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MANUFACTURING INDUSTRIES IN KENYA**

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**ABSTRACT**

*Food and beverage manufacturing companies should have relevant procurement internal control methods so as to ensure that there is operational efficiency and there is value for money during purchasing as well as cost cutting in order to keep up with the stiffening competition. Hence, firms should have organizational structure aligned with procurement internal controls and must be reshaped and productivity enhanced through resource maximization, operational efficiency and timely purchasing to make it easier to deliver the needs of those it serves more efficiently. The general objective of the study was to investigate the effects of procurement internal controls on performance in the food and beverage manufacturing industries in Kenya. The specific objectives of the study were to determine the effect of control environment on performance of food and beverage manufacturing industries in Kenya, to assess the effect of risk assessment on performance of food and beverage manufacturing industries in Kenya, to establish the effect of monitoring controls on performance of food and beverage manufacturing industries in Kenya and to evaluate the effect of control activities on performance of food and beverage manufacturing industries in Kenya. The target population for study was drawn from the procurement managers of different manufacturing industries in Kenya. The study employed correlational research design. The target population included 187 procurement managers of food and beverage manufacturing industries in Kenya. The sample size was 125 procurement managers. The data obtained was analyzed using qualitative data analysis & quantitative data analysis and presented in terms of tables and figures to summarize responses for further analysis and facilitate comparison. The study concluded that internal procurement controls which includes control environment, risk assessment, monitoring controls, control activities; affects performance of food and beverage manufacturing industries in Kenya.*

**Key Words:** Control Environment, Risk Assessment, Monitoring Controls, Control Activities

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## INTRODUCTION

Internal control is a procedure that guarantees that the objectives of an organization are accomplished by guaranteeing that laws are conformed to, there's operational efficiency and effectiveness, and reliable financial recording. Generally, it involves all activities that control organizational risk. Internal control policies and procedures help achieve more predictable results due to reduction in process variation. Setting up procurement controls at your organization encourages you to lessen purchasing costs as well as enhance quality and decline credit costs (Edmunds, 2016). Through internal control, the resources of an organization are measured, directed and monitored hence protecting a firm's resources and detecting as well as preventing fraud. The initial phase in making internal controls for acquiring is to place somebody responsible for the procedure (Edmunds, 2016). According to Ellram (2014), various firms have seen the need to upgrade the regular procurement ability to exhibit day key sourcing to incorporate an impetus over the production network since sourcing costs represent 40 to 80 percent of the cumulative cost of products sold, and 30 to 50 percent of income and this proportion has stayed consistent in about all ventures throughout the years. The food industry is seen as the most important economic sector that directly impacts the daily life of the entire population society (Henry, 2014)). In East Africa, there has been growing competition in the food and beverage industry with "big" economy countries being on the lead. Kevian Kenya Limited which began in 1992 in Kenya with bottling drinking water as their core activity and has now spread its activities to the whole of East Africa and other African countries with Afia juice, pick and peel, as its main brands. Aside from tomato sauce, they also have other products such as the malt juice. Kevian Kenya which prides itself in great and fast-moving products in Africa imports concentrates which are some of the core raw materials and the procurement department is in-charge of purchasing them (Odhiambo and Theuri, 2015).

Leading organizations like Brava Kenya Limited are simplified and consolidate the entire procurement process, by improving the responsiveness of their procurement internal control systems (Kilonzo 2014). Brava Foods is a Kenyan private food and beverage manufacturing company that manufactures carbonated and non-carbonated soft drinks. Brava's mission is to capture a large market share in Kenya by providing quality and affordable products in a timely manner exceeding customer expectations while still making huge profits. Brava being a new market entrant expects to compete with brands that have been there for decades and to do so effectively, they have come up with core values to guide their staffs which are quality, integrity, accountability, speed and innovation. These values guide the procurement where they teach staff on how to be accountable, make reliable reports and practice timeliness in their operations to ensure that lead time is at the minimum (Kimani, 2015). Del Monte Kenya Limited is a food manufacturing company that has several operations including farming, manufacturing and packaging canned pineapples. It produces juice and is one of the biggest juice brands in Kenya. Odhiambo and Theuri (2015) observes that for more than 100 years, shoppers around the globe have perceived the Del Monte mark as a confident image of item quality, freshness and unwavering quality joined with undaunted duty to quality, advancement and mindful business hones that permits to reliably conveying exceptional.

Food and beverage industry in Kenya is a basic productive sector singled out for development and expansion of the economy thus it has enormous possibilities for creation of employment, reducing or eradicating poverty and creation of wealth. The manufacturing sector in Kenya is among the key productive sectors identified for economic growth and development because of its immense potential for wealth, employment creation and poverty alleviation (Vashta, 2012). The government's commitment to the realization of Vision 2030

depends on collaborated effort to address the costs of production and other factors contributing to the high cost of doing business. The food and beverages industry has a unique role in expanding economic opportunity because it is universal to human life and health.

### **Statement of the Problem**

Globally food and beverage manufacturing companies are experiencing increased competition over the last few years due to increased innovations among the players and new entrants into the market. This is forcing most food and beverage manufacturing companies to cut costs due to the increasingly changing global business environment. Electricity and fuel prices continue to rise, technology shifts every now and then and the influx of suppliers makes it hard to determine the best (Henry, 2014). Due to the high cost of energy among other factors, the manufacturing sector's annual growth hardly hits 4%, slowing down productivity and rendering the sector uncompetitive. (KAM 2021) Governments and national bodies have tried to make the industry competitive by controlling factors such as foreign exchange rates and removal of price controls as well as border barriers but competition still remains high. At a time when neighboring countries are attracting critical investments in the sector due to lower production and labour costs, Kenya seems to be upscaling. The newly structured tariffs have seen the base cost of energy increase up to 36%, critically raising the cost of production (C.O.P) and cost of finished goods, which in turn results discourages the consumption of locally produced goods. Organizations therefore have resulted to looking within and trying to achieve competitive advantage by coming up with internal controls that will help achieve competitive advantage. Coming up with internal procurement controls is one method that firms have resorted to using to seal loopholes, ensure operational efficiency, cost cutting and value for money. Internal procurement controls are an essential factor which determines the extent to

which a firms achieves its targets since it greatly influences performance of firms, with a consideration of factors that may negatively or positively affect performance (Payne, 2014). This study is of great essence in the absence of sufficient studies that address the subject of effects of internal procurement controls on performance in the food and beverage manufacturing industries. The study by Kimani (2015) focused on strategic internal controls practices within the service industry in Kenya, establishing that it is important for management to identify parameters for success, suitability and sustainability of strategic internal controls practices but it did not focus on cost analysis to ensure that costs are cut to produce great results despite the challenges they experience. While such studies may have been carried in some developed nations (Kanini, 2016), a huge gap still exist that this study can fill in the food and beverage manufacturing industries in Kenya since no studies have categorically covered all the objectives of the study together. To bridge this gap and provide empirical evidence, this study established the effects of internal procurement controls on performance in the food and beverage manufacturing industries in Kenya.

### **Objectives of the Study**

The general objective of this study was to investigate the effects of internal procurement controls on performance in the food and beverage manufacturing industries in Kenya. The study was guided by the following specific objectives;

- To assess the effect of control environment on performance of food and beverage manufacturing industries in Kenya.
- To establish the effect of risk assessment on performance of food and beverage manufacturing industries in Kenya.
- To assess the effect of monitoring controls on performance of food and beverage manufacturing industries in Kenya.

- To determine the effect of control activities on performance of food and beverage manufacturing industries in Kenya.

## LITERATURE REVIEW

### Theory of Procurement Contracts

According to Laffont and Tirole (1993), modern economic theories of procurement employ mechanism design to structure the procurement problem as one of ex ante asymmetric information coupled with moral hazard. In light of the foregoing, the seller is argued to possess information regarding production costs that the buyer does not have. The buyer is said to screen the seller by offering a list of contracts from which the seller selects a particular contract, a situation that ends up revealing the buyer's private information. In this case, the seller has an upper hand in terms of requisite information. It is, however, noted that the descriptive engineering and construction management does not demand for a list of contracts. Rather, the vast majority of contracts in this sector are variants of simple fixed price and cost-plus contracts. In the former (fixed price) contracts, the buyer offers the seller a specific price for completing the project. On the other hand, cost plus contracts do not specify a price; instead, they reimburse the contractor for costs plus a stipulated fee.

### Agency Theory

The agency theory that was advocated by Donahue (1989), explains how procurement managers must play the agency role. The procurement department takes the role of agents on behalf of their institutions. The Principal-Agent model main concept is the premise the Principal is so busy that they can't execute a certain task, making it important to hire an agent, but the principal cannot supervise the agent ideally because he or she is busy. According to the agency concept the principals (owners) must supervise and be in command of agents (managers) to guard the owners' outstanding claims from the extremes of

self-centered agents (Bansal, 2013). This theory was very key in this study. The principals included the CEO's and entrepreneurs of different organizations, in this case the food and beverage manufacturing industries in Kenya. The agents were the procurement professionals. The best way an organization can achieve performance is by ensuring that all these work with the same cognitive dissonance to ensure there is utmost performance in any entity. Internal procurement controls must be embraced by both the principal and the agent to avoid agency conflicts (Bansal, 2013). In conclusion, procurement can be seen as having a minimum of two components with two different objectives a buyer and seller in competition for contracts. Nonetheless, on top of the agency connection that the buyer and competing vendors have, several internal stakeholders with potentially conflicting interests may also exist, increasing the sophistication of the procurement process (Bansal, 2013). Control activities and risk assessment objectives link up with the agency theory, where there is segregation of duties for the principal and the agent, with the principal acting as the supervisor, and where risk of the agent being likely to act in self-interest is assessed and controlled. The theory also links with the monitoring and control objective where it provides guidelines of reporting, monitoring and evaluation procedures between the principal and the agents.

### Resource Based Theory

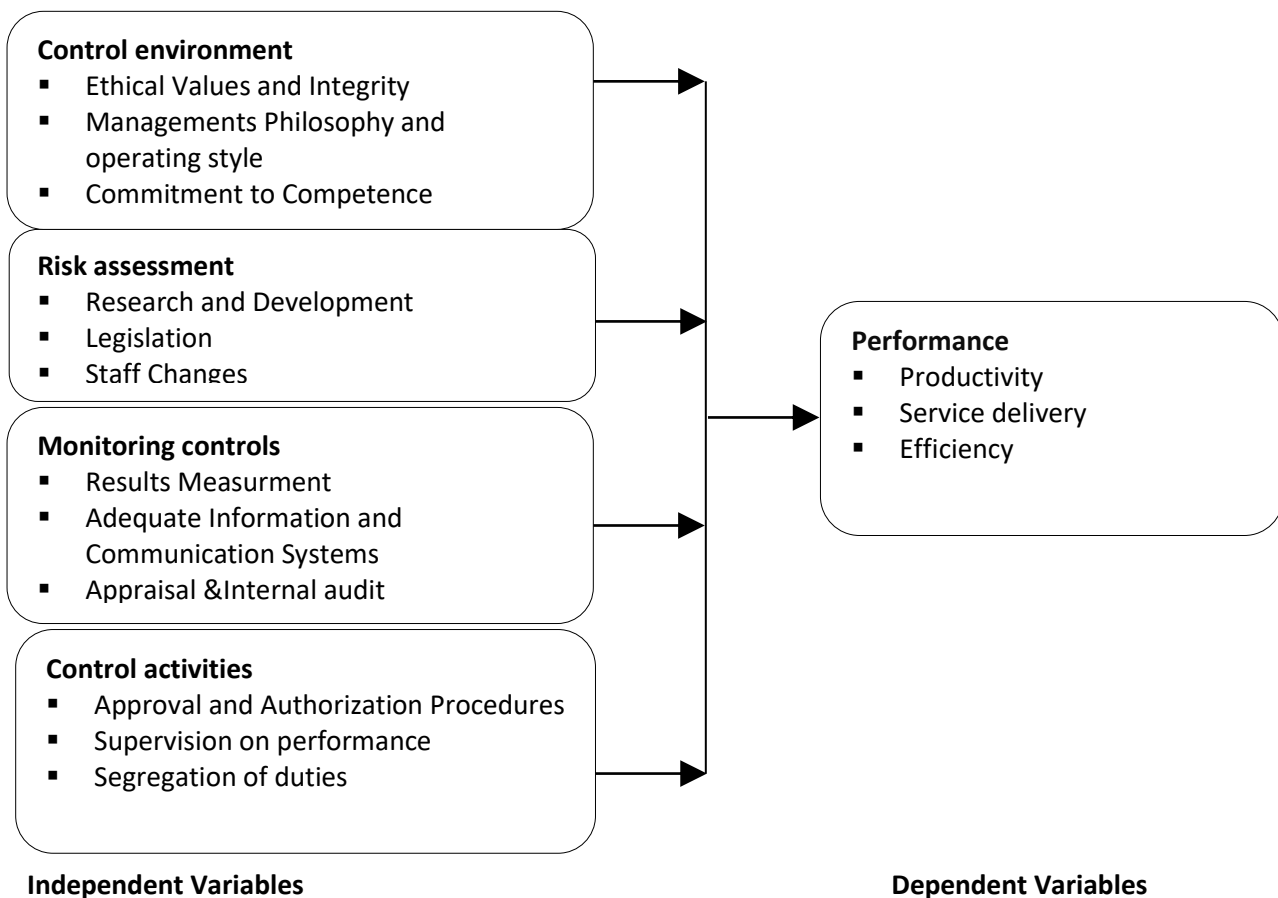
The resource-based view (RBV) of the firm suggests that organizations compete and create value on the basis of resources that are unique, rare, valuable, and not easily imitable or substitutable (Barney, 2001). Competencies develop when such resources are combined to create specific organizational ability. According to Wang (1999) there are three main research perspectives in resource-based view which are a firm's distinctive competencies and heterogeneous capabilities, fitting the resource-based view within the organizational economics paradigm and its complementary view to industry

organization research. Choosing appropriate internal procurement controls, firms could increase their adaptability, while enacting and actively shaping their organizational environment. It could be manifested in the choice of internal procurement controls.

**Institutional Theory**

Institutional theory is a wide ranging and often confusing area, which, according Scott (2004) serves the profound depths and more resilience of social structure elements. It looks into the methodologies by means of which structures, such as diagrams, set of laws, customs, and habits, become entrenched as respected directives for social conduct. Directly, it can be seen that there is a large and perhaps surprising degree of correspondence between institutional theory and the current topic of procurement internal controls and performance in

security firms (Blair, 2010). The regulative pillar deals with unequivocal control procedures rule-making, tracking, and sanctioning functions. Organizations comply with the rules for reasons of expediency as basis for compliance (Brammer, 2012). In Kenya, the PPDA ACT 2015 dictates private procurement guidelines. All private entities and firms ought to strictly adhere to these regulations and guidelines. Thus each of the three pillars has its own area of theorists who will tend to give more emphasis to a particular pillar than to the others. The rules, which are the procedures, must be well diffused for the best performance of procurement, since it plays a key role in performance of institutions (Brammer, 2012). This theory links up with the control environment objective, under which laws and procedures are established.



**Figure 1: Conceptual Framework**

### **Empirical Review of Literature**

There are a number of areas in which legal differences among countries require firms to operate differently. When one country constituents hold ethical or moral values that vary greatly from those of other countries, there has been a growing debate over whether this country's government should regulate their belief in order to institute those values abroad. In most ethical value controversies, the arguments are frequently highly emotional and may lead to enmity or even fight which are dangerous. Therefore, everyone should understand that people have different ways of rating a certain aspect of life as ethical or crooked thus care ought to be taken (Weber, 2013).

According to Carol (2013) hazard evaluation is the way toward recognizing and examining administration important dangers to the arrangement of budgetary proclamations that would be given reasonably and similarly general acknowledged bookkeeping rule, data and correspondence frameworks and procurement Internal controls necessitate that all appropriate data be distinguished, caught and imparted in a shape and time allotment that empowers individuals to do their procurement revealing duties. The procurement department identifies and assesses likely risks during procurement procedures and comes up with risk evasion mitigation strategies reducing impacts of risks on the firm.

Procurement leadership commits to monitoring the effectiveness of procurement processes using continuous and periodic monitoring controls and a corrective system put in place to ensure mistakes are corrected. Monitoring controls systems establish "what data to gather; how, when, and who to gather data; data analysis; and reporting recent process." Monitoring activities require an inclusive data needs since they complement each other; thus design and provisions ought to be regarded together (Larson & Gray, 2015). According to UNDP data accessibility and quality necessary for analysis in developing a new project point out the

scope and potential utilization of available resources for monitoring. Also, it points out any critical gaps to be tackled to ensure stable control outlook (Lewis, 2015).

The leadership develops control activities specifically designed for the procurement process. They ensure that there are required certifications during procedures and that there are enough and competent staff. Looking at the findings of Baily (2015) on effects of procurement control activities on firm performance it asserts that control activities is emerging as one of the most beneficial tool for business in Kenya. It provides the essential information and brief step-by-step procedures for procurement of goods, works and services.

Performance is an essential objective of every single firm endeavor; it requires an organization to plan their administrations and items with information of their client prerequisites. This includes tasks, showcasing, dispersion and bolster exercises to meet client desires and to build organization execution. There is developing proof that enhancements in quality prompts increments in efficiency, execution and benefits. There are many organizations, however, that have successfully implemented internal controls and obtained significant improvements in quality, productivity and competitiveness (Keenly, 2013).

### **METHODOLOGY**

For this study, correlational research design was used (Cooper & Schindler, 2011). The study targeted a population of 187 food and beverage companies in Kenya (KAM, 2017) which formed the unit of analysis of the study. The unit of observation was procurement managers from the food and beverage manufacturing firms. The study targeted these managers due to their familiarity in procurement internal controls on performance at all levels of the firm. Judgmental sampling technique was used to determine the appropriate sample size of the study. This was to ensure that all the firms under consideration participated in the

study. The sample size was 125 procurement managers. Since the study used primary data, instrument for data collection used was questionnaire.

This data for the study was analyzed by use of statistical package of social science (SPSS version 21). Data on Means and Standard Deviations was done to the collected data. The analysis method used was regression analysis. Analysis was conducted using multiple regression to assess the impact of control environment, monitoring and reporting, control activities and risk assessment on performance in the food and beverage manufacturing industries in Kenya.

## FINDINGS AND DISCUSSIONS

### Descriptive Findings

Descriptive findings were used to establish the mean and standard deviation of the responses on the Likert scales used in the study. A scale of 1 to 5 was used in the study. The findings were been presented per objective of the study. The outcome was given in tables where 5-strongly agree, 4-agree, 3-neutral, 2 disagree, 1-strongly disagree.

### Descriptive Findings of Control Environment

The study aimed at determining the effect of control environment on performance of food and beverage manufacturing industries in Kenya. The respondents were asked to indicate to what extent they agreed with the statements and their responses were shown in table 1.

**Table 1: Descriptive Findings of Control Environment**

Statement	Mean	Standard Deviation
There is a specific code of conduct set to be observed by every employee	4.26	1.14
Staff are in full knowledge of consequences of violating procurement procedures	4.60	0.90
Management is committed to bringing in competent staff for every role to ensure competency	3.58	1.14
There are regular independent assessments for management to control fraud	4.20	1.07
There is a clear organizational structure understood by both external and internal staff	3.84	1.24
Authority and responsibility is clear since there are clear employee job descriptions	3.63	1.18
<b>Average</b>	<b>4.01</b>	<b>1.11</b>

As illustrated by Table 1, a big number of respondents were in agreement that; Staff are in full knowledge of consequences of violating procurement procedures as given by the mean as well as the standard deviation of 4.60 and 0.90 values respectively and there is a specific code of conduct set to be observed by every employee as given by the mean as well as standard deviation of 4.26 and 1.14 values respectively. Respondents also agreed that there are regular independent assessments for management to control fraud as

given by the mean as well as the standard deviation of 4.20 and 1.07 values respectively. The study indicated that respondents were neutral that there is a clear organizational structure understood by both external and internal this was given by the mean as well as the standard deviation of 3.84 and 1.24 values respectively and that management is committed to bringing in competent staff for every role to ensure as given by the mean as well as the standard deviation of 3.58 and 1.14 values respectively. Respondents were also neutral that



Authority and responsibility is clear since there are clear employee job descriptions as given by the mean as well as the standard deviation of 3.63 and 1.18 values respectively. The study findings agreed with those of Rezaee (2012) who argued that organizational policies and procedures ensures that any transaction is processed in the appropriate way to avoid waste, theft and misuse of organization resources. He also argued that through procurement internal controls, organizations achieve performance and organizational goals,

prevent loss of resources, enable production of reliable reports and ensure compliance with laws and regulation.

### Descriptive Findings of Risk Assessment

The respondents were asked to indicate to what extent they agreed with the following statements in regard to establishing the effect of risk assessment on performance in the food and beverage manufacturing industries in Kenya. Their responses are indicated in table 2.

**Table 2: Descriptive Findings of Risk Assessment**

Statement	Mean	Standard Deviation
The firm puts up detective control systems that detect fraud	3.48	1.20
Firm conducts random audits to control theft	4.12	0.86
Firm invests in research and development to ensure they identify the risks likely to occur and ways to reduce the effects of the risks	3.56	0.52
Come up with the best corrective measures for efficiency	3.51	0.45
Firm continually monitors suppliers to ensure transparency and reduce risk of transparency	3.01	0.61
<b>Average</b>	<b>3.54</b>	<b>0.73</b>

Most respondents agreed that the firm conducts random audits to control theft as given by the mean and standard deviation of 4.12 and 0.86 respectively. They were neutral that the firm invests in research and development to ensure they identify the risks likely to occur and ways to reduce the effects of the risks as given by the mean and standard deviation of 3.56 and 0.52 respectively and that the firm comes up with the best corrective measures for efficiency as given by the mean and standard deviation of 3.51 and 0.45 respectively. The respondents were also neutral that the firm put up detective control systems that detect fraud as given by the mean and standard deviation of 3.48 and 1.20 respectively and that Firm continually monitors suppliers to ensure transparency and reduce risk of transparency as given by the mean and standard deviation of 3.01 and 0.6 respectively. The study findings concurred with those of Saaren & Deelde, (2014) who asserts that corrective controls help in ensuring that the impact a threat is

minimised, identify the cause of a problem as well as the correct error arising from the problem. They also indicated that corrective controls correct problems discovered by detective controls and modify the processing system to minimise occurrence of the problem. Respondents were asked what the company can do to improve its procurement planning controls. Majority of the respondents indicated that the companies should conduct refresher training to all the employees in the procurement department on the existence, availability and use of legal framework from the highest level down to the more detailed operational procedures.

### Descriptive Findings of Monitoring Controls

The respondents were asked to state the extent to which they agreed with the statements in regard to establishing the effect of monitoring on performance in the food and beverage manufacturing industries in Kenya and their responses were as shown in table 3.

**Table 3: Descriptive Findings of monitoring**

Statement	Mean	Standard Deviation
There are independent process checks and evaluations of procurement activities on a regular basis	3.82	1.32
The company procurement processes are monitored as required of their monitoring and evaluation criteria	3.18	1.36
Internal procurement reviews of implementation of internal procurement controls in units are conducted periodically.	3.68	1.16
Progressive reports have helped in assessing the quality of firm performance over time	3.64	1.32
Monitoring and Evaluation committee has assigned responsibilities for the timely review of audit reports	3.80	1.33
There is a reporting mechanism for procurement activities of organization	4.01	1.40
Quality assurance is adhered to for all organization procurement	3.01	1.34
<b>Average</b>	<b>3.59</b>	<b>1.32</b>

A big number of respondents agreed that there is a reporting mechanism for all procurement activities of this organization given by the mean and standard deviation of 4.01 and 1.40 values respectively. They were neutral that there are independent process checks and evaluations of procurement activities on a regular basis as given by the mean value as well as standard deviation of 3.82 and 1.32 values respectively. Moreover, respondents were neutral that; monitoring and evaluation committee has assigned responsibilities for the timely review of audit reports as given by the mean as well as the standard deviation of 3.80 and 1.33 values respectively and that Internal procurement reviews of implementation of internal procurement controls in units are conducted periodically as given by the mean as well as the standard deviation of 3.68 and 1.16 values respectively. Respondents were neutral that; Progressive monitoring has helped in assessing the quality of firm performance over time given by the mean as well as standard deviation of 3.64 and 1.32 values respectively also that the company procurement processes are monitored and reported as required of their monitoring and evaluation this was given by the mean as well as

standard deviation of 3.18 and 1.36 values respectively. Respondents were also neutral that quality assurance is adhered to for all organization procurement as given by the mean and standard deviation of 3.01 and 1.34 respectively. Respondents were asked to indicate what else they think can be done in their firms to improve its monitoring and reporting controls in procurement departments. A big number of respondents showed that regulations that are articulated in the organizations procurement manual should be strictly adhered to by any party in the procurement contract with the intention of controlling company funds. Also respondents indicated that monitoring and evaluation frameworks should be articulated in the manual to help various stakeholders to make appropriate decisions during the procurement process.

#### **Descriptive Findings of Control Activities**

The respondents were asked to state the extent to which they agreed with the statements in regard to establishing the effect of control activities on performance in the food and beverage manufacturing industries in Kenya. Their responses were as indicated in table 4.

**Table 4: Descriptive Findings of Control Activities**

Statement	Mean	Standard Deviation
Our firm has adequate segregation of duties	4.60	0.76
The company's security system identifies and safeguards company assets	4.76	0.42
Staff cannot access crucial company information without authority from seniors	4.50	0.52
There is proper authorization of transaction and activities	4.01	0.81
<b>Average</b>	<b>4.47</b>	<b>0.63</b>

The respondents were in agreement that the company's security system identifies and safeguards company assets as given by the mean and standard deviation of 4.76 and 0.42 respectively and that the firm has adequate segregation of duties as given by the mean and standard deviation of 4.60 and 0.76 respectively. They also agreed that Staff cannot access crucial company information without authority from seniors as given by the mean and standard deviation of 4.50 and 0.52 respectively and that there is proper authorization of transaction and activities as given by the mean and standard deviation of 4.01 and 0.81 respectively.

The findings were in line with those of Lysons and Gillingham (2013) who indicated that procurement personnel should be knowledgeable about specifications so as to be able to secure value for money for their employers and play their role of intermediaries between the user and the supplier

#### **Performance of Food and Beverage Manufacturing Firms**

The study also established the respondent's opinion on the performance of food and beverages manufacturing firms licensed under KAM. The respondents were asked to rate statements about the performance of their firms on a scale of 1 to 5 and the responses are indicated in Table 5.

**Table 5: Performance of Food and Beverage Manufacturing Industries in Kenya**

Statement	Mean	Standard Deviation
Production cost has reduced	3.60	1.35
There has been improvement of firm efficiency and effectiveness	3.77	1.30
There has been improvement of employee productivity	4.20	1.07
Return on investment has improved	4.40	1.16
Profit margin has increased	3.47	0.51
<b>Average</b>	<b>3.89</b>	<b>1.08</b>

The findings in Table 5 revealed that the respondents agreed that there was an improvement of firm efficiency and effectiveness (Mean = 3.77), returns on investment (Mean = 4.40), profit margin (Mean = 3.47), employee productivity (Mean = 4.20) and reduction in production cost (Mean = 3.60). On average, there was an agreement on improvement of the performance of the food and beverages firms licensed under KAM (Average Mean = 3.89).

The study also established the sales revenue from the firms operating under the food and beverages manufacturing sector. Based on the statistics from the Wesgro Group (2017), the exports which reflects the revenue / sales from the food and beverages manufacturing firms has been increasing from a value of 24.2 Billion in the year 2014 to 42 Billion in the year 2018 reflecting an increasing trend.

## Correlation Analysis

The association among the variables used in the study was examined using the correlation analysis whose results are presented in table 6 below.

**Table 6: Correlation Analysis**

		Control Environment	Risk Assessment	Monitoring	Control Activities	Performance
Control Environment	Correlation Coefficient	1				
	Sig. (2-tailed)					
Risk Assessment	Correlation Coefficient	.312*	1			
	Sig. (2-tailed)	0.005				
Monitoring and Reporting	Correlation Coefficient	.348*	.492*	1		
	Sig. (2-tailed)	0.014	0.023			
Control Activities	Correlation Coefficient	.231*	.282*	.586*	1	
	Sig. (2-tailed)	0.039	0.005	0.000		
Performance	Correlation Coefficient	.408*	.758*	.986*	.521*	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	120	120	120	120	120

\* Correlation is significant at the 0.05 level (2-tailed).

A Pearson moment correlation was deployed. It was found out that efficient control environment measures have a positive and significant effect on performance of food and beverage manufacturing industries in Kenya which were positively correlated as indicated by the value 0.408. The correlation was significant as indicated by the value 0.000 as it was below 0.05. This means that an enforcement of control environment measures such as management philosophy, ethical values and integrity and commitment to competence is associated with improvement of performance of food and beverage manufacturing industries in Kenya.

The findings showed that risk assessment and performance of food and beverage manufacturing industries in Kenya were positively correlated as given by 0.758, significance value was 0.000 that is below 0.05. This shows that an increase in risk assessment activities such as research and

development, staff changes and legislation is associated with an increase in performance of food and beverage industries.

The findings showed that monitoring was positively correlated with performance of food and beverage manufacturing industries in Kenya as given by the value 0.986, significance value was 0.000 which is below 0.05. This means that an increase in enforcement of monitoring and controls such as results measurement, internal audit and proper communication and information systems is associated with improvement in performance of food and beverage manufacturing industries in Kenya.

The findings showed that an increase in control activities leads to a positive and significant increase in performance of food and beverage manufacturing industries in Kenya as given by the values 0.521, significance value was 0.000 which is

below 0.05. This means that an increase in control activities such as segregation of duties, proper approval and verification of activities as well as independent supervisions is associated with improved performance of food and beverage manufacturing industries in Kenya. The findings concur with Cursworth (2013) who found out that

there is a strong positive correlation between procurement performance and control activities in food and beverage manufacturing companies.

### Regression Analysis

**Table 7: Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.912	0.831	0.823	0.2976

Predictors: (Constant), Control Environment, Risk Assessment, Monitoring, Control Activities

**Table 8: ANOVA**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	31.724	6	8.181	69.566	.0002
Residual	6.082	80	0.080		
Total	37.806	86			

Dependent Variable: Performance  
Predictors: (Constant), Control environment, Risk assessment, Monitoring, Control activities.

**Table 9: Model Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.386	0.425		0.908	0.380
Control Environment	0.301	0.095	0.182	3.168	0.002
Controls	0.417	0.096	0.397	4.344	0.00
Risk Assessment	0.114	0.052	0.114	2.192	0.032
Monitoring	0.540	0.051	0.673	10.588	0.001
Control Activities	0.174	0.086	0.110	2.023	0.038

From the SPSS generated output:

Performance of food and beverage manufacturing industries = 0.386 + 0.301 (control environment) + 0.114 (risk assessment) + 0.540 (monitoring) + 0.174 (control activities)

The revised regression equation indicated that all the internal procurement controls have a positive and significant influence on performance of Food

and Beverages Firms Licensed under KAM. However, the most significant variable was monitoring (t = 10.588), then control environment (t = 3.168) followed by risk assessment (t = 2.192) and lastly control activities (t = 2.023)

### Discussion

From the above regression model top management in the procurement departments should first enhance the internal controls already used in the

departments. Further, monitoring controls should be enhanced to ensure there is adequate check on the internal controls in place. Monitoring controls helps to identify loopholes left in the procurement process and come up with strategies to curb any eventuality that might arise out of the gaps left. Control environment, risk assessment and control activities should be adopted to facilitate excellent functioning of the procurement process. This will minimize cases of fraud, embezzlement among others as low as practically possible. The model coefficient findings indicated that control environment has a positive and significant effect on performance of food and beverages manufacturing firms in Kenya (Beta = .182, Sig = .002, < .05). The findings imply that there is a significant improvement in performance of food and beverages manufacturing firms in Kenya 0.182 units given an increase in control environment by one unit. The findings are in agreement with a study by Kaufmann and Gaeckler (2015) which focused on the relationship between control environment and procurement decision-making speed and established that there exists a significant effect.

The findings also showed that risk assessment has a positive and significant influence on performance of food and beverages manufacturing firms in Kenya (Beta = .114, Sig = .032, < .05). The findings implied that there is a significant improvement in performance of food and beverages manufacturing firms in Kenya by 0.114 units given an increase in risk assessment by one unit. The findings were in agreement with a study done by Cheruiyot (2013) which revealed a positive and significant effect of risk assessment on performance.

It was also revealed that monitoring has a positive and significant effect on performance of food and beverages manufacturing firms in Kenya (Beta = .673, Sig = .00, < .05). The findings imply that there is a significant improvement in performance of food and beverages manufacturing firms in Kenya by 0.673 units given an increase in monitoring and reporting by one unit. The findings agree with that of Kamau (2013) on monitoring and reporting and

organizational performance among large manufacturing firms and established that there is a positive and significant association between monitoring and reporting and performance.

The findings lastly indicated that control activities have a positive and significant effect on performance of food and beverages manufacturing firms in Kenya (Beta = .110, Sig = .038, < .05). This implies that there is a significant improvement in performance of food and beverages manufacturing firms in Kenya by 0.110 units given an increase in control activities by one unit. The findings are in agreement with a study done by Battistoni, Bonacelli, Fronzetti Colladon and Schiraldi (2013) conducted on the effect of control activities on performance and indicated a positive and significant association between control activities and performance.

## **CONCLUSIONS AND RECOMMENDATIONS**

The study concluded that an enforcement of control environment methods such as ethical values and integrity, management philosophy and commitment to competence leads to improvement of firm performance and reduced variation of the results and set goals of food and beverage manufacturing industries in Kenya. Hence, companies that want to thrive in the have to establish a controlled environment in all departments ensuring that all workers have similar values and have a common management philosophy in order to achieve the required set of goals.

Secondly, the study concluded that application of risk assessment methods such as staff changes, research and development and legislation helps to detect fraud, control theft and losses and hence improve firm performance of the food and beverage manufacturing industries in Kenya. To attain company objectives and save on resources, manufacturing firms should come up with proper risk assessment systems to ensure all risks are identified and avoided or minimized during procurement processes.

The study also concluded that increase in monitoring controls such as results measurement, efficient information and communication systems and frequent audits improves performance of food and beverage manufacturing industries in Kenya. Management teams in food and beverage manufacturing firms should have monitoring controls to ensure that information on operations is accurate, reasonable and consistent. Lastly, the study concluded that application of proper and effective control activities such as approval, authorization and verification, independent supervision and adequate segregation of duties contribute positively and significantly to firm performance in the food and beverage manufacturing industries in Kenya. Food and beverage manufacturing firms in Kenya must establish proper control activities in order to effectively keep up with competition.

The study recommended that since control environment contributes positively and significantly to firm performance, manufacturing industries in Kenya should increase adoption of ethical values, management philosophy and commitment to competence. Since application of risk assessment

leads to significant improvement of firm performance, manufacturing companies in Kenya should increase adoption of staff changes, research and development and legislation. The study also recommends that since application of monitoring and reporting methods in an organization leads to significant improvement of firm performance, manufacturing industries should increase the adoption of results measurement, proper information and communication systems and internal audits. Since adoption of control activities such as approval, authorization and verification and independent supervision and adequate segregation of duties leads to significant improvement in firm performance, manufacturing industries in Kenya should increase the adoption of control activities.

#### **Areas for Further Research**

The objective of the study was assessing the effect of internal procurement controls on performance of food and beverage manufacturing industries in Kenya which are mainly private companies. This study advocates for more research on the same topic of effects of internal procurement controls on government agencies which are governed by the PPDA.

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