments to be used (Neuman, 2000).

3.6 Data Collection Procedure

The initial process involved attaining an introductory letter from Management University of Africa. Questionnaires were used to collect data. Thereafter, the researcher booked appointments with the relevant respondents in different departments in Auto sterile East Africa. The questionnaires were delivered by hand to respondents; the researcher was on

standby for the respondents as they filled them out and provided any clarifications whenever needed. Due to the Corona virus pandemic, the researcher made sure she does not come into contact with the respondents. The researcher sanitized every time she received the questionnaire from the respondents and always wore a mask to protect herself.

3.7 Data Analysis and Presentation

Data preparation was first done by involving a process of cleaning and transforming raw data prior to processing and analysis. It was an important step prior to processing and often involves reformatting data, making corrections to data and the combining of data sets to enrich data. Data preparation process usually included standardizing data formats, enriching source data, and/or removing outliers.

Data obtained was first cleaned by removing the unanswered or incomplete filled questionnaires. The cleaned questionnaires were then coded and analyzed using SPSS version 25. Imputation was used to take care of missing data. Mohajan, (2018) revealed that missing data could be replaced by use of different estimation methods; this study adopted the “Missing Values Analysis” add-on module. Data analysis took place at two levels – descriptive statistics level and inferential statistics level.

Data obtained was qualitatively analyzed using content analysis techniques. Mugenda and Mugenda (2003), pointed out that the best content-analytical studies use both qualitative and quantitative methods. The information was analyzed and evaluated to determine its usefulness, credibility, consistency and adequacy. Content analysis technique was used because it assisted in making inferences by objectively identifying specific information and relating the same to occurrence trends.

According to Mugenda and Mugenda (2003), the main purpose of content analysis is to study existing information in order to determine factors that explain a specific phenomenon. In coding qualitative data, the researcher read all the responses, identify key information and relate it to emerging patterns. The outcome was compared in an attempt to get more revelation on the processes and challenges on competition of Autosterile East Africa Limited products in the domestic market. Inferential statistics involved regression analysis. Statistical Package for Social Sciences (SPSS) version 25 was used to analyze data.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where: Y = Competitiveness of locally manufactured goods, $\{\beta_i ; i=1,2,3,4\}$ = The coefficients for the various independent variables.

X_i for; X_1 = Economic growth, X_2 = Management efficiency, X_3 = Business environment efficiency, X_4 = Business facility infrastructure ε = Error term.

3.8 Ethical Considerations

Ethical considerations that influence a research are critical aspects to take into account in any study (Cuervo-Cazurra, Mudambi, Pedersen, & Piscitello, 2017). In relation to this research study, several ethical issues were critical. Since this research was founded majorly on the primary data, the examiner made sure that the data collected was not manipulated with a purpose of attaining findings that was founded on subjectivity. The original data was gathered from annual reports and other secondary sources were examined without changing them so as to ensure that the findings are objective.

The researcher sought to get informed consent from respondents before data collection. The participants were also given confirmation that the data collected would be used in complete confidentiality and shall purely be used for education purpose. Privacy and confidentiality was

observed all through. It was important for the researcher to respect and adhere to the schedule agreed upon by the respondents.

3.9 Chapter Summary

This chapter has described the research design, data collection and the various techniques for data analysis to be used in the study. It explains the research design types, population of the study, data collection method and data analysis and interpretation.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

This chapter deals with data analysis, presentation and interpretation. Data analysis and presentation is based on the four study objectives: to explore the influence of economic growth on competitiveness of locally manufactured goods, the effect of management efficiency on competitiveness of locally manufactured goods, the influence of business environment efficiency on competitiveness of locally manufactured goods and to determine the influence of business facility infrastructure on competitiveness of locally manufactured goods by Autosterile East Africa, Kenya.

This study involved the 69 respondents that included 8 top level employees, 22 middle level employees and 39 lower level employees. 66 respondents out of 69 returned their questionnaires making a 95.65 per cent return rate. As indicated by Mugenda and Mugenda (2003) in her studies 50 per cent of reaction rate of above 70% rated is very good. This means that a response of 95.65 per cent was very good for data analysis.

Table 4.1 Response rate

Respondents	Sampled	Responded
Top level employees	8	6
Middle level employees	22	21
Lower level employees	39	39
Total	69	66

4.1 Presentation of Research Findings

This study examined the demographic information of the respondents before covering the four objectives of the study using descriptive and inferential statistics as presented.

4.1.1 Demographic Information

The researcher started by a general analysis on the demographic data got from the respondents which included: gender, education level and working experience of the respondents. This was followed by a description of the study variables under various sections of the questionnaire.

Table 4.2: Gender of the respondents

Gender	Frequency	Percentage
Male	39	60
Female	27	40
Total	66	100

From the findings, majority 39 (60%) of the respondents were male while 27 (40%) were female. This means that the study involved both gender and that Autosterile East Africa has more male employees than female. The organization therefore need to ensure that they balance in terms of equality in gender.

The respondents were asked to specify their education level. The data is presented in Table 4.3.

Table 4.3: Education level of the respondents

Education Level	Frequency	Percentage
Primary	0	0
Secondary	3	4
Undergraduate	57	86
Postgraduate	6	10
Total	66	100

Majority 57 (86%) of the respondents had undergraduate level of education while a 6 (10%) had postgraduate level. Therefore the information on the factors influencing competitiveness of locally manufactured goods in Autosterile East Africa was from an informed people.

Table 4.4: Working experience of the respondents

Adequacy	Frequency	Percentage
Below 2 year	7	10
2-5 years	9	14
6 -10 years	14	21
11 years and above	36	55
Total	66	100

The findings indicate that majority 36 (55%) of the respondents revealed that they had worked for 10 years and above while 14 (21%) indicated they had worked for between 6-10 years. A few 9 (14%) revealed that they had worked for between 2-5 years. This implies that the respondents had enough experience to understand the factors influencing competitiveness of locally manufactured goods at Autosterile East Africa, Kenya.

4.1.2 Influence of Economic Growth on Competitiveness of Locally Manufactured Goods

The findings on Influence of Economic Growth on Competitiveness of Locally Manufactured Goods are presented in Table 4.5.

Table 4.5: Influence of economic growth on competitiveness of locally manufactured goods

Influence of Economic Growth on Competitiveness of Locally Manufactured Goods	%	Mean	Standard deviation
The GDP has influenced the competition among our competitors	78%	1.23	0.12
Goods inflation negatively influences competition among firms	68%	1.52	0.68
Price control of commodities enhances competition among competitors	56%	1.98	0.25
The local firms competitive advantage is determined by economic growth	60%	1.85	0.87
The tax rate from the government influences competition among firms	72%	1.42	0.74
There were benefits in competition of the government initiatives to enhance economic growth	80%	1.21	0.48
The government penalties to companies enhances their competition	60%	1.85	0.21

From the findings, a mean of 1.23 and a standard deviation 0.12 indicated that a large number (78%) of respondents agreed that the GDP has influenced the competition among their competitors while most (68%) agreed that goods inflation negatively influences competition among firms a mean of 1.52 and a standard deviation 0.68. Most (56%) of them agreed that price control of commodities enhances competition among competitors as revealed by a mean of 1.98 and a standard deviation 0.25. The local firm's competitive advantage is determined by economic growth as shown by a mean of 1.85 and a standard deviation 0.87. A large number (72%) agreed that the tax rate from the government influences competition among firms as revealed by a mean of 1.42 and a standard deviation 0.74 while most (80%) agreed that there were benefits in competition of the government initiatives to enhance economic growth as indicated by a mean of 1.21 and a standard deviation 0.48. A large number (60%) agreed that the government penalties to companies enhances their competition as revealed by a mean of 1.85 and a standard deviation 0.21. One respondent indicated that the economic growth affected their sales where the demand reduced for their product. This was experienced for a period of one year.

This finding agree with (World Bank, 2017) and Eurostat (European Commission, 2017) reports that indicated that the seven possible determinants of competition were Gross Domestic Product, expansion rate, charge rate, unfamiliar direct venture, exchange, work profitability, and cost of business fire up system.

4.1.3 Effect of Management Efficiency on Competiveness of Locally Manufactured Goods

This study investigated the effect of management efficiency on competitiveness of locally manufactured goods.

Table 4.6: Effect of management efficiency on competitiveness of locally manufactured goods

Effect of management efficiency on competitiveness of locally manufactured goods	%	Mean	Standard deviation
Organization structure of firms dictates its competitive advantage over other firms	82%	1.22	0.15
Product cost has an influence on competition among firms	78%	1.25	0.88
Leadership in the firm directs the competitive advantage of a firm	70%	1.45	0.28
Control among the top management influences the competition offered by the firm	75%	1.28	0.75
Management controls the competitive advantages among firms	63%	1.75	0.27
Departmental control influences the way the firm performs competitively	90%	1.02	0.18

A large number (82%) of respondents agreed that organization structure of firms dictates its competitive advantage over other firms as shown by a mean of 1.22 and a standard deviation 0.15 while majority (78%) agreed that product cost has an influence on competition among firms a mean of 1.25 and a standard deviation 0.88. Most (70%) agreed that leadership in the firm directs the competitive advantage of a firm as indicated by a mean of 1.45 and a standard deviation 0.28 while a large number (75%) agreed that control among the top management influences the competition offered by the firm as revealed by a mean of 1.28 and a standard deviation 0.75. Majority (63%) agreed that the management controls the competitive advantages among firms as shown by a mean of 1.75 and a standard deviation 0.27. A large number (90%) of respondents agreed that departmental control influences the way the firm performs competitively as shown by a mean of 1.02 and a standard deviation 0.18. A respondent explained that the managers who involved the employees in decision making make them open in sharing with them their challenges in executing their duties. This happened to affect the performance of the sale of goods hence their competitiveness.

The findings agree with Barney (2014) who found out that for an organization to achieve low cost leadership therefore control of cost drivers is key but more so it must have the ability to realize economies of scale, gains from learning/experience curve, better manage linked cost, Adopt vertical integration, manage cross functional co-ordination, pay attention to the timing of the strategic moves and increase the percentage of capacity utilization.

Effectiveness and competitiveness improving overflows may affect the modern improvement of an area or nation (Drucker, 2017). Overflows from unfamiliar direct speculation may go with such ventures. Information overflows that stream from Research and Development (R&D) may prompt better indigenous innovation, while improved human capital could improve efficiency. The utilization of gifted architects and unrivaled gear by one firm or industry can cause innovation overflows between them, as organizations come into contact with each other.

4.1.4 Influence of Business Environment Efficiency on Competitiveness of Locally Manufactured Goods

The findings on the influence of business environment efficiency on competitiveness of locally manufactured goods. The results are presented in Table 4.7.

Table 4.7: Influence of business environment efficiency on competitiveness of locally manufactured goods

Influence of business environment efficiency on competitiveness of locally manufactured goods	%	Mean	Standard deviation
Demand for goods and services influences competition of goods and services	64%	1.58	0.29
Political stability has an impact in competition among firms	68%	1.68	0.64
Regulations dictates the competition among companies	70%	1.47	0.52
Supply of goods and services controls a firms competitive advantage	78%	1.25	0.01

From the findings, a mean of 1.58 and a standard deviation 0.29 revealed that majority (64%) agreed that demand for goods and services influences competition of goods and services while a large number (68%) agreed that political stability has an impact in competition among firms as shown by a mean of 1.68 and a standard deviation 0.64. Most (70%) agreed that regulations dictates the competition among companies as revealed by a mean of 1.47 and a standard deviation 0.52 while a large number (78%) agreed that supply of goods and services controls a firms competitive advantage as indicated by a mean of 1.25 and a standard deviation 0.01. The manager explained that they endeavour to provide the right working environment for their employees to enhance their competitiveness.

This findings agrees with Pearce and Robinson, (2015) who highlights the ever changing environment that continually provides opportunities and threats to organizations. They reveal that in order to ensure survival and success, firms need to develop their capabilities to manage threats and exploit the emerging opportunities. Competitive advantage thus is a broader formula on how firms are positioning themselves to compete within the industry. It is the means of what a firm can use to achieve the market. It consists of approaches and initiatives a firm undertake to attract customers and fulfil their expectation better than the competitors.

4.1.5 Influence of Business facility infrastructure on Competiveness of Locally Manufactured Goods

The findings on the influence of business facility infrastructure on competitiveness of locally manufactured goods are shown below.

Table 4.8: Influence of business facility infrastructure on competitiveness of locally manufactured goods

Influence of business facility infrastructure on competitiveness of locally manufactured goods	%	Mean	Standard deviation
Technological advancement has a positive impact on a firms competitive advantage	88%	1.05	0.05
Human assets enhances a firms competitive advantage	70%	1.48	0.24
Buildings and structures availability has an impact on an organization competitive advantage	76%	1.28	0.85
Business facility infrastructure control how an organization performs competitively	54%	1.96	0.42

A mean of 1.05 and a standard deviation 0.05 revealed that a large number (88%) agreed that technological advancement had a positive impact on a firms competitive advantage while majority (70%) agreed that human assets enhances a firms competitive advantage as revealed by a mean of 1.48 and a standard deviation 0.24. A large number (76%) agreed that buildings and structures availability has an impact on an organization competitive advantage as indicated by a mean of 1.28 and a standard deviation 0.85 while most (54%) agreed that business facility infrastructure control how an organization performs competitively as revealed by a mean of 1.96 and a standard deviation 0.42. Provision of the required business facility infrastructure was deemed necessary by a respondent who highlighted that it was a major reason that affected their competitiveness with the other companies. He explained that the railway system would have made the transportation of their goods easier and hence more competitive.

This finding agrees with Snieska and Bruneckiene (2014) distinguished business facility infrastructure as one of the pointers of the competition of locales inside the nation. It alludes to the physical framework (comprising of street transport foundation, broadcast communications, and recently fabricated property, outside availability of the district via land, air and water) as a marker of the components of creation, serious conditions in the locale. Martinkus and

Lukasevicius (2008) solidify that the business facility infrastructure administrations and physical framework are factors that influence the venture atmosphere at the nearby level and increment the engaging quality of the district. Further, we inspect the degree of the business facility infrastructure impact for worldwide intensity and sources.

4.1.6. Competitive Advantage

Table 4.9: Technological Advantage

Items	%	Mean	Standard deviation
The firm has adopted completely new technological models	80%	1.20	0.36
The firm have improved the new processes	72%	1.35	0.85
The firm have improved the processing automation procedures	92%	1.05	0.14
The firm has formed alliances with organizations to improve its technological operations	66%	1.56	0.85
The firm has invested in newer hardware	60%	1.89	0.25
The firm has integrated on a core operating software	62%	1.85	0.62
The firm is continuously investing on newer versions of core software	79%	1.22	0.09
The firm continuously maintains its hardware and software	70%	1.64	0.15

A mean of 1.20 and a standard deviation of 0.36 revealed that majority (80%) of the respondents agreed that the firm has adopted completely new technological models while a large number (72%) agreed that the firm have improved the new processes as revealed by a mean of 1.35 and a standard deviation of 0.85. A large number (92%) of the respondents agreed that the firm have improved the processing automation procedures as shown by a mean of 1.05 and a standard deviation of 0.14 while majority (66%) agreed that the firm has formed alliances with organizations to improve its technological operations as indicated by a mean of 1.56. The firm has invested in newer hardware as revealed by a mean of 1.89 and a standard deviation of 0.25. A large number (62%) of the respondents agreed that the firm has integrated on a core operating software as indicated by a mean of 1.85 and a standard deviation of 0.62 while majority (79%) agreed that the firm is continuously investing on newer versions of core

software as shown by a mean of 1.22 and a standard deviation of 0.09. A large number (70%) agreed that the firm continuously maintains its hardware and software as shown by a mean of 1.64 and a standard deviation of 0.15.

Innovation and data encourage advertising development in serious business sectors (Sood & Tellis, 2009). As per Rodríguez-Pose and Crescenzi (2008), spontaneous creation, change, enlargement or change of existing channels of exchange using innovation can lessen exchange costs. Inventive advertising without the utilization of innovation in an exchanging arrangement rather requires asset based focal points for starting trade of information and data about circumstances accessible in the commercial center. The trading of field notes among purchaser and dealer firms can encourage the investigation of unpredicted events and the distinguishing proof of original plans to address accidental chances.

Table 4.10: Product expansion

Items	%	Mean	Standard deviation
The firm is continuously improving existing products and services	90%	1.02	0.36
The firm continuously introducing new products and services	74%	1.48	0.25
The firm has new developed products	70%	1.63	0.18
The firm has linked its service to other organizations	80%	1.28	0.58
The firm has adopted automation services	86%	1.09	0.21

A mean of 1.02 and a standard deviation of 0.36 showed that a large number (90%) of the respondents agreed that the firm is continuously improving existing products and services. Majority (74%) agreed that the firm continuously introducing new products and services as revealed by a mean of 1.48 and a standard deviation of 0.25 while a large number (70%) agreed that the firm has new developed products as revealed by a mean of 1.63 and a standard deviation of 0.18. Majority (80%) of the respondents agreed that the firm has linked its service

to other organizations as revealed by a mean of 1.28 and a standard deviation of 0.58 while a large number (86%) agreed that the firm has adopted automation services as revealed by a mean of 1.09 and a standard deviation of 0.21.

As per Tudose, and Rusu, (2015), the examination of competitiveness permits a valuation for the degree to which the different economies of the world's nations have figured out how to handle monetary difficulties. The competitiveness has been and stays a need in the arrangement of the logical discussion, yet additionally a significant worry for every single world economy. Financial approaches and institutional changes were acknowledged as fundamental apparatuses for an expansion in force of the intensity and feasible exhibition. A nation's competitiveness is differently estimated and the degree of competitiveness includes numerous factors of financial thriving. The different determinant variables of competitiveness and nation explicit macroeconomic pointers permit order of the world economies in various phases of improvement.

Table 4.11: Market power

Market power	%	Mean	Standard deviation
The firm has integrated new marketing channels	64%	1.58	0.81
The firm has adopted new advertising strategies	70%	1.65	0.42
The firm has adopted new promotion strategies	58%	1.85	0.56
The firm uses social media marketing	84%	1.11	0.02

A mean of 1.58 and a standard deviation of 0.81 revealed that majority (64%) agreed that the firm has integrated new marketing channels as revealed by while a large number (70%) of respondents agreed that the firm has adopted new advertising strategies as revealed by a mean of 1.65 and a standard deviation of 0.42. Majority (58%) of the respondents agreed that the firm has adopted new promotion strategies as revealed by a mean of 1.85 and a standard deviation of 0.56 while a large number (84%) agreed that the firm uses social media marketing

as revealed by a mean of 1.11 and a standard deviation of 0.02. Kalimeris (2012) referred to competitiveness as how much a country can create products and enterprises that can sell in the worldwide business sectors, under the states of a free market and reasonable trade, while keeping up and expanding the real incomes of its citizens over a long time.

4.1.7 Multiple Regression Analysis

Multiple regression was used to determine whether independent variables affect the dependent variable. To achieve this, competitiveness of locally manufactured goods as the dependent variable was regressed against four variables namely economic growth, management efficiency, business environment efficiency and business facility infrastructure as independent variables. The regression model for this study generally assumed the following equation:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ Where: Y = Competitiveness of locally manufactured goods, $\{\beta_i ; i=1,2,3\}$ = The coefficients for the various independent variables. X_i for; X_1 = economic growth, X_2 = management efficiency, X_3 = Business environment efficiency, X_4 = Business facility infrastructure ε = Error term.

This section examined whether the multiple regression equation can be used to explain the effects of determinants of competitiveness of locally manufactured goods in Autosterile East Africa in Kenya.

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 ^a	.691	.679	6.567
a. Predictors: (Constant), Economic growth, Management efficiency, Business environment efficiency, Business facility infrastructure				

From the results obtained, an R of 0.831 shows that there is a positive correlation between effects of determinants of competitiveness of locally manufactured goods. The adjusted R square of 0.679 indicates that economic growth, management efficiency, business environment efficiency and business facility infrastructure, in exclusion of the constant

variable explained the change in competitiveness of locally manufactured goods by 67.9%, the remaining percentage can be explained by factors not included in the model.

The coefficient of determination (r-squared) of 0.691 indicates that 69.1 % of competitiveness of locally manufactured goods can be explained by economic growth, management efficiency, business environment efficiency and business facility infrastructure. Drivers of competitiveness vary from one country to another and can be grouped into two main areas: macroeconomic and microeconomic. Macroeconomic competitiveness is driven by a range of institutions, policies, and public good investments that set the context for an entire economy. Social business facility infrastructure (education, healthcare and public safety) and political institutions define the broader context in which productive economic activity takes place (Suh & Lee, 2018). Microeconomic factors are those that have a direct influence on company productivity and labor force mobilization and includes factor endowments and demand conditions.

The findings on ANOVA results on effects of various determinants of competitiveness of locally manufactured goods are presented in Table 4.13.

Table 4.13: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10111.282	4	2527.821	58.622	.000 ^b
	Residual	4527.709	62	73.027		
	Total	14638.991	66	221.80289		

a. Dependent Variable: Competitiveness of locally manufactured goods

b. Predictors: (Constant), Economic growth, Management efficiency, Business environment efficiency, Business facility infrastructure

The Analysis of Variance (ANOVA) indicated a p-value of 0.000. This, therefore, means that the relationship between effect the four factors economic growth, management efficiency, business environment efficiency, business facility infrastructure was significant at 95%

confidence level. The F statistics of 58.622 was large enough to conclude that the set of variables have a significant influence on competitiveness of locally manufactured goods in Autosterile East Africa. This implies that economic growth, management efficiency, business environment efficiency, business facility infrastructure are significant predictors at explaining competitiveness of locally manufactured goods in Autosterile East Africa and that the model is significantly fit at 95% confidence level.

Table 4.14: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	.337	2.205		2.153	.029
Economic growth	.180	.072	.024	2.152	.034
Management efficiency	.135	.062	.241	2.040	.045
Business environment efficiency	1.003	.075	.069	2.354	.026
Business facility infrastructure	.875	0.77	.058	2.214	.028

a. Dependent Variable: Competitiveness of locally manufactured goods

Further analysis as shown in Table 4.14 shows that management efficiency had a coefficient of 0.135, economic growth had a coefficient of 0.180 while business environment efficiency had a coefficient of 1.003. From the coefficients, the model developed was as follows;

Competitiveness of locally manufactured goods = 0.337 + 0.180 Economic growth + 0.135 Management efficiency + 1.003 Business environment efficiency + .875 Business facility infrastructure

The beta Coefficients in the regression shows that all of the tested variables had positive relationship with competitiveness of locally manufactured goods. The findings show that all the four variables tested were statistically significant with positive beta coefficients. It also shows that business environment efficiency is the most significant determinant of competitiveness of locally manufactured goods.

Pearce and Robinson, (2015) highlights the ever changing environment that continually provides opportunities and threats to organizations. To ensure survival and success, firms need to develop their capabilities to manage threats and exploit the emerging opportunities. Competitive advantage thus is a broader formula on how firms are positioning themselves to compete within the industry. It is the means of what a firm can use to achieve the market. It consists of approaches and initiatives a firm undertake to attract customers and fulfil their expectation better than the competitors.

4.2 Limitations of the Study

The main limitation experienced was that most respondents considered some information as confidential and did not want to reveal everything. However, confidentiality and protection of information was assured to the organizations' management and the respondents. Information was coded to avoid direct reference to particular individuals. The study was limited to Autosterile East Africa although issues of competitiveness affects other local manufactured goods.

4.3 Chapter Summary

This chapter has presented the analysis of the data collected and related to the previous studies done.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

This chapter summarizes the findings of the study and presents conclusions, recommendations and suggestions for further research.

5.1 Summary of Findings

This section presents the summary of the study findings guided by the objectives of the study. This includes the relationship between the economic growth and competitiveness of locally manufactured goods, management efficiency and competitiveness of locally manufactured goods, business environment and competitiveness of locally manufactured goods and business facility infrastructure and competitiveness of locally manufactured goods.

5.1.1 Economic Growth and Competitiveness of Locally Manufactured Goods

From the findings, it was highlighted that a large number of respondents agreed that the GDP has influenced the competition among our competitors while most agreed that goods inflation negatively influences competition among firms. Most of them agreed that price control of commodities enhances competition among competitors. The local firms' competitive advantage is determined by economic growth. A large number agreed that the tax rate from the government influences competition among firms while most agreed that there were benefits in competition of the government initiatives to enhance economic growth. A large number agreed that the government penalties to companies enhances their competition.

The competitiveness is influenced by a series of macroeconomic and business environment indicators, indicators which we have chosen as the explanatory variables of our models. The annual data for the explanatory variables are obtained from the World Development Indicators database (World Bank, 2017) and Eurostat (European Commission, 2017). For the reliant variable, the yearly information are gotten from the Global Competitiveness Index Historical Data-set and the Global Competitiveness Reports (World Economic Forum, 2017). We have picked seven possible determinants of intensity, to be specific: Gross Domestic Product, expansion rate, charge rate, unfamiliar direct venture, exchange, work profitability, and cost of business fire up system.

5.1.2 Management Efficiency and Competitiveness of Locally Manufactured Goods

A large number of respondents agreed that organization structure of firms dictates its competitive advantage over other firms while majority agreed that product cost has an influence on competition among firms. Most agreed that leadership in the firm directs the competitive advantage of a firm while a large number agreed that control among the top management influences the competition offered by the firm. Majority agreed that the Management controls the competitive advantages among firms a. A large number of respondents agreed that departmental control influences the way the firm performs competitively.

There are several factors that determine business competitiveness, such as costs of production in which wage costs constitute an important component particularly in labor-intensive production, management quality, prices, quality of the service, exchange rates, government policies, political stability, investments in human and physical business facility infrastructure and other factors that set a country ahead of its competitors (Tongzon & Cheong, 2014).

5.1.3 Business environment and Competitiveness of Locally Manufactured Goods

From the findings, majority agreed that demand for goods and services influences competition of goods and services while a large number agreed that political stability has an impact in competition among firms. Most agreed that regulations dictates the competition among companies while a large number agreed that supply of goods and services controls a firms competitive advantage.

According to Hollensen (2010), national circumstances create an environment in which businesses can gain international competitive advantages but it depends on the firm whether it grabs the opportunity to gain competitive advantage or not. Also they suggested that external factors are more or less uniform for all competing companies and it is a firm's characteristics and action that determine its profitability.

5.1.4 Business facility infrastructure and Competitiveness of Locally Manufactured Goods

A large number agreed that technological advancement had a positive impact on a firms competitive advantage while majority agreed that human assets enhances a firms competitive advantage. A large number agreed that buildings and structures availability has an impact on an organization competitive advantage while most agreed that business facility infrastructure control how an organization performs competitively.

European experts single out three groups of key factors determining the international competitive status of a region: business facility infrastructure and accessibility; human assets;

industrial environment that, in turn, include certain sub-factors. Sub-factors under business facility infrastructure and accessibility include basic business facility infrastructure, technological business facility infrastructure, business facility infrastructure of knowledge and habitat quality. Human assets include demographic trends and highly skilled labour force. Industrial environment include factors such as entrepreneurial culture, sectoral concentration, internationalization, specialization, innovation, nature and pattern of competition, sufficiency of manufacturing resources, Government and institutional capability (Brykova, 2014).

5.2 Recommendations

From the findings, it is recommended that; the government of Kenya need to boost the Economic Growth in order to enhance the competitiveness of Locally Manufactured Goods. This can be done by providing subsidies to business owners and fund the SMEs in starting up business.

The locally manufactured goods firms should enhance their management Efficiency so as to better their competitiveness of their locally manufactured goods. This can be done by the firm's management developing leadership structures that are efficient.

The Kenyan Government should formulate policies that enhance the business environment to enhance competitiveness of locally manufactured goods. This can be done through the Ministry of trade supporting the exportation of locally manufactured goods and limiting the importation of the same products.

The GOK should enhance the business facility infrastructure to better competitiveness of locally manufactured goods. This should be done by constructing road networks and enhancing the systems that control trade in the country.

5.3 Conclusion

It can be concluded from the findings on economic growth and competitiveness of locally manufactured goods that the GDP has influenced the competition and that goods inflation negatively influences competition among the firms. Price control of commodities enhances competition among competitors and the local firms' competitive advantage is determined by economic growth. There are also benefits in competition of the government initiatives to enhance economic growth and the government penalties to companies enhances their competition.

The findings also led to conclusion that the management efficiency influences competitiveness of locally manufactured goods. Organization structure of firms dictates its competitive advantage over other firms and the product cost has an influence on competition among firms. The leadership in the firm directs the competitive advantage of a firm and the control among the top management influences the competition offered by the firm. The departmental control influences the way the firm performs competitively.

It can be concluded that business environment positively influences Competitiveness of Locally Manufactured Goods. The demand for goods and services and political stability influences competition of goods and services. The regulations dictates the competition among companies and supply of goods and services controls a firm's competitive advantage.

Business facility infrastructure has an influence on competitiveness of Locally Manufactured Goods. The technological advancement and human assets have a positive impact on a firm's competitive advantage. Buildings and structures availability has an impact on an organization

competitive advantage and business facility infrastructure control how an organization performs competitively.

The study concludes that economic growth, management efficiency, business environment efficiency and business facility infrastructure all have a positive relationship with competitiveness of locally manufactured goods. The findings revealed that business environment efficiency is the most significant determinant of competitiveness of locally manufactured goods.

5.4 Area for Further Research

This study examined the determinants of competitiveness of locally manufactured goods: the case of Autosterile East Africa, Kenya. The study concentrated on four determinants; economy, management efficiency, business environment efficiency and business facility infrastructures. However the study did not examine the differences in application of the determinants at Autosterile East Africa and establish whether differences in competitiveness of goods were attributed to the determinants.

A further study is, therefore, recommended to determine whether the determinants could explain the difference in competitiveness among the locally manufactured goods. The current study also investigated the determinants on sample drawn from only one firm.

Further study is, therefore, recommended where a repeat study can be done using samples from other local firms. This will ensure that the findings can be compared among the various samples of companies and determine whether the determinants affect competitiveness in equal magnitude. The current study also looked at four objectives affecting competitiveness of locally manufactured goods at Autosterile East Africa in Kenya but did not look at either

moderating or mediating effects between the variables under study. A further study is therefore recommended to look into the moderating/mediating factors influencing competitiveness of locally manufactured goods.

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APPENDICES

Appendix I: Introduction Letter

3rd August, 2020

Margaret Wambui Kamau
Management University of Africa
P.O.BOX 29677-00100
NAIROBI

Dear Sir/Madam,

Ref: Request to Conduct a Research

I am a student at Management University of Africa undertaking Master of Business Administration. As part of course requirement, am required to undertake research on a topic relevant to my field of study. To this effect am researching on “**DETERMINANTS OF COMPETITIVENESS OF PHARMACEUTICAL MANUFACTURERS IN KENYA: A CASE OF AUTOSTERILE EAST AFRICA, KENYA**”. You have been selected as one of the respondent. Attached open ended questionnaire seeks your opinion on various issues, would be grateful if you could complete the form as best and honestly as possible. The information provided will be treated with utmost confidentiality and no single response will be reported on its own, but as assumptions of all responses.

Yours faithfully,

Margaret Wambui Kamau.

Appendix II: Questionnaire

This study intends to investigate the **Determinants of Competitiveness of Pharmaceutical Manufacturers in Kenya: A Case of Autosterile East Africa, Kenya**. Answer as honestly as possible to the best of your knowledge. All information provided will be treated with anonymity and confidentiality. The survey result will strictly be used for academic purposes only.

Section I: Demographic Characteristics

1. Please indicate your Gender?

- a) Male [] b) Female []

2. What is your highest academic qualification?

- a) No formal education
b) Primary []
c) Diploma []
d) Degree []
e) Other(s) specify.....

3. What is your working experience? Indicate full years.

- [] 1 year and below
[] 2-5 years
[] 6 -10 years
[] 11 years and above

Section II: Influence of Economic Growth on Competiveness of Locally Manufactured Goods

The following statements indicate the views on influence of economic growth on competitiveness of locally manufactured goods. Please use a tick (✓) in the provided five-point scale of to a Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD)

	Influence of Economic Growth on Competiveness of Locally Manufactured Goods	SA	A	UD	D	SD
4.	The GDP has influenced the competition among our competitors					
5.	Goods inflation negatively influences competition among firms					
6.	Price control of commodities enhances competition among competitors					
7.	The local firms competitive advantage is determined by economic growth					
8.	The tax rate from the government influences competition among firms					
9.	There were benefits in competition of the government initiatives to enhance economic growth					
10.	The government penalties to companies enhances their competition					

11. There is influence of economic growth on competitiveness of locally manufactured goods.

Yes () No ()

If Yes, please explain_____

Section III: Effect of Management Efficiency on Competitiveness of Locally Manufactured Goods

The following statements indicate the views on effect of management efficiency on competitiveness of locally manufactured goods.

Please use a tick (✓) in the provided five-point scale of to a Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD).

	Effect of management efficiency on competitiveness of locally manufactured goods	SA	A	UD	D	SD
12.	Organization structure of firms competitive advantage over other firms					
13.	Product cost has an influence on competition among firms					
14.	Leadership in the firm directs the competitive advantage of a firm					
15.	Control among the top management influences the competition offered by the firm					
16.	Management controls the competitive advantages among firms					
17.	Departmental control influences the way the firm performs competitively					

Section III: Influence of Business Environment Efficiency on Competitiveness of Locally Manufactured Goods

The following statements indicate the views on the influence of business environment efficiency on competitiveness of locally manufactured goods.

Please use a tick (✓) in the provided five-point scale of to a Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD)

	Influence of business environment efficiency on competitiveness of locally manufactured goods	SA	A	UD	D	DS
18.	Demand for goods and services influences competition of goods and services					
19.	Political stability has an impact in competition among firms					
20.	Regulations dictates the competition among companies					
21.	Supply of goods and services controls a firms competitive advantage					

22. Indicate other influence of business environment efficiency on competitiveness of locally manufactured goods.

Section IV: Influence of Business facility infrastructure on Competitiveness of Locally Manufactured Goods

The following statements indicate the views on the influence of business facility infrastructure on competitiveness of locally manufactured goods. Please use a tick (✓) in the provided five-

point scale of to a Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD)

	Influence of business facility infrastructure on competitiveness of locally manufactured goods	SA	A	UD	D	SD
23	Technological advancement has a positive impact on a firms competitive advantage					
24	Human assets enhances a firms competitive advantage					
25	Buildings and structures availability has an impact on an organization competitive advantage					
26	Business facility infrastructure control how an organization performs competitively					

27. Indicate other the influence of business facility infrastructure on competitiveness of locally manufactured goods.

Section V: Competitive Advantage

28. The following statements describe the nature of competitive advantage within your firm. Rate the items using the scale where 1 is ‘very little extent’ and 5 “very large extent”.

Items	1	2	3	4	5
Technological Advantage					
The firm has adopted completely new technological models					
The firm have improved the new processes					

The firm have improved the processing automation procedures					
The firm has formed alliances with organizations to improve its technological operations					
The firm has invested in newer hardware					
The firm has integrated on a core operating software					
The firm is continuously investing on newer versions of core software					
The firm continuously maintains its hardware and software					
Products expansion					
The firm is continuously improving existing products and services					
The firm continuously introducing new products and services					
The firm has new developed products					
The firm has linked its service to other organizations					
The firm has adopted automation services					
Market power					
The firm has integrated new marketing channels					
The firm has adopted new advertising strategies					
The firm has adopted new promotion strategies					
The firm uses social media marketing					

Appendix III: Letter from the institution



Date: 18th September 2020

TO WHOM IT MAY CONCERN

MARGARET KAMAU- EMBA/00006/1/13

This letter serves to introduce the above named who is an (**Executive Masters in Business Administration**) student and is interested in carrying out research on **Determinants of Competitiveness of Locally Manufactured Goods. A Case study of Autosterile East Africa Kenya**

Any assistance accorded to her in pursuit of this study will be greatly appreciated.

Yours Sincerely

Juster Nyaga

Ag. Dean, School of Management and Leadership

Appendix IV: Research Letter



REPUBLIC OF KENYA

Ref No: **451167**



**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **02/October2020**

RESEARCH LICENSE



This is to Certify that Ms.. Kamau Margaret wambui of The Management University of Africa, has been licensed to conduct research in Nairobi on the topic: Determinants of competitiveness of locally manufactured goods :The case of Autosterile East Africa, Kenya for the period ending : 02/October/2021.

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