

**OUTSOURCING AND PRODUCTIVITY IN MANUFACTURING  
FIRMS IN KENYA**

**BY**

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## DECLARATION

This research project is my original work and has never been submitted to any other University for assessment or award of degree.

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This research project has been submitted with my approval as the university supervisor.

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## **DEDICATION**

This project is posthumously dedicated to my late dad Kirimi M'Muna who laid for me a solid foundation in education. I also dedicate the project to my mum Faith Kirimi and my siblings for their encouragement and prayers. Last but not least I dedicate this project to Mbugua Mwaura and our son Reagan Mwaura Mbugua who turns 9 weeks today. May this project be a source of encouragement to you in future our dear son.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>BPO</b>	Business Process Outsourcing
<b>GDP</b>	Gross Domestic Product
<b>HRM</b>	Human Resource Management
<b>IT</b>	Information Technology
<b>KAM</b>	Kenya Association of Manufacturers
<b>NSE</b>	Nairobi Stock Exchange
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>TCE</b>	Transaction Cost Economic
<b>TOC</b>	Theory of Constraints

## **ABSTRACT**

Outsourcing has in the recent past become a very popular management strategy. The rationale associated with outsourcing is reducing of costs while allowing firms to concentrate on their core business. The study was guided by two specific objectives: to determine which functions are outsourced by manufacturing firms in Kenya and determine the impact of outsourcing on productivity in manufacturing firms operating in Kenya. The study was founded on the Transaction Cost Economic (TCE) and Theory of Constraints (TOC). Descriptive research design was adopted. Out of a population of 659 manufacturing firms operating in Kenya, 69 firms were sampled. Both secondary and primary approaches were used to collect data. The questionnaire was used as the primary data collection instrument and company financial reports were used to gather secondary information. Data analysis comprised of descriptive statistics analysis and regression analysis. A response rate of 58 % which corresponded to 40 questionnaires was achieved and used in the analysis. The study revealed that warehouse management outsourcing and logistics management outsourcing were outsourced to a large extent with a mean score of 3.0205 (60.5%) and 2.865 (57%) respectively while human resource was least outsourced with a mean score of 1.316(26%) compared to the overall mean of 2.1646 (43.3%). Further warehousing and logistics had 0.703 and 0.502 positive and significant impact on productivity of sampled manufacturing firms. Finance and accounting management outsourcing (0.253), IT management outsourcing (0.101) and human resource management outsourcing (0.076) had impact on manufacturing firms' productivity but this was insignificant. The study also revealed that Food and processing sector led in outsourcing of the managerial functions with a productivity of 2.861. These firms outsourced more of the warehousing and logistics functions compared to other sectors. Timber, wood and furniture on the other hand outsourced the least with a productivity impact of 1.175. The study recommends that more manufacturing firms should outsource their warehouse management and logistics management outsourcing to improve their productivity. Manufacturing firms should also embark on continually analyzing their finance and accounting, IT and human resource management functions and processes to enable them identify which aspects can be outsourced to enhance their productivity as they continue to grow to enable them to keep their focus on their day to day operations. The major limitation of the study was that study limited itself to Value-adding and Processing Industries in Kenya which implied that the results obtained may not be used to make generalization for all the manufacturing sectors in Kenya or manufacturing firms outside Kenya. The study recommends that future researchers should conduct studies to establish what contributes to the 46.7% of variations on productivity not attributed to outsourcing.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

Outsourcing has been an integral component to companies' operations and plays an important role in the economic growth of both companies operating in developed and developing countries (Katz, 2004). It is mostly viewed by organizations as an opportunity that can be taken advantage of if the outsourcing strategies and procedures are carefully and meticulously planned and adhered to. However, it's until factors like; infrastructure costs, legal aspects, security and labor costs are assessed and favorable conclusions are drawn from these assessments, that outsourcing can be fully accepted as a tool for business improvement.

Global trends like globalization are some of the reasons that have contributed to most firms outsourcing. Globalization has enabled firms to have access to specialized firms that have adopted the latest technologies in their operations and as a result these firms are able to offer non-core services in a more efficient and effective manner at less operational costs than if the outsourcing firm were to internally perform these functions themselves (Kamanga, 2016). Another reason for outsourcing is the search of unique human resources that are not available in the parent company. Lack of human resources that possess the right skills and knowledge is a big challenge to firms of today. It is easier to outsource these competencies that enable the acquiring of world class capabilities that drive the firm's competitive advantage.

Transferring of operational risks to another party is also a key reason for the need to outsource, especially when it comes to manufacturing companies (Adler, 2003). Spreading the operational risks is important as it lowers the total firm's operational costs. Manufacturing firms usually outsource functions and processes that cut across the whole supply chain. It includes functions and processes that might deal with research and design, product components, product developments, product final assembly, distribution and logistics (Adler, 2003). Kenyan companies tend to outsource functions that are more inclined towards being resource intensive. These functions are mostly associated with high labor or capital costs, requirements of

experts possessing unique competencies, activities that are dependent on rapidly changing technology and those that need heavy financial investments (Ismail, 2016).

In General, by a firm concentrating on its core skills, competencies, technology and brand and outsourcing the non-core functions, there will be a direct correlation to increments experienced in innovations, efficiency, higher productivity and competitiveness by the firm in that specific industry. The result of this is the organization's economic growth and its employees experiencing higher standards of living (Iraki, 2013). From the above we can say that when a firm outsources, then there is an effect on the firm's productivity. Lawler and Boudreau, (2009) argued that outsourcing is an instrument in operational cost reduction and savings in organizations.

### **1.1.1 Outsourcing**

Outsourcing can be explained as contract made between two organizations whereby one organization will manage some or all processes of the other organization (Sharma, 2004). Outsourcing is regarded as a management strategy of a company. It takes place when a company transfers some or all their non-core functions, to established external service providers with the intent of obtaining better competencies from these providers. Companies do this so that they can drive their competitive advantages in their market of operation (Sharpe, 1997). The motives or drive behind making outsourcing decisions is based on several factors. The first is knowledge in form of advice or information obtained from third party providers, suppliers, customers or consultants that support outsourcing of processes or activities. The second is managerial initiatives and high-level decisions from decision makers on opting for outsourcing to increase their business performance (Mol and Kotabe, 2008).

One of the key benefits of outsourcing to a company is cost reduction in terms of its operating costs. This is because generally outsourcing of some of the business activities to the third-party service provider is cheaper than the same activities being performed internally (Kokes, 2014). Outsourcing also improves the quality of service delivery. The company concentrates on its core functions that result in increase of

efficiency and effectiveness of their operations and thus improve customer satisfaction. Further, outsourcing enables firms to have more operating flexibility. This results in providing an environment that fosters innovation and business growth (Wabwire & Namusonge, 2015). These contracted or outsourced companies enjoy economies of scale and acquire unique expertise because of the large number of clients that they have and can employ new technologies and innovative practices to their operations (Jiang, Frazer & Prater, 2001).

### **1.1.2 Productivity**

Lussier (2008) defines productivity as a measure of performance that considers the cost of achieving a given performance level. According to Shields (2007), Lawler and Boudreau (2012), organizational productivity is experienced when its capacity to achieve its operational objectives at the least expenditure of energy, time, finance, personal and materials is met. Elmuti (2003) argues that when an organization outsources, it can access and use new technologies which leads to increase in the productivity of investment in knowledge. Abraham and Taylor (1996) states that an organization can benefit from outsourcing by lowering its cost of wages and exploiting economies of scale.

There have been both theoretical and empirical studies conducted that have discovered that there is a link between various organizations' activities to productivity. However, some of these results of different firms' activities on production have been questioned and the different studies carried out have revealed mixed results (Mugendi, Gachanja and Nganga, 2015).

Studies done in 1990's on productivity performances of domestic manufacturing firms' have revealed that productivity growth has been slow and majority of these domestic firms' do not have the capabilities to meet their set standards and objectives unlike the foreign organizations' (Teal, 1999). Ngugi and Musengele (2008) survey on productivity analysis of both domestic and foreign manufacturing companies in Kenya state that, seventy five percent of the sampled companies had enough capabilities to achieve their production goals and of the seventy-five only thirty-five percent comprised of domestic manufacturing companies. Additionally,

manufacturing sub-sectors like food processing and beverages are comprised of almost equal number of foreign and domestic firms with the previous performing better in terms of productivity.

McCann (2008) researched that as firms outsource more non-core activities to specialized service providers, productivity increased in two ways: In the short-run, the organizations benefited from cheaper or higher-quality inputs, while in the medium term the organizations gained the ability to reallocate resources towards higher value-added activities. McMann also states that, international firms outsourcing from abroad can experience further productivity gains from the higher quality and variety of inputs on offer and from exposure to new technologies, practices and knowledge. Functions that are usually found in the production process that are outsourced do indeed influence firm-level productivity, but that this effect is small, and that it does not cut across all organizations when the organizations are broken down by their international orientation and their industry characteristics.

### **1.1.3 Manufacturing Firms in Kenya**

After Kenya's independence in 1963, it acquired a mixed economic framework that opened the growth of its private sector that included the manufacturing industries. In the four decades that followed, various policies and regional strategies were undertaken by the government. The growth of the manufacturing sector, specifically in food processing and other related sectors like fast moving consumer goods (FMCGs) remained important in the country's overall agenda throughout (Kenya Economic Recovery Strategy for Wealth & Employment Creation, 2003).

In the 1990s Kenya's formal manufacturing sector had a relatively sluggish employment growth rate averaging at 2 per cent annually (Kenya Manufacturing Enterprise Survey, 2000). The sector's contribution to the national Gross Domestic Product (GDP) in the period between 2003 and 2007 was an annual average of 5.5 per cent. In 2008 this figure dropped to 3.8 per cent. The drop was attributed to overall slowing down of the global economy, the post-election violence experienced in the country, depreciation of the Kenyan shilling, and low levels of productivity and high costs of production.

Originally in Kenya, the vision of BPO sector was to concentrate on exportation but controlled by Kenyan stakeholders geared towards job creation (Anderson, Graham and Mann, 2015). In 2007, the Kenyan government named Business Process Outsourcing as one of its key six pillars that would drive its economic growth in its vision 2030 Kenyan report. The Vision 2030 Kenyan report being a national development framework or programme seeks to establish Kenya as a middle-income country by the year of 2030 (Kenya Government Vision 2030, 2007). The vision 2030 of Kenya emphasizes the critical role of the manufacturing sector. It highlights food processing sub-sector in its contribution to the GDP at 28.7 per cent and the manufacturing sector contributes to an employment rate of about 34.5 per cent (Kenya Vision 2030, 2008).

The manufacturing sector in Kenya grew at the rate of 3.5 per cent in the year of 2015 this was an improvement from year 2014 growth rate of 3.2 per cent. Its contribution to the GDP was at 10.3 per cent (Kenya National Bureau of Statistics, 2016). This growth is however much slower than the country's economic growth which was at 5.6 per cent in 2015. The implication of this is that the Kenyan manufacturing industry is relatively still under developed.

Kenyan firms have resulted to looking at ways to cut costs as a solution to curbing some of these challenges. Identifying ways of increasing their productivity, increasing their market shares and drive up their competitiveness in both the global and local industry are some of the solutions that can be used to resolve some of these challenges. There is a concern that the productivity in this industry is stagnant or even declining, the reason for this is the companies are using obsolete technologies in their operation, the lack of access to financial resources and the lack of ability to attract and retain skilled man-power (Were, 2016). There is therefore a need to improve productivity in Kenyan manufacturing industries because of the key role this sector plays in the economy and one way to possibly achieve this is maybe through outsourcing.



## **1.2 Statement of the Problem**

Yeboah(2013) stated that after evaluating the benefits when it comes to outsourcing, some firms are likely to opt for it as they believe that outsourcing is the best way to enhance organizations' productivities. Other firms will hold back due to certain shortcomings about the entire outsourcing strategy with the view that the organization's ability to quickly respond to the marketplace will be deeply affected and for this reason they insist in-house production is the best option. From this, it is clear we need to investigate the relationship between outsourcing and productivity and the impact that outsourcing has on the productivity of organizations.

According to Were (2016) the Kenyan manufacturing industry is not without its challenges. Some of the challenges he highlighted include: rise in costs of inputs such as labor, logistics and human resources to encountering stiff competition from international markets; technological challenges in the form of lack of adoption of new and advanced technologies together with innovative practices. He continues to add that Kenya's manufacturing exports are becoming less competitive in the global market due to inefficiencies experienced in the production. He argued that, the Kenyan government is developing a lot of policies and strategies related to manufacturing standards that do not necessarily have clear mandates of execution which leads to poor implementation. The conclusion from his research is that there must be a link between policies and research when it comes to the manufacturing industry, especially in specific sub-sectors of the industry.

Ozer and Cicek (2011) carried out a research on determining the effect of organizations performances when human resources functions of these organizations are outsourced. In their finding they discovered that organizations that outsourced their human resources functions were affected positively in terms of their performance and the organizations productivity increased, they however did not research on the effect on productivity of these organizations of outsourcing other functions in the production process besides human resource and additionally, their research was based on European firms' and not Africa, specifically Kenya.

Yeboah (2013) conducted a research on determining the relationship between outsourcing and organizational performance. His findings were that there was no statistically significant correlation between outsourcing and organizational productivity, but there was statistically significant correlation between outsourcing and quality and there was statistically significant correlation between outsourcing and competitive advantage. He concluded that there must be thorough background check before outsourcing, and organizations must also have a back-up system to avoid losing vital data because of incompetence on the part of the external supplier. His research however did not cover manufacturing firms' but rather insurance and banking companies. His research needs to be applied in manufacturing firms' specifically those operating in Kenya.

Wabwile and Namusonge (2015), carried out an empirical study on the determinants of outsourcing as a competitive strategy in supply chain management of East African Breweries Limited (EABL), a beverage processing company operating in Kenya. In their research, they found out that EABL outsourced non-core competencies which led to cost effectiveness in her operations. They recommended that further research on effects of outsourcing needs to be carried out to determine the benefits or limitations of outsourcing.

Additionally, Kamanga and Ismail (2016), conducted a research case study of Del Monte Company, a Juice processing firm based in Kiambu County, investigating the effects of outsourcing. Their findings revealed that cost, quality and technological adoption had a very strong positive relation to organizational performance. They concluded that organizations should not outsource an activity or function to a third-party service provider until they have fully confirmed the third-party service providers have the capabilities to handle those activities or functions as per the expected standards and objectives. Their research was limited as they only researched on one manufacturing firm. Further, they did not address the outputs of outsourcing a function, in relation to whether productivity levels and the company's competitive advantages were enhanced because of outsourcing.

Kung'u (2016), researched on the effects of BPO in the profitability of manufacturing firms listed in the Nairobi Stock Exchange (NSE). Her research revealed that outsourcing functions like back office transactions had no effect on the profitability of these firms while outsourcing functions such as customer interaction services had a positive and significant effect on the profitability of the manufacturing firms listed on the NSE. She concluded that manufacturing firms should adopt needs assessment criteria prior to outsourcing its functions. Through this they will be able identify the cost-benefit analysis and decide on whether to outsource or not. The scope of her research was limited to the NSE manufacturing firms which represent a small fraction of the manufacturing firms operating in Kenya. She also did not look at the productivity element in terms of what were the total revenues compared to total costs of firms that adopted outsourcing strategies.

Outsourcing is clearly an important aspect in business operations nowadays. Study on what exactly is outsourced, whether it is processes, functions or activities needs to be carried out. Further there was need to establish the overall impact or difference between those companies that outsource and those that do not. The productivities of these firms need to be analyzed in relation to whether they increase or not after outsourcing strategies and procedures are put into effect.

In Kenya, not enough empirical studies have been done on the effect of outsourcing functions of manufacturing companies on their level of productivity. It was therefore important to carry out an empirical study that attempts to answer very critical questions raised in the discussions above. This study was guided by the following research questions; what functions were outsourced by the manufacturing firms in Kenya? And what was the impact of outsourcing these functions positive or negative in nature as far as the firm's productivity was concerned?

### **1.3 Objectives of the Study**

The general objective of the study was to determine the relationship between outsourcing and productivity of manufacturing firms operating in Kenya.

The specific objectives of the study were;

- i. To determine which functions are outsourced by manufacturing firms in Kenya.
- ii. To determine the impact of outsourcing on productivity in manufacturing firms operating in Kenya.

#### **1.4 Value of the Study**

In Kenya, not a lot of research has been done on the functions different organizations are outsourcing and the impact this outsourcing has on manufacturing companies' level of productivity. This study will therefore contribute to the body of knowledge in these areas. Researchers and academicians will also be able to reference this document in the future and identify further research opportunities through the research gaps that they will be able to derive from this research.

In addition this study will enable manufacturing firms both in Kenya and across the world to increase their technical capabilities and flexibilities through identifying of the functions that have the greatest positive impact on their productivity. This will be as result of firms doing away with functions or activities that would have become redundant because of outsourcing. Through this research, productivity of manufacturing firms will be streamlined and improvements on the supply chain performances made, due to this research analyzing the positives or negatives of outsourcing on the manufacturing firms' productivity.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discussed the theories underpinning outsourcing which include; the theory of constraints and transaction cost economic theory. This chapter also covered a summary of some international and local studies carried out that were relevant to this research and lastly frame the conceptual framework associated with this study.

#### **2.2 Theoretical Foundation of the Study**

Scientific theories are used in research because they allow the researcher to make links and try to explain the relationships involved between the variables under investigation. Theories also reduce and arrange knowledge to draw comparisons between the abstract and the concrete (Sunday, 2012).

##### **2.2.1 Transaction Cost Economic (TCE)**

Transaction cost economic (TCE) view of outsourcing is one of the theoretical concepts that assume a firm as a type of governance structure (Williamson, 1998). The firm is encountered with a critical economic dilemma of adopting measures in governance that gear towards minimizing transactional costs involved in undertaking economic activities. Outsourcing in relation to this dilemma and application of the TCE theory is that, the firm can either externally adapt to responses to the price mechanisms in the market or can cooperatively adapt internally by administration within the firm itself. The solution chosen for either going with the market hierarchy i.e. the price mechanisms of the market or the organizational hierarchy which is the internal administration is solely based on which of the two governance structures provide the most efficient adaptive capability to the firm.

Transaction cost economics provides a way to understand concepts and the consequences that are involved in the decision of whether to carry out routine activities internally in the organization or through a third-party provider using the market-mechanisms in place (Michael and Rashmi, 2011). TCE explains theoretically why organizations opt for outsourcing some of their functions and go for the market

mechanism option and not the organizational hierarchy despite from the face value, the organizational hierarchy being the better option.

TCE assumes that contracts drawn up in the outsourcing process should consider both the transaction costs of producing a private product and the costs that follow the social product (Williamson, 2007). Firms normally produce two types of products; a private product and a social product. A private product is what a firm produces and assigns value to with the purpose of selling it in the market-place. A social product is the accompanying cost brought about by the production of the private product and others must bear with it. Outsourcing concentrates on efficiency and the private product costs but not the social product costs like; displaced workers without jobs when outsourcing is done. Outsourcing is capable of reducing company costs and improves productivity (Casale, 1996) while TCE favors cost reduction factors (Iqbal and Dad, 2013).

### **2.2.2 Theory of Constraints (TOC)**

This model assists decision makers in deciding of which products are to be manufactured internally or be outsourced. TOC analyses the feasibility of whether to outsource or not based on the firms manufacturing capacity constraints (Adnan and Cazan, 2014). TOC has an advantage over a standard accounting solution, in that TOC maximizes the firms' available internal resources in the manufacturing processes. TOC achieves this by either outsourcing or not. It converts the question of whether to outsource or not a manufacturing function into a linear programming problem and draws up a simple criterion for the solution to this question from its linear programming findings (Lung and Muppala, 2014). The theories discussed above are relevant because they try to explain how the variables in question; outsourcing functions of manufacturing firms' operating in Kenya and their productivity relate to each.

### **2.3 Outsourcing**

The ability of manufacturing organizations to outsource their non-core processes is not only important but key to their survival and growth. The advantages and disadvantages of outsourcing are dependent on the parties involved and the level of

operation of manufacturing firms. It is however important to discuss some of these benefits and challenges that are faced by outsourcing of manufacturing functions to third-party providers. The fundamental benefit of outsourcing is the saving of costs (King, 2014), where organizations can save costs that are different in nature like; overhead costs, which are an example of costs that manufacturers tend to benefit from when it comes to outsourcing. Rothberg (2013), identified overhead costs like office spaces and salaries associated with non-core functions were much less when outsourced.

Increase in process efficiencies is another advantage of adopting outsourcing strategies by manufacturing companies. The efficiencies that are normally positively affected are quality of transactions; where increase in traceability and accuracy of transactions is quantitatively observed, payment cycle-times are reduced and operational standards are raised (Gillai and Kim, 2007). The processes that are maximized from the result of outsourcing eventually bring about reduction of the organizations workloads.

Lau and Zhang (2006), stated that the benefits from outsourcing simulate further the outsourcing agenda and leads to government initiatives that gear towards entry into trade organizations like the World Trade Organization (WTO) that leads to economic growth of both the nation and its businesses. They however state that for this growth to be substantively achieved, economic reforms of most developed countries must take place and these reforms must involve key stakeholders.

Outsourcing also enables the increase of technical capabilities and flexibility of operations and risk management. Firms can increase their level of predicting costs and put measures to mitigate these risks that might increase their operational costs. Additionally, outsourcing brings about increase in inventory visibility and reduction on the frequency in which orders are cancelled or returned. This is due to the improvement of service quality and high value-addition to their outsourced functions (Gillai and Kim, 2007).

It is important however to note that as much as outsourcing is a powerful tool for manufacturing firms when it comes to cost reduction, cost saving, improvement of

operational efficiencies etc., it also has its drawbacks in relation to; small, mid-sized and large organizations. Thornton (2014), discussed the high cost of adoption and implementation of outsourcing as one of its drawbacks. This is important because without having proper organizational policies and procedures on what, how, when and scope of outsourcing to be carried out by a firm, it will be very costly to the firm in implementation of these outsourcing plans when the time comes.

Another important challenge brought about by outsourcing is the loss of important critical skills (Beaumont and Sohal, 2004). Important skills like; Information technology skills could be lost when IT functions are outsourced to third party providers since those skills are no longer in need or demanded by the parent firm. This adversely results in losses of competitive advantages which bring about more direct and in-direct competitors in the industry to compete with the parent firm.

Additionally, there is the challenge of organizational support from the decision-makers of companies (Razzaque and Shevy, 1998). For outsourcing to occur, whether in manufacturing industries or otherwise, the management of firms must agree with the outsourcing agenda. This is sometimes not the case, as managers in charge of giving consent to outsourcing of specific functions might not favor outsourcing as the direction to pursue. This largely results in increased cases of the outsourcing strategies failing even before the implementation stage.

There are other challenges like that of loss of flexibility of manufacturing firms in outsourcing some key functions (Beaumont and Sohal, 2004). This can result in alienation of some customers that require a certain level of flexibility in meeting their demands. Geographical distances, cultural differences, long lead times, language barriers, currency exchange variances, regulatory changes, political and economic instabilities of countries of operations are some of the challenges that outsourcing is faced with, when it comes to adoption, integration and implementation of outsourcing strategies and plans in organizations (Wang, 2012.)

## **2.4 Productivity**

Productivity can be explained as how much output is obtained from a given set of inputs (Syverson, 2011). As such, it is normally expressed as an output–input ratio.



Productivity measures can be reflected as units of output produced per unit of an input. These productivity levels are affected by the intensity of use of the excluded inputs. A productivity concept is applied in a manner that does not vary to the intensity of use of observable factor inputs, as a result, revenues are typically observed or used to measure output, where the ratio of total revenues act as outputs and total costs act as inputs. Some of the factors that affect productivity are managers quality practices (Reenen, 2007), capital inputs (Wilson, 2004), level of information technology (Timmer, 2008), research and development (Hubbard, 2003) available in the organization and lastly product innovation (Kortum, 2004). The biggest factor in increasing economic growth and raising living standards over time is the economy's ability to produce more out of less, also known as productivity (Fox, 2002).

## **2.5 Empirical Studies**

A survey study conducted by Kremic, Tukul and Rom (2006), on benefits, risks and decision factors associated with outsourcing revealed that most of the studies on outsourcing are theoretical in nature and they concentrate on mostly the benefits, risks and motivations behind outsourcing. There is a need to conduct empirical and descriptive studies on outsourcing practices and additionally, practical business environments like in the manufacturing sector need to be observed on how they react to the exposure of factors like outsourcing.

Troaca and Bodislav (2012), examined the concept of outsourcing in relation to its evolution, benefits and challenges. In their conclusion, they stated that opening of the market in developing countries, brought about large companies in the developed countries outsourcing some of their production functions to developing countries with the aim of reducing operational costs. In their research, they however did not specifically concentrate in key developing countries like Kenya and even apply this outsourcing concept to the manufacturing industries.

Kiptum (2014), analyzed the effects of outsourcing on organizational productivity in selected parastatals in Kenya, he found out that contracting out was the most popular form of outsourcing used in parastatals and outsourcing had a positive effect on operational costs while very little or no effects were discovered on innovation and

productivity. Kiptum's study on productivity was not based on the relating the revenues and costs of these parastatals to the outsourcing concept and furthermore his scope was only limited to parastatals. Extension of his studies needs to be done to cover the whole manufacturing industry.

Rioba (2014), also carried out a research project on the manufacturing industry in Kenya, he looked at the industries economic growth in Kenya, where his studies revealed that the manufacturing industry in Kenya accounts for only 8 per cent of the overall Gross Domestic Product (GDP) growth of Kenya. The 8 per cent was below the 25 per cent set by Kenya's vision 2030 agenda in 2008. His research did not address the productivity of the manufacturing industry and its role in the 8 per cent contribution to Kenya's GDP and if outsourcing of some of the manufacturing functions could improve the manufacturing industry's contribution to Kenya's GDP.

Lastly, Mogere (2016), researched on service outsourcing effects on the supply chain performance of cement manufacturing companies in Kenya. In his analysis, he found out that cement firms outsource services to reduce their operating costs and concentrate on their core-competencies. He concluded by stating that there are benefits like; cost reduction, risk sharing and increase in quality when outsourcing is done by manufacturing firms. His scope was however limited to only the cement firms operating in Kenya and not the whole manufacturing industry. His studies also did not research on what types of functions are mostly outsourced by manufacturing firms.

## **2.6 Conceptual Framework**

According to Bolat (2009) there is a relationship supporting the role of outsourcing and the impact it has on organizational productivity where, co-operation with the outsourced service vendor cannot only lead to improvement in productivity but also indirectly or directly affect organizational effectiveness, profitability, quality, continuous improvement, quality of work life, and social responsibility levels. The conceptual framework (Figure 2.1) shows the relationship between logistics management outsourcing, warehouse management outsourcing, finance and accounting outsourcing, IT management outsourcing, and human resource

management perceived effect on productivity indicators (total inputs and total outputs).

**Independent variables**

**Outsourcing**

- Warehouse management outsourcing
- Logistics management outsourcing
- Finance & accounting management outsourcing
- IT management outsourcing
- Human resource management outsourcing

**Dependent variable**

**Productivity**

- Total inputs
- Total outputs



**Source: Researcher (2017)**

**Figure 2.1: Conceptual Framework**

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the research design used, the population and sample used for the study, the data collection instrument, the data collection technique and finally the data analysis method and approaches used.

#### **3.2 Research Design**

The research design was a descriptive study because the study attempted to answer the research questions of whether there was a relationship between outsourcing and productivity of manufacturing firms in Kenya, the functions that were normally outsourced by the manufacturing firms and the effect of outsourcing on productivity of the manufacturing firms. Additionally, it was descriptive in nature because of relating the independent variables to the dependent variables and what effect the independent variables have on the dependent variables (Cooper and Schindler, 2014). The research was also formal in nature and cross-sectional.

#### **3.3 Population of the Study**

The population of the study comprised a total of 659 manufacturing companies operating in Kenya. These were value-adding industries which included the small, medium and large enterprises (KAM,2017).KAM categorised the firms into 14 sectors, 13 in processing and value addition while the other one offers essential services to enhance formal industry. This study focused on the 13 sectors involved in processing and value addition (Table 3.1).

#### **3.4 Sample Design**

Stratified random sampling was used. The reason for using stratified random sampling was the lack of homogeneity in the population (Saunders, Lewis and Thornhill, 2009). According to Mugenda and Mugenda (2013), when the study population is less than 10,000, a sample size of between 10 and 30% is a good representation of the target population and therefore 69 manufacturing firms operating in Kenya representing 10 % of the population was considered an appropriate sample size for analysis in this study.

**Table 3.1: Value-adding and Processing Industries in Kenya**

<b>Sector</b>	<b>Population</b>	<b>Sample Size</b>
Building, Mining and Construction	26	3
Chemical and Allied	78	7
Energy, Electrical and Electronics	44	4
Food and Beverages	193	19
Leather and Footwear	9	1
Metal and Allied	78	8
Motor vehicle Assemblers and Accessories	53	5
Paper and Board	70	7
Pharmaceutical and Medical Equipment	26	3
Plastics and Rubber	26	3
Textile and Apparel	61	6
Timber, Wood and Furniture	18	2
Fresh Produce	9	1
<b>Total</b>	<b>691</b>	<b>69</b>

**Source: Compiled from Kenya Association of Manufacturers (2017)**

### **3.5 Data Collection**

Primary data was used and a close-ended questionnaire was designed to collect the data. The primary data was collected to address the specific research questions raised. Primary data was used for this study because of their proximity to the truth and control over errors (Cooper and Schindler, 2014). The close-ended questionnaire was used because it was easier to code, record and analyze the data collected, additionally, it was much easier, efficient and specific for the participant to communicate with the respondents when using a close-ended questionnaire (Kothari, 2004). The respondents included the production/operations and financial managers of the sampled manufacturing firms. The respondents were selected because of their assumed knowledgeability of the required information on the variables under investigation. The questionnaires were delivered to the participants either physically or by mail and collected at an agreed time. Phone calls were used for follow ups

where it was necessary. This approach was used because it was a low-cost option and it helped clarify issues. Secondary data was also used to inform the study. These data was sourced from the firm's published books of account and other public journals that were available.

### 3.6 Data Analysis

In determining the type of functions outsourced by manufacturing firms operating in Kenya, descriptive statistics were used to determine the means, central tendencies and measures of spreads of the responses. Descriptive statistics analysis was used because it is flexible and its coverage in terms of scope is wide. Another reason for using descriptive analysis was that it had an advantage of being a stand-alone methodology. In determining the impact of outsourcing on manufacturing firms' productivity, quantitative data on yearly total inputs/Costs and Total outputs/ Revenues was collected and their ratios done descriptively to investigate how they were affected because of outsourcing some of their functions. Descriptive statistical measures were used to determine the center, spread and shape of distributions to assist in data description, this was done using the Statistical Package for the Social Sciences (SPSS) Version 22. In determining if there was a relationship between outsourcing of manufacturing functions and the firms' productivity, regression analysis was used because it provides an in-depth insight into the independent variable being outsourcing and the dependent variable being productivity. Regression analysis was also used because it doesn't assume the variables are symmetric (Cooper and Schindler, 2014).

The Regression Equation was;

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \epsilon$$

Where

*Y* is the dependent variable that is being predicted i.e. Productivity

*a* = is the constant or intercept

*b*<sub>1</sub>, *b*<sub>2</sub>, *b*<sub>3</sub>, *b*<sub>4</sub>, *b*<sub>5</sub> = is the slope for Warehouse management, Logistics Management, Finance and Accounting Management, IT Management, Human Resource Management respectively.

*X<sub>1</sub> = is the Independent Variable for Warehouse Management*

*X<sub>2</sub> = is the Independent Variable for Logistics Management*

*X<sub>3</sub> = is the Independent Variable for Finance and Accounting Management*

*X<sub>4</sub> = is the Independent Variable for IT Management*

*X<sub>5</sub> = is the Independent Variable for Human Resource Management*

*ε = the absolute error*

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presented the results of the study, the data analysis and discussion. The chapter comprised of response rate section, functions outsourced by manufacturing firms and impact of outsourcing on productivity in manufacturing firms operating in Kenya.

#### **4.2 Response Rate**

The researcher administered 69 questionnaires in the data collection phase and got back 40 questionnaires which were used in the analysis. This represented a response rate of 58 % as shown in Table 4.1.

**Table 4.1: Response Rate**

<b>Categories</b>	<b>Frequency</b>	<b>Percent</b>
Questionnaires administered	69	100.0%
Questionnaires returned	40	58.0%

**Source: Researcher (2017)**

#### **4.3 Functions outsourced by manufacturing firms in Kenya**

Descriptive statistics are used to describe and compare variables numerically (Saunders et al., 2009). The first objective of the study was to determine the managerial functions outsourced by manufacturing firms in Kenya. Warehouse management, logistics management, Finance and accounting management outsourcing, IT management outsourcing, and Human resource management functions were listed and respondents asked to indicate to what extent their firms outsourced these functions.

The study revealed that warehouse management had the highest mean score of 3.025 (60.5%) relative to the overall mean of all the functions of 2.1646 (43.3%). The least outsourced function was Human resource management with a mean score of 1.3158 (26.3%) As shown in table 4.2 it is evident that warehouse management and logistics



management (57%) were outsourced to a moderate extent among the manufacturing companies sampled compared to the other managerial functions investigated.

The overall mean of outsourcing all the functions was at 2.1646 (43.3%). This means that most of the manufacturing firms considered did not outsource highly. This could be attributed to the huge capital costs required to enter into an outsourcing relationship making outsourcing a less priority for the firm compared to other competing goals for the firm. Another factor for the low score could be due to the risks of loss of control by the parent company as a result of outsourcing. Other functions like finance and accounting, IT management and human resource are considered to be sensitive in nature by some firms hence the low uptake of their outsourcing. Another reason for the low overall outsourcing could be due to the size of the firms. Small firms may not see the need to outsource their functions as it is more cost effective to undertake them internally hence the less than 50% uptake of outsourcing in the manufacturing firms in Kenya.

**Table 4.2: Descriptive Statistics**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Warehouse management outsourcing	40	1.00	5.00	3.025	1.000
Logistics management outsourcing	40	1.00	4.00	2.850	1.176
Finance & accounting management outsourcing	40	1.00	4.00	2.000	1.132
IT management outsourcing	40	1.00	5.00	1.632	1.076
Human resource management outsourcing	40	1.00	5.00	1.316	0.904
Mean of all Functions	40			2.1646	1.0576
Valid N (list wise)	40				

**Source: Researcher (2017)**

From Table 4.3 below, the food and beverages, fresh produce sectors outsourced logistics to large extent at 84% and 80% respectively. This can be attributed to the fact that most food and beverage firms deal with fast moving consumer goods which need to be distributed to their vast geographically located consumer base. Again they have to transport the inputs from the warehouses to their factories. As for the fresh produce, most of their logistics functions are concentrated on the farm level where they get their inputs from for processing before these are pushed to their consumers.

Food and beverage sector and the pharmaceuticals outsourced warehouse functions to a large extent both at 80%. Some of the supplies used by the two sectors are imported hence the need for warehouse facilities. In order to minimize their costs and focus on their core functions, these sectors have opted to rely on third party providers who have the expertise to manage their warehousing services.

The sector that outsourced most of its functions was food and beverages with an overall mean of 3.2 (64%) while the least was timber, wood and furniture with a mean of 1.3(26%). This is due to the nature of the sector with most of the players operating on very small scale. Players in this sector operate informally with less training and appreciation of outsourcing strategies. The sluggishness in outsourcing could be attributed to high cost of outsourcing. This is in agreement with Thornton (2014), who argued that the high cost of adoption and implementation of outsourcing is one of outsourcing drawbacks.

**Table 4.3 Means of outsourced functions per sector**

	<b>Logistics Mgt</b>	<b>Ware-house Mgt</b>	<b>Finance &amp; Account</b>	<b>IT Mgt</b>	<b>HRM</b>	<b>Mean/ Sector</b>
Building, Mining & Construction	3.5	3.5	1.3	1.5	1.5	<b>2.3</b>
Chemical/Allied	2.7	3.0	1.7	1.3	1.0	<b>1.9</b>
Energy, Electrical & Electronics	2.0	2.4	1.2	1.4	1.2	<b>1.6</b>
Food/Beverages	4.2	4.0	3.5	2.0	2.3	<b>3.2</b>
Fresh produce	4.0	2.5	2.0	2.0	1.0	<b>2.3</b>
Metal & Allied	2.0	3.0	1.7	1.7	1.0	<b>1.9</b>
Motor Vehicle Assemblers &	2.0	3.0	1.0	2.0	1.0	<b>1.8</b>

Accessories						
Paper & Board	3.2	3.0	2.4	1.4	1.6	<b>2.3</b>
Pharmaceutical and Medical Equipment	3.5	4.0	2.0	2.3	2.0	<b>2.8</b>
Plastics/Rubber	2.0	2.0	1.5	1.0	1.0	<b>1.5</b>
Textile & Apparel	3.0	3.6	2.4	1.5	1.0	<b>2.3</b>
Timber, Wood & Furniture	1.5	2.0	1.0	1.0	1.0	<b>1.3</b>
Total	33.5	36.0	21.6	19.1	15.6	
<b>Overall mean/function</b>	<b>2.8</b>	<b>3.0</b>	<b>1.8</b>	<b>1.6</b>	<b>1.3</b>	

**Source: Researcher (2017)**

#### **4.4 Impact of outsourcing on productivity of manufacturing firms in Kenya**

The second objective of the study was to investigate the impact of outsourcing on productivity of manufacturing firms in Kenya. The study conducted a multiple regression analysis to establish the influence of outsourcing functions on productivity. Multiple regression analysis is used in research to explain the influence of two or more predictor variables on a response variable (Gogtay et al., 2017). Linear regression models are used to explain this relationship. The proposed regression model was:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \epsilon$$

Productivity which was the dependent variable was computed as ratio between the Total Revenues (Total outputs) and Total Costs (Total inputs). The respondents were required to give the Total revenues (Total outputs) and Total costs (total inputs) for the year before outsourcing was carried out and an additional 3 years after outsourcing was undertaken. An average of the 4 readings per firm was computed for both the Total revenues (Total outputs) and Total costs (total inputs). These averages were later used to compute the productivity of each of the firms sampled. The productivity was further analyzed per sector as shown on Table 4.4 below

From the research results on Table 4.4 the sector that outsourced most across all functions was the food and Beverages sector with an average productivity of 2.861. This is the largest sector with 193 firms. This means that the level of competition is

high hence every firm would wish to enhance their productivity and cut on their operational costs. Most of the firms in this sector outsourced warehouse management and logistics management to a larger extent and human resource was the least outsourced. Wambua, Mukulu, and Waiganjo (2017) also agreed that food and beverage manufacturing firms in Kenya were outsourcing their logistics and warehouse management functions. The sector that least outsourced was the timber, wood and furniture sector with a productivity score of 1.175. This is due to the nature of the sector with most of the players operating on very small scale. Players in this sector operate informally with less training and appreciation of outsourcing strategies. The sluggishness in outsourcing could be attributed to high cost of outsourcing.

**Table 4.4 Productivity per sector**

<b>Sector</b>	<b>Sector Productivity</b>
Building, Mining & Construction	1.773
Chemical/Allied	1.706
Energy, Electrical & Electronics	1.398
Food/Beverages	2.861
Fresh produce	1.895
Metal & Allied	1.711
Motor Vehicle Assemblers & Accessories	1.272
Paper & Board	1.86
Pharmaceutical and Medical Equipment	1.855
Plastics/Rubber	1.326
Textile & Apparel	2.245
Timber, Wood & Furniture	1.175

**Source: Researcher (2017)**

#### **4.4.1 Correlation Analysis**

Pearson's correlation analysis was conducted to determine the level of association between outsourced managerial functions of manufacturing firms and productivity. The results indicate positive association between outsourcing warehouse management ( $r = 0.703$ ), logistics management ( $r = 0.502$ ), finance & accounting management ( $r = 0.253$ ), IT management ( $r = 0.101$ ), human resource management ( $r = 0.076$ ) and manufacturing firms' productivity as shown in Table 4.3.

These results indicate that there was statistical evidence that outsourcing had positive impact on productivity though in different magnitudes. The correlation of logistics management, warehouse management, Finance and accounting, IT management and Human resource management to productivity was 0.703, 0.502, 0.253, 0.101 and 0.076 respectively. In their study, Kamanga and Ismail (2016) concluded that any outsourcing process carried out will have effect on the outputs of manufacturing firms in Kenya. In Uganda, Mwelu, Moya, Muhwezi, Rulangaranga and Watundu (2014) found that the benefits of outsourcing translated into higher productivity levels and output for the firms benefiting from outsourcing.

**Table 4.5: Variables Correlation Matrix**

	Warehouse Mgt.	Logistics Mgt.	Finance & Acc. Mgt.	IT Mgt.	HRM	Productivity
Warehouse Mgt.	1					
Logistics Mgt.	.699	1				
Finance & Accounting Mgt.	.520	.476	1			
IT Mgt.	.361	.232	.160	1		
HR Mgt.	.129	.524	.400	.313	1	
Productivity	.703	.502	.253	.101	.076	1

**Source: Researcher (2017)**

#### 4.4.2 Model Summary

Table 4.3 shows the model summary which indicated that  $R^2$  value was 0.533 which means that the model explained 53.3 % of variation of productivity among manufacturing companies in Kenya. This means that logistics management, warehouse management, finance and accounting management, IT management, and human resource management outsourcing predicted a change of 53.3 % in productivity of manufacturing firms in the sample.

**Table 4.6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730(a)	.533	.464	.97499

a Predictors: (Constant), logistics management outsourcing, warehouse management outsourcing, finance & accounting management outsourcing, IT Management outsourcing, human resource management outsourcing

The  $R^2$  value was 0.533 which means that 53.3 % of variations of productivity among manufacturing companies in Kenya are as a result of changes in outsourcing of warehousing, logistics, IT management, Finance and Accounting as well as HRM. The difference which is 46.7 % of variations on productivity of manufacturing firms are attributed to other factors not included in the model. Several studies have made conclusions on other factors that affect productivity of manufacturing firms in Kenya. Okello and Were (2014) found that supply chain management practices affected productivity of food manufacturing firms. Mugendi, Gachanja, and Nganga (2015) found that research and development, gender diversity, skills and firms size. Kariithi and Kihara (2017) concluded that IT adoption/non-adoption affected performance of pharmaceutical manufacturing firms.

#### 4.4.3 Analysis of Variance (ANOVA)

ANOVA was used to establish whether the model was significant in giving explanation on the impact of outsourcing on productivity. Table 4.4 shows the ANOVA results from the multiple regression analysis revealed that that the independent variables statistically significantly predicted the dependent variable,  $F(5, 34) = 7.759, p < .0005$ .

**Table 4.7: ANOVA <sup>(b)</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.877	5	7.375	7.759	.000 <sup>b</sup>
	Residual	32.321	34	0.951		
	Total	69.198	39			

a Predictors: (Constant), logistics management outsourcing, warehouse management outsourcing, finance & accounting management outsourcing, IT Management outsourcing, human resource management outsourcing  
 b Dependent Variable: Productivity

#### 4.4.4 Coefficient Results

Table 4.5 shows the coefficients results of the regression results. The results show warehouse management outsourcing ( $\beta = 0.713, p < 0.05$ ), logistics management outsourcing ( $\beta = 0.336, p < 0.05$ ), finance & accounting management outsourcing ( $\beta = 0.156, p > 0.05$ ), IT Management outsourcing ( $\beta = 0.041, p > 0.05$ ), and human resource management outsourcing ( $\beta = 0.023, p > 0.05$ ).

This means a positive relationship between productivity and all the independent variables existed though some of these relationships were insignificant. The established regression equation was;

$$Y = 15.678 + 0.713X_1 + 0.336X_2 + 0.156X_3 + 0.041X_4 + 0.023X_5$$

**Table 4.8: Coefficients<sup>a</sup>**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	15.678	3.627		5.768	0.000
Warehouse Mgt	0.713	0.195	0.63	3.651	0.001
Logistics Mgt	0.336	0.233	0.176	1.416	0.076
Finance & Accounting	0.156	0.168	0.133	0.93	0.359
IT Mgt	0.041	0.241	0.031	0.17	0.866
Human resource	0.023	0.213	0.015	0.107	0.916

b Dependent Variable: productivity

From the regression equation, outsourcing warehouse management had a positive and significant effect on productivity ( $\beta = 0.713, p < 0.05$ ). Storage is costly more so for

firms operating in the metropolitan area. By outsourcing these functions, a manufacturing firm is able to shift the mandate to another entity. This allows the firm to concentrate on its core business of manufacturing goods thus enhancing their productivity.

Logistics had a positive and statistically significant effect on productivity. ( $\beta = 0.336$ ,  $p < 0.05$ ). This is attributed to the need for skilled staff and huge capital investments to purchase adequate fleet which leads to increased risks and costs of doing business. Adebambo, Omolola and Dosunmu (2015) study found that logistics outsourcing helps manufacturing companies to reduce transport cost. Transport is needed throughout the whole supply chain being the link between supply chain members. Consequently quality of transport service affects the competitiveness of the entire supply chain. Firms outsource logistics so that they can lower costs and tap on third party providers expertise and capabilities.

HRM had positive but statistically insignificant effect on productivity ( $\beta = 0.023$ ,  $p > 0.05$ ). This finding disagrees with past studies that have found that manufacturing firms were outsourcing certain human resource activities. For example, Gilley, Greer and Rasheed (2004) analyzed the relationship between HRM outsourcing and organizational performance in manufacturing companies and concluded that outsourcing of certain HRM activities had a positive impact on overall innovation within the company. Kalinzi et al. (2016) and (Işık& Bilal (2011) research affirmed that outsourced human resource activities had a significant effect on manufacturing firms 'performance. The findings show that several sectors did not outsource HRM functions at all. This could be attributed to the fact that, the sample of manufacturing firms in this study were not large and did not have many employees which would require outsourcing of human resource management.



## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings, conclusion, discussion and recommendations of the study. The conclusion, discussion is presented in line with the study research objectives and the recommendations are presented in terms of policy and implication, and areas of further study.

#### **5.2 Summary of Findings**

The objectives of the study were to determine which functions are outsourced by manufacturing firms in Kenya and determine the impact of outsourcing on productivity in manufacturing firms operating in Kenya.

Warehouse management and logistics management were the most outsourced functions among manufacturing firms in Kenya with mean scores of 3.025 and 2.850 respectively. Human resource was the least outsourced function among the manufacturing firms in Kenya with a mean score of 1.3158. From the regression analysis only warehousing and logistics were significant to productivity while IT, HRM and finance and accounting remained insignificant to productivity. The findings further revealed that food and beverages sector outsourced most of the functions while timber wood and furniture sector outsourced least.

The Pearson's correlation analysis indicated positive linear associations between the independent and dependent variables. Positive correlations indicate a strong association between outsourcing management functions and productivity of manufacturing firms. This means that by outsourcing any of the functions the firms' productivity was improved though by differing magnitudes.

#### **5.3 Conclusion**

The first objective of the study was to determine which functions are outsourced by manufacturing firms in Kenya. The management functions under investigation were logistics management, warehouse management, finance and accounting management, IT management, and human resource management. The descriptive results showed

that warehouse management was the most outsourced with a mean score of 3.025 and human resource management was least outsourced at a mean score of 1.3158

The second objective of the study was to determine the impact of outsourcing on productivity in manufacturing firms operating in Kenya. The multiple regression analysis indicated that warehouse management and logistics management outsourcing had a positive and significant effect on productivity of manufacturing firms. The correlation analysis also emphasized that there was a positive association of the independent variables and dependent variable which means that outsourcing positively impacted productivity of the manufacturing firms sampled. The finance and accounting management, IT management outsourcing, and human resource management outsourcing are insignificant to effect on productivity of manufacturing firms. This study therefore concludes that outsourcing warehouse and logistics functions has a positive and significant effect on productivity while outsourcing finance and accounting management, IT management and human resource management have no significant impact on productivity of manufacturing firms.

#### **5.4 Study Limitations**

The study limited itself to Value-adding and Processing Industries in Kenya which implied that the results obtained may not be used to make generalization for all the manufacturing sectors in Kenya or manufacturing firms outside Kenya.

The study was limited to five independent variables namely: Warehouse management, Logistics Management, IT management, Finance and accounting management and Human resource management while in reality there are other several factors affecting productivity of a manufacturing firm.

Some firms refused to respond to the questionnaires of the study leading to the 56% response rate.

#### **5.5 Recommendations**

Based on the findings, the study recommends that more manufacturing firms across the sectors should embrace outsourcing of their warehousing and logistics functions to third parties to improve on their productivity.

Manufacturing firms should also seek to conduct an in depth forensic understanding of their costs for the warehouse, logistics, finance and accounting, IT and Human resource functions to help them understand what factors can be outsourced to enhance their productivity.

Further firms that have not embraced outsourcing should invest more in understanding the benefits of outsourcing so that they may hedge on this interesting concept to enhance their productivity

Firms should also benchmark with the best in class either locally or globally on the benefits of outsourcing so that they are able to reap maximum benefit from this concept.

Firms should also conduct in depth understanding of their functions to understand what can be outsourced to third parties with the least risks and high returns.

#### **5.6 Suggestion for Further studies**

This study investigated the relationship between outsourcing and productivity of manufacturing firms operating in Kenya. There is need for further study to establish the effect of outsourcing on competitive advantage among manufacturing companies.

Further, future scholars should seek to conduct the research on other variables responsible for the 46.7% variations on productivity not included in this study.

Also a research should be conducted over a longer period of time across all the manufacturing sectors in Kenya to find out whether this relationship would hold.

## REFERENCES

- Adebambo, S. A., Omolola, O. M., & Dosunmu, V. A. (2015). Impact of logistics outsourcing services on company transport cost in selected manufacturing companies in SouthWestern Nigeria, *European Journal of Logistics, Purchasing and Supply Chain Management*, 3 (4), 30-41.
- Adler, P. S. (2003). Making the HRM outsourcing decision, *MIT Sloan Management Review*, 45, 53-60.
- Adnan, A., Cazan, A., Safa, M., Lung, A. W. M., & Muppala, S. (2014). The Application of Theory of Constraints in manufacturing Outsourcing: A Case Study, *International Journal of Enhanced Research in Science Technology & Engineering*, 3 (4), 134-138.
- Amiti, M., & Wei, S-J. (2006). *Service Offshoring and Productivity: Evidence from the United States*. Working Paper No. 11926. New York, NY: The National Bureau of Economic Research.
- Anzetse, W. (2016). *Manufacturing in Kenya: Features, Challenges and Opportunities*. Supporting Economic Transformation Programme.
- Bolat, T., & Yilmaz, O. (2009). The relationship between outsourcing and organizational performance: Is it myth or reality for the hotel sector? *International Journal of Contemporary Hospitality Management*, 21 (1), 7-23.
- Cooper, D., & Schindler, P. (2014). *Business Research Methods* (12th ed.). McGraw-Hill Irwin.
- Denis, M., Patrick, N., & George, O. (2015). Primary Supply Chain Processes Outsourcing and Supply Chain Performance for Manufacturing firms in Nairobi's Industrial Area. *Journal of Research in Business and Management*, 2(10).
- Elmuti, D. (2003). The perceived impact of outsourcing on organizational performance, *American Journal of Business*, 18 (2), 33-42.
- Gachanja, P., Were, N., & Efyang, M. (2013). *Total Factor Productivity Change in the Kenyan Manufacturing Sector*.

- Gilley, K. M., Greer, C. R., & Rasheed, A. A. (2004). Human resource outsourcing and organizational performance in manufacturing firms, *Journal of Business Research*, 57, 232-240.
- Gogtay, N. J., Deshpande, S. P., & Thatte, U. M. (2017). Principles of Regression Analysis, *Journal of the Association of Physicians of India*, 65(1).
- Group, A. D. (2014). *Eastern Africa's Manufacturing Sector: Promoting technology, innovation, productivity & linkages*. Eastern Africa Regional Resource Centre (EARC).
- Hauke, J., & Kossowski, T. (2011). Comparison of values of Pearson's and Spearman's correlation coefficients on the same sets of data, *Quaestiones Geographicae*, 30 (2), 87-93.
- Hrušecká, D., Macurová, L., Juříčková, E., & Kozáková, L. (2015). The Analysis of the Use of Outsourcing Services in Logistics by Czech Manufacturing Companies, *Journal of competitiveness*, 7 (3), 50-61.
- Işik, C., & Bilal, O. (2011). The effect of outsourcing human resource on organizational performance: the role of organizational culture, *International journal of business and management studies*, 3 (2), 131-144.
- Iraki, X. N. (2013). Outsourcing and Vision 2030: An analysis into Kenya's new economic frontier, *African journal of business management*, 7 (15), 1218-1223.
- Jacob, C., Daina, N., & Peter, K. (2013). *Industrialization in Kenya*.
- Jiang, B., Frazier, G. V., & E. L. Prater (2006). Outsourcing effects on firms' operational Performance, *International Journal of Operations & Production Management*, 26 (12), 1280-1300.
- Kalinzi, C., Bett, C. R. K., & Kiprop, C. P. (2016). Effects of outsourcing of services on performance of manufacturing companies in Eldoret and Nandi hills, Kenya, *European journal of logistics, purchasing and supply chain management*, 4 (3), 59-72.
- Kamanga, F., & Ismail, S. (2016). Effects of Outsourcing on Organization Performance in Manufacturing Sector in Kenya. *European Journal of Logistics, Purchasing and Supply Chain Management*, 4(3).

- Kariithi, J. N., & Kihara, A. (2017). Factors affecting performance of manufacturing firms in Kenya: A case of pharmaceutical firms in Nairobi County, *The Strategic Journal of Business & Change Management*, 4 (2), 817-836.
- Kimuyu, P. (2005). *Productivity performance in developing countries: Kenya*.
- Kotabe, M., & Mol. M., & Murray, J. (2008), Outsourcing, performance, and the role of e-commerce: A dynamic perspective, *Industrial Marketing Management*, 37 (1), 37-45.
- Kothari, C. R. (2004). *Research Methodology: methods and technologies* (2nd Revised Edition ed.). New Age International Publishers.
- Kung'u, E. W. (2016). *Effect of business process outsourcing on the profitability of manufacturing companies listed on the Nairobi Stock Exchange*. Research Project Report. Master in Business Administration. United States International University. Nairobi. Kenya.
- Lawler, E. E., & Boudreau, J. W. (2009). *Achieving excellence in human resource management*. Stanford, CA: Stanford University Press.
- L, M., & M, G. (2015). The domestic Turn: Business Process Outsourcing and the growing automation of Kenyan Organizations. *Journal of Development Studies*.
- Lilian, W., & G.S, N. (2015). Determinants of Outsourcing as a Competitive Strategy in Supply Chain Management of Manufacturing companies in Kenya: A case study of East African Breweries Limited. *International Journal of Academic Research in Business and Social Sciences*, 5(5).
- Masinga, E., & Kiarie, D. (2014). Effects of Outsourcing decision on Organization Performance in the manufactruing industry: A case of Unilever grouplimited in Kenya. *International Journal of Business and Law Research*, 2(4).
- McCann, J., Selsky, J., & Lee, J. (2008). Building Agility, Resilience and Performance in Turbulent Environments, *people and strategy*, 32 (3), 45-51.
- Michael, B., & Rasmi, M. (2011). A Transaction Cost Economics View of Outsourcing *International Journal of Business, Humanities and Technology*, 1 (2), 34-43.
- Mikell, G. (2010). *Fundamentals of Modern Manufacturing: Materials, Processes and Systems* (4th ed.). John Wiley and Sons Inc.

- More, S. V. (2016). The study of Efficiency and Effectiveness of Warehouse Management in the context of Supply Chain Management, *International Journal of Engineering Technology, Management and Applied Sciences*, 4 (8), 160-169.
- Mugendi, C. N., Gachanja, P. M., & Nganga, T. K. (2015). Firm's Characteristics and Productivity in Kenya, *Journal of Economics and Development Studies*, 3 (3), 105-115.
- Okello, J. O. & Were, S. (2014). Influence of supply chain management practices on performance of the Nairobi Securities Exchange's listed, food manufacturing companies in Nairobi. *International Journal of Social Sciences and Entrepreneurship*, 1 (11), 107-128.
- Rioba, M. (2014). *Manufacturing Industry and Economic Growth in Kenya: A kaldorian Approach from 1971-2013*.
- Robert, J., & Graham, C. (2006). *Service Operations Management: Improving Service Delivery* (2nd ed.). Prentice Hall.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Pearson Education Limited.
- Sharma, C. K. (2004). BPO Tide: Political Economic and Moral Overtones, *M-World, the Journal of Ludhiana Management Association*, 2 (3), 10-12.
- Sharpe, M. (1997). Outsourcing organizational competitiveness and work, *Journal of Labor Research*, 18 (4), 535-549.
- Shields, J. (2007). *Managing employee performance and reward: Concepts, practices and strategies*. Cambridge, UK: Cambridge University Press.
- Tibor, K., Tukel, O., & Walter, R. (2006). Outsourcing decision Support: A survey of benefits, risks and decision factors. *Supply chain Management: An International Journal*, 11(6).
- Tingting, W. (2014). An Empirical Study of the Economic Effects of Outsourcing-Based on China's Economic Development Data, *International Journal of Business and Social Science*, 5 (11), 210-215.
- Victor, T., & Dumitru, B. (2012). Outsourcing: The Concept. *Theoretical and Applied Economics*, 19(6).

- Wambua, J., Mukulu, E., & Waiganjo, E. (2017). Cost as a Factor of Outsourcing Third-Party Logistics Providers and the Performance of Food and Beverages Manufacturing Companies in Kenya, *International Journal of Academic Research in Business and Social Sciences*, 7 (2).
- Wanjugu, W., Brookes, M., & Richard, H. (2016). Viewing the impact of outsourcing from a Kenyan perspective. *Asian Journal of Management Science and Economics*, 3(1).
- Williamson, O. E. (2007). Transaction cost economics and where it is headed, *The Economist* 146, 23-58.
- Williamson, O. E. (2007). Outsourcing: transaction cost economics and supply chain management, *Journal of supply management*, 44 (2), 5-16.
- Yeboah, A. (2013). The relationship between outsourcing and organizational performance, *European Journal of Business and Management*, 5 (2), 1-13.



## APPENDICES

### APPENDIX 1: QUESTIONNAIRE

#### Dear Respondent

This is a survey conducted courtesy of School of Business, University of Nairobi. Kindly spare your time to answer all questions in this research study questionnaire. The information provided shall be treated with confidentiality and will be used purely for this study.

NB: *Do not write your name on this questionnaire*

#### SECTION A: GENERAL INFORMATION

1. When was the organization established?

2. What is your designation in the organization?

- Operations Manager
- Production Manager
- Finance/ Accounts Manager
- Other (specify)

3. How long have you been on this role?

- Less than one year
- 1-5 Years
- Over 5 years

4. Which sub- sector of Manufacturing does your company operate in? (Tick where appropriate).

Building, Mining and Construction  Chemical and Allied  Food and Beverages

Leather and Footwear  Metal and Allied  Paper and Board

Energy, Electrical and Electronics  Fresh Produce  Plastics and Rubber

Pharmaceutical and Medical Equipment  Motor Vehicle Assemblers and Accessories

Textile and Apparel  Timber, Wood and Furniture

**SECTION B: ORGANIZATION OUTSOURCED FUNCTIONS**

1. To what extent has your organization outsourced below functions? Where 1= Not At all 2= To a small extent 3= Moderate extent 4=Large extent 5= Completely outsourced

Function	1	2	3	4	5
<b>Logistics Management</b>					
<b>Warehouse management</b>					
<b>Finance and Accounting Management</b>					
<b>IT management</b>					
<b>Human Resource Management</b>					

2. Please indicate any other functions that your organization has outsourced, (if any).


3. Of the above outsourced functions please indicate which year they were outsourced.

<b>Function</b>	<b>Year Outsourced</b>
<b>Logistics Management</b>	
<b>Warehouse management</b>	
<b>Finance and Accounting Management</b>	
<b>IT management</b>	
<b>Human Resource Management</b>	

**SECTION C: ORGANIZATION TOTAL INPUTS/ COSTS, TOTAL OUTPUTS / REVENUES AND PRODUCTIVITY**

1. Please indicate the level of your Total Outputs/ Revenue for the below period.

Tick where appropriate

<b>Year</b>	<b>Less than 20M</b>	<b>20M-100M</b>	<b>100-500M</b>	<b>500M-1B</b>	<b>Over 1B</b>
<b>The year before outsourcing</b>					
<b>Year 1</b>					
<b>Year 2</b>					
<b>Year 3</b>					

2. Please indicate the level of your Total Inputs/ Costs for the below periods

<b>Year</b>	<b>Less than 20M</b>	<b>20M-100M</b>	<b>100-500M</b>	<b>500M-1B</b>	<b>Over 1B</b>
<b>The year before outsourcing</b>					
<b>Year 1</b>					
<b>Year 2</b>					
<b>Year 3</b>					

3. To what extent do you think outsourcing below functions has had an impact on the organizations revenues and costs? Where 1= No Impact at all, 2= Small extent, 3= moderate extent, 4= Large extent, 5=very large extent.

<b>Function</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Logistics Management</b>					
<b>Warehouse management</b>					
<b>Finance and Accounting Management</b>					
<b>IT management</b>					
<b>Human Resource Management</b>					

## APPENDIX 2: LIST OF COMPANIES SAMPLED

SN	COMPANY NAME
1	ACME Containers Ltd
2	Alloy Steel Casting Ltd
3	Alloy Steel Casting Ltd
4	Allpack Industries Ltd
5	Alpine Coolers Limited
6	Ashut Engineers Ltd
7	ASL Limited- Steel Division
8	Associated Vehicle Assemblers Ltd
9	Bayer East Africa Ltd
10	Beta Healthcare International
11	Bobmil Industries Ltd
12	Broadway Bakery Ltd
13	Brookside Dairy Ltd
14	C. Dorman's Ltd
15	City Engineering Works (K) Limited
16	Corrugated Sheets Ltd
17	Crown Berger Kenya Ltd
18	Crown Paints (Kenya) Ltd
19	Deepa Industries Limited
20	Devki Steel Mills Ltd
21	Dodhia Packaging Limited
22	Doshi Enterprises Ltd
23	East Africa breweries ltd
24	East African Cables Ltd
25	Farmers Choice Ltd
26	General Motors East Africa Limited
27	General Plastics Limited
28	Glaxo Smithkline Kenya Ltd
29	Impala Glass Industries Ltd.
30	Kaluworks Ltd
31	Kapa Oil Refineries Limited
32	Kenafic Industries Ltd
33	Kenblest Limited
34	Ken-Knit (Kenya) Ltd
35	Kenpoly Manufacturers Limited
36	Kevian Kenya Ltd
37	Kikoy Co. Ltd
38	Kim-Fay East Africa Ltd
39	Mabati Rolling Mills Limited

<b>SN</b>	<b>COMPANY NAME</b>
40	Metal Crowns Ltd
41	Mini Bakeries (Nbi) Ltd
42	Nampak Kenya Ltd
43	Nestle Foods Kenya Ltd
44	Ngecha Industries Ltd
45	Orbit Enterprises Ltd
46	Pembe Flour Mills Ltd
47	Proctor and Allan (E.A.) Ltd
48	PZ Cussons EA Ltd
49	Reckitt Benckiser (E.A.) Ltd
50	Regal Pharmaceuticals Ltd
51	Revital Healthcare (EPZ) Ltd
52	Revolution Stores Ltd
53	Rosewood Furniture Manufacturers
54	Rumorth Group of Companies Ltd
55	S C Johnson And Son Kenya
56	Sadolin Paints (E.A.) Ltd
57	Saj Ceramics Ltd
58	Savannah Cement
59	Sheffield Steel Systems Ltd
60	Sollatek Electronics (Kenya) Limited
61	Spinners and Spinners Ltd
62	Techpak Industries Ltd
63	Toyota Kenya Ltd
64	Twiga Chemical Industries Limited
65	Twiga Stationers and Printers Ltd
66	Unga Group Ltd
67	Unilever East And Southern Africa
68	Vajas Manufacturers Ltd
69	Vitafoam Products Limited

### APPENDIX 3: PRODUCTIVITY OF MANUFACTURING FIRMS

	<b>Sector</b>	<b>Total outputs (KES Millions)</b>	<b>Total inputs (KES Millions)</b>	<b>Firm's Productivity</b>	<b>Sector Productivity</b>
1	Building, Mining & Construction	268	180	1.486	1.773
2	Building, Mining & Construction	35	16	2.154	
3	Building, Mining & Construction	48	16	2.923	
4	Building, Mining & Construction	155	293	0.530	
5	Chemical/Allied	233	120	1.938	1.706
6	Chemical/Allied	300	120	2.500	
7	Chemical/Allied	240	353	0.681	
8	Energy, Electrical & Electronics	35	168	0.209	1.398
9	Energy, Electrical & Electronics	240	60	4.000	
10	Energy, Electrical & Electronics	48	240	0.198	
11	Energy, Electrical & Electronics	108	60	1.792	
12	Energy, Electrical & Electronics	48	60	0.792	
13	Food/Beverages	168	180	0.931	2.861
14	Food/Beverages	180	29	6.261	
15	Food/Beverages	938	525	1.786	
16	Food/Beverages	54	16	3.308	
17	Food/Beverages	161	54	3.000	
18	Food/Beverages	101	54	1.884	
19	Fresh produce	228	120	1.896	1.895
20	Metal & Allied	240	120	2.000	1.711
21	Metal & Allied	108	41	2.606	
22	Metal & Allied	95	180	0.528	
23	Motor Vehicle Assemblers & Accessories	525	413	1.273	1.272
24	Paper & Board	48	48	1.000	1.86
25	Paper & Board	108	60	1.792	
26	Paper & Board	95	48	2.000	
27	Paper & Board	23	10	2.250	
28	Paper & Board	108	48	2.263	
29	Pharmaceutical and Medical Equipment	35	60	0.583	1.855
30	Pharmaceutical and Medical Equipment	120	48	2.526	
31	Pharmaceutical and Medical Equipment	101	41	2.455	
32	Plastics/Rubber	120	120	1.000	1.326
33	Plastics/Rubber	48	29	1.652	

	<b>Sector</b>	<b>Total outputs (KES Millions)</b>	<b>Total inputs (KES Millions)</b>	<b>Firm's Productivity</b>	<b>Sector Productivity</b>
34	Textile & Apparel	48	353	0.135	2.245
35	Textile & Apparel	35	23	1.556	
36	Textile & Apparel	240	41	5.818	
37	Textile & Apparel	48	16	2.923	
38	Textile & Apparel	48	60	0.792	
39	Timber, Wood & Furniture	48	29	1.652	1.175
40	Timber, Wood & Furniture	29	41	0.697	