



**INFLUENCE OF PROCUREMENT OUTSOURCING PRACTICES ON PERFORMANCE OF MANUFACTURING FIRMS IN
NAIROBI COUNTY, KENYA**

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ABSTRACT

The general objective of the study was to examine the influence of procurement outsourcing practices on performance of manufacturing firms in Nairobi County, Kenya. It was notable that there existed a relationship between independent and dependent variable with a correlation coefficient of 0.871. The variables were very significant and they therefore needed to be considered in any effort to boost supply chain performance in the county government of Kenya. The study recommended that there is need to enhance supplier outsourcing that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. The managers should monitor the supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing with their own organizational requirements and priorities. The study recommended that given the rapid changes in taste, technology and competition; organization should not rely solely on its existing supplier but look forward to get better sources of materials. The study recommended that there is need to enhance logistics outsourcing practices such as turning non-core functions over to external suppliers which can enable companies to leverage their resources, spread risks and concentrate on issues critical to survival and future growth. The study recommended that the firm's warehouse management should focus on coordination of the movement and storage of materials within a warehouse and processes associated and transactions, including shipping, receiving, put-away and picking. The firms should continue to seek to reduce the number of stocking locations and drive more productivity from the remaining distribution centers

Key Words: Supplier, Material, Logistics, Warehouse Outsourcing, Manufacturing Firms Performance

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INTRODUCTION

The outsourcing functions have become the obvious choice with companies eyeing for cost reduction and value enhancement while distributing and transporting products. As a result, outsourcing service providers (SPs) has now become the norm across the industry. As per Joto (2013), an improvement in the delivery process, resulting from the outsourcing process, can also contribute towards competitive advantages, as contributed by the product. Further, he observes that logistics outsourcing has also been instrumental in turn around cases in many companies, wherein shippers incurred loss; hence it has taken its place in strategic boardroom agendas. Many managers view outsourcing as the only way to keep a business competitive into the twenty-first century.

The highly competitive environments along with customers' demands for tailored products and services has forced companies to continuously evaluate, improve and reengineer their transport operations. These operations have a noticeable contribution in companies' efforts to meet customers' expectations. Their outcomes, such as place convenience, waiting time convenience, delivery time convenience, and after sales convenience, are easily visible and assessable by the final customer and consequently delineating its Purchasing behaviour. The close relationship between transportation and customer service dictate that companies handle their transport services function prudently so as to receive full potential benefits (Maghanga, 2011).

With the increasing globalization, outsourcing has become an important business approach, and a competitive advantage may be gained as products or services are produced more effectively and efficiently by outside suppliers (Kinyanjui, 2014). Outsourcing allows firms to focus on their own core competences by relocating limited resources to strengthen their core product or service and to strategically use

outside vendors to perform service activities that traditionally have been internal functions (Kaveke, 2014). Outsourcing can also involve the transfer of both people and physical assets to the supplier (Anyango, 2014).

Kaevke (2014) observes procurement outsourcing as the transfer of all or part of a range of sourcing-to-settlement processes including sourcing, tactical buying, requisitioning, accounts payable and supplier management to a third party whereby it does not mean that the company loses control of the procurement process, but merely that it utilizes the services of a third party service provider/procurement outsourcing.

Price Water Coopers (2012) conducted a survey in the United States among America's fastest growing companies, the conclusion arrived at was that businesses that outsource were growing faster, were larger and made more profits than those that did not. The survey further revealed that, of the companies that outsourced, 70 percent claimed to save money and 25 percent had improved focus on core business. The goals of outsourcing often include reducing labor and overhead costs, maximizing profits, dominating a market, and gaining a competitive advantage. While this strategy looks quite promising, it is surprising to find that "more than one-fourth of outsourcing deals fail in the first year. According to Kyusya (2015), success rate of IT outsourcing is only 56 per cent. Aron and Sing (2005) state that half of the organizations that shifted processes to external providers failed to generate the financial benefits they expected. Pricewater House Coopers (2005), noted that companies are outsourcing more and more while enjoying the benefits less and less and this was attributed to firms overestimating the profitability of the their outsourcing ventures by not taking into account very influential transaction costs which decrease or even outweigh the benefits.

The public sector in many African countries are operating in an environment characterized by countless economic and political disruptions to their sources of supplies and services. In order to survive in this turbulent marketplace, these organizations must continually monitor their competitive position as well as their internally controllable processes, especially the procurement process (Kaveke, 2014). The government ministries in African countries are no exception. The governments through various ministries annually procure billions of shillings worth of systems, supplies, and services in support of the government operations. As a result, modernization of procurement practices and processes presents government with a clear opportunity to leverage significantly improved value for money from its total spend on goods and services.

The envisaged benefits of outsourcing practices have been forthcoming within the Kenyan public agencies. Some scholars have argued that, if public sector firms operate under the requirement to treat all activities as potentially outsource-able due to envisaged gains, then they may be failing to develop their core competencies (Kinyanjui, 2014). This is confirmed by other scholars who posit that, outsourcing in the public sector is imposed through government policies and regulations with many public agencies failing to develop their core competences therefore missing out on one of the main benefits that outsourcing can bring (Kyusya, 2015).

In Kenya, in the past decades, According to Odhiambo and Kamau (2013), the public procurement system in Kenya has undergone significant developments. From being a system with no regulations in the 1960s, and a system regulated by Treasury Circulars in the 1970s, 1980s and 1990s, the introduction of the Public Procurement Asset and Disposal Act (PPDA) of 2015 and the Procurement Regulations of 2006 has introduced new standards for public procurement in Kenya. Using procurement management processes,

organization in the country purchase the resources they need from suppliers or vendors to conduct business. Effective procurement management policies and procedures enable purchasing organizations to negotiate prices from supplies and vendors to get the best quality materials and services for business operations. Because large companies purchase resources in large volumes, they typically utilize formal procurement management processes.

Manufacturing is to make or process (a raw material) into a finished product, especially by means of a large-scale industrial operation. According to Shavulimo (2014), manufacturing is an important sector in Kenya and it makes a substantial contribution to the country's economic development. It has the potential to generate foreign exchange earnings through exports and diversify the country's economy. This sector has grown over time both in terms of its contribution to the country's gross domestic product and employment (Magutu, Chirchir & Haines, 2016). The manufacturing sector in Kenya constitutes 70 per cent of the industrial sector contribution to GDP, with building, construction, mining and quarrying cumulatively contributing the remaining 30 per cent. Kenya Vision 2030 identifies the manufacturing sector as one of the key drivers for realizing a sustained annual GDP growth of 10 per cent.

Statement of the Problem

Manufacturing industry was the leading business activity in Kenya during the early 80's both in terms of size and employment. The industry was employing over 200,000 family households and about 30% of the labor force in the national manufacturing sector. Later the sub-sector started declining in the mid-1980s until the 1990s (Willy, 2012). Efforts to boost growth in manufacturing industry have been undertaken with procurement outsourcing being one of the strategies (Mahonza, 2017).

The manufacturing sector in Kenya has not been performing as expected or projected, expressing declining performance in some sectors and stagnating figures in other sectors, in the recent past. According to the Kenya Economic Report (2016), the manufacturing sector contribution to GDP has stagnated at about 10 per cent, with the sector's growth during the first Medium Term Plan being a mere 3.16 per cent. The key contributors to the reduced performance are Spiraling energy costs, an increased tax burden, and increasing cost of raw materials, which have seen the sector's contribution to the economy (GDP) decline from 11.21% in 2013 to 10.41% in 2016. The latest data from the Kenya National Bureau of Statistics (KNBS) shows that the downturn affects all key sectors including sugar, cement, vehicles and dairy, which experienced a month-on-month decline in production of between 2% and 11%. This fuels the fear that Kenya's hopes of becoming a manufacturing hub by 2030 hang in the balance (KeNBS, 2017).

The Kenya Manufacturing Association (KAM) attributes the exits to a host of factors, among them the high costs of production and the local market being flooded with cheap imports, poor infrastructure and limited market access. Manufactures also decry other operational costs, among them labour, rent and other overheads. This, coupled with the high cost of capital, is discouraging investment in critical areas, for example, setting up manufacturing plants or growth (Kubai, 2016). In light of this scenario, it has become inevitable for manufacturing firms to focus closely on procurement outsourcing practices to ensure that they are not eroded by the highly competitive global environment. This would enable manufacturing companies to outsmart their competitors and manage better profitability and counter the extensive competition waged in the current liberalized economies scenario (Maku & Iravo, 2013). It is on this premise that the study sought to establish the influence of procurement outsourcing practices on

performance of manufacturing firms in Nairobi County, Kenya.

Study Objectives

The purpose of the study was to establish the influence of procurement outsourcing practices on performance of manufacturing firms in Nairobi County, Kenya. The specific objectives were:-

- To establish how supplier outsourcing influence performance of manufacturing firms in Nairobi County, Kenya
- To find out how material outsourcing influence performance of manufacturing firms in Nairobi County, Kenya
- To establish how logistics outsourcing influence performance of manufacturing firms in Nairobi County, Kenya
- To examine how warehouse outsourcing influence performance of manufacturing firms in Nairobi County, Kenya

LITERATURE REVIEW

Theoretical Review

Supply Chain Operations Reference Model

The Supply Chain Operations Reference model provides a unique framework that links performance metrics, processes, best practices, and people into a unified structure (Estampe et al., 2013). The framework supports communication between supply chain partners and enhances the effectiveness of supply chain management, technology, and related supply chain improvement activities. Business value, whether real or perceived, is derived from the predictability and sustainability of business outcomes. It lives, healthy or sick, in those gaps between expected vs. perceived vs. actual performance (Pundoor & Herrmann, 2016). Value is articulated by measuring what is being managed. The SCOR model helps refine strategy, define structure (including

human capital), manage processes, and measure performance (Estampe et al., 2013).

Firm Theory

Theories of the firm were originally developed to identify why firms existed hence, earlier theories of the firm were rooted in deductive economics and had their foundation transaction cost theory (Penrose, 2009). According to Maghanga (2011), introduction of the concept of transaction costs as the factor was to determine whether a firm or market contracts existed for the coordination of production or not. Firm existence was based on differences between the transaction costs of market contracts versus those of a firm (Kiptum, 2014). If market contracts were characterized by low transaction costs, it meant that all factors of firm production both intra and inter had low transaction costs as well hence logistics could have influenced such situation in the market when handled rightly by the firms (Kaveke, 2014).

According to the transaction cost framework, the organization's form that developed was the one that most efficiently completed transactions and minimized production costs (Mulama, 2013). Transaction costs were those costs associated with exchange, while production costs were associated with the coordination of various production activities in-house (Maku & Iravo, 2013) A firm that managed logistics activities efficiently created situation where both transaction costs and production costs were minimized (Kinyanjui, 2014).

Principal Agency Theory

The principal Agency theory guided the study to establish the relationship between warehousing and performance of manufacturing firms Kenya This theory is based on the separation of ownership and control of economic activities between the agent and the principal. Various agent and principal problems may arise including conflicting objectives; differences in risk aversion, outcome uncertainty, and behavior

based on self-interest, and bounded rationality. The contract between the principal and the agent governs the relationship between the two parties, and the aim of the theory is to design a contract that can mitigate potential agency problems (Mulama, 2012). The "most efficient contract" includes the right mix of behavioral and outcome-based incentives to motivate the agent to act in the interests of the principal (Kinyanjui, 2014). Creating contracts with supply chain partners that balance rewards and penalties, misalignment can be mitigated (Magutu, Chirchir & Mulama, 2013).

Queuing Theory

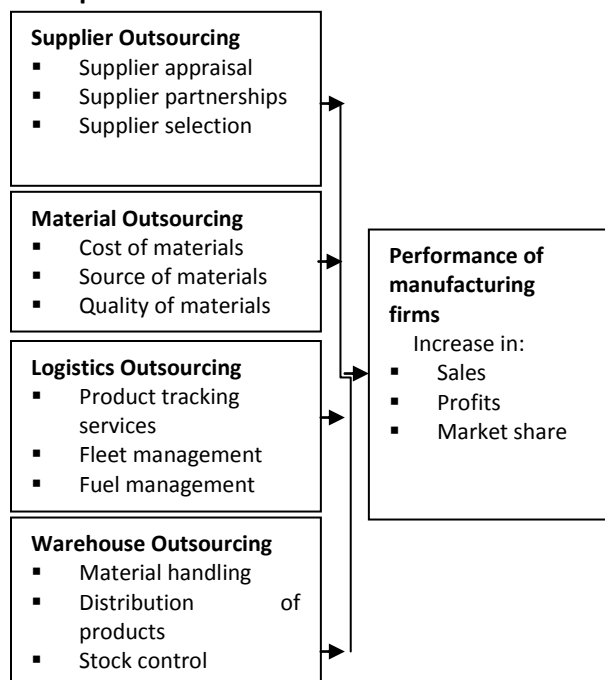
This theory guided the study in investigating the relationship between logistics outsourcing and performance of manufacturing firms. Queuing theory was born in the early 1900s with the work of Agner K. Erlang of the Copenhagen Telephone Company, Erlang derived several important formulas for telegraphic engineering. Erlang published the first paper on what would now be called queuing theory in 2009. Queuing theory is a mathematical study of waiting lines or queues (Kaveke, 2014). The theory enables mathematical analysis of several related processes, including arriving at the back of the queue, waiting in queue (a storage process) and being served in front of the queue. The theory permits the derivation and calculation of several performance measures including the average waiting time in the queue or the system, the expected number waiting or receiving service, and the probability of encountering the system in certain states such as empty, full having an available server or having to wait a certain time to be served (Mulama, 2012).

Resource Dependence Theory

Resource Dependence Theory (RDT) promoted by Pfeffer and salancikin (1978), is the study of how the exterior resources of organizations affects the performance of the organization. The procurement of exterior resources is a significant tenet of both the

strategic and tactical management of any company. Thus, this theory props up the concept of procurement. RBT proposes that actors lacking in crucial resources will seek to create relationships with (i.e., be dependent upon) others in order to acquire required resources. Just like sellers on buyers for precious markets and buyer will depend on suppliers for external resources. Also, organizations endeavor to alter their reliance relationships by lessening their own reliance or by increasing the dependence of other organizations on them. Within this viewpoint, organizations are viewed as coalitions alerting their structure and patterns of behavior to acquire and maintain required external resources. Acquiring the external resources required by an organization comes by diminishing the organization's reliance on others and/or by increasing other's reliance on it, that is, modifying an organization's influence with other organizations.

Conceptual Framework



Independent Variables Dependent Variable

Figure 1: Conceptual Framework

Source: (Author, 2019)

Supplier Outsourcing

Supplier outsourcing is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Iam, 2012). According to Peters (2004) argues that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Staff involved in SRM activities will have a good combination of commercial, technical and interpersonal skills. Commercial acumen, market knowledge, analytical abilities and project management expertise are important. But "softer" skills around communication, listening, influencing and managing change are critical to developing strong and trusting working relations. SRM managers understand their suppliers' business and strategic goals and are able to see issues from the supplier's point of view, while balancing this with their own organizational requirements and priorities.

Material Sourcing

Material outsourcing is a set of tangible physical attributes assembly in an identifiable form. That is given the rapid changes in taste, technology and competition; organization will not rely solely on its existing supplier but look forward to get better sources of materials. An organization can use three ways to minimize cost of sourcing materials, by interviewing her customers, by negotiation with the suppliers, by sourcing for better materials, we mean original material that can go into production and come out with quality product; and in the study, we will be concentrating on material sourcing as a way of increasing an organization's profitability (Anyango, 2014).

Logistics Outsourcing

Logistics outsourcing has grown rapidly to impact many activities of organizations and can cover many areas, including the outsourcing of manufacturing as well as services. Abraham and Taylor (2006) provide evidence of rising outsourcing of business services in 13 US industries and Helper (2008) documents the increased outsourcing of parts*-in the US automobile sector. A survey in 2007 of more than 600 large companies by the American Management Association finds that substantial numbers of companies are now outsourcing in many areas.

Warehouse Outsourcing

Warehouse management primarily refers to the coordination of the movement and storage of materials within a warehouse and processes associated and transactions, including shipping, receiving, put-away and picking. Warehousing is one of the important auxiliaries to trade. It creates time utility by bridging the time gap between production and consumption of goods. The effective and efficient management of any organization requires that all its constituent elements operate effectively and efficiently as individual SBUs / facilities and together as an integrated whole corporate. Across the supply chains, warehousing is an important element of activity in the distribution of goods, from raw materials and work in progress through to finished products .It is integral part to the supply chain network within which it operates and as such its roles and objectives should synchronize with the objectives of the supply chain. It is not a 'Stand-alone' element of activity and it must not be a weak link in the whole supply chain network (Anyango, 2014).

Performance of the Manufacturing Firms

Organizational performance is focused on improving efficiency and effective systems which are reliable and can ensure excellent which exceed organizational expectations (Maghanga, 2011). To get such sustainable organizational results, strategic

procurement is developed, which supports the organization in ensuring the key operational aspects of the firm are met; cost reduction, speed of product development and production, flexibility of the production system and quality assurance for the product (Wachira, Brookes & Hainnes, 2016). As manufacturing sector organizations compete in the market place where prices are driven by the market forces, most of the firms seek to device other means of influencing customers to buy their products. This will call for methods like lowering product cost, reducing lead times, and improving quality of product, showing sincere attention to safety and environmental protection and so forth.

Empirical Review

Supplier Outsourcing

Ojil, Kibet and Musiega (2014) research sought to assess the factors that influence the performance of supplies unit with special focus on County Government of Kakamega. The study adopted a descriptive research design. The study established that financial stability of a supplier had a positive effect on county government supplies units in Kakamega County. The study also revealed that quality management had a positive impact on county government supplies units in Kakamega County. The study further established that reliability of supplier had a positive effect on county government supplies units in Kakamega County. The study established the performance of suppliers before awarding tenders to them had positive influence on the county government supplies units in Kakamega County. Bashuna (2013) assessed selected factors affecting effective management of the procurement function at Nakuru North Sub County Procurement Unit. This study carried out a census in the procurement units among departmental heads from all the 30 Ministry departments. The study established that management of the procurement function was found to be slightly effective. This was greatly attributed to project financing, accountability, ICT adoption and

the internal control system as applied in departments.

Material Outsourcing

Susan and Wagoki (2014) study was to determine the effect of strategic Material Sourcing on operational performance of manufacturing firms, a case of East African Breweries Limited in Nairobi, Kenya. The study adopted descriptive research design to generate findings and made conclusions Strategic Material Sourcing and operational performance. Stratified sampling technique was adopted besides using closed ended questions to obtain data. The study findings showed that strategic material sourcing entails developing sourcing strategy and that it involved improving and re-evaluating the purchasing activities at EABL. Findings also indicated that effective supplier relationship management helps in reducing monitoring costs and that it helped in conflict resolution and better communication between the company and the supplier thereby promoting operational performance.

Logistics Outsourcing

Mulama (2012) conducted a study to the logistics outsourcing practices and performance of manufacturing firms in Nairobi Kenya. The research was a cross sectional survey of the manufacturing companies operating in Nairobi, Kenya. The study used primary data which was collected through a self-administered questionnaire that consisted of both open and closed aided questions. The data was analysed using descriptive statistics. The finding of the study was that the outsourcing services adopted by the firms were transportation management, warehouse management, material handling management, formation management and inventory management. The outsourcing practices being adopted the firms resulted in increased productivity, organizational effectiveness, increased profits, continuous improvement, improved quality and

improved quality of work life and thus sourcing of these processes was an ideal solution that helps the firm expand internationally and operate on a much larger scale. At the same time, outsourcing resulted in decreased crating costs, improved customer satisfaction, increased productivity, timely delivery of services to clients, and reduced lead time, improved profits and faster response to customer demands was an indication that the performance of the firms was influenced by the outsourcing prices adopted by the firms.

Warehouse Outsourcing

Njoroge (2015) sought to determine the inventory management practices used by Public hospitals in Kenya. The study further concludes that the main challenges that hindered implementation of inventory management practices in public hospitals were: failure to invest more in the warehouse management especially with modern technologies. Akintonye (2014) found that inventory management led to improved performance of German Service firms. Mehra (2014) and Lapide (2010) also concluded that use of technology in warehouse inventory management improved efficiency of manufacturing firms and service firms. Gakuru (2012) found that the major factor hindering the application of inventory model is frustrations by the ordering system. Lack of computers to keep track of inventory levels and lack of awareness on how best to implement the models were also cited as constraining factors.

Performance of Manufacturing Firms

Kinyanjui (2014) study was conducted to establish the effect of procurement outsourcing on supply chain performance among manufacturing firms in Kenya. The study had three specific objectives to achieve: to determine the extent to which procurement outsourcing is done in manufacturing firms in Nairobi, Kenya, to determine the effect of procurement outsourcing on supply chain performance of manufacturing firms in Nairobi, Kenya and to

determine the challenges in procurement outsourcing among manufacturing firms in Nairobi, Kenya. Regression analysis was used to test the relationship between the variables under study in relation to the objectives of the study. The study concluded that the manufacturing firms outsource procurement practices to a great extent and this affects supply chain performance of manufacturing firms in Kenya positively by leading to improved supply chain performance in ways such as increased productivity, minimized costs, maximized profits, increased operational efficiency and increased customer satisfaction. Challenges were faced to a moderate extent.

METHODOLOGY

This study adopted a descriptive survey designed to obtain pertinent and precise information concerning the current status of phenomena and whenever possible to draw valid general conclusion from the facts discovered. All procurement managers of the registered manufacturing firms in Nairobi City County, Kenya were used in the study. The Kenya Association of manufacturers had 400 registered large manufacturing firms distributed across Nairobi City County. The study used questionnaires to collect primary data from the respondents as research tools (Creswell & Creswell, 2017). The study collected both qualitative and quantitative data and was analyzed using both quantitative and qualitative methods with the help of (SPSS) version 24. The Multiple Regression model that aided the analysis of the variable relationships as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon,$$

Where;

Y= Performance of manufacturing firms (dependent variable);

β_0 = constant (coefficient of intercept);

X_1 = Supplier outsourcing (independent variable);

X_2 = Material outsourcing (independent variable);

X_3 = Logistics outsourcing (independent variable);

X_4 = Warehouse outsourcing (independent variable);

ϵ = Error term;

$\beta_1... \beta_4$ = regression coefficient of four variables.

FINDINGS

Supplier Outsourcing

The study sought to assess the influence of supplier outsourcing on performance of manufacturing firms in Kenya. Table 1 presented the findings as tabulated, a majority of respondents were found to be neutral that they adequately select their vendors with the best prices for goods and services(3.234).; they adequately negotiate with their vendors with the best prices for goods and services (3.212); Supplier partnerships allows firm to make the better use of supplies (2.998); They monitor the progress of products and orders with their suppliers(3.212); there is teamwork, joint decision making with our suppliers (2.896); they adequately select our vendors with the best prices for goods and services(2.560). The study results implied that supplier outsourcing influenced performance of manufacturing firms in Nairobi City County, Kenya. The study findings were in consistent with literature review by Mulama (2012) stated that information sharing as the access to private data between business partners thus enabling them to monitor the progress of products and orders as they pass through various processes in the supply chain. Supplier outsourcing is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Maku & Iravo, 2013).

Table 1: Supplier Outsourcing and Performance of Manufacturing Firms

| Description | Mean | Std. Dev |
|--|-------|----------|
| We adequately select our vendors with the best prices for goods and services | 3.234 | 1.897 |
| We adequately negotiate with our vendors with the best prices for goods and services | 3.212 | 1.765 |
| Supplier partnerships allows firm to make the better use of supplies | 2.998 | 1.700 |
| There is teamwork, joint decision making with our suppliers | 3.212 | 1.008 |
| We adequately select our vendors with the best prices for goods and services | 2.896 | 1.653 |

Material Outsourcing

The study sought to assess the influence of material outsourcing on performance of manufacturing firms in Kenya. Table 2 presented the findings as tabulated, a majority of respondents were found to be neutral that the sourcing of the materials was based on their cost(3.128); The source of materials determined the choice of the suppliers(2.882); The quality of materials determined the profitability of the firm (2.780).The cost of the materials enhanced sourcing of the materials for the firms(3.206).The study findings are in agreement with literature review Ogoda (2013) who established that organization can use three ways to minimize cost of sourcing materials, by interviewing her customers, by negotiation with the suppliers, by sourcing for better materials, we mean original material that can go into

production and come out with quality product; and in the study, we will be concentrating on material sourcing as a way of increasing an organization's profitability (Kyusya, 2015).

As a matter of fact, sourcing for the right material is like human being whose life span has to be treated to keep it working in order to add value, profit to the organization in the view that organization will not die subsequently. The death of organization lays on the fact that proper material is not acquired. Delayed deliveries, poor quality outputs due to faulty specifications, duplication of raw materials and continue threats of litigation by the suppliers due to delayed payments, is a common scenario among firms which experience poor relationship with their suppliers.

Table 2: Material Outsourcing and Performance of Manufacturing Firms

| Description | Mean | Std. Dev |
|---|-------|----------|
| The sourcing of the materials is based on their cost | 2.876 | 1.625 |
| The source of materials determine the choice of the suppliers | 3.212 | 1.909 |
| The quality of materials determines the profitability of the firm | 2.998 | 1.543 |
| The cost of the materials enhance sourcing of the materials for the firms | 3.112 | 1.113 |
| The sourcing of the materials is based on their cost | 3.298 | 1.900 |

Logistics Outsourcing

The study sought to assess the influence of logistics outsourcing on performance of manufacturing firms in Kenya. Table 3 presented the findings as tabulated, a majority of respondents were found to be neutral that the vehicle scheduling and maintenance policy(3.232); Fuel management policy (2.998); automated and tracking systems (2.654);scheduling pickups at regional distribution centers(3.116).The

study results are in agreement with findings by Mahonza (2017) who established that in the face of increasingly intensified competition in the emerging global economy, manufacturing firms are progressively turning to outsourcing of their logistics functions. Outsourcing is a viable business strategy because turning non-core functions over to external suppliers enables companies to leverage their resources, spread risks and concentrate on issues

critical to survival and future growth. One of the most important reasons why companies outsource their logistics functions is the need to decrease the number

of warehouses, vehicles and excess inventories and to reduce shrinkage, and labor costs.

Table 3: Logistics Outsourcing and Performance of Manufacturing Firms

| Description | Mean | Std. Dev |
|---|-------|----------|
| Vehicle scheduling and maintenance policy | 3.232 | 1.435 |
| Fuel management policy | 2.998 | 1.356 |
| Automated and tracking systems | 2.654 | 1.235 |
| Scheduling pickups at regional distribution centers | 3.116 | 1.562 |

Warehouse Outsourcing

The study sought to assess the influence of warehouse outsourcing on performance of manufacturing firms in Kenya. Table 4 presented the findings as tabulated, a majority of respondents were found to be neutral that the design of the warehouses is appropriate (2.996); Practice material handling techniques (3.214); Invested on information communication systems for distribution of products (2.543); Use of electronic order processing for stock control(2.908). Across the supply chains, warehousing is an important element of activity in the distribution of goods, from raw materials and work in progress through to finished products .It is integral part to the supply chain network within which it operates and as

such its roles and objectives should synchronize with the objectives of the supply chain. It is not a 'Stand-alone' element of activity and it must not be a weak link in the whole supply chain network (Joto, 2013).These cost and space pressures outweigh the pressures to improve operations because of rising customer demands for faster and more tailored fulfillment. However, the best performing companies are focused on winning in both these dimensions: by creating faster throughput and more workflow agility in their warehouses, they are able to satisfy customer demands while lowering logistics costs. An increasingly vital part of any warehouse operation is an enterprise's ability to deliver on customer demands in a timely fashion.

Table 4: Warehouse Outsourcing and Performance of Manufacturing Firms

| Description | Mean | Std. Dev |
|--|-------|----------|
| The design of the warehouses is appropriate | 2.996 | 1.325 |
| Practice material handling techniques | 3.214 | 1.432 |
| Invested on information communication systems for distribution of products | 2.543 | 1.457 |
| Use of electronic order processing for stock control | 2.908 | 1.543 |

Performance of Manufacturing Firms

On the extent to which performance of manufacturing firms, respondents were asked to indicate the extent to which the outsourcing practices influenced performance of manufacturing firms in Kenya. The data was collected from the different indicators of the variable performance of manufacturing firms which was ordinal categorical. The data was therefore presented in frequency tables with the mode being used as the appropriate

measure of central tendency. The results were presented in Table 5.

The first indicator for the dependent variable required to know what the performance of manufacturing firms on the level of cost reduction was, 0% of the respondents had 0-10%, 3% had 11-20%, 11% had 21-30%, 17% had 31-40%, 69% had over 50%. The modal class was of the respondents who had over 50% level of cost reduction in performance of manufacturing firms. The median was found to be 5 which implied that on average the

performance of manufacturing firms level of cost reduction was over 50%.

When the respondents were asked what the level of increase in timely deliveries of procured goods and services in the firms was, 3% of the respondents 0-10%, 3% had 11-20%, 14% had 21-30%, 26% had 31-50%, 49% had over 50%. The modal class is of the respondents who had over 50% level of increase in timely deliveries of procured goods and services in the performance of manufacturing firms. The mode was found to be 5 which implied that on average the level of increase in timely deliveries of procured goods and services in the performance of manufacturing firms is over 50%.

Finally, the respondents were asked what the level of increase in customer satisfaction in the performance of manufacturing firms offered was, 0% of the

respondents 0-10%, 3% had 11-20%, 3% had 21-30%, 34% had 31-50%, 60% had over 50%. The modal class is of the respondents who had over 50% customer satisfaction level. The mode was found to be 5 which implied that on average the level of increase in customer satisfaction in the manufacturing firms is over 50%.

Finally, the respondents were asked what the level of reduction of stock out in the manufacturing firms was, 0% of the respondents 0-10%, 3% had 11-20%, 20% had 21-30%, 43% had 31-50%, 34% had over 50%. The modal class was of the respondents who had between 31-50% reductions of stock out levels in the manufacturing firms. The mode was found to be 4 which implied that on average level of reduction of stock out in the manufacturing firms is between 31-50%.

Table 5: Performance of Manufacturing Firms

| Statement | 0%-10% | 11%-20% | 20%-30% | 31%-50% | Over 50% | Mode |
|--|--------|---------|---------|---------|----------|------|
| What is the level of cost reduction in manufacturing firm? | 0 | 3 | 11 | 17 | 69 | 5 |
| What is the level of increase in timely deliveries of procured goods and services in the firm? | 3 | 3 | 14 | 26 | 49 | 5 |
| What is the level of increase in customer satisfaction in the firm? | 0 | 3 | 3 | 34 | 60 | 5 |
| What is the level of reduction of stock out levels in the firm? | 0 | 3 | 20 | 43 | 34 | 4 |

Multiple Regression Analysis

It was notable that there exists a relationship between independent variables and dependent variable with a correlation coefficient of 0.871. The coefficient of determination was between zero and one. The data showed that the high R square is 0.758. It shows that the independent variables in the study were able to explain 75.80% variation in the

performance of manufacturing firms while the remaining 24.20% was explained by the variables or other aspects outside the model. This shows that the model has a good fit since the value is above 60%. This implied that these variables were very significant and they therefore needed to be considered in any effort to boost performance of manufacturing firms in Nairobi County, Kenya.

Table 6: Model Summary

| Model | R | R ² | Adjusted R ² | Std. Error of the Estimate |
|-------|------|----------------|-------------------------|----------------------------|
| | .871 | .758 | .689 | .001 |

Based on the study results of the ANOVA Test or F-test obtained F-count (calculated) value was 39.934

greater the F-critical value (Table) (15.876) with significance of 0.001. Since the significance level of 0.001 < 0.05 we concluded that the set of

independent variables influenced the performance of manufacturing firms (Y-dependent variable) and this showed that the overall model was significant. Thus

the four variables played a significant role in the performance of manufacturing firms in Kenya.

Table 7: ANOVA

| Model | Sum of Squares | d.f | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|------|
| Regression | 72.954 | 4 | 18.238 | 39.934 | .001 |
| Residual | 23.292 | 51 | .4567 | | |
| Total | 96.246 | 55 | | | |

NB: F-critical Value = 15.876;

Table 7 presented the beta coefficients of all independent variables versus performance of manufacturing firms in Kenya. Supplier outsourcing (X_1) had a coefficient of 0.876 which is greater than zero. The t statistics was 6.387 which has a p-value of 0.000 which is less than 0.05 implies that the coefficient of X_1 is significant at 0.05 level of significance. This showed that supplier outsourcing has a significant positive influence on performance of manufacturing firms.

The beta coefficient of material sourcing (X_2) was 0.774 which was greater than zero. The t statistic of this coefficient was 5.032 with a p value of 0.002 which is less than 0.05. This implies that the coefficient 0.774 is significant. Since the coefficient of X_2 is significant, it showed that material outsourcing has a significant effect performance of manufacturing firms.

Logistics outsourcing (X_3) had a coefficient of 0.762 which is greater than zero. The t statistic was 4.276 which had a p-value of 0.004 which was less than 0.05 implied that the coefficient of X_3 was significant at

0.05 level of significance. This showed that logistics outsourcing has a significant positive influence on performance of manufacturing firms in Kenya. That warehouse outsourcing (X_4) had a coefficient of 0.696 with a t statistic of 3.876 which has a p-value of 0.005 which is less than 0.05. This implies that the coefficient of X_4 is significant at .05 level of significance. This showed that warehouse outsourcing has a significant positive influence on performance of manufacturing firms.

Finally, the constant term was 16.980. The constant term is the value of the dependent variable when all the independent variables are equal to zero. The constant term had a p value of 0.000 which is less than 0.05. This implied that the constant term is significant. The multiple regression of performance of manufacturing firms was thus an equation through the 16.980. If all the independent variables take on the values of zero, there would be 16.980performance of manufacturing firms.

Table 8: Regression Coefficient Results

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-----------------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | β | | |
| (Constant) | 16.980 | 2.462 | | 6.897 | .000 |
| Supplier Outsourcing | .876 | .137 | .665 | 6.387 | .000 |
| Material Outsourcing | .774 | .153 | .654 | 5.032 | .002 |
| Logistics Outsourcing | .762 | .178 | .455 | 4.276 | .004 |
| Warehouse Outsourcing | .696 | .180 | .332 | 3.876 | .005 |

CONCLUSIONS

The study concluded that supplier outsourcing influenced performance of manufacturing firms in Kenya. The regression coefficients of the study showed that supplier outsourcing had a significant positive influence on performance of manufacturing firms in Kenya. This implied that increasing levels of supplier outsourcing would increase the levels of performance of manufacturing firms in Kenya. This showed that supplier outsourcing had a strong positive influence on performance of manufacturing firms in Kenya.

The study concluded that material outsourcing influence performance of manufacturing firms in Kenya. The regression coefficients of the study showed that material outsourcing had a significant positive influence on performance of manufacturing firms in Kenya. This implied that increasing levels of material outsourcing would increase the levels of performance of manufacturing firms in Kenya. This shows that material outsourcing has a strong positive influence on performance of manufacturing firms in Kenya.

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RECOMMENDATIONS

The study recommended that there was need to enhance supplier outsourcing that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. The managers should monitor the supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing with their own organizational requirements and priorities.

The study recommended that given the rapid changes in taste, technology and competition; organization should not rely solely on its existing supplier but look forward to get better sources of materials. An organization can use three ways to minimize cost of sourcing materials, by interviewing her customers, by negotiation with the suppliers, by sourcing for better materials, we mean original material that can go into production and come out with quality product.

The study recommended that there was need to enhance logistics outsourcing practices such as turning non-core functions over to external suppliers which can enable companies to leverage their resources, spread risks and concentrate on issues critical to survival and future growth. One of the most important reasons why companies outsource their logistics functions is the need to decrease the number of warehouses, vehicles and excess inventories and to reduce shrinkage, and labor costs.

The study recommended that the firms' warehouse management should focus on coordination of the

movement and storage of materials within a warehouse and processes associated and transactions, including shipping, receiving, put-away and picking. The firms should continue to seek to reduce the number of stocking locations and drive more productivity from the remaining distribution centers.

Areas for Further Research

The study was a milestone for further research in the field of procurement outsourcing and firm

performance. The findings have demonstrated the important procurement practices to include; supplier outsourcing, material outsourcing, logistics outsourcing and warehouse outsourcing. The current study covered only 70.00% and the remaining 30.00% should therefore be expanded further in future in order to determine other procurement outsourcing practices influencing performance of manufacturing firms in Kenya.

REFERENCES

- Abeywardena, I. S., Raviraja, S., & Tham, C. Y. (2012). Conceptual framework for parametrically measuring the desirability of open educational resources using D-index. *The International Review of Research in Open and Distributed Learning*, 13(2), 59-76.
- Adamov, E. O., Dzhilavayan, A. V., Lopatkin, A. V., Molokanov, N. A., Muravyov, E. V., Orlov, V. V., ... & Ivanov, V. B. (2012). Conceptual framework of a strategy for the development of nuclear power in Russia to 2100. *Atomic energy*, 112(6), 391-403.
- Anyango, B. J. (2014). Outsourcing and the performance of state corporations in Kenya. *Unpublished MBA Project, School of Business, University of Nairobi*.
- Chiang, C. Y., Kocabasoglu-Hillmer, C., & Suresh, N. (2012). An empirical investigation of the impact of strategic sourcing and flexibility on firm's supply chain agility. *International Journal of Operations & Production Management*, 32(1), 49-78.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Estampe, D., Lamouri, S., Paris, J. L., & Brahim-Djelloul, S. (2013). A framework for analysing supply chain performance evaluation models. *International Journal of Production Economics*, 142(2), 247-258.
- Fapohunda, T. M. (2013). Towards successful outsourcing of human resource functions. *International Journal of Human Resource Studies*, 3(3), 39.
- Festus, A. F., & Adenike, A. A. (2011). The Competitive Advantage of Outsourcing the Products and Services of the Nigerian Industry. *Interdisciplinary Journal of Contemporary Research in Business*, 3(2), 77-88.

- Joto, B. M. (2018). *Effect Of Logistics Outsourcing On The Performance Of Dairy Processing Firms In Kenya* (Doctoral Dissertation, School Of Business, University Of Nairobi).
- Kangaru, M. (2011). Challenges of business outsourcing at the Kenya Power. *Unpublished MBA project*.
- Kaveke, D. (2014). *Application of outsourcing strategy among shipping firms in Kenya* (Doctoral dissertation, Doctoral dissertation, University of Nairobi).
- Kinyanjui, B. M. (2014). Procurement outsourcing and supply chain performance of manufacturing firms in Nairobi, Kenya. *Unpublished MBA project, School of Business, University of Nairobi*.
- Kiptum, D. (2014). *Analysis of the effects of outsourcing on organization Productivity in selected parastatals in Kenya* (Doctoral dissertation).
- Kothari, C. R., & Garg, G. (2014). Research methodology Methods and Techniques. 2014-New Age International (P) Ltd. *New Delhi*.
- Kubai, F. B. (2016). The Effect of Capital Structure on the Financial Performance of Manufacturing Firms in Kenya. *Unpublished Thesis*.
- Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners*. Sage Publications Limited.
- Kyusya, J. M. (2015). Effect of logistics outsourcing on the operational performance of shipping industry in Kenya. *University of Nairobi*.
- Maghanga, F. (2011). Logistics outsourcing practices among tea processing firms in Kericho County, Kenya. *Unpublished MBA Project*.
- Magutu, P. O., Chirchir, M. K., & Mulama, O. A. (2013). The Effect of Logistics Outsourcing Practices on the Performance of Large Manufacturing Firms in Nairobi, Kenya.
- Maku, J. K., & Iravo, M. A. (2013). Effects of outsourcing on organizational performance at Delmonte Kenya Limited. *International Journal of Social Sciences and Entrepreneurship*, 1(5), 104-117.
- Mugenda, A. G., & Mugenda, A. G. (2012). Research methods dictionary. *Nairobi, Kenya: Applied Research & Training Services*.
- Muhonza, P. B. (2017). *Effects of Outsourcing as a Strategy to Generate Competitive Advantage in Transport and Logistics Industry: A Case of DAMCO Kenya Limited* (Doctoral dissertation, United States International University-Africa).
- Mulama, O. A. (2012). Logistics Outsourcing Practices And Performance Of Large Manufacturing Firms In Nairobi, Kenya. *School Of Business University Of Nairobi*.
- Njoroge, M. W. (2015). *Inventory Management Practices And Performance Of Public Hospitals In Kenya* (Doctoral Dissertation, Doctoral dissertation, University of Nairobi).
- Odhiambo, I. (2013). *Strategic Sourcing Practices In Multinational Corporations In Kenya* (Doctoral dissertation, University of Nairobi).
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.

- Persson, F., & Araldi, M. (2009). The development of a dynamic supply chain analysis tool—Integration of SCOR and discrete event simulation. *International Journal of Production Economics*, 121(2), 574-583.
- Peters, B. G. (2011). *Institutional theory in political science: The new institutionalism*. Bloomsbury Publishing USA.
- Pundoor, G., & Herrmann, J. W. (2006). A hierarchical approach to supply chain simulation modelling using the Supply Chain Operations Reference model. *IJSPM*, 2(3/4), 124-132.
- Robinson, J. R. (2016). Role of Outsourcing in Stress and Job Satisfaction of Information Technology Professionals.
- Sang, J. K. (2010). Outsourcing in Kenyan universities: an examination of challenges and opportunities. *International Journal of Business and Social Science*, 1(2).
- Sarpong, D. J. K. (2017). *Impact Of Strategic Material Sourcing On Construction Performance, A Comparative Study Of Domestic Verses Overseas Sourcing Strategies* (Doctoral Dissertation, Kwame Nkrumah University Of Science And Technology, Kumasi).
- Shavulimo, P. M. (2014). Effect of Corporate Governance on Performance of Sugar Manufacturing Firms in Kenya: A Case of Sugar Manufacturing Firms in Western Kenya. *Journal of Business and Management* 16, 11, 214-239.
- Susan, K. N., & Wagoki, J. (2014). Effect of Strategic Material Sourcing on Operational Performance of Manufacturing Firms: A Case of East African Breweries Ltd., Kenya. *International Journal of Science and Research (IJSR)*, 3(11), 124-130.
- Wachira, W., Brookes, M., & Haines, R. (2016). Viewing the impact of outsourcing from a Kenyan Perspective. *Asian Journal of Management Science and Economics*, 3(1), 24-43.
- Wambui, G. R. (2010). *An Analysis Of Information Systems Outsourcing Adoption At Kenya Armed Forces* (Doctoral Dissertation, School Of Business, University Of Nairobi).
- Willy, O. C. O. (2012). Macro economic fluctuations effects on the financial perfomance of listed manufacturing firms in Kenya.
- Xia, J., Wang, Y., Lin, Y., Yang, H., & Li, S. (2018). Alliance formation in the midst of market and network: Insights from resource dependence and network perspectives. *Journal of Management*, 44(5), 1899-1925.
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Sage publications.