

# Factors Affecting Procurement Performance in the Milk Processing Firms in Kiambu County

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**Abstract:** *Given the impact of procurement activities on the operation and effectiveness of procurement processes, it is essential that these activities be performed by qualified staff with high professional and ethical standards and using sound procedures anchored in appropriate policies and regulations. Procurement is one of the vital functions in an organization and it plays a vital role in acquiring the needed resources at the time required. The purpose of this study was to assess the factors affecting procurement Performance in the milk processing firms in Kiambu County. The study also sought to assess the effect of information technology, employees' incompetence, organizational culture and packaging policy on procurement performance in the milk processing firms in Kiambu County. The paper adopted a descriptive survey method. The target population included milk processing firms in Kiambu County. The sample was selected from managers working in various milk processing firms in Kiambu County. Purposive sampling technique was used to select a sample from the managers in various milk processing firms in the County. Self administered questionnaires were used to collect primary data from the field. Qualitative data from the open ended questions was analysed by use of content analysis and the findings were presented in a prose form. Descriptive statistics and inferential statistics were used in this study to analyze quantitative data, which was obtained from the closed ended questions. Descriptive statistics used in this study include mean, standard deviation, percentages and frequencies. Further, multiple regression analysis was used to establish the relationship between the dependent and the independent variables. Quantitative data was presented in form of bar graphs, pie charts and frequency tables. This study established that organizational culture contributed most to the procurement process in the milk processing firms in Kiambu County followed by employees' competence then organizational culture while packaging policy contributed the least to the procurement process in the milk processing firms in Kiambu County. This study recommends that milk processing firms should also adopt information technology in all sectors and inter-link various departments within the organization. In addition, they should adopt information technology in the human resource management and in connecting various departments within the organization and linking the organization with other firms.*

**Keywords:** Employees competence, Procurement performance, Organizational culture, Packaging policy, Information technology

## 1. Introduction

The procurement function has not been given the recognition it deserves in developing countries, in most public entities, regardless of the effort by the partners like the World Bank, the International Trade Organization, the United Nations Conference on Trade and Development, the World Trade Organization and, others [1]. This could be deliberate or sheer ignorance on the value the procurement function could contribute to any organization.

In most developing countries, the procurement function is transitioning from a clerical non strategic unit to an effective socio-economic unit that is able to influence decisions and add value [2]. Developing countries in one way or another have reformed their public procurement regulations. The reforms have not been limited to regulations only, included public procurement process, methods, procurement organizational structure, and the workforce. None the less, most developing countries are facing a problem of rapid changes in procurement requirements. The changes are impacting pressure on how the procurement function performs its internal and external processes and procedures in order to achieve its objectives [3]. The ability to realize procurement goals is influenced by internal forces and external forces. Interactions between various elements, professionalism, staffing levels and budget resources, organizational structure whether centralized or decentralized, procurement regulations, rules, guidelines, and internal control policies, all need attention and influence the performance of the procurement function [4]. In

addition, the process of procurement is faced by the challenges imposed by a variety of environment factors (external factors) such as market, legal environment, political environment, organizational and socio-economic environmental factors.

Despite the progress made in the public sector procurement processes, there is little to say about the private sector [5]. It is also important to note that the procurement Act does not directly address sustainable procurement and the factors affecting it in specific industries such as the dairy industry [6]. The Kenyan dairy industry just like all monopolies is less regulated hence, exercises much more flexibility and with a higher degree of discretion in their operations [7] opines. These dairies tend to deal with the same suppliers of milk and other products repeatedly and therefore tends to take for granted procurement of processes.

One of the basic rules of procurement is that in the end, it is important to think in terms of the total cost of the process and products. This includes not only the purchase price, but also time and resources that are expended in the pursuit of commodities [8]. Many procurement activities suffer from neglect, lack of direction, poor co-ordination, lack of open competition and transparency, differing levels of corruption and most importantly not having a cadre of trained and qualified procurement specialists, who are competent to conduct and manage such procurements, in a professional, timely and cost effective manner. Inflexible and bureaucratic systems of procurement contribute to unacceptable contract delays, increased costs, the potential for manipulation of

contract awards and lack of fair competition, all of which influence the procurement process and performance negatively.

Despite the fact that there are various studies that focus on procurement performance. For instance, Kiragu [9] conducted a study on the impact of information technology on procurement process in Kenya for companies listed in Nairobi Securities Exchange. However, there is no known study that has been conducted on factors affecting procurement performance in milk processing firms. This study therefore sought to fill this gap by assessing factors affecting procurement Performance in the milk processing firms in Kiambu County.

### **1.1 Research Objectives**

The overall objective of this study was to assess the factors affecting procurement Performance in the milk processing firms in Kiambu County. The specific objectives of this study were;

1. To assess the effect of information technology on procurement performance in the milk processing firms in Kiambu County.
2. To determine the effect of employees competence on procurement performance in the milk processing firms in Kiambu County.
3. To examine the effect of organizational culture on procurement performance in the milk processing firms in Kiambu County.
4. To establish the effect of packaging policy on procurement performance in the milk processing firms in Kiambu County.

## **2. Theoretical Background**

The Resource based view or theory investigates the firm's strategies and practices on the basis of the internal resources and capabilities of the firm. This implies that competitive advantage can be achieved through resources that are valuable, rare, inimitable, and cannot be substituted [10]. Procurement is used to gain a competitive advantage. The RBV therefore is useful because it can be used to measure how the resources of an organization affect the practice of procurement. Procurement performance can enable an organization to build and sustain its competitive advantage through innovation and developing new products and services. This occurs when the firm invests in research and development to come up with practices and technologies that are both environmentally and socially friendly. Such capabilities enable a firm not only to improve its efficiency but also to respond quickly to external forces. A firm with the ability to implement procurement practices can easily handle the legal and environmental requirements in the business environment. This will result in good economic, social and environmental performance [6].

Organizations with high levels of internal integration processes and resources are more likely to adopt new procurement practices. The practice of procurement is therefore related to the resources within an organization. This explains the huge disparities in the practice of standard procurement between the developing and the developed

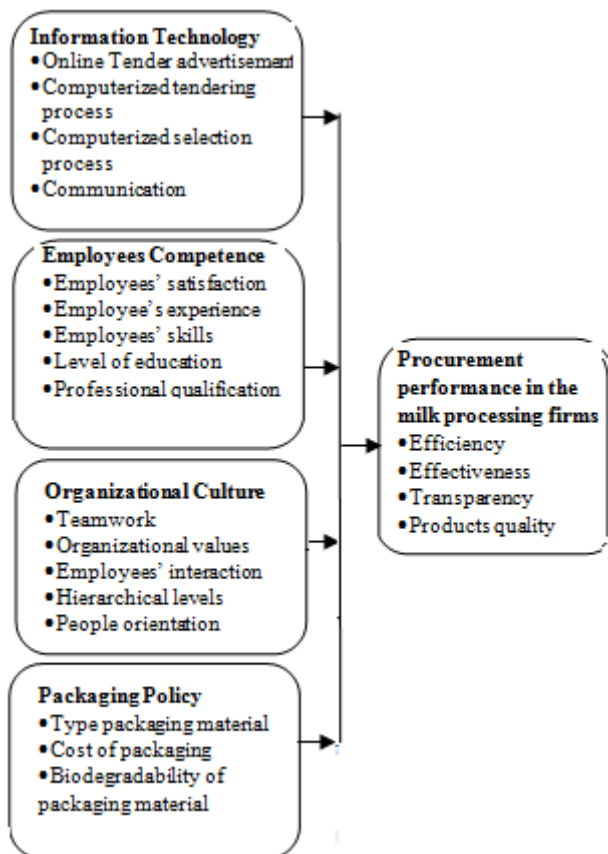
countries.

On the other hand, UTAUT provides a refined view of how the determinants of intention and behavior evolve over time. It assumes that there are three direct determinants of intention to use (performance expectancy, effort expectancy, and social influence) and two direct determinants of usage behavior (intention and facilitating conditions) [11]. These relationships are moderated by gender, age, experience, and voluntariness of use. Empirical testing of UTAUT shows that performance expectancy, effort expectancy, and social influence have significant relationships with the intention to use technologies. Later studies found that social influence affect perceived usefulness and perceived ease of use. In relation to this study most milk processing firms have been reluctant in fully adopting information communication and technology in their procurement processes. The adoption of information communication and technology has highly been influenced by age, experience, perceived complexity as well as social influence.

In the late 1950s and early 1960s, Frederick Herzberg developed what would be a very famous theory known as the Dual-Structure Theory. Originally called the 'Two-Factor' Theory, it went on to play a very important role in influencing managers' decisions on employee motivation. Herzberg and his associates started by asking around 200 accountants and engineers in Pittsburg to recall times they felt satisfied and motivated by their jobs and times they felt dissatisfied and unmotivated. He then went on to ask them to describe the reasons behind those good and bad feelings [6]. Surprisingly, Herzberg found that 'entirely different' factors were related to the employees' feelings about their jobs. For instance, those who stated they were not satisfied because their jobs were 'low-paid' would not necessarily identify 'high pay' as a cause of satisfaction and motivation. Those people instead claimed that factors such as recognition or achievement were some of the main causes of job satisfaction and motivation. In relation to this study, the procurement performance highly depends on the commitment of the employees. The commitment of the employees highly depends on their motivation and job satisfaction. There are various motivation factors that can be used by various firms to enhance their employees job satisfaction: recognition, working environment, bonuses and job security.

## **3. Conceptual Framework**

The conceptual framework in this study shows the relationship between the independent variables and the dependent variable. A conceptual framework gives an illustration of the relationship between variables in the study either graphically or diagrammatically. It helps the reader to see at a glance the proposed relationships in the question and also to understand their significance in the given relationship [12].



Independent Variables Dependent Variable  
Figure 1: Conceptual Framework

#### 4. Research Gap

There is a lot of empirical literature on procurement and procurement performance for studies conducted internationally and locally. However, most of these studies have been conducted in other countries with different demographic, economic, political and environmental differences from Kenya and hence their findings cannot be generalized to the Kenyan case. In addition, studies that have been conducted are case studies and hence their findings cannot be generalized to the to the milk processing industry.

None of these studies focused on the influence of information technology, employees competence, organizational culture and packaging policy on procurement performance in the milk processing firms in Kenya. This study sought to fill this research gap by assessing the factors affecting procurement Performance in the milk processing firms in Kiambu County.

#### 5. Research Methodology

The researcher used descriptive survey method. The population consisted of 11 milk processing firms in Kiambu County. Kiambu County was selected as it hosts some of the largest dairy processing firms in Kenya such as Brookside and Fresha Dairies. The target population was all the 11 milk processing plants in Kiambu County as contained in the Kenya Dairy Board report of 2012. The target population of this study was 451 staffs working in milk processing firms in Kiambu County. Using stratified random sampling the

researcher selected a sample of 55 managers from 11 milk processing firms in Kiambu County. Managers were targeted as they are the people mandated in making decisions which mostly influence the running of milk processors and procurement activities in this sector. The main instruments used for data collection was a questionnaire. The questionnaire had both open and close ended questions this way both qualitative and quantitative data was collected. Qualitative data from the open ended questions was analysed by use of content analysis and the findings were presented in a prose form. Descriptive statistics and inferential statistics were used in this study to analyse quantitative data, which was obtained from the closed ended questions. Further, multiple regression analysis was used to establish the relationship between the dependent and the independent variables. Analyzed data was presented in frequency tables, means and standard deviation. Further presentation involved cross tabulations since both the independent and dependent variables are ordinal in nature.

### 6. Results and Discussion

#### 6.1 Information Technology

The study sought to assess the effect of information technology on procurement performance in the milk processing firms in Kiambu County. This study established that most of the milk processing firms in Kiambu County had adopted information technology in the procurement department. IT investment pays for itself more quickly when used in a broader way, where possible with companywide application [5]. It further increases transparency because performance indicators are uniformly raised and benchmarks can be set. In addition, most of the firms had adopted information technology in research and development, in raising orders, in receiving requisitions, in the tendering process and in purchasing all the organizational equipments.

The study established that the adoption of IT helps in determination of re-order levels and stock control management, (increases transparency in the procurement process, increases transparency because performance indicators are uniformly raised and benchmarks can be set). Information technology increases transparency because performance indicators are uniformly raised and benchmarks can be set [8]. The study also found that adoption of IT leads to efficient distribution of information, improves both internal and external communication, leads to decentralization of tasks and decisions and enables better stock control.

The study further established that communication, online Tender advertisement, computerized tendering process and computerized selection process influences the procurement performance in the milk processing firms in Kiambu County. In addition, IT offers smoother and faster process flow, efficient distribution of information, decentralization of tasks and decisions, increased transparency and better control.

It was also revealed that the adoption of Information technology in the milk processing firms in Kiambu County was not to its maximum annually. Milk processing firms should also adopt information technology in all sectors and

inter-link various departments within the organization. In addition, they should adopt information technology in the human resource management and in connecting various departments within the organization and linking the organization with other firms.

### 6.2 Employees Competence

The study sought to determine the effect of employee's competence on procurement performance in the milk processing firms in Kiambu County. The study established that most of the respondents in this study had the required knowledge in procurement. The performance of procurement function in any organization requires that the individuals handling the procurement activity should have the necessary professional qualifications [7]. The study also found that most of the respondents were satisfied with their salaries, but a good number of them were not satisfied with their salaries. It was also found that the use of bonuses increases the satisfaction of employees which in turn increases the productivity of employees. The study further revealed that employees' recognition in the milk processing firms was moderate. The study also found that number of employees in the procurement department was not enough.

The study established that employee's experience, professional qualification, employees' satisfaction, employees' skills and level of education influences the procurement performance in the milk processing firms in Kiambu County.

### 6.3 Organizational Culture

The study sought to examine the effect of organizational culture on procurement performance in the milk processing firms in Kiambu County. The study established that organizational culture influences the procurement performance in the milk processing firms. In addition, organizational culture influences how employees approach their various duties and how they relate with external stakeholders including suppliers. Organizational culture has been known for a while as one of the conditions that foster procurement processes in organizations by creating an organic rather than a bureaucratic organizational structure [8].

The study also found that organizational values influence the procurement performance in the milk processing firms in Kiambu County to a great extent. In addition, teamwork influences the procurement performance in the milk processing firms in Kiambu County to a great extent. Further, the study found that employees' interaction influence the procurement performance in the milk processing firms in Kiambu County. The study also established that people orientation influences the procurement performance in the milk processing firms in Kiambu County. Lastly, the study established that hierarchical levels influence the procurement performance in the milk processing firms in Kiambu County.

### 6.4 Packaging Policy

The study also sought to establish the effect of packaging policy on procurement performance in the milk processing

firms in Kiambu County. The study established that packaging policy influences procurement performance in the milk processing firms to a great extent. A fundamental requirement for a public liquid milk supply is that it will be safe, that is, it will not be a medium for the transmission of organisms responsible for human disease. The study also found that milk processing firms in Kiambu County consider the environment when procuring packaging material.

The study also revealed that most milk processing firms were using environmental policies, economic policies, and sustainability and government policies in ensuring recyclability, durability and quality of the packaging material. The study found that cost of packaging, type of packaging material and biodegradability of packaging material influences the procurement performance in the milk processing firms in Kiambu County. According to Kim, Lopetcharat and Drake [4] packaging costs, type of packaging material and recyclability of material influences procurement in organizations.

### 6.5 Regression Analysis

A regression analysis was used to establish how information technology, employee's competence, organizational culture and packaging policy influence procurement process in the milk processing firms in Kiambu County.

The regression model was;

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

Whereby:  $\beta_0$  is the regression intercept;  $\beta_1 - \beta_4$  are the regression coefficients; Y is the dependent variable (procurement performance in the milk processing firms);  $X_1$  is information technology;  $X_2$  is employee's competence;  $X_3$  is organizational culture; and,  $X_4$  is packaging policy.

The four independent variables that were studied, explain 78.9% of the procurement performance in the milk processing firms in Kiambu County as represented by the adjusted  $R^2$ . This therefore means that other factors not studied in this research contribute 21.1% of the procurement performance in the milk processing firms in Kiambu County.

**Table 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892 <sup>a</sup>	.796	.789	.45165

According to table 1 below, the F calculated was found to be 6.853. This shows that the overall model was significant. Further, the P-value in this study was 0.000 which was less than 0.05 thus the model was statistically significance in predicting how information technology, employees competence, organizational culture and packaging policy influence procurement process in the milk processing firms in Kiambu County.

**Table 2: Analysis of Variance**

Model	Sum of Squares	df	Mean	F	Sig.
1 Regression	5.592	4	1.398	6.853	.000 <sup>a</sup>
Residual	8.772	43	.204		
Total	14.363	47			

The regression equation was therefore;

$$Y = 2.033 + 0.147 X_1 + 0.157 X_2 + 0.535 X_3 + 0.093 X_4$$

The regression equation above has established that taking all factors into account (information technology, employee's competence, organizational culture and packaging policy) constant at zero, the procurement process in the milk processing firms in Kiambu County will have an index of 2.033. The findings presented also shows that taking all other independent variables at zero, a unit increase in information technology will lead to a 0.147 increase in the scores of procurement performance in the milk processing firms in Kiambu County. The *P*-value was 0.013 which is less than 0.05 and thus the relationship was significant. The study also found that a unit increase in employee's competence will lead to a 0.157 increase in the procurement process in the milk processing firms in Kiambu County. The *P*-value was 0.006 and thus the relationship was significant. In addition, the study found that a unit increase in organizational culture will lead to a 0.535 increase in the scores of procurement performance in the milk processing firms in Kiambu County. The *P*-value was 0.003 and thus the relationship was significant. Lastly, the study found that a unit increase in packaging policy will lead to a 0.093 increase in the scores of procurement performance in the milk processing firms in Kiambu County. The *P*-value was 0.015 and hence the relationship was insignificant since the *p*-value was greater than 0.05.

This infers that organizational culture contributed most to the procurement performance in the milk processing firms in Kiambu County followed by employee's competence then organizational culture while packaging policy contributed the least to the procurement process in the milk processing firms in Kiambu County.

**Table 3: Coefficients**

	<i>B</i>	<i>t</i>	<i>Sig.</i>
(Constant)	2.033	3.887	.000
Information Technology	.147	2.021	.013
Employees competence	.157	3.594	.006
Organizational culture	.535	4.201	.003
Packaging policy	.093	1.609	.015

## 7. Conclusion

The study concludes that there is a positive relationship between information technology and procurement performance in milk manufacturing companies in Kiambu County. The study found that a unit increase in information technology will lead to a 0.147 increase in the scores of procurement performance in the milk processing firms. In addition, communication, online Tender advertisement, computerized tendering process and computerized selection process influences the procurement performance in the milk processing firms in Kiambu County.

The study also concludes that there is a positive relationship

between employee's competence and procurement performance in the milk manufacturing firms in Kiambu County. The study found that a unit increase in employee's competence will lead to a 0.157 increase in the procurement performance in the milk processing firms. The study established that employee's experience, professional qualification, employees' satisfaction, employees' skills and level of education influences the procurement performance in the milk processing firms.

The study further concludes that there is a positive relationship between organizational culture and procurement performance in milk processing firms in Kiambu County. A unit increase in organizational culture will lead to a 0.535 increase in the scores of procurement performance in the milk processing firms. The study also found that organizational values, teamwork, employees' interaction, people orientation and hierarchical levels influence the procurement performance in the milk processing firms.

Lastly, the study concludes that packaging policy influences procurement performance in the milk processing firms in Kiambu County. The study found that a unit increase in packaging policy will lead to a 0.093 increase in the scores of procurement performance in the milk processing firms. The study found that cost of packaging, type packaging material and biodegradability of packaging material influences the procurement performance in the milk processing firms.

## 8. Recommendations

This study established that the adoption of Information technology in the milk processing firms in Kiambu County was not to its maximum annually. This study therefore recommends that milk processing firms should also adopt information technology in all sectors and inter-link various departments within the organization. In addition, they should adopt information technology in the human resource management and in connecting various departments within the organization and linking the organization with other firms.

The study also found that although most employees were satisfied with their salaries, a good number of them were not satisfied with their salaries. This study therefore recommends that milk processing firms should streamline the salaries of employees so as to improve their satisfaction. The study further revealed that employees' recognition in the milk processing firms was moderate. The study therefore recommends that employees' recognition should be improved in milk processing firms. The study also found that the number of employees in the procurement department was not enough. The study therefore recommends that milk processing firms should increase the number of employees so as to reduce workload.

The study also found that teamwork and employees' interaction influence the procurement performance in the milk processing firms. This study therefore recommends that milk processing firms should improve on teamwork and employees interaction.

The study found that cost of packaging, type packaging material and biodegradability of packaging material influences the procurement performance in the milk processing firms. The study therefore recommends that milk processing firms should formulate policies to reduce the cost of packaging by changing the type of packaging material and biodegradability of the packaging material.

### 8.1 Future Scope of the Study

This study sought to assess the factors affecting procurement Performance in the milk processing firms in Kiambu County. However, due to demographic and economic differences the findings of this study (conducted in Kiambu County) cannot be generalized to other Counties. This study therefore recommends further studies on factors affecting procurement Performance in the milk processing firms in all counties in Kenya. The study also recommends further studies on the role of information technology in procurement performance in milk processing firms.

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