## INFLUENCE OF PROCUREMENT BEST PRACTICES ON THE PERFORMANCE OF FOOD AND BEVERAGE MANUFACTURING FIRMS IN KENYA

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# A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN PROCUREMENT AND LOGISTICS IN JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

2019

#### DECLARATION

I declare that this is my original work and has not been submitted to any other University.

Signature: .....

Date: .....

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HD311-C004-0815/2015

This research project has been presented for examination with my approval as the University supervisor.

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## DEDICATION

I dedicate this project to my ever supportive family. I owe my deepest gratitude to my entire family for enormous support. This project would not have been successfully completed without their love and patience.

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#### ABBREVIATIONS AND ACRONYMS

- Center for Corporate Governance CCG: GDP: Gross Domestic Product **GNP**: **Gross National Product** Government of Kenya GoK: Kenya Bureau of Standards **KEBS:** Kenya Institute for Public Policy Research and Analysis **KIPPRA: KNBS:** Kenya National Bureau of Statistics COMESA: Common Market for Eastern and Southern Africa Public Procurement Oversight Authority **PPOA:** EAC: East African Community
- WB: World Bank

#### **OPERATIONAL DEFINITION OF TERMS**

**Manufacturing Firms:** A manufacturing firm is any business that uses components, parts or raw materials to make a finished good. These finished goods can be sold directly to consumers or to other manufacturing firms that use them for making a different product (Al-Mashari & Zairi, 2009).

**Outsourcing:** The practice of having certain job functions done outside a company instead of having an in-house department or employee handle them; functions can be outsourced to either a company or an individual (Analytica, 2012). In this study aspects of outsourcing covered are vendor performance management and core versus noncore spend monitoring.

**Performance of Food and Beverage Manufacturing Firms:** It is the process by which the company manages its performance in line with its corporate and functional strategies. Performance may entail corporate and functional strategies being deployed to all business processes, activities, tasks and personnel, and feedback is obtained through the performance measurement system to enable appropriate management decisions (Ferdows, 2008). In this study aspects of performance of food and beverage manufacturing firms covered are cost reduction, market share and timely delivery.

**Procurement Best Practices:** Refers to how activities and systems interact so as to help an organization to identify opportunities to improve processes and deliver massive productivity gains. Effective spend analytics, improved strategic sourcing, and the elimination of waste (Kennedy & Brian, 2009). In this study aspects of procurement best practices covered are reverse logistics, outsourcing, strategic alliances and vendor managed inventory.

**Reverse Logistics:** The role of logistics in product returns, source reduction, recycling, materials substitution, reuse of materials, waste disposal, and refurbishing, repair and remanufacturing to

enhance green supply chain management (Nyeko, 2008). In this study aspects of reverse logistics covered are recall policy and procedure, re-use systems and recycling.

**Strategic Alliances:** An agreement between two or more players to share resources or knowledge to undertake a specific, mutually beneficial project to all parties involved. It is a way to supplement internal capabilities, assets and activities, with access to needed resources or processes from outside players for example suppliers, customers, competitors among others (David & Robert, 2014). In this study aspects of strategic alliances covered are alignment of goals and preferential scheduling of orders.

**Vendor Managed Inventory:** This is a streamlined approach to inventory management and order fulfillment. VMI involves collaboration between suppliers and their customers (for example; distributor, retailer or product end user) which changes the traditional ordering process (Ahire & Dreyfus, 2010). In this study aspects of vendor managed inventory covered are efficient customer response and centralized inventory management.

#### ABSTRACT

In today's highly competitive market, the demand for superior goods and services is the single most critical fact for companies to survive in the ever-expanding global marketplace. Procurement best practices are vital in determining the economic success of organizations where they achieve competitive edge and greater market share through extraordinary levels of performance by providing superior products with competitive prices as required by demanding customers. This makes procurement best practices critical to this sector as they strive to continuously improve their processes and products to meet customers' expectation. The overall objective of this study was to examine the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenva. The study aimed to establish how reverse logistics, outsourcing, strategic alliances and vendor managed inventory influence performance of food and beverage manufacturing firms. To achieve this, the researcher reviewed both theoretical and empirical literature and proposed to use the research methodology that addresses the gaps identified in literature as well as answer the stipulated research questions. This research study adopted a descriptive research design approach. The researcher preferred this method because it allowed an in-depth study of the subject. Structured questionnaires were used to collect data from the 197 heads of procurement departments because it was a census. Data was analyzed using descriptive and inferential statistics. Quantitative data was analyzed using multiple regression analysis. The qualitative data generated was analyzed by use of Statistical Package of Social Sciences (SPSS) version 22. The response rate of the study was 77%. The findings of the study indicated that reverse logistics, outsourcing, strategic alliances and vendor managed inventory have a positive relationship with performance of food and beverage manufacturing firms in Kenya. Finally, the study recommended that food and beverage manufacturing firms should embrace procurement best practices so as to improve performance and further researches should to be carried out in other sectors to find out if the same results can be obtained.

#### **CHAPTER ONE**

#### **INTRODUCTION**

#### 1.1 Background of the Study

This chapter presents and entails the background of the study, problem statement, objectives, research questions, importance of the study, the scope of the study and limitations of the study. Procurement best practices are considered an important catalyst in the performance of company's world over (Abdurrahman, 2010). This is why the procurement best practices concept has captured the attention of all sides of commerce and industry, as well as that of academics (Bask, 2011). The large number of academic articles being published in this area is a testimony to the high level of interest in best practices issues (Meegan & Taylor, 2009).

During the past decade, procurement best practices have become one of the most important organizational strategies for achieving competitive advantage. Improving the procurement best practices with which an organization can deliver its products and services is critical for competing in an expanding global market (Ferdows, 2008). Procurement best practices begin with the primary assumption that employees in organizations must cooperate with each other in order to achieve the needs of the customer (Chang, 2008). One can achieve this by controlling manufacturing/service processes to prevent defects (Masters, 2008).

Procurement best practices also depend on a certain set of values and beliefs shared by all organizational members (Frooman, 2009). The concept of best practices has migrated from being considered as a non-price factor on which imperfect competition in the markets is based, to being considered as a strategic resource of firms (Gordon, 2014). In other words, quality went from being a one-dimensional attribute of the product to being considered a multi-dimensional construct

which has to be managed and the implementation of which leads to a dynamic capability of firms (Demirbag, Tatoglu, Tekinkus & Zaim, 2010).

Despite the large number of articles and books on best practices, procurement best practices remain a hazy, ambiguous concept. Various teams provide companies with the structured environment necessary for successfully implementing and continuously applying the best practices process (Al-Mashari & Zairi, 2009). Best practices training are conducted and the improvement of processes executed through a well-planned team structure. The ultimate goal of the team approach is to get everyone, including contractors, designers, vendors, subcontractors, and owners involved.

#### 1.1.1 Global Perspective of Procurement Best Practices

In response to increase global pressures, customers' demanding superior products and services, the global market place has become very competitive; many organizations have adopted practices such as outsourcing and benchmarking. Many scholars claim that managers can implement procurement best practices in any organization in any sector of the economy such as manufacturing, service, education, and government and it generates improved products and services, more satisfied customers and employees, reduced costs, improved financial performance, enhanced competitive, and increased (Robbins & Coulter, 2009)

Procurement best practices have been built on the concept of processes improvement which has become a world-wide topic in the twenty-first century guiding various management practices in organizations. Having its roots partly in the USA, it was primarily adopted by some companies in the decades immediately after World War II. With the greater successes of American companies, companies all over the world found that it was necessary to have good best practices in order to stay competitive (Flynn, Sakaribara & Schroeder, 2014).

As world markets are becoming increasingly integrated, Indian manufacturing companies are coming under strong pressures to ensure that their procurement best practices are up to date and matches with the leaders like the USA, Australia; the UK and other competitors (Mann & Zhang, 2010). Increased globalization and tough business conditions have brought challenges and opportunities for Indian manufacturing companies and made them to promote superiority in their products and services, and has become a national imperative for Indian companies to stand and compete in the present market condition (Abdurrahman, 2012).

Organizations adopt procurement best practices focus on achieving and sustaining a high quality outputs, cost reductions and timely deliveries using management practices as the inputs and quality performance as the outputs (Flynn, Sakakibara & Schroeder, 2014). The pioneers in procurement best practices highlighted the importance of the philosophy as an essential competitive weapon for the transformation of an organization's performance. Researchers define procurement best practices as both a set of guiding principles and management style and that have been adopted by managers in organizations to improve competitiveness and organizational performance.

#### 1.1.2 Regional Perspective of Procurement Best Practices

In the African continent, most countries have adopted procurement best practices in both manufacturing and service sectors but differences occur in the manner in which they are applied. (Kakwezi & Nyeko, 2010) assess the application of procurement best practices in Nigeria, South Africa and Uganda to investigate the relationship between national culture and the implementation of procurement best practices. Their results show that in each country, several distinct relationships between the dimensions of procurement best practices implementation and national culture exist. They therefore imply that the application of procurement best practices should take into account different characteristics of national cultures (Yeung & Lo, 2012).

In Uganda, procurement best practices were mainly practiced by multinationals that understood the concept but was notably implemented locally with success by Shumuk Group of Companies. The manufacturer's management of best practices was overhauled; first class graduates were employed, inducted and maintained with a clear cut reproductive management strategy and succession plan. Procurement best practices implementation eliminated long delivery times through prompt service, quality service was rendered and customers were satisfied. All these led to efficient operations, cost reduction and high profit maximization which elevated the manufacturer to Uganda's top five in the aluminum sector, few years after its establishment (Kakwezi & Nyeko, 2010).

Procurement best practices have become a management philosophy and a way of an industry's life that helps in managing organizations to improve its overall effectiveness and performance towards achieving world-class status for the past two decades. Successful implementation of procurement best practices brings wide benefits and contributions to an industry. The ultimate contributions include cultivating attitude of right first time, achieving zero defects, acquiring effective and efficient business solutions, attaining business excellence, delighting customers and suppliers and many more (Nwabueze, 2011).

#### 1.1.3 Procurement Best Practices in Kenya

Procurement best practices are strategies that may be followed when making company purchasing decisions. These practices may include building supplier relationships, benchmarking approaches to procurement and proper use of outsourcing. Implementing procurement best practices may significantly improve the effectiveness of purchasing decisions (Rouse, 2013). One of the most important procurement best practices may be improving the relationship between the buyers and

suppliers. Choosing a supplier based solely on competitive pricing is often viewed as short-sighted and may be ineffective.

Today, procurement strategies are more a part of a business's success than ever before. Not only has procurement best practices given companies the opportunity to truly make purchasing more efficient and inexpensive, but companies are now spending a larger percentage of their revenue on products and services than they were thirty years ago (Samuel, 2009).

Building a long-term relationship with a reliable supplier can result in better customer service and may prove to be more cost effective over time. Another procurement best practice is to make an entire department responsible in some way for procurement (Shirima, 2009). Making procurement practices more of a team effort can boost company morale and improve strategic approaches to purchasing. Some practices include designating a representative from each department to sit on a procurement committee that consults regularly with the procurement department.

Research by World Bank (2013) has described procurement best practices and how these positively affect procurement performance in terms of cost, time, satisfaction, quality, stock, and value. Smith (2011) provides good background to some procurement work as traditional procurement route came under closer scrutiny other procurement routes developed and consequently means for selection were considered. In addition, he has defined various procurement best practice routes if characteristics of procurement route can be identified and the impact of these characteristics upon performance can be measured, then and only then can the selection of specific procurement path serve a definite purpose.

#### 1.1.4 Food and Beverage Manufacturing Sector in Kenya

The manufacturing sector in Kenya constitutes 65% of the industrial sectors contribution to GDP, with building, construction, mining and quarrying contributing the remaining 30% (Kennedy & Brian, 2009). Kenya's manufacturing sector is among the key productive sectors of the economy identified under vision 2030 which can spur growth (Kirungu, 2012). Kenya recognized the importance of the manufacturing sector for long-term economic development.

Indeed, the growth targeted for manufacturing stated by the government in its Vision 2030 document were ambitious and required rapidly increasing investment levels, eventually reaching levels above 30% of GDP (GoK, 2013). The raised levels of poverty coupled with the general slowdown of the economy had continued to inhibit growth in the demand of locally manufactured goods, as effective demand continued to shift more in favor of relatively cheaper imported manufactured items. According to World Bank (2013), the manufacturing sector contributes directly to 10% of the Kenya's GDP.

The sector comprises of 3,500 manufacturing units and employs 300,000 persons and nearly 500,000 indirectly which accounts for 13% of the labor force in the formal sector in Kenya. The manufacturing sector has high, yet untapped potential to contribute to employment and GDP growth. Witjaksono (2012) notes that since the sector is not limited to land size. It has high growth prospects compared to the agriculture sector.

It is noted that its contribution to GDP has continued to stagnate at about 10% with its contribution to wage employment on a declining trend (Smith, 2011). Kenya's share of manufacturing exports to the global market is dismal and stands at 0.02%. This figure is low compared to South Africa at 0.3 %.

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

The manufacturing sector in Kenya is a key productive unit and has immense potential for wealth, employment and poverty alleviation, (Kagechu, 2013). Manufacturing industry has been the economic growth engine and is the major tradable sector (Rotich, 2011). However, Kenya's manufacturing industrial sector has enjoyed modest growth rates averaging 4% over the last decade (KAM, 2016). In the year 2000 manufacturing sector was the second largest sub sector of the economy after agriculture (CCG, 2008) but in 2010, it was in the fourth place behind agriculture, wholesale and retail trade, transport and communication (World Bank, 2013). As a result, the sector had seen a reduction in its contribution to GDP from 13.6% in the early 90's to 9.2% in 2012, (GoK, 2013).

Kenya's' vision 2030 emphasizes the need for appropriate manufacturing strategy for efficient and sustainable practices as a way of making the country globally competitive and a prosperous nation (KNBS, 2008). Nevertheless, most manufacturing firms in Kenya operate at a technical efficiency, of about 52% compared to their counterparts in Malaysia that average about 78% (KIPPRA, 2010) raising doubts about the sector's capacity to meet the goals of Vision 2030 (PPOA, 2010). This sector has been the main conduit for the country's integration to the regional and world market, COMESA and EAC, (Were, 2007), thus attracting international investors as well, (Muhoro, 2011). In order to earn a competitive edge, these firms ought to embrace procurement best practices as it leads to increased profitability, better financial performance, customer satisfaction and increased market share for local manufacturing firms, (Mudhararam and Hunt, 2008). Hines & Taylor 2000, indicated that extensive research has been conducted on procurement best practice. Hassanzadeh

and Jafarian, 2010 noted that procurement best practices are viewed as a strategic function working to improve the organization profitability.

Many studies have been conducted on manufacturing firm's performance focusing on different areas of supply chain management. These studies have not addressed the influence of procurement best practice on food and beverage manufacturing firms in Kenya. A study conducted by Achuora (2015) focused on how the performance of manufacturing firms in Kenya is influenced by the use of green supply chain management practices. A study by Mwangangi (2016) examined how the incorporation of logistics management affects the performance of manufacturing firms in Kenya. On the other hand, Kariithi (2011) conducted a study that investigated the aspects that influence the performance of manufacturing firms in Kenya.

Therefore, the studies cannot be used to ascertain the influence of procurement best practices in manufacturing firms in Kenya. This highlights a literature gap that this study aims to bridge by looking at the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

#### 1.3 Objectives of the Study

#### **1.3.1** The General Objective of the Study

The general objective of the study was to examine the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

#### **1.3. 2 Specific Objectives**

- i. To assess the influence of reverse logistics on the performance of food and beverage manufacturing firms in Kenya.
- ii. To establish the influence of outsourcing on the performance of food and beverage manufacturing firms in Kenya.

- iii. To determine the influence of strategic alliances on the performance of food and beverage manufacturing firms in Kenya.
- iv. To evaluate the influence of vendor managed inventory on the performance of food and beverage manufacturing firms in Kenya.

#### **1.4 Research Questions**

These research questions helped the researcher in her quest to collect the relevant information on the research topic:

- i. Does reverse logistics influence the performance of food and beverage manufacturing firms?
- ii. In what ways does outsourcing influence the performance of food and beverage manufacturing firms?
- iii. To what extent do strategic alliances influence the performance of food and beverage manufacturing firms?
- iv. Does vendor managed inventory influence the performance of food and beverage manufacturing firms?

#### 1.5 Justification of the Study

The study will be a comprehensive assessment of the effect of procurement best practices on the performance of food and beverage manufacturing firms in Kenya and the findings will be instrumental to the following groups:

#### 1.5.1 Government of Kenya

The government can use the findings of this study to ensure the development and successful

implementation of procurement best practices in order to meet the performance targets in its ministries as well as ensuring that the guidelines and procedures are well instituted when procuring materials (Dunn, 2010).

#### **1.5.2 Procurement Departments in Manufacturing Firms**

The study is useful to the staff and management of procurement departments by highlighting the loop holes and bringing to table several measures that can be adopted to enhance procurement best practices in achieving performance targets (John & Johnson, 2012).

#### **1.5.3 Stakeholders and Other Interested Parties**

This includes tax payers, the procurement professionals and institutions, suppliers and the contractors in the manufacturing industry, the study will provide relevant information on using procurement best practices to improve performance of firms (Kothari, 2008).

#### **1.5.4 Researchers and Scholars**

The study will provide researchers and academicians with more knowledge concerning influence of procurement best practices in optimizing organizational performance. The findings from this study can also be used by students and the academic fraternity in further studies concerning the same thematic areas (Isaac & Michael, 2010).

### 1.6 Scope of the Study

The study's scope was assessing the influence of procurement best practices on the performance food and beverage manufacturing firms in Kenya. Procurement best practices are a set of activities interact to help an organization to identify opportunities to improve processes and deliver massive

gains. Effective spend analytics, improved strategic sourcing, and the elimination of waste (Smith, 2011). The study was confined to 197 food and beverages manufacturing companies in Kenya who are registered members of KAM, 2017 directory. The study considered aspects of procurement best practices which included: reverse logistics, outsourcing, strategic alliances and vendor managed inventory. These variables were most favorable because, Joiner (2008), procurement best practices are classified into two, core and supporting. The core activities take place in every chain of a firm while supporting activities vary from company to company (Kazemi & Hooshyar, 2009).

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### **2.1 Introduction**

This chapter involves review of literature where a deeper look in the subject matter is done. It comprises of; theoretical review, conceptual framework, empirical review, critique of literature, summary and research gaps.

#### 2.2 Theoretical Review

This consists of concepts together with their definitions and reference to relevant scholarly literature (Dunn, 2010), existing theory that is used for a particular study. Here a demonstration of understanding of theories and concepts that are relevant to the topic of the study and that relate to the broader areas of knowledge being considered (Ngechu, 2009). Thus, it is a collection of interrelated statements or principles that explains the major theories in relation to the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

#### 2.2.1 The Stakeholder Theory

According to Harrison and Freeman (2009), they defined the concept of a stakeholder approach in relation to reverse logistics management to include any individual or group who can affect the firm's performance or who is affected by the achievement of the organizations' objectives. The stakeholder theory is grouped into two: strategic stakeholder who emphasizes the active management of stakeholder interests and moral stakeholder interested in balancing stakeholder interests (Frooman, 2009).

Corporations should not focus narrowly their strategic management decisions on creating shareholder value; rather broaden their objectives to tackle the expectations and interest of a wide variety of salient stakeholders (Donaldson & Preston, 2015). Poor reverse logistics management

leads to poor company's relationship with its stakeholders. Consequently shareholders and financial institutions perceive companies with a poor environmental record as riskier to invest in and may demand a higher risk premium (Henriques & Sadorsky, 2009).

Also companies with a poor reputation of reverse logistics management will find it harder to attract and retain highly qualified employees who may have a strong proactive environmental management (Reinhardt, 2009). From the above argument the success of companies aiming to develop reverse logistics competencies strongly depend on the participation of their employees. Consumer awareness has led them to demand industry improvement on their environmental performance (Buysse & Verbeke, 2013).

Consumers can reject the products of companies with poor reverse logistics management reputation (Greeno & Robinson, 2012). Similarly suppliers may stop delivering inputs to protect their own reputation. A firm with a reactive reverse logistics management may face big loss of competitive advantage if proactive environmental management becomes a common practice among its competitors. From the above argument Freeman and Phillips, (2012) suggest that business should take a leadership role to improve the natural environment. In this study stakeholder theory has been adopted and linked to reverse logistics management variable.

#### 2.2.2 The Transaction Cost Economic Theory

The theory of transaction cost economics, also called social cost theory, is a contractual concept developed by British economist Ronald Coase and refined by American economists Oliver Williamson. Transaction cost economics (TCE) has been the predominant theories used to examine strategic sourcing decisions from a make versus out-source perspective. TCE tenets imply that sourcing decisions involve a comparison of the production costs incurred from producing a process or product internally with the transaction costs associated in purchasing a process or product from an external source-outsourcing or multi sourcing (Stewart, 2015).

The total transaction costs included in the sourcing decision include the direct economic costs associated with sourcing service development and delivery, transaction-based monitoring and control costs incurred to ensure that the sourcer acts in the best interest of the firm, and mediation and legal costs accrued should the sourcer act in a manner inconsistent with the terms of the sourcing contract (Wisner & Leong, 2011).

Sourcing transaction costs also increase with asset specificity, for example green procurement specifications, where the increased complexity of interactions required to produce sourcing outputs necessitates increased monitoring and control costs to protect source investments. TCE offers a very rational view for evaluating make versus outsource decisions, where the sourcing choice is made strictly based on the economic merits of market versus hierarchy costs associated with each individual sourcing transaction (Herbert, 2015).

Beyond individual sourcing transactions, firms should consider and manage transactions from a holistic perspective. In such cases, the level of analysis implied by TCE moves from the individual transaction to the network of sourcing transactions at the organizational level, with firms making sourcing decisions that maximizes the economic value added from interactions with sourcing partners (Jha, 2010).

The overall value of these sourcing interactions includes the minimization of economic costs incurred from managing a nexus of sourcing transactions, as well as maximizing the value of vendor performance management and other knowledge gained from sourcing relationships and transactions (Maghanga, 2011).

Out-sourcing as a purchasing strategy is founded on tenets of TCE because it allows business organizations an opportunity to contract non-core but essential activities which would otherwise be costly to manage internally third party service providers who can offer them at a relatively lower

cost. This is very applicable in procurement functions in the manufacturing sector where consolidation of contracts and comparison between realized versus contracted savings can a long way in decision making concerning make or outsource.

#### 2.2.3 The Partnership Theory

In supply chain, the common model through which theorists study the relationship between supplier and buyer is known as the partnership theory. In its basic nature, the partnership model depicts the buyer and supplier as partners with a common interest which is customer satisfaction (Woods, 2014). Partnership is a business relationship based on mutual trust openness, shared risks and rewards that enables an organization gain competitive advantage leading in the company achieving a performance that's far much greater than the firm would have achieved when operating as single entities.

This model requires efficient information exchange between the buyer and supplier which is a critical element of any partnership (Whan & Teawon, 2015). The theory further states that any partnership is always based on value and present for each other. The solid and long term relationship simply implies continuous improvement of the organization performance. Suppliers must provide better services that are of high quality than his competition at a price reasonable and still achieve goals to remain in business.

Partnership model according to Hughes (2010), increases company efficiency through way of cooperative; both parties obtain cost reduction which leads to price reduction and therefore increasing the market share profit margin as well. This leads to a company gaining a competitive edge and efficiency. The character which forms the perceived attributes of partnership include the following; high frequency of both formal and informal communication, cooperative attitude, trusting relations are built, problem solving that is win negotiation style, long term business agreement, open sharing of information and there is always vendor certification and defect

prevention approach. Motivation factors, environment of operation, strength of operation and duration of operation vary in different partnership formed. However there is never an ideal relationship that is recommended (Haakansson & Ford, 2012).

There are three types of partnership; which is the most used. Companies recognize each other as partners, all the activities are coordinated, and planned is short term. Only one division within the organization is involved. The second type is partnership which basically integrates activities rather than coordinating as in the case for type 1. There are multiple division and entails a long term horizon.

The last type of partnership is the partnership which is not used frequently. Companies share high operational integration and each views the others as an extension of their firm (Gordon, 2014). The partnership theory has three elements which are drivers, facilitators' and used components. The drivers each party must have a driver strong enough to provide them with realistic expectation of significance benefit through strengthening of the relationship. Facilitators on the other have included corporate compatibility, mutuality, managerial philosophy and techniques and symmetry. The final element is the components which are the factors than can be controlled in a partnership by the management. They include planning, joint operating controls, communications, risk/reward sharing, trust and commitment, contract style, scope and financial investment (Ellram & Ogden, 2007). In conclusion in order to gain leadership position against your competitors and ensure the company grows partnership can be used to achieve the above.

#### 2.2.4 The Lean Theory

The term 'lean-production' was first used by Womack and Jones to describe the 2:1 difference in productivity they found between car assembly plants in Japan and those in Europe. They subsequently explained how companies could make dramatic improvements in performance by adopting the lean approach to manufacturing pioneered by the Toyota Corporation (Weele, 2009).

Lean is a functional model which basically discounts the value of economies of scale brought about by vendor managed inventory (VMI) and focuses on how to reduce costs as a result of small, incremental and continuous improvement of inventory management system. Lean inventory has certainly become increasingly significant in public resources management (Edward, 2009). Lean as a functional model also basically proposes minimization of wastages in material storage handling. Initially organizations involved in manufacturing of products used to involve themselves in lean manufacturing techniques; this has expanded beyond manufacturing (Watson & Zhang, 2012). Lean management of inventory seeks to explain how organization should manage its inventory system and needs. It states that inventory can be used as a strategic differentiator by the organization and further goes on to say that not all continuous improvement is about waste, it entails; just in time approach, vendor managed inventory and economic order quantity to mention but a few (Schonberger, 2011).

The theory stated that inventory strategies developed by an organization should support the customer's need and expectations (Mehra & Inman, 2010). Inventory management strategies should not be a driver on how much and when a product will be delivered to a customer, rather, the customers' expectations should be understood and inventory strategies designed purposely to meet those expectations (Krajewski & Ritzman, 2009).

Real savings can only be realized through day to day management and optimization of customer requirements variability. This therefore implies that cost associated with inventory cannot be achieved through inconsistent network designs (Gonzalez & Gonzalez, 2010). This theory is relevant to the study because inventory management system is a key component in effective and efficient performance in the manufacturing sector.

Vendor Managed inventory borrows from the doctrines highlighted by the lean theory because it focuses on maintenance of zero or near zero stock balances since new purchases of material are pegged on the actual demand that can sustain production. This if informed by first ascertaining the quantity needed by the final consumers of a firms products and then linking that with the processing capacity of the plant. This to a larger extent minimizes wastes associated with maintaining higher stock level than necessarily required.

#### 2.3 Conceptual Framework

Conceptual framework is a detailed description of the phenomenon under the study accompanied by the graphical or visual depiction of the major variable of the study (Kothari, 2008). According to Dunn (2010) conceptual framework is diagrammatical representation that shows the relationship between dependent variable and independent variables.



#### **Independent Variables**

Dependent Variable

**Figure 2.1: Conceptual Framework** 

#### 2.3.1 Reverse Logistics

Reverse logistics in this study was considered as a variable that affects the performance of food and beverage manufacturing firms. The attributes of reverse logistics which were taken into consideration in this study are: return policy and procedure, recycling and refurbishment and reuse systems. Reverse logistics has been defined as the term used to refer to the role of logistics in product returns, source reduction, recycling, materials substitution, reuse of materials, waste disposal, and refurbishing, repair and remanufacturing (Hendricks & Singhal, 2015). The idea is to eliminate or minimize waste (energy, emissions, chemical/hazardous and solid wastes).

The initiatives that an organization chooses to follow between the various logistics functions as reverse logistics and environmental considerations will have an impact on the performance of that organization (Sarkis, 2013). In an eco-transportation system, there are parameters like fuel sources, infrastructure, operational practices and organization of the transport system. These parameters and the dynamics that connect them determine the environmental impact generated in the transportation logistics phase of the GSCM (Seman, Zakua & Shoki, 2016).

According to Preuss (2015), the link between green supply chain management and environmental protection also needs to be considered from the opposite perspective. Whereas design for environment technique is dependent on the availability of materials and technical capabilities of the supply chain; product take-back requires well-honed logistics operations (Porter, 2012).

Managing the reverse flow of product is an important ability for any company, since the product life cycle offers a valuable source of insight about the changing needs of marketing and logistics over the life of a product. Recycling is a technique that is used to reduce the solid waste stream volume, though the reverse logistics channels used seem to have received minimal attention (Lembke, 2012).

Efficiency, accuracy and timeliness in reverse supply chains activities are a priority for leading manufacturers. Products that are returned or are traded-in are usually of value. Failure to address the reverse supply chain can lead to lost revenues and additional expenses. Harpe (2013) asserts that, with all the attention to the forward action of the supply chain, manufacturers are now considering how this supply chain can work in reverse to reclaim products at the end of their life cycle and return them through the supply chain for decomposition, disposal, or re-use of key components.

Strategic factors to consider in reverse logistics include costs, overall quality, customer service, environmental concerns and legislative concerns (Goldsby & Garcia-Dastugue, 2011). On the operational side, factors to consider are cost-benefit analysis, transportation, warehousing, supply management, remanufacturing and recycling, and packaging. Often incentive systems or no-cost return systems must be in place to make reverse logistics work without external governmental regulation. The use of reverse logistic operation by firms' in their management plans can bring added profits and create a more competitive environment. Reverse logistics can significantly impact a company's profits by recapturing value (Frooman, 2009).

#### 2.3.2 Outsourcing

Outsourcing in this study was considered as a strategic purchasing variable that influences performance of food and beverage manufacturing firms. The attributes of outsourcing which were taken into consideration in this study are: vendor performance management, core versus noncore spend monitoring and realized versus contracted savings comparison. Outsourcing is a common practice among both private and public organizations and is a major element in business strategy (Onyango, 2011).

Perhaps most organizations now outsource some of the functions they used to perform themselves. Due to widespread outsourcing practices, it has become a frequent topic in the literature. Numerous reasons why outsourcing is initiated have been identified by researchers. Organizations may expect to achieve many different benefits through successful outsourcing, although there are significant risks that may be realized if outsourcing is not successful (Andrew, 2012).

According to Kinyanjui (2010) many benefits, risks, motivators, and decision factors have been presented although the relationships, commonalities and disparity among the contents of these studies have not been investigated. Although organizations may outsource for cost related reasons, there are no guarantees that expected savings will be realized. There is increasing evidence that cost savings have been overestimated and costs are sometimes higher after outsourcing (Brigham & Gapenski, 2013).

In addition to not realizing the costs that originally drove the outsourcing initiative, there are also some additional indirect and social costs that may be incurred (Agus & Noor, 2010). Indirect costs may include contract monitoring and oversight, contract generation and procurement, intangibles, and transition costs. Further the social costs are not necessarily limited to the organization.

Wisner *et al* (2011) study suggests that the education and skill level of a whole class of workers may be declining due to outsourcing of public services. All these issues notwithstanding, vendor performance management, core versus noncore spend monitoring and realized versus contracted savings comparison are vital benefits realized from outsourcing which cannot be under estimated (Talluri, 2012).

#### 2.3.3 Strategic Alliances

Strategic alliances in this study were considered as a supply base leveraging attribute that influences performance of food and beverage manufacturing firms. The attributes of strategic alliances which were taken into consideration in this study are: Systems integration, commitment to sustainable discounted prices and preferential scheduling of orders. Supplier partnerships are agreements among firms in which each commits resources to achieve a common set of objectives. Companies may form strategic alliances with a wide variety of players: customers, suppliers, competitors, universities or divisions of government (Chang *et al.*, 2012). Through supplier partnerships, companies can improve competitive positioning, gain entry to new markets, supplement critical skills and share the risk or cost of major development projects.

To form a supplier partnerships, companies should: Define their business vision and strategy in order to understand how an alliance fits their objectives, evaluate and select potential partners based on the level of synergy and the ability of the firms to work together, develop a working relationship and mutual recognition of opportunities with the prospective partner and negotiate and implement a formal agreement that includes systems to monitor performance (Hughes, 2010). Supplier partnerships help companies to improve relationship value systems within their organisations' cultures thus learning from mistakes and form the successes of other alliances, and make investments to enable collaborative problem solving. In supplier partnerships, business decisions are made jointly to achieve the agreed goals of aligned organizations that share resources, information, profits, knowledge, and risk.

The main goals are to: gain access to new customer bases; offer more product/service offerings for the customers; pool resources in light of the large outlay required; to learn new know-how from the alliance partners; utilize the existing personal network to reach new supplier bases; enhance the market position in present markets; add credibility to the business (Talluri, 2012).

#### 2.3.4 Vendor Managed Inventory

Vendor managed inventory in this study was considered as a strategic purchasing variable that influences performance of performance of food and beverage manufacturing firms. The attributes of vendor managed inventory which were taken into consideration in this study are: efficient customer response, continuous replenishment policy and centralized inventory management. VMI is a family of business models in which the buyer of a product provides certain information to a supplier (vendor) of that product and the supplier takes full responsibility for maintaining an agreed inventory of the material, usually at the buyer's consumption location (Lambert, 2011). By expediting the quick and accurate flow of information in the supply chain, efficient customer response (ECR) enables distributors and suppliers to forecast demand far more accurately than the current system. From ECR, the concept of continuous replenishment policy (CRP) is developed. CRP is a move from pushing products from inventory holding areas to pulling goods onto shelves based on consumer demand (Raduan *et al.*, 2009).

Demand forecasting is one of the most difficult tasks for both retailers and suppliers in a supply chain. With the shortening of product life cycles, and the increasing request for customization of made-to-order products, forecasting is even more challenging. In addition, due to the "bullwhip effect", the demand variation of the suppliers is much greater than the demand variation of the retailers. Thus, sharing of information in the retailer–supplier partnership is critical to both parties (McCrudden, 2013).

Paul (2011) proposes the view that retailer–supplier partnership is a continuum. The degree of partnership ranges from information sharing where the retailer helps the vendor to plan demand more efficiently, to consignment schemes where the vendor completely manages and owns the inventory until the retailer sells it. The latter type of partnership is referred to as the centralized inventory management (Stewart, 2015).
Centralized inventory management is the integrated functioning of an organization dealing with supply of materials and allied activities in order to achieve the maximum co-ordination and optimum expenditure on materials (Muge, 2009). Inventory control is the most important function of centralized inventory management and it forms the nerve center in any inventory management organization. An inventory management system is an essential element in an organization. It is comprised of a series of processes, which provide an assessment of the organization's inventory (Qui, 2013). Systems such as vendor managed inventory system are paramount to the success of inventory management (Wangari, 2012).

# 2.3.5 Performance of Food and Beverage Manufacturing Firms

According to Walton (2010) performance measurement is a crucial criterion for evaluating the competence and achievement of an organization. Xiande (2014) defined performance measurement as the process of quantifying action, where measurement is the process of quantification and action leads to performance. They emphasized the importance of satisfying customer requirements with greater efficiency and effectiveness than the competitors.

Here the effectiveness referred to the extent to which customer requirements were met, largely with the essence that customer was always right and the efficiency referred to the measurement as to how economically the firm's resources were utilized (i.e. total output against total input) to provide a specific level of customer satisfaction(Islam & Zunders, 2013).

Bolumole (2011) defined it as the process of quantifying the efficiency and effectiveness of an action or activity. The purpose of performance measurement is to find out whether things are going the right way and, if not, to find what the causes that generated a poor performance were. After this step, there have to be found solutions for improving performance. There are several reasons for measuring performance: for improving performance, for avoiding inconveniences before it's

too late, for monitoring customer relations, for process and cost control and for maintaining quality (Alavi *et al.*, 2012).

The main instruments for assessing performance are performance indicators, also named key performance indicators. They are specific characteristics of the process which are measured in order to describe if the process is realized according to pre-established standards. The best way to use indicators is to compare process values with normal, standard values. If there are poor results, poor performance, in reality, improvements for the process have to be made. Indicators are used basically for comparison with expected values. They are the control system of the studied process (Bask, 2011).

According to Eisenhardt and Martin (2010) firm performance encompasses three specific areas of firm outcomes: financial performance (profits, return on assets, return on investment); market performance (sales, market share); and, customer satisfaction/value added. Firm performance comprised the actual output or results of an organization as measured against its intended outputs (or goals and objectives), it involved the recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently (Hertz, *et al.*, 2013).

According to Kaynak (2010) supply chain performance is optimized only when an "interorganizational, inter-functional" strategic approach is adopted by all chain partners. Such an approach maximizes the supply chain surplus available for sharing by all supply chain members. Kwai-Sang *et al.* (2014) proposed a schema for future supply chain research that included transportation and logistics capabilities as the link between supply chain structure and performance. While Owano (2013) hypothesized a positive link between logistics strategy and organizational performance, he did not report data collection related to logistics strategy measurement and did not report results related to his hypotheses. Parkhe (2013) assessed the relationship between logistics quality and the organizational performance of firms in the retail sector.

#### **2.4 Empirical Review**

There are a few studies illustrating of the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya, Sarkis (2013) observed that the food and beverage manufacturing firms are faced with the challenge of meeting high targets due to both internal and external constraints.

# 2.4.1 Reverse Logistics and Performance of Food and Beverage Manufacturing Firms

According to Hendricks and Singhal (2015) the growing attention to reverse logistics (RL) is explained primarily by the need to comply with regulations on environmental protection, which in many industries imply the producer's responsibility for the sold goods, even after the sale transaction, and in particular when the products' life cycle is over.

Another explanation of the interest for RL is the concern of some companies for their image in front of the growing number of those customers who in their purchase decisions evaluate not only the product's performance, quality, or price, but also the company's respect for the environment demonstrated by environmentally friendly initiatives, such as the use of recycled raw materials in the production process, or the design of such products and packaging that ensure that waste disposal problem is not further intensified (Preuss, 2015).

Seman, Zakua and Shoki (2016) conducted a study on green supply chain management a review and research direction in Malaysia. The researcher used descriptive research design and the primary data was collected by use of self-administered questionnaires to all the respondents. The variables of the study were; strategic level of purchasing department, level of environment commitment, degree of reverse logistics management and degree of green collaboration with suppliers.

The review focused on development of GSCM in a developed and developing countries including all those researches which are relevant to environmental and social sustainability towards operation management and the supply chain. It concluded that among other variables, reverse logistics management was the most important variable in implementation of GSCM practices especially in developing countries such as Malaysia.

According to Frooman (2009) reverse logistics are the logistics management skills and an activity involved in reducing, managing and disposing of hazardous or non-hazardous waste from packaging and products. It includes reverse distribution, which causes goods and information to flow in the opposite direction from normal logistic activities.

Harpe (2013) coined the term product recovery management (PRM) to describe reverse logistics as all those activities that encompass the management of all used and discarded products, components, and materials that fall under the responsibility of a manufacturing company. The objective of PRM is to recover as much of the economic and ecological value as reasonably possible, thereby reducing the ultimate quantities of waste.

# 2.4.2 Outsourcing and Performance of Food and Beverage Manufacturing Firms

In addition to refocusing resources onto core competencies, other strategy issues which encourage the consideration of outsourcing are restructuring, rapid organizational growth, changing technology and the need for greater flexibility to manage demand swings (Oyango, 2011). Flexibility appears to be an important driver not just from a scale perspective but also regarding the scope of product or service. Organizations need to react quicker to customer requirements and outsourcing is seen as a vehicle to accomplish this (Kinyanjui, 2010).

According to Raduan *et al* (2009) outsourcing may also be perceived as a way to reduce the organization's risk by sharing it with suppliers and at the same time acquire the positive attributes of those suppliers. The partnerships that result from outsourcing may enable an organization to be a world-class performer for a whole suite of products and services where it could only be an average performer by itself. This strategy results in a so-called virtual organization where functions are outsourced to multiple vendors under one agreement. Together the suppliers perform an integrated set of services (Wisner *et al.*, 2011).

There are, however, potential pitfalls when outsourcing for strategic reasons. Organizations may "give away the crown jewels" if they are not careful (Talluri, 2012). IBM is used as a frequent example of a company that outsourced the "wrong" things (the operating system). If organizations outsource the wrong functions they may develop gaps in their learning or knowledge base which may preclude them from future opportunities (Hughes, 2010).

According to Wisner *et al.* (2011) in highly integrated and evolutionary technologies, applying the traditional core competence tests may result in outsourcing too many or the wrong functions. Because public organizations are sometimes perceived as inefficient and bureaucratic, managers may promote outsourcing ideas, to demonstrate their willingness to make positive changes in the organization. Another reason for public sector outsourcing may be better accountability. Stewart (2015) finds that managers in public organizations generally realize an accountability improvement in the particular function being outsourced.

However, the managers also believe that there is a simultaneous decline in accountability to the public. The explanation is that a supplier works for the government and performs the functions to satisfy the government representative whereas a government employee works for the public and keeps their interests primary (Herbert, 2015).

#### 2.4.3 Strategic Alliances and Performance of Food and Beverage Manufacturing Firms

Andrew (2012) specified that supplier partnerships influence procurement performance in terms of system leveraging for example through system integration, commitment to sustainable discounted prices and preferential scheduling of orders. Supplier-buyer partnerships have today become the backbones of economic activities in the modern world and a focal point of organizational competitiveness, performance and long-term business success.

According to Kinyanjui (2010) the competitiveness and profit-generating capacity of the individual firm is highly dependent on its ability to handle the supply side and the management of supplier-buyer relationships as a primary driver of both customer and shareholder value. This is particularly true due to the increased adoption of globalization and outsourcing strategies leveraged by company specialization and focus on their core competencies in order to withstand today's competitive market pressures.

According to (Lambert, 2011), the three main buyer-supplier partnerships are transactional, collaborative and alliances. Transactional partnerships are the most common and the most basic type of buyer/supplier partnership. This relationship is referred to as an arm's length partnership where neither party is concerned about the other parties well-being (Wangari, 2012). There is very little trust involved in this relationship and it could be a onetime transaction between the buyer and supplier.

Collaborative partnerships must be supported from the entire organization. A buyer must have the authority to negotiate with a supplier and come to an agreement that carries mutual trust and benefit. Benefits to collaborative relationships are: lower overall costs, higher quality products, less time to market due to open communication and improved technology and innovation.

Supply disruptions are also less likely as the relationship is similar to friendship and suppliers and buyers look out for one another rather than opportunities to take advantage of one another (Chang,

2008).The third type of buyer-supplier partnership is the alliance relationship. An alliance is formed for a systematic approach to enhance communication between the two firms. Unlike collaborative relationships, an alliance is built to have a trust where both firms can be on the same level and help each other out when there is a time of need or uncertainty.

Having an alliance can be very beneficial as there is asset specialization and human specialization as well. With human specialization, certain people in companies have experience working together and they have information that allows them to communicate with others effectively. Because of this, companies are less likely to have breakdowns between them that will result in errors (Hakansson & Ford, 2012).

# **2.4.4 Vendor Managed Inventory and Performance of Food and Beverage Manufacturing Firms**

According to Muge (2009) the vendor managed inventory (VMI) term reflects the most significant fact about a supply chain, that is, that the distributor (the customer in the VMI relationship) passes inventory information and point of sales (POS) data to their suppliers rather than placing replenishment orders. The actual inventory at the customer is then compared to a re-order point that has been agreed on by both parties.

This re-order point is set to ensure adequate availability without building up excessive stocks. It triggers a replenishment order that is delivered to the customer if the actual inventory is below the re-order point every planning period (Paul, 2011). According to Maghanga (2011) it should be noted that the net change in the re-order point from one time period to another is added to the sales signal and the vendor treats this as a demand.

So, when demand is increasing and the distributors re-order point grows, the supplier or vendor treats the stock (re-order point) requirements at the distributor as demand and incorporates that into his forecasts and stock levels, as he clearly should do. Obviously, the negative argument also

applies, i.e. when the re-order point is reducing in size over time, demand signals to the manufacture and the system inventory levels reflect this (Weele, 2009).

VMI represents the highest level of partnership where the vendor is the primary decision-maker in order placement and inventory control. Under a VMI system, the supplier decides on the appropriate inventory levels of each of the products (within previously agreed upon bounds), and the appropriate inventory policies to maintain these levels (Watson & Zhang, 2012). The motivation behind a VMI system is that both the retailer and supplier work together to maximize the competitiveness of the supply chain.

The most obvious benefits of VMI are inventory cost reduction for the retailer and total cost reduction for the supplier. The productivity and service level improvement lead to a larger profit margin and an increase in sales (Parkhe, 2013). Ellram *et al.*, (2007) investigated the VMI implementation and reported that out of ten VMI implementations, seven or eight achieved great success. One or two reaped some benefits, but not as much as anticipated. The confidentiality of information sharing between retailer and supplier, the risk of loss of control by the retailer, the increase of vendor's administrative cost and minimal benefits for supplier are the major weaknesses of VMI (Walton, 2010).

The requirements for a retailer to implement a VMI program can be classified into three categories: organization infrastructure, information technology, and a decision support tool. The organization infrastructure refers to the change of the retailer's power environment externally and internally (Muge, 2009).

#### 2.5 Critique of the Reviewed Literature

Mungu (2013) on role of strategic procurement practices on organizational performance; a case study of public health facilities in Bungoma East Sub County found out that practice like cost

management, information technology and records management have a direct positive relationship with organizational performance. This study is only limited to procurement best practices.

Related studies on strategic supply chain practices have been done. Dorothy (2012) did a study on the impact of strategic purchasing on competitive advantage and organizational performance, where they concluded that higher levels of strategic purchasing can lead to enhanced competitive advantage and improved organizational performance. Also, competitive advantage can have a direct, positive impact on organizational performance; however she failed to cover any single procurement best practice.

Onyango (2011) on impact of supply chain management practices on organizational performance: A case study of Bamburi Cement Limited, found out that there is a high level of practical implementation of SCM practices in Bamburi Cement Limited and that they all had a positive effect on organization's performance that is, they improved the organization's performance in terms of lowering its operational costs, reduction of lead time, high customer service levels, product quality, fast response to changes in the market and expanding its market share and sales. A combination of all the four practices studied had a stronger effect on organization performance other than the effect of one which further shows the need to embrace a good combination of SCM practices, however he failed to cover any single procurement best practice.

#### 2.6 Summary of Literature Reviewed

It is evident that firm's performance requires input from all key stakeholders for holistic win-win situations. Government has provided the legal framework for practice. Equally, aspects such as outsourcing and reverse logistics are vital aspects of ensuring better performance in the manufacturing process. While there have been developments in regulatory framework, there is still challenges to be addressed in order to realize full benefits of procurement best practices in Kenya.

Some of the notable challenges include; institutional and professional capacity challenges (PPOA, 2007), political interference with implementation of regulations (CCG, 2007) and the low level of implementation of information communication tools (KIPPRA, 2010). Most of the literature shows that, there is abuse of the procurement rules and regulations, but very little is said on the role of procurement best practices which seems to be the missing tie in the progressive regulations that have been developed. While the existing studies (CCG, 2007; KIPPRA, 2010) focus on the identification of gaps in procurement performance.

Although procedures supporting systematic procurement best practices have been established, data from CCG survey (2007) indicates that these are far from always being complied with. While it has not been possible to assess the percentage of contracts which didn't use procurement best practices, the low share of procurements conducted without following procurement best practices indicates that a large part of procurements are undertaken without shoddily, thus leading to the low performance in manufacturing firms.

## 2.7 Research Gaps

Based on the literature reviewed, Inadequate resources for implementing procurement best practices is major a problem to most firms. Companies fail to invest in strategic purchasing technology and infrastructure lack effective strategic purchasing systems. A competitive firm should put proper infrastructure to maintain maximum and minimum levels of inventory. This enables the firm to save holding costs, stock out costs and lead time costs.

Shapiro (2009) in his study on strategic purchasing strategies among multinational companies in USA argues that if the management fails to provide facilities and resources required to effectively manage strategic purchasing in the organization the financial performance will reflect this. Talluri (2012) in his study on the influence of top management commitment on effective implementation

of strategic purchasing strategies explains that lack of commitment by the top management of the organization is a major contributor to poor strategic purchasing systems.

In most cases the management fails to provide the required support to their subjects for effective implementation of strategic purchasing practices for example the top management might fail to involve its supply chain partners in management decisions. This brings about poor coordination, increased communication costs which negatively impact on the supply chain performance of the organization.

According to Githendu (2010) in his study on the influence of modern technologies on implementation of strategic purchasing argues that some organizations especially in the developing economies, the top management is reluctant to invest in modern technologies and equipment to facilitate strategic purchasing this inhibits effective management of supply chain performance. This prolongs the cycle time and delay delivery of goods and services to the final consumer and thus may negatively impact on performance of the organization. This causes lack of cooperation between the suppliers and the organization which eventually leads to delayed delivery of goods and services or no delivery in extreme circumstances.

Therefore, there lacks conclusive studies in the area of procurement best practices as majority of reviewed studies focuses the general procurement. This forms the research gap. It is for this research gap that this study wishes to establish the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

#### **CHAPTER THREE**

# **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the steps to be followed to completing this study. It involves the collection, measurement and analysis of data. It is broken down to; research design, target population, data collection instruments, data collection procedures and finally data analysis and presentation.

#### **3.2 Research Design**

The research was conducted using a descriptive research method, this method was used because it provides answers to questions such as what, who, where, when and how they are related to the problems (Dunn, 2010). This study employed a descriptive research design to investigate the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. Descriptive research design was used in this study to gather, summarize, present and interpret information for the purpose of clarification.

It is mainstreamed to fact finding and may result in the formulation of important principles of knowledge and solution to significant problems. The design was proposed for this study because it can provide numeric description of the population and describe events as they are, as they were or as they will be (Isaac & Michael, 2010). Therefore, the descriptive survey is deemed the best strategy to fulfill the objectives of this study. This design enabled the study to investigate the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

#### **3.3 Target Population**

According to John and Johnson (2012) the population refers to the entire group of people, events or things of interest that the researchers wish to investigate. Target population refers to the portion

of entire population in which the researcher is interested, has access to or is more likely to get the required data (Kothari, 2008). The target population of this study was 197 registered food and beverages manufacturing companies in Kenya as per KAM Directory 2017. The unit of analysis was food and beverages manufacturing firms, while the unit of observation was the heads of procurement in these firms.

Population of Firms	Percentage %	
101	51	
24	12	
21	10	
08	4	
08	4	
06	3	
03	2	
03	2	
03	2	
20	10	
197	100.00	
	Population of Firms           101           24           21           08           08           06           03           03           20           197	Population of Firms         Percentage %           101         51           24         12           21         10           08         4           06         3           03         2           03         2           03         2           20         10           197         100.00

**Table 3.1 Target Population** 

#### 3.4 Sample and Sampling Technique

Ngechu (2009) defines sampling technique is the technique that is used to determine the sample size that ought to be included in a study. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample. The study employed a census approach to collect data from the respondents hence no sampling techniques were used. According to Kothari (2008) a census is a count of all the elements in a population. The sample size was taken from the heads of procurement department from each food and beverage manufacturing firm.

Table 3.2	Samp	le Size
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Location	<b>Population of Firms</b>	Heads of Procurement
Nairobi	101	101
Mombasa	24	24
Thika	21	21
Kisumu	8	8
Nakuru	8	8
Eldoret	6	6
Kericho	3	3
Nyeri	3	3
Ruiru	3	3
Towns with $< 3$	20	20
Total	197	197

# **3.5 Data Collection Instruments**

Instruments and tools of data collection refers to the means of collecting data and how to analyse it so as to make meaningful output out of it (Serekan, 2009). The research is a compination of qualitative and quantitative resaerch methods (Kasomo, 2007). Consequently, questionnares were the most fit choice for the undertaking of this research. The questionnaires that were used for the study comprised of open and close ended questions. Likert scale of measurement was used. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents.

The questionnaire designed in this study comprised of two sections. The first part included the demographic and operational characteristics designed to determine fundamental issues including the demographic characteristics of the respondent. The second part was devoted to the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya where the variables of the study were put into focus.

#### **3.6 Data Collection Procedure**

The study will use both primary and secondary data. The secondary data will be obtained from existing comprehensive archived sources namely published material, journals, internet sources and books while primary data will be collected by the use of questionnaires which has both closed and open ended questions. The questionnaire will address the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. Closed ended questions will be used to limit the respondents to the given variables which the study is interested, Kothari, 1990. The questionnaire was personally administered through drop and pick from the respondents. This method was proposed by this study because it gives ample time to the respondents to answer the questionnaire. Before data collection, the researcher sought a letter of introduction from the university. The respondents were assured of confidentiality of their names and responses (Oso & Onen, 2008).

#### 3.7 Pilot Study

Before the actual study, it is crucial to conduct a pilot study. According to Mugenda and Mugenda (2008), 10% of the sample is sufficient for pilot test. To ascertain the validity and reliability of the questionnaire, a pilot study will be conducted. It will contain 10% (19) respondents in order to guarantee a suitable coverage. The purpose of the pilot test will be to determine the accuracy and appropriateness of research design and to provide proxy data for selection of a probability sample (Saunders, Lewis, & Thornhill, 2007). Cronbach's Alpha will be applied to determine the internal reliability of the questionnaire. Responses will be collected with a view to establishing consistency of the questionnaire. This method will be preferred because most of the questions are on a Likert scale.

#### 3.7.1 Validity of the Research Instruments

Validity indicates the degree to which the instrument measures what it is supposed to measure (Kothari, 2008). To ensure precision and relevance of the instrument, the questionnaires were subjected to critical evaluation by both the supervisor and researcher. Ambiguous questions were corrected and edited. The questions that were not clear were revised to assist improve the questionnaire in order to guarantee its validity. Content validity which is employed by this study is a measure of the degree to which data collected using a particular instrument to represent a specific content of a particular concept. Content validity coefficient index of 0.7 was used to test the validity of the questionnaire (Berg, 2011).

## 3.7.2 Reliability of the Research Instruments

According to Oso and Onen (2008), a pilot study is necessary for testing the reliability of data collection instruments. Likert type questions require Cronbach's Coefficient Alpha to be calculated for each item. A reliability coefficient of 0.7 and above was assumed to reflect the internal reliability and internal consistency of the instruments and can be generalized to reflect opinions of all respondents in the target population (Orodho, 2009). The Cronbach's Coefficient Alpha combines all items and advises on which item to discard in case it doesn't capture what it is intended to capture (Mugenda & Mugenda, 2008).

#### 3.8 Data Analysis and Presentation

Kothari (2008) defines data analysis as the computation of certain indices or measures along with searching for patterns of relations that exist among data groups. It is made up of; analyzing information in a systematic manner in order to come to a useful conclusion and recommendation. The collected data was first checked for completeness, comprehensibility and subjected to integrity tests. It was then be coded as per variable and units of analysis and entered (Berg, 2011). This study used both descriptive and inferential statistics. Descriptive statistics such as mean,

percentage and standard deviation were used to present the various characteristics for the data sets such as biographical data (Orodho, 2009). Tables and charts were used to present the results of the study. Data was organized and interpreted on account of concurrence to objectives using assistance of the computer package, statistical package for the social sciences (SPSS) version 22 to communicate research findings.

According to Kothari (2008) correlation analysis studies the joint variations of two or more variables, correlation of +1 means a strong relationship between the independent variables and the dependent variable. This study used Pearson's' correlation model to test direction of correlation between the dependent variable and the various independent variables.

Multiple regression analysis described by the model below was used to make inference between the collective effects of all the four independent variables The coefficient of determination (R-Square) resulting from the regression equation was used to determine the goodness of fit (Ngechu, 2009). The research used a multiple regression model.

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

# Where:

Y	= Performance of Food and Beverage Manufacturing Firms
β0	= Constant
$\beta_1, \beta_2, \beta_3, \beta_4 =$	Beta Coefficients
X1	= Reverse Logistics
X <sub>2</sub>	= Outsourcing
X3	= Strategic Alliances
X4	= Vendor Managed Inventory
3	= Error Term

#### **CHAPTER FOUR**

# DATA ANALYSIS AND PRESENTATION

# 4.1 Introduction

This chapter presents results arising from the analysis of data collected using questionnaires. The current study sought to establish the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. The data collected was analysed using descriptive and inferential statistics and the findings presented in tabular summaries and their implications discussed.

# 4.2 Response Rate

A sample of respondents were interviewed using questionnaires that allowed the researcher to drop the questionnaire to the respondents and then collect them at a later date when they had filled the questionnaires. A total of 197 questionnares were distributed to heads of procurement. Out of the population covered, 152 were responsive respresenting a response rate of 77%. This was above the 50% which is considered adequate in descriptive statistics according to (Dunn, 2010).

Response	Frequency	Percentage
Actual Response	152	77
Non-Response	45	33
Total	197	100%

Table 4.1: Response Rate of Respondents	

#### 4.3 Pilot Study

The cronbach's alpha was computed in terms of the average inter-correlations among the items measuring the concepts. The rule of thumb for cronbach's alpha is that the closer the alpha is to 1 the higher the reliability (Isaac & Michael, 2010). A value of at least 0.7 is recommended. Cronbach's alpha is the most commonly used coefficient of internal consistency and stability. Consistency indicated how well the items measuring the concepts hang together as a set. Cronbach's alpha was used to measure realibility. This was done on the four objectives of the study. The higher the coefficient, the more reliable is the test.

Variable	No. of Items	Respondents	α=Alpha	Comment
Reverse Logistics	9	20	0.893	Reliable
Outsourcing	9	20	0.987	Reliable
Strategic Alliances	9	20	0.974	Reliable
Vendor Managed Inventory	9	20	0.976	Reliable

#### **Table 4.2 Reliability Results**

#### **4.4 Demographic Information**

This section presents the personal details of the respondents and it provides data regarding the study and is necessary for the determination of wether the individuals in a particlar study are a respresentative sample of the target population and testing appropriateness of repondent in answering the questions for generalisation. The study sought to determine the demographic characteristics of the respondents as they are considered as categorical variables which give some basic insight about the respondents. The characteristics considered in the study were; gender, age, their highest level of education attained and their work experience.

#### 4.4.1 Distribution of Respondents by Gender

The study determined the gender distribution of the respondents. The results summarized in the figure below. The results revealed that majority of the respondent (56%) indicated that they were male, while only (44%) of the respondent indicated that they were female. The percentages may raise the issue of gender equity in food and beverage manufacturing firms, but that is outside the scope of this study. A study on UK companies found that women and men do not differ in their ability to perform operational tasks, but rather bring a different perspective to procurement best practices (John & Johnson, 2012).



# **Figure 4.1: Distribution of Respondents by Gender**

#### 4.4.2 Distribution of Respondents by Age

The study determined the distribution of respondents by age. The results summarized in the table below. The results revealed that majority of the respondent (40.1%) were above 50 years old, (34.2%) were 31-40 years old, while (25.6%) were between 41-50 years. The findings are in agreement with those of Kasomo (2014) who established that there are two natural age peaks of the early 30s and mid 40s which correlated to employee performance and consequently influencing firm performance.

Years	Frequency	Percent
31-40 Years	52	34.2
41-50 Years	39	25.6
50 Years and above	61	40.1
Total	152	100.00

Table 4.3: Distribution of Respondents by Age

# 4.4.3 Distribution of Respondents by Level of Education

The respondents were asked to state their highest level of education and the results revealed that majority of the respondent (47.4%) indicated that their academic qualification was up to master's level. The result further revealed that (52.6%) of the respondent indicated that their academic qualification was up to degree level. With majority responsedents having degree and above, it is expected that their level of understanding of performance of food and beverage manufacturing firms is good. This is an indication that the results obtained from respondents interviewed in the present study can be relied upon. These findings concur those of Kaynak (2010) who established that majority of who run food and beverage manufacturing firms are highly educated and that there is evidence linking education and performance in food and beverage manufacturing firms.

Table 4.4: Distribution	of Resp	pondents by	V Level	of Education
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Education Level	Frequency	Percent
Undergraduate	80	52.6
Post-Graduate	72	47.4
Total	152	100.00

#### 4.4.4 Distribution of Respondents by Length of Service

The study determined the number of years the respondents had worked in their current office. The respondents were asked to indicate their work duration. The result showed that (31.6%) of the respondent indicated that their work duration was 3-5 years. The result revealed that majority of the respondents (38.4%) indicated that their work duration was 6-8 years. The result also showed that (30.0%) of the respondent indicated that their work duration was 9 and above years above. The findings of the study are in tandem with literature review by Kennedy and Brian (2009) who indicated that a duration and experience of employee helps him or her to have better knowledge and skills which contribute to performance of food and beverage manufacturing firms.

Length of Service	Frequency	Percent
3-5 Years	48	31.6
6-8 Years	59	38.4
9 Years and above	45	30.0
Total	152	100.0

 Table 4.5: Distribution of Respondents by Length of Service

#### **4.5 Descriptive Statistics**

The study set out to examine the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. To this end, four variables were conceptualized as components of performance food and beverage manufacturing firms. These included; reverse logistics, outsourcing, strategic alliances and vendor managed inventory.

#### **4.5.1 Reverse Logistics**

The first objective of the study was to assess the influence of reverse logistics on performance of food and beverage manufacturing firms in Kenya. The respondents were asked to indicate to what extent reverse logistics had an influence on performance of food and beverage manufacturing firms. Results indicated that majority of the respondents 27% agreed that it was to a very effective, 25% said that it was effective, 29% said it was somehow effective, while ineffective was at 19%.



#### **Figure 4.2: Reverse Logistics**

The respondents were also asked to comment on statements regarding reverse logistics on performance of food and beverage manufacturing firms in Kenya. The responses were rated on a likert scale and the results presented in Table 4.6 below. It was rated on a 5 point likert scale ranging from; 1 = strongly disagree to 5 = strongly agree. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'neutral' has been taken to represent a statement agreed upon, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.

The respondents were asked to indicate their responses on influence of reverse logistics on performance of food and beverage manufacturing firms in Kenya. The results revealed that majority of the respondent with a mean of (4.13) agreed with the statement that recalls policy and

procedure plays a significant role in cost reduction. The measure of dispersion around the mean of the statements was 0.94 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (4.27) agreed with the statement recycling and refurbishment plays a significant role in cost reduction. The standard deviation for was 0.968 showing a variation. The result revealed that majority of the respondent (4.55) agreed with the statement that re-uses systems play a significant role in cost reduction. The results were varied as shown by a standard deviation of 0.5.

The average response for the statements on recalls policy and procedure plays a significant role in attaining higher market share was (4.22). The results were varied as shown by a standard deviation of 0.955. The average response for the statements on recycling and refurbishment plays a significant role in attaining higher market share was (4.4). The results were varied as shown by a standard deviation of 0.704. The result revealed that majority of the respondent with a mean of (4.46) agreed with the statement that re-uses systems play a significant role in attaining higher market share. The measure of dispersion around the mean of the statements was 0.787 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (4.44) agreed with the statement recalls policy and procedure plays a significant role in attaining timely deliveries. The standard deviation for was 0.786 showing a variation. The result revealed that majority of the respondent (4.21) agreed with the statement that recycling and refurbishment plays a significant role in attaining timely deliveries. The results were varied as shown by a standard deviation of 0.942. The average response for the statements on re-uses systems plays a significant role in attaining timely deliveries was (4.01). The results were varied as shown by a standard deviation of 0.81.

The average mean of all the statements was 4.01 indicating that majority of the respondents agreed on reverse logistics having an influence on performance of food and beverage manufacturing firms. However the variations in the responses were varied as shown by a standard deviation of 0.81. These findings imply that reverse logistics were at the heart of the organizations. The findings agree with Lembke (2012) that using reverse logistics as procurement best practice is a smart move and can reduce expenses significantly.

Statements	Mean	Std. Deviation
Recall policy and procedure plays a significant role in		
profitability	4.10	0.94
Recycling and refurbishment plays a significant role in		
profitability	4.27	0.968
Re-use systems plays a significant role in profitability	4.55	0.5
Recall policy and procedure plays a significant role in		
attaining higher market share	4.22	0.955
Recycling and refurbishment plays a significant role in		
attaining higher market share	4.41	0.704
Re-use systems plays a significant role in attaining		
higher market share	4.46	0.787
Recall policy and procedure plays a significant role in		
attaining customer satisfaction	4.44	0.786
Recycling and refurbishment plays a significant role in		
attaining customer satisfaction	4.21	0.942
Re-use systems plays a significant role in attaining		
customer satisfaction	4.11	1.096
Average	4.01	0.81

# **Table 4.6: Reverse Logistics**

#### 4.5.2 Outsourcing

The second objective of the study was to establish the influence of outsourcing on performance of food and beverage manufacturing firms in Kenya. The respondents were asked to indicate to what extent outsourcing influenced performance of food and beverage manufacturing firms in Kenya. Results indicated that majority of the respondents 25% agreed that it was to a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little extent and not all were at 5 and 8% respectively.



#### **Figure 4.3: Outsourcing**

The respondents were also asked to comment on statements regarding outsourcing on performance of food and beverage manufacturing firms in Kenya. The results revealed that majority of the respondent with a mean of (3.58) agreed with the statement that vendor performance management plays a significant role in cost reduction. The measure of dispersion around the mean of the statements was 1.0 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (3.63) agreed with the statement core versus noncore spend monitoring plays a significant role in cost reduction. The standard deviation for was 0.9 showing a variation. The result revealed that majority of the respondent (3.6) agreed with the statement that

realized versus contracted savings comparison plays a significant role in cost reduction. The results were varied as shown by a standard deviation of 0.7.

The average response for the statements on vendor performance management plays a significant role in attaining higher market share was (3.45). The results were varied as shown by a standard deviation of 1.2. The average responses for the statements on core versus non-core spend monitoring plays a significant role in attaining higher market share was (3.5). The results were varied as shown by a standard deviation of 1.0. The results revealed that majority of the respondent with a mean of (3.61) agreed with the statement that realized versus contracted savings comparison plays a significant role in attaining higher market share. The measure of dispersion around the mean of the statements was 0.6 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (4.17) agreed with the statement vendor performance management plays a significant role in attaining timely deliveries. The standard deviation for was 0.8 showing a variation. The result revealed that majority of the respondent (3.63) agreed with the statement that core versus noncore spend monitoring plays a significant role in attaining timely deliveries. The results were varied as shown by a standard deviation of 0.8. The average response for the statements on realized versus contracted savings comparison plays a significant role in attaining timely deliveries was (3.66). The results were varied as shown by a standard deviation of 1.

The average mean of all the statements was 3.77 indicating that majority of the respondents agreed on outsourcing having an influence on performance of food and beverage manufacturing firms in Kenya. However the variations in the responses were varied as shown by a standard deviation of 1.134. These findings agree with Maghanga (2011) that through outsourcing, companies can improve competitive positioning.

# Table 4.7: Outsourcing

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Statements	Mean	Std. Deviation	
Vendor performance management plays a significant role in			
profitability	3.58	1.0	
Core versus noncore spend monitoring plays a significant role			
in profitability	3.63	0.9	
Realized versus contracted savings comparison plays a			
significant role in profitability	3.6	0.7	
Vendor performance management plays a significant role in			
attaining higher market share	3.45	1.2	
Core versus noncore spend monitoring plays a significant role			
in attaining higher market share	3.5	1.0	
Realized versus contracted savings comparison plays a			
significant role in attaining higher market share	3.61	0.6	
Vendor performance management plays a significant role in			
attaining customer satisfaction	4.17	0.8	
Core versus noncore spend monitoring plays a significant role			
in attaining customer satisfaction	3.63	0.8	
Realized versus contracted savings comparison plays a			
significant role in attaining customer satisfaction	3.66	1.0	
Average	3.77	1.134	

#### 4.5.3 Strategic Alliances

There was also need to establish influence of strategic alliances on performance of food and beverage manufacturing firms in Kenya as the third objective. Results indicated that majority of the respondents 47% agreed that it was to a very great extent, 45% said that it was to a great extent, 2% said it was moderate; little extent was 2% and not all at 4%.



## **Figure 4.4: Strategic Alliances**

The respondents were asked to indicate their levels of agreement on statements regarding strategic alliances. The results revealed that majority of the respondent with a mean of (3.8) agreed with the statement that alignment of goals play a significant role in cost reduction. The measure of dispersion around the mean of the statements was 0.9 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (4.9) agreed with the statement preferential scheduling of orders play a significant role in cost reduction. The standard deviation for was 0.9 showing a variation. The result revealed that majority of the respondent (3.4) agreed with the statement that systems integration and joint initiatives play a significant role in cost reduction. The results were varied as shown by a standard deviation of 1.3.

The average response for the statements on alignment of goals play a significant role in attaining higher market share was (3.6). The results were varied as shown by a standard deviation of 1.2. The average response for the statements on preferential scheduling of orders play a significant role

in attaining higher market share was (4.1). The results were varied as shown by a standard deviation 0.8. The results revealed that majority of the respondent with a mean of (4.1) agreed with systems integration and joint initiatives play a significant role in attaining higher market share. The measure of dispersion around the mean of the statements was 0.9 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (4) agreed with the statement alignment of goals play a significant role in attaining timely deliveries. The standard deviation for was 1 showing a variation. The result revealed that majority of the respondent (4.2) agreed with the statement that preferential scheduling of orders play a significant role in attaining timely deliveries. The results were varied as shown by a standard deviation of 0.8. The average response for the statements on systems integration and joint initiatives play a significant role in attaining timely deliveries was (3.9). The results were varied as shown by a standard deviation of 0.9.

Average mean of all the statements was 3.8 indicating that majority of the respondents agreed on strategic alliances having an influence on performance of food and beverage manufacturing firms in Kenya. However the variations in the responses were varied as shown by a standard deviation of 0.9. The results are in tandem with Parkhe (2013) who opine that an organization benefits greatly when strategic alliances are embraced in their supplier relations.

# Table 4.8: Strategic Alliances

Statements	Mean	Std. Deviation	
Alignment of goals play a significant role in profitability	3.8	0.9	
Preferential scheduling of orders play a significant role in			
profitability	4.9	0.9	
Systems integration plays a significant role in profitability	3.4	1.3	
Alignment of goals play a significant role in attaining higher market share	3.6	1.2	
Preferential scheduling of orders play a significant role in attaining higher market share	4.1	0.8	
Systems integration plays a significant role in attaining higher market share	4.1	0.9	
Alignment of goals play a significant role in attaining customer satisfaction	4.0	1.0	
Preferential scheduling of orders play a significant role in attaining customer satisfaction	4.2	0.8	
Systems integration plays a significant role in attaining customer satisfaction	3.9	0.9	
Average	3.8	0.9	

#### 4.5.4 Vendor Managed Inventory

There was also need to establish the influence of vendor managed inventory on performance of food and beverage manufacturing firms in Kenya. Results also showed that 3% of respondents indicated to very great extent, great extent was at 12%, moderate extent was 37%, while little extent was at 27% and not at all was at 21%.



#### **Figure 4.5: Vendor Managed Inventory**

The respondents were asked to indicate their views on vendor managed inventory. The results revealed that majority of the respondent with a mean of (4.5) agreed with the statement that efficient customer response plays a significant role in cost reduction. The measure of dispersion around the mean of the statements was 0.5. The result revealed that majority of the respondent as indicated by a mean of (3.9) agreed with the statement continuous replenishment policy plays a significant role in cost reduction the standard deviation for was 0.8 showing a variation. The result revealed that majority of the respondent (3.2) agreed with the statement that centralised inventory management plays a significant role in cost reduction. The results were varied as shown by a standard deviation of 1.4

The average response for the statements on efficient customer response plays a significant role in attaining higher market share was (4.5). The results were varied as shown by a standard deviation

of 0.5. The average response for the statements on continuous replenishment policy plays a significant role in attaining higher market share was (4.4). The results were varied as shown by a standard deviation 0.6. The results revealed that majority of the respondent with a mean of (4.4) agreed with the statement centralised inventory management plays a significant role in attaining higher market share. The measure of dispersion around the mean of the statements was 0.9 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (4.3) agreed with the statement efficient customer response plays a significant role in attaining timely deliveries. The standard deviation for was 0.7 showing a variation. The result revealed that majority of the respondent (4.5) agreed with the statement that continuous replenishment policy plays a significant role in attaining timely deliveries. The results were varied as shown by a standard deviation of 1.0. The average response for the statements on centralised inventory management plays a significant role in attaining timely deliveries was (4.1). The results were varied as shown by a standard deviation of 1.0.

Average mean of all the statements was 4.2 indicating that majority of the respondents agreed on vendor managed inventory having an influence on performance of food and beverage manufacturing firms in Kenya. However the variations in the responses were varied as shown by a standard deviation of 0.8. The results agree with Gordon (2014) that an organization that embraces vendor managed inventory benefits greatly in its operations management.

Statements	Mean	Std. Deviation		
Efficient customer response plays a significant role in profitability	4.5	0.5		
Continuous replenishment policy plays a significant role in				
profitability	3.9	0.8		
Centralised inventory management plays a significant role in				
profitability	3.2	1.4		
Efficient customer response plays a significant role in attaining				
higher market share	4.5	0.5		
Continuous replenishment policy plays a significant role in				
attaining higher market share	4.4	0.6		
Centralised inventory management plays a significant role in				
attaining higher market share	4.4	0.9		
Efficient customer response plays a significant role in attaining				
customer satisfaction	4.3	0.7		
Continuous replenishment policy plays a significant role in				
attaining customer satisfaction	4.2	1.0		
Centralised inventory management plays a significant role in				
attaining customer satisfaction	4.1	1.0		
Average	4.2	0.8		

# Table 4.9: Vendor Managed Inventory

#### 4.6 Correlation Analysis

Correlation analysis was used to determine both the significance and degree of association of the variables and also predict the level of variation in the dependent variable caused by the independent variables. The correlation summary shown in Table 4.10 indicates that the associations between each of the independent variables and the dependent variable were all significant at the 95% confidence level. The correlation analysis to determine the relationship between procurement best practices influencing of food and beverage manufacturing firms in Kenya, Pearson correlation coefficient computed and tested at 5% significance level.

The results indicate that there is a positive relationship (r=.509) between reverse logistics and performance of food and beverage manufacturing firms in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). The results also indicate that there is a positive relationship (r=.398) between outsourcing and performance of food and beverage manufacturing firms in Kenya. In addition, the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The results indicate that there is a positive relationship (r=.678) between strategic alliances and performance of food and beverage manufacturing firms in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). The results indicate that there is a positive relationship (r=.685) between vendor managed inventory and performance of food and beverage manufacturing firms in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). The results indicate that there is a positive relationship (r=.685) between vendor managed inventory and performance of food and beverage manufacturing firms in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). Hence, it is evident that all the independent variables could explain the changes in implementation of performance of food and beverage manufacturing firms in Kenya, on the basis of the correlation analysis.

					Vendor				
		Reverse		Strateg	gic	Manage	d	Performance	
Correlations		Logistics	Outsourcing	g Allianc	es	Invento	ry	of Firms	
Reverse	Pearson								
Logistics	Correlation	1							
	Sig.(2-Tailed)								
	Pearson								
Outsourcing	Correlation	.263**		l					
0	Sig.(2-								
	Tailed)	0.007							
Strategic	Pearson								
Alliances	Correlation	.350**	.346**		1				
	Sig.(2-								
	Tailed)	0		)					
Vendor									
Managed	Pearson								
Inventory	Correlation	.363**	.516**	.543**			1		
-	Sig.(2-								
	Tailed)	0		)	0				
Performance	Pearson								
of Firms	Correlation	.509**	.398**	.678**		.685**		1	
	Sig.(2-								
	Tailed)	0		)	0		0		

#### **Table 4.10: Summary of Pearson's Correlations**

\*\* Correlation is Significant at the 0.05 Level (2-Tailed).

# 4.7 Regression Analysis

In this study multivariate regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. Regression analysis was conducted to find the proportion in the dependent variable (performance of food and beverage manufacturing firms in Kenya) which can be predicted from the independent variables (reverse logistics, outsourcing, strategic alliances and vendor managed inventory).

Table 4.11 presents the regression coefficient of independent variables against dependent variable. The results of regression analysis revealed there is a significant positive relationship between dependent variable and the independent variable. The independent variables reported R value of .805a indicating that there is perfect relationship between dependent variable and independent
variables. R square value of 0.647 means that 64.7% of the corresponding variation in performance of food and beverage manufacturing firms in Kenya can be explained or predicted by (reverse logistics, outsourcing, strategic alliances and vendor managed inventory) which indicated that the model fitted the study data. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at ( $\beta = 0.647$ ), p=0.000 <0.05).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate				
1	.805 <sup>a</sup>	.647	.633	.166295				
<ul> <li>a) Predictors: (Constant), Reverse Logistics, Outsourcing, Strategic Alliances, Vendor Managed Inventory</li> <li>b) Dependent Variable: Performance of Food and Beverage Manufacturing Firms</li> </ul>								

Table 4.11: Model Summary	
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Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.027	4	1.257	66.158	.000 <sup>b</sup>
	Residual	2.738	147	0.019		
	Total	7.765	151			

#### Table 4.12: ANOVA

a) Predictors: (Constant), Reverse Logistics, Outsourcing, Strategic Alliances, Vendor Managed Inventory

b) Dependent Variable: Performance of Food and Beverage Manufacturing Firms

The significance value is 0.000 which is less than 0.05 thus the model is statistically significance in predicting how reverse logistics, outsourcing, strategic alliances and vendor managed inventory influence performance of food and beverage manufacturing firms in Kenya. The F critical at 5% level of significance was 36.8. Since F calculated which can be noted from the ANOVA table above is 66.158 which is greater than the F critical (value= 36.8), this shows that the overall model was significant. The study therefore establishes that; reverse logistics, outsourcing, strategic

alliances and vendor managed inventory were all important procurement best practices influencing performance of food and beverage manufacturing firms. These results agree with Kazemi and Hooshyar (2009) results which indicated a positive and significant influence of procurement best practices on performance of food and beverage manufacturing firms.

Model		Unstand	ardized	Standardized	t	Sig.
		Coeffici	ents	Coefficients		
		В	Std. Error	Beta		
1	(Constant)	2.353	0.202		11.619	0.000
	Vendor Managed	0.183	0.037	0.392	4.948	0.000
	Inventory					
	Reverse Logistics	0.158	0.045	0.232	3.546	0.001
	Strategic Alliances	0.121	0.023	0.383	5.272	0.000
	Outsourcing	0.001	0.036	0.027	0.021	0.040
	e					

Table 4.13: Coefficients of Determinatio
------------------------------------------

a) Predictors: (Constant), Reverse Logistics, Outsourcing, Strategic Alliances, Vendor Managed Inventory

b) Dependent Variable: Performance of Food and Beverage Manufacturing Firms

The research used a multiple regression model

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

The regression equation will be;

## $Y{=}2.353{+}0.183X_1{+}0.158X_2{+}0.121X_{3{+}}0.001X_4$

The regression equation above has established that taking all factors into account (reverse logistics, outsourcing, strategic alliances and vendor managed inventory) constant at zero, performance of food and beverage manufacturing firms will be an index of 2.353.

The findings presented also shows that taking all other independent variables at zero, a unit increase in reverse logistics will lead to a 0.158 increase in performance of food and beverage manufacturing firms. The P-value was 0.001 which is less 0.05 and thus the relationship was significant.

The study also found that a unit increase in outsourcing will lead to a 0.001 increase in performance of food and beverage manufacturing firms. The P-value was 0.04 and thus the relationship was significant. In addition, the study found that a unit increase in strategic alliances will lead to a 0.121 increase in performance of food and beverage manufacturing firms. The P-value was 0.000 and thus the relationship was significant.

Lastly, the study found that vendor managed inventory will lead to a 0.183 increase in performance of food and beverage manufacturing firms. The P-value was 0.000 and hence the relationship was significant since the p-value was lower than 0.05. The findings of the study show that, vendor managed inventory contributed most to performance of food and beverage manufacturing firms.

#### **CHAPTER FIVE**

#### SUMMARY, CONCLUSION AND RECOMMENDATIONS

## **5.1 Introduction**

This chapter provides a detailed summary of the major findings of the actual study; it then draws conclusions and discusses implications emanating from these findings. Finally, it makes some recommendations and suggestions on areas of further study. The main aim of the study was to study the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. It specifically sought to determine the influence of; reverse logistics, outsourcing, strategic alliances and vendor managed inventory among food and beverage manufacturing firms in Kenya.

#### 5.2 Summary of Findings

The study sought to examine the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. The study targeted staff of food and beverage manufacturing firms, specifically heads of procurement. A total of 152 employees participated. The summary of the study findings presented herein followed the research objectives formulated in chapter one of the study.

## **5.2.1 Reverse Logistics**

The study sought to assess influence of reverse logistics on performance of food and beverage manufacturing firms in Kenya as the first objective of the study. A majority of respondents were found to highly agree that food and beverage manufacturing firms had embraced reverse logistics with regard to their procurement activities. Recycling and refurbishment were common in the food and beverage manufacturing firms. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that

reverse logistics was an important factor in influencing performance of food and beverage manufacturing firms.

## 5.2.2 Outsourcing

Majority of respondents were found to highly agree that food and beverage manufacturing firms had embraced outsourcing with regard to their procurement activities core versus non-core spend monitoring were common in the food and beverage manufacturing firms. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that outsourcing was an important factor in influencing performance of food and beverage manufacturing firms.

## 5.2.3 Strategic Alliances

Most of the respondents were found to highly agree that food and beverage manufacturing firms had embraced strategic alliances with regard to their procurement activities. Alignments of goals were common in the food and beverage manufacturing firms. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that strategic alliances was an important factor in influencing performance of food and beverage manufacturing firms.

## 5.2.4 Vendor Managed Inventory

Many of the respondents were found to highly agree that food and beverage manufacturing firms had embraced vendor managed inventory with regard to their procurement activities. Efficient customer response was common in the food and beverage manufacturing firms. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that vendor managed inventory was an important factor in influencing performance of food and beverage manufacturing firms.

#### 5.2.5 Performance of Firms

The regression results revealed that procurement best practices identified in the study, that is, reverse logistics, outsourcing, strategic alliances and vendor managed inventory combined could explain approximately 64.7% of the variations in the performance of food and beverage manufacturing firms. The other 35.3% may be attributed to other strategies not explained by the model or the variables.

Quality of goods purchased recorded positive growth, timely purchases and stock out reduction further recorded positive growth, cost reductions due to minimal or no reworks also recorded positive growth. From inferential statistics, a positive correlation is seen between each predictor variable and performance of food and beverage manufacturing firms. The strongest correlation was established between vendor managed inventory and performance of food and beverage manufacturing firms. All the independent variables were found to have a statistically significant association with the dependent variable at ninety five percent level of confidence.

#### 5.3 Conclusion of the Study

Based on the study findings, the study concludes that performance of food and beverage manufacturing firms can be improved by reverse logistics, outsourcing, strategic alliances and vendor managed inventory.

#### **5.3.1 Reverse Logistics**

A positive regression coefficient of 0.183 was attributed to reverse logistics influencing the performance of food and beverage manufacturing firms in Kenya.

### 5.3.2 Outsourcing

A positive regression coefficient of 0.158 was attributed to outsourcing influencing the performance of food and beverage manufacturing firms in Kenya.

#### 5.3.3 Strategic Alliances

A positive regression coefficient of 0.121 was attributed to strategic alliances influencing the performance of food and beverage manufacturing firms in Kenya.

#### **5.3.4 Vendor Managed Inventory**

A positive regression coefficient of 0.001 was attributed to Vendor Managed Inventory influencing the performance of food and beverage manufacturing firms in Kenya.

## **5.3.5 Performance**

Drawing on this research, lack of reverse logistics, outsourcing, strategic alliances and vendor managed inventory in food and beverage manufacturing firms is leading to poor performance. Though the food and beverage manufacturing firms are striving hard to improve their performance there are still issues of poor quality products, long lead time and high cost of projects/products. It was articulated that the current phenomenon of poor performance in the food and beverage sector can be reversed if the government and other stakeholders ensure; reverse logistics, outsourcing, strategic alliances and vendor managed inventory are embraced in the procurement function.

### **5.4 Recommendations of the Study**

## **5.4.1 Reverse Logistics**

To ensure that food and beverage manufacturing firms have better performance they should focus more on using their reverse logistics so as to ascertain vendors provide re-use systems and recycling systems to ensure that there is consistency of recycling goods that need reworks. In the same regard, they should involve suppliers early enough to enable them to have recall policy and procedure.

## 5.4.2 Outsourcing

With regard to the second objective, it would be constructive for food and beverage manufacturing firms to invest more in outsourcing to reduce the amount of time spent by staff doing non-core activities and ensure professionals spend time on core activities that give them competitive advantage.

## 5.4.3 Strategic Alliances

In relation to strategic alliances, the organizations should embrace alignment of goals with their supply chain partners; they should also embrace systems integration so as to gain first insights on demand fluctuations. If food and beverage manufacturing firms embrace strategic alliances among its suppliers then there will be cost reduction and timing of delivery will improve.

## 5.4.4 Vendor Managed Inventory

Concerning vendor managed inventory, there is need for food and beverage manufacturing firms to always set aside a substantial part of their resources for activities that spend a huge amount of total resources, and this involves among many other issues vendor managed inventory. This is because decisions made here have major effects on the rest of the organizational processes. In the same regard, they should embrace efficient customer response and continuous replenishment policy to enable them to come up with cost efficient strategies that enable them source sustainably. The study recommends that procurement staff in the food and beverage manufacturing firms should ensure that they strictly follow procurement procedures to ensure that goods supplied are of the right quality, in the right quantity, at the right time, to the right place from the right source. This will aim at satisfaction of customers in terms of cost, quality, and timeliness of the delivered product or service, minimizing administrative operating costs.

#### 5.5 Areas for Further Research

The study is a milestone for further research in the field of performance of food and beverage manufacturing firms in Africa and particularly in Kenya. The findings demonstrated the important procurement best practices to the performance of food and beverage manufacturing firms to include; reverse logistics, outsourcing, strategic alliances and vendor managed inventory. The current study obtained a regression of 64.7% and should therefore be expanded further in future in order to include other procurement best practices that may as well have a positive significance to performance of food and beverage manufacturing firms. Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other institutions in Kenya and other countries in order to establish whether the explored procurement best practices platforms herein can be generalized to affect performance in other institutions.

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## **APPENDICES**

## **Appendix I: Introduction Letter**

Dear Respondent,

I am a student at Jomo Kenyatta University of Agriculture and Technology pursuing a graduate degree in Master of Science in Procurement and Logistics. I am conducting a research on the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya.

Your participation in this evaluation is greatly appreciated and information given will be treated in strictest confidence. Your assistance in filling this questionnaire is highly appreciated. Thank you.

Yours Faithfully,

EMMA WANJIKU HD 311-COO4-0815/2015

### **Appendix II: Questionnaire**

This questionnaire has been set in relation to the objectives of the study. All the questions relate to the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya. Kindly read the questions carefully and answer them as honestly as possible by ticking ( $\checkmark$ ), rating, specifying or writing the correct answers precisely on the spaces provided.

## SECTION 1: RESPONDENT'S INFORMATION

1. Department of the person filling the questionnaire .....

2. Gender (Please tick in the appropriate box)

Male [] Female []

3. What is your age? (Please tick in the appropriate box)

31-40 [ ] 41-50 [ ] 50 and above [ ]

4. What is your level of education? (Please tick in the appropriate box)

Undergraduate level [] Post graduate level []

5. Number of years served in your current office

3-5 [] 6-8 [] 9 and above []

## **SECTION 2: Reverse Logistics**

6. Indicate the extent to which implementation of reverse logistics in the procurement department influences performance of your organization?

- a) Very Great Extent
- b) Great Extent
- c) Moderate Extent
- d) Little Extent
- e) Not at All

7. Please indicate the extent to which you agree or disagree with the following statements.

(Please Tick 1 for "Strongly Disagree", 2 for "Disagree", 3 for neutral", 4 for "Agree" and 5

for "Strongly Agree").

	REVERSE LOGISTICS	1	2	3	4	5
a)	Efficient recall policy and procedures helps reclaim customer					
	satisfaction					
b)	Recycling and refurbishment leads to increased profits					
c)	Efficient recall policy and procedures significantly impact on					
	company's profits					
d)	Refurbishment of products improves customer satisfaction					
e)	Recycling and refurbishment leads an increase in market share					
f)	Efficient recall policy and procedures leads to growth of					
	market share and a positive impact on performance					

## **SECTION 3: Outsourcing**

8. In your own view, indicate to what extent outsourcing influences performance of your organization?

- a) Very Great Extent
- b) Great Extent
- c) Moderate Extent
- d) Little Extent
- e) Not at All

9. Please indicate the extent to which you agree or disagree with the following statements.

(Please Tick 1 for "Strongly Disagree", 2 for "Disagree", 3 for neutral", 4 for "Agree" and 5 for "Strongly Agree").

	OUTSOURCING	1	2	3	4	5
a)	Vendor performance management helps in realising efficiency					
	in performance					
b)	Core versus noncore spend monitoring aids in the control of					
	risks					
c)	Realised versus contracted savings plays a significant role in					
	profitability					
d)	Vendor performance management helps in continuous					
	improvement thus increased market share					
e)	Core versus noncore spend monitoring plays a significant role					
	in improving market share					

f)	Realised versus contracted savings comparison plays a significant role in improving market share			
g)	Vendor performance management plays a significant role in managing supplier dependence			
h)	Core versus noncore spend monitoring promotes adjustments of performance			
i)	Realised versus contracted savings improves cash flow and profitability			

# Section 4: Strategic Alliances

10. In your own view, indicate to what extent does the implementation of strategic alliances influence performance of your organization?

- a) Very Great Extent
- b) Great Extent
- c) Moderate Extent
- d) Little Extent
- e) Not at All

11. Please indicate the extent to which you agree or disagree with the following statements.(Please Tick 1 for "Strongly Disagree", 2 for "Disagree", 3 for neutral", 4 for "Agree" and 5 for "Strongly Agree").

	STRATEGIC ALLIANCES	1	2	3	4	5
a)	Alignment of goals leads to competitive positioning					
b)	Preferential scheduling of orders aids in new customer base					
c)	Systems integration and joint initiatives motivates know how					
d)	Alignment of goals helps in decision making and pooling of					
	resources					
e)	Preferential scheduling of orders plays a significant role in					
	improving market share by gaining entry to new markets					
f)	Systems integration and joint initiatives plays a significant					
	role in sharing risks and improving market share					
g)	Alignment of goals plays a significant role in improving					
	responsibility and customer satisfaction					

## **SECTION 5: Vendor Managed Inventory**

12. In your own view, indicate to what extent does the implementation of vendor managed inventory influence the performance of your organization?

- a) Very Great Extent
- b) Great Extent
- c) Moderate Extent
- d) Little Extent
- e) Not at All

13. Please indicate the extent to which you agree or disagree with the following statements.

(Please Tick 1 for "Strongly Disagree", 2 for "Disagree", 3 for neutral", 4 for "Agree" and 5 for "Strongly Agree").

	VENDOR MANAGED INVENTORY	1	2	3	4	5
a)	Efficient customer response helps to forecast demand and					
	optimum inventory					
b)	Continuous replenishment policy helps meet the demand of					
	customers					
c)	Centralized inventory management promotes information					
	flow and coordination					
d)	Efficient customer response shortens product life cycles					
e)	Continuous replenishment policy promotes product					
	customisation					

# **SECTION 6: Performance of Food and Beverage Manufacturing Firms**

(Please indicate by ticking the appropriate box, the change in performance (Please indicate

## by ticking the margin of reduction in cost over the last five years)

14.	Cost	Red	luction
17.	COSt	nou	uction

Category	2013	2014	2015	2016	2017
Cost Reduction '000'					
0000 - 2000					
2000 - 4000					
4000 - 6000					
6000 - 8000					
More than 8000					

(Please indicate by ticking the margin of market share improvement as indicated by external economic indices over the last five years)

15. Market Share

Category	2013	2014	2015	2016	2017
Percentage (%)					
00-10					
10-20					
20-30					
30-40					
Over 40					

# (Please indicate by ticking the margin of lead time reduction in delivery of supplies over the last five years)

16. Lead Time Reduction

Category	2013	2014	2015	2016	2017
Lead Time 'Weeks'					
0-1					
1-2					
2-3					
3-4					
More than 4					

# THANK YOU FOR YOUR TIME