INFLUENCE OF PROCUREMENT PRACTICES ON PERFORMANCE OF LOGISTICS FIRMS IN KENYA: A CASE OF NAIROBI COUNTY

PETER NJUGUNA MWANGI, DR. MAKORI MORONGE
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1* Peter Njuguna Mwangi, 2 Dr. Makori Moronge

1*Student, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya
2 Lecturer, Jomo Kenyatta University of Agriculture & Technology, Kenya

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ABSTRACT

Procurement is a crucial element in the working functions of any state. Logistics firms have the obligation to provide essential services to their clients. Effective implementation of procurement practices entails implementation of strategies to be followed when making organization purchasing decisions. It significantly improves the effectiveness of purchasing decisions. One of the most important factors that promote procurement practices in logistics firms is improving the relationship between them and their clients. Choosing an effective logistic firm is based solely on pricings often viewed as short-sighted and may be ineffective. An alternative procurement practice is to use logistic firms that offer reliable services at fair prices in a very competitive environment. This study sought to establish the influence procurement practices on performance of logistic firms in Kenya. The study adopted a descriptive design and the target population was 75 logistic firms based in Nairobi county. The census survey design technique was carried out by involving all the managers of the logistic firms and primary data was collected through the use of questionnaires. The secondary data was obtained from published documents. A pilot study was conducted for the data collection instrument. The data was with help of SPSS version 21 and Excel. The study adopted a correlation and regression analysis at 5% level of significance to determine strength and direction of the relationship of the variables under study. The regression analysis showed that competitive environment had the strongest positive (Pearson correlation coefficient =.832) influence on performance of logistic firms. In addition, supplier management, inventory management, information communication and technology and competitive environment were positively correlated to performance of logistic firms with Pearson correlation coefficient of .761, .793 and .673 with p-values of .007<0.05, .003<0.05 and .008<0.05 respectively. The study established that competitive environment was the most significant factor. The study recommends for similar studies to be undertaken in other areas in Kenya for generalization of the findings of this study.

Key Words: Supplier Management, Inventory Management, Information Communication Technology, Competitive Environment, Procurement Practices
Background to the Study

Procurement is a crucial element in the working functions of any state. It refers to the purchasing of goods and services in the right quality, from the right source and the right price all to meet a specific need. Logistics firms have the obligation to provide essential services to their clients. Effective implementation of procurement practices entails implementation of strategies to be followed when making organization purchasing decisions. These include building supplier relationships, team-based approaches to procurement and proper use of technology or e-procurement (UNEP 2007). It significantly improves the effectiveness of purchasing decisions (Sobczak 2008). One of the most important factors that promote procurement practices in logistics firms is improving the relationship between them and their clients. Choosing an effective logistic firm is based solely on pricings often viewed as short-sighted and may be ineffective. An alternative procurement practice is to use logistic firms that offer reliable services at fair prices (Elliot 2007).

Making procurement practices more of a team effort boosts employees’ morale and improves 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 (McCrudden 2008). One of the most widely discussed issue that promotes effective implementation of procurement practices is the use of e-procurement. E-procurement is an electronic method of purchasing supplies and services. Companies that purchase e-procurement software are able to receive products and service payments online. E-procurement is considered as an effective procurement practice because it can reduce overhead expenses by eliminating purchasing agent costs for the logistic firms (Wisegeek 2013).

Procurement Practices in Kenya

Procurement practices in Kenya public sector are regulated by three major acts, namely; (PPDA 2005, Rok 2005, PPDR 2006, GoK 2006) and the Supplies Practitioners Management Act, 2007 (GoK 2007). The PPDA, effective as of 1st January 2007, applies to all procurement of goods, works and services, as well as the disposal of assets by public entities. Public entities are those that procure goods, services or works utilizing public funds. As such, public entities include the central and local governments, courts, commissions, state corporations, cooperatives, and educational institutions such as colleges, schools and universities (Duncan 2009).

This Act does not directly seek to regulate the private sector, though it does regulate its interaction with public entities. The PPDA was established in order to; maximize economy and efficiency, promote competition and ensure that competitors are treated fairly, promote the integrity and fairness of procurement procedures, increase transparency and accountability in those procedures, increase public confidence in those procedures, facilitate the promotion of local industry and economic development (Mathew 2009). To achieve these objectives, the Act establishes procurement and disposal procedures, and sets up the necessary structures to ensure that the procedures are followed and there is provision of oversight and compliance. The Act also establishes the Public Procurement Administrative Review Board, which handles complaints, reviews and appeals stemming from procurement practices. The Public Procurement and Disposal Regulations, 2006 (ROK) read together with the PPDA, outline the various processes and procedures to be followed when goods, services or works are procured.
Statement of the Problem
In spite of the legal, policy and institutional reforms undertaken so far in the public procurement sector in Kenya, logistics firms still find it hard to effectively participate in this particular market. Bailey (2013) indicated that over 75 percent of key logistic firms in Kenya are performing poorly. This implies that only 35% of the logistic firms are on average in this country. In 2013-14, further statistics show that of the 30 percent of logistics firms had less than a two thirds of the of them closing their businesses while two-thirds went to the could survive in the last 8 years (RoK, 2011). The market share for logistics firms in the was at below 20 percent is too small compared to the 75 percent market share enjoyed by other logistics firms in the developed countries.

This implies that, in spite of the legal, policy and institutional reforms so far undertaken in the logistic firms sector in Kenya, logistics firms are still unable to effectively perform. The inability of logistics firms to perform well (Kamau & James, 2013) is a serious problem given that logistics firms are the engine of economic growth and development needed to move the country to a middle level economy as envisaged in the development blue print of Vision 2030 (GoK, 2012). This presents a gap for research to establish the reasons behind such a lackluster performance of logistics firms in Kenya.

General Objective
The purpose of the study was to establish the influence of procurement practices on performance of logistics firms in Kenya.

Specific Objectives
The study was guided by the following specific objectives:

- To find out how inventory management practices performance of logistics firms in Kenya
- To establish how information communication technology performance of logistics firms in Kenya
- To determine how competitive environment influence performance of logistics firms in Kenya.

LITERATURE REVIEW
This chapter reviews literature derived from the research works of other scholars.

Theoretical Framework
This subsection provides an insight into theories revolving around logistics firms’ access to procurement market in Kenya. It explores Schumpeter’s Theory of Innovation, and agency theory.

Schumpeter’s Theory of Innovation

The term “entrepreneur” is derived from a French root *entreprendre*, meaning, “to undertake”. The term “entrepreneur” seems to have been introduced into economic theory by Cantilon (1755) but Say (1803) first accorded the entrepreneur prominence. It was Schumpeter however, who really launched the field of entrepreneurship as associating it clearly with innovation (Filion, 2007). According to Mourdoukoutas (2009) Schumpeter treat entrepreneurship as a distinct and separate function of a firm in revolutionizing the pattern of production through development of product, discovery and exploitation of new market and discovery and exploitation of new source of supply of raw materials.

In Bull et al (1995) perception, Schumpeterian model of the theory of entrepreneurship makes no attempt to deduce what the innovating
entrepreneur does or how he or she can do better, neither does it make any pretence of constituting a piece of theoretical reasoning. Theoretical analysis only enters the discussion when Schumpeter turns the enhancement of profits made possible by innovation, which in turn, stimulates imitation that finally brings the flow of innovator’s profits to an end. The model shows why innovators must search constantly for yet further novelties in flow of profits. The innovator therefore introduces new products, introduce new production methods, open up new markets, discover new source of supply of raw materials and come up with new organizations. Much of the academic debate on entrepreneurship over the last quarter of a century or more has concerned itself with entrepreneurial, behavioral and personal traits (McClelland (2001); McClelland & Winter (2009); Fraboni & Saltstone (2010) and Gibb (2011).

**Technology acceptance model (TAM)**

The Technology Acceptance Model (TAM) is a theoretical model that explains how users come to accept/adopt and use a technological infrastructure. Original TAM was proposed by Davis in 1989. The model suggests that when a user is presented to a new technology, a number of factors influence their decision regarding how and when they will use it. This includes its perceived usefulness and its perceived ease of use. This model adopts well established causal chain of “beliefs, attitude, intention, actual behaviour”, which was developed from the theory of reasoned action by social psychologists. In Davis’s study, two important constructs are identified; perceived usefulness and perceived ease of use. The perceived usefulness (PU) is defined as “the degree to which an individual believes that using a particular system/technology would enhance his/her performance” (Davis, Foxall and Pallister, 2002).

The perceived ease of use (PEU) is defined as “the degree to which an individual believes that using a particular system would be free of physical and mental efforts”. These perceptions predict attitudes toward the system/technology adoption. Then the attitude develops the intentions to use and the intentions cause actual system usage. In many recent studies regarding technology, TAM is adopted extensively. TAM was adopted and showed that it contributes to the prediction of individual usage of technology (Fishbein and Ajzen, 1989). Perceived ease of use of an infrastructure has a direct effect on its perceived usefulness and both determine the consumer’s attitude toward use, which leads to behavioral intention to use the system and actual use of the system (Davis et al, 2002; Lu et al. 2003). The model supports adoption of ICT on effective inventory management in health projects

**Theory of Perfect Competition**

A study by KIPPRA (2006) on Neoclassical Paradigm Theory which is based on the concept of perfect competition which has several assumptions. These assumptions include perfect and costless information, no transaction cost, no public goods, no economies of scale and scope, perfect (or strong form) rationality and those firms maximize profit. Given these assumptions, all players in the perfect market will seek to maximize their gain in all exchanges and, in the long term, the market will tend towards an equilibrium in which returns will equal total costs of production. Consumer demand and producer supply are both homogenous such that the market price acts as the “invisible hand” that equilibrates the market. In the neoclassical theory, consumer sovereignty is critical in allocating production and determining the associated cost.

logistics firms as producers may lack the resources to enter the market, access distribution, acquire complete information, and lack the ability to
transact and sell. They may be limited in terms of competitive advantage required in various government tenders. Similarly, production is most likely to correspond to the ability of producers with the most monetary resources. In the absence of sophisticated legal and contractual structures, competition law and regulation, logistics firms operating in these markets suffer from high transaction costs, monopoly distortions (due to limited choices of buyers or suppliers), information failure, mistrust, uncertainty and risk aversion. Such market failures reduce responsiveness to changing demand, and discourage investment, locking logistics firms into unrewarding activities that create bottlenecks, and sometimes facilitate outright exploitation.

In this regard, it is of utmost importance to develop a marketing strategy incorporating support services to micro and small enterprises by creating an enabling environment for them and have a legal and regulatory environment that is conducive for their survival and growth. It is also necessary to offer support services that ensure market access and product improvement. A survey of street vending in the City of Nairobi reported that about 85 percent faced very severe competition from like businesses (NCBDA, 2004). However, it is important to note that competition in the MSE sector is not only between logistics firms that are engaged in the same line of business but also between the logistics firms and the relatively larger and resource-rich businesses who seek the same market opportunity.

According to NCBDA, the latter is what concerns logistics firms more than competition from themselves because they serve different market segments and target same clients. The target clients for logistics firms are low-end income earners who invest in consumption goods/services than making long-term capital investments. Competition is most severe for logistics firms when they “discover” a certain trade and tend to flood it albeit in the same location causing over saturation of their products in the markets.

Transaction Cost Economics Theory and Resource Based View

In transaction of cost economics (TCE), the focus of the firm is to minimize the sum of transaction costs and production costs (Williamson 1979). Transaction costs affect the firms’ decisions on how they organize their activities, whether to move towards vertical integration (hierarchy) or to prefer market exchange. Thus, According to TCE, the decision of whether to collaborate or not should be based on the efficiency of governance. Transaction cost economics theory identifies and explains the conditions suitable for a firm to manage an economic exchange internally, and the conditions under which it should manage an economic exchange externally (Williamson 2005).

Heide and John (1990) argue that transaction cost analysis is useful in studies of relationships, because it provides insights into the circumstances that cause the development of a closer relationship between the buyers and suppliers. Heide and John (1990) base their theoretical argument on Williamson’s (1979) studies stating that the establishment of a closer relationship corresponds to a shift away from market-based exchange toward bilateral governance. RBV and TCE are important to the study of supplier management, as superior performance achieved in supply chain activities relative to competitors, would explain how these activities can be supported by suppliers and how supplier selection/evaluation/development can contribute to the supply chain core competences (Dey 2010). Applying TCE underlies the aspects of efficiency and cost focus. Especially, it defines the boundaries of a firm. RBV refers to the firm’s internal value creation through its resources and capabilities. Value can be created from supplier
relationship management through learning mechanisms, routines and experience. RBV applies the aspects of external and internal social relations, power distribution and the level of dependency on external counterparts. It aims at the optimization of the continuity of the business and the autonomy of a firm. As a summary, it can be said that these theories support the purpose of supplier management, diffusion of supplier information between business units, minimization of transaction costs, value creation through internal capabilities and resources, and reducing the risks of supply dependence and availability (Ellram 2008). In this study TCE was used to establish the effect of supplier management on performance of logistics firms in Kenya.

Conceptual Framework

Supplier Management
- Supplier appraisal
- Supplier relationship
- Payment of suppliers

Inventory Management
- Stores management practices
- Lead time
- Inventory costs

Competitive Environment
- Product Differentiation
- Disadvantage Edge
- Fair Play

Information communication & Technology
- Level of automation
- ICT infrastructure
- E-procurement

Supplier Management

Supplier management is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Arthur 2009). According to Peters (2004) argues that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Staff involved in SRM activities will have a good combination of commercial, technical and interpersonal skills. Commercial acumen, market knowledge, analytical abilities and project management expertise are important. But “softer” skills around communication, listening, influencing and managing change are critical to developing strong and trusting working relations. SRM managers understand their suppliers’ business and strategic goals and are able to see issues from the supplier’s point of view, while balancing this with their own organizational requirements and priorities.

Supplier involvement in product development allows firm to make better use of their suppliers capabilities and technology to deliver competitive products. Coordinating operational activities through joint planning also results to inventory reduction, smoothing production, improve product quality, and lead time reduction( Ansari, 2009) Browne (2004) contends that supplier relationship management is a comprehensive approach to managing an enterprise’s interactions with the organizations that supply the goods and services it uses. The goal of supplier relationship management (SRM) is to streamline and make more effective the processes between an enterprise and its suppliers just as customer relationship management (CRM) is
intended to streamline and make more effective the processes between an enterprise and its customers.

**Inventory Management**

Inventory management is the application of data collection, demand and forecasting, lean and operational principles to manage the total amount of inventory within the supply chain at any point in time and manage inventory holding costs (Sharafali 2007). The scope of inventory management concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods, and demand forecasting. Balancing these competing requirements leads to optimal inventory levels, which is an on-going process as the business needs shift and react to the wider environment (Riggs & Sharon 2008). Application of effective inventory management methods such as economic order quantity and just in time greatly supports implementation of effective procurement practices.

**Information Communication & Technology**

Information Technology (IT) is a technology that involves use of computers, software and internet connections infrastructure for supporting information processing and communication functions (Crompton 2007). The use of information technology in public sector has not been effectively implemented since most of the procurement functions are subjected to manual procedures that are slow, inaccurate and infective. This has negative impact on procurement procedures since the public sector organizations cannot effectively monitor and coordinate procurement procedures of all road construction projects because of lack of computerized procurement procedures and this subjects much of 36 procurement functions to manual operations which are slow and ineffective. The use of computerized procurement systems demonstrates effective use of information technology. In cases where the organization subjects all it’s procurement functions to manual procedures, the benefits of information technology are not experienced and a high level of inefficiency is experienced during execution of procurement procedures.

**Competitive Environment**

According to Townsend (2003) small firms will never win on price, but they can compete on value and service, while the more specialized their product or service, the better. They can be flexible and adaptable to meet customers' needs, and through the clever use of social media, they can make their brand more 'loveable', which gives them the edge. The situation is different in public procurement market in Kenya. Any establishment will be required to meet some set standards like bid bonds, show performance bonds, produce three years audited annual reports among other requirements which set ground for firms applying for public tenders. How well an MSE can compete in this area provides an opportunity for investigation.

At a national scale, the enactment of a strong procurement law in the country is a welcome move towards achieving transparency and accountability on government spending. However, there are potential threats and challenges in this process for micro and small businesses because some of them are unlikely to meet the stringent conditions of participation as outlined in the Act. As suggested by CRED (2007), greater efficiency in procurement may involve in some cases supply rationalization in order to reduce the costs of operating procurement processes. This would mean awarding larger contracts to a smaller number of businesses that have the capacity and expertise to manage larger projects.
According to CRED (2007), it is possible that this approach has concentrated public procurement within the confines of a few large companies and led to the loss of income for micro and small-sized firms, and organizations in the voluntary and community sectors. In this regard, CRED notes that the business community as a whole may benefit in terms of improved practice, but the costs and benefits of these changes may fall unevenly on different types of businesses and among different geographical areas. For logistics firms to grow and deliver as anticipated there is need for a ready market for their goods and services. However, with a tendering system which opens the market and favours competition, maintaining participation of logistics firms within the standard tender specifications, which favors the established enterprises, is a challenge common in procurement sector in Kenya.

Empirical Review

This section presents a review of empirical studies conducted in the past on logistics firms’, supplier management, inventory management, information communication & technology and competitive environment. Critical researches have been conducted in Kenya concerning various aspects of logistics firms. It is worth mentioning findings of some of those studies at this point for this study to have a well-founded advocacy for the intended intervention measures which will be established. Perhaps it would be more systematic to commence with the findings of the studies curried out on performance.

Hunja (2010) notes that inventory management problems that affect implementation of effective procurement practices in many public institutions in Canada include; lack of application of economic order quantity principle, application of poor stores management practices, long lead time and higher inventory costs. Elliot (2007) found that many government training institutions in India employed ineffective inventory management practices as a result of lack of application of economic order quantity principle, application of poor stores management practices, long lead time and higher inventory costs. Shalle, Guyo, and Amuhaya (2014) conducted a study on role of inventory optimization on e-procurement performance in State Parastatals in Kenya. The findings of the study emphasize that continuous inventory replenishment policy takes a regular order. The time of a replenishment decision is called an order point and the arrival of an order is regeneration point.

Findlay (2009) notes that in South Africa, many public training institutions have not managed to embrace effective procurement practices as a result of low level of staff competency, use of poor training methods, lack of qualified procurement staff with technical knowledge and skills on the requirements of effective procurement practices. A study by Cristianne (2008) reveals that lack of professionally trained procurement staff and employment of unqualified and incompetent staff discourages implementation of effective procurement practices in many public institutions in developing nations.

According to Baily (2007), organization with effective IT infrastructure can easily automate its procurement functions by implementing an Enterprise Resource Planning (ERP) system. ERP is a system that integrates all organizational functions into a single system in order to serve the needs of each different department within the enterprise. ERP is more of a methodology than a piece of software, although it does incorporate several software applications, brought together under a single, integrated interface. According to Lambert (2004), Electronic Data Interchange (EDI) is a communication technology used to facilitate effective execution of procurement functions by
most organizations. Michael (2010), explains that Electronic Data Interchange refers to computer-to-computer exchange of business documents in a standard format. Chopra (2004) affirms that EDI describes both the capability and practice of communicating information between two organizations electronically instead of traditional form of mail, courier, and fax.

**RESEARCH METHODOLOGY**

This chapter describes the methodological framework which was used to attain the stated objectives of the study.

**Research Design**

A research design describes how the study addresses the specific aims and objectives of the research. This study used case study research design.

**Target Population**

Mugenda (2008) described population as the entire group of individuals or items under consideration in any field of inquiry and have a common attribute. The target population of this study was 75 owner-managers targeted for information by this study because they are the decision makers in these firms and are actively involved in their day to day operations.

**Data collection Tools and Procedure**

The study used questionnaire to collect primary data. A questionnaire is an instrument that is used to gather data and allows measurement for or against a particular viewpoint.

**Data Analysis and Presentations**

Data analysis is the representation of data gathered during a study (Orodho, 2010). This study gathered quantitative data which was coded and analyzed using Statistical Package for Social Sciences (SPSS) computer software version 22. SPSS software was used because of its ability to appropriately create graphical presentations of questions, data for reporting, presentation and publishing.

**DATA ANALYSIS, PRESENTATION AND DISCUSSION**

This chapter discusses the findings obtained from the field. The chapter presents the background information of the respondents, and the findings of the analysis based on the objectives of the study.

**Response Rate**

A sample of 75 was selected using census survey design technique. A total of 75 questionnaires were distributed to various owner-managers of logistics firms in Nairobi County. Out of the covered population, 65 were responsive representing a response rate of 66.67%. This is above the 30% which is considered adequate in descriptive statistics according to Mugenda (2008).

**Reliability Analysis**

A pilot study was carried out to determine reliability and validity of the data collection instrument. The pilot study did not involve the sample respondents.

**Gender of Respondents**

The study sought to establish the gender distribution of the respondents. From the results, both male and female respondents participated in the study and results show that 55% (35) were male, 40% (26) were female and 5% (4) of the respondents did not indicate their gender.

**Age of the Respondents**

In order to establish the age distribution of owner-managers of logistics firms in the study, ages of the respondents who participated in this study were recorded. A total of 35 respondents answered this question and the findings show that 53.85% of the owner-managers were aged between 18 to 35 years, 32.76% were more than 35 years old while 13.39% did not indicate their age.
Level of Education of the Respondents

It was important to establish the education level held by the study respondents in order to ascertain if they were equipped with relevant knowledge and skills on procurement management practices. Majority (70%) had college education level, 20% had university education level, 5% had post graduate education level, 3% had secondary education level and 2% had professional qualifications. These findings implied that most of the respondents were qualified to understand the nature of the study problem.

Working Experience of the Respondents

The study determined the working experience held by the respondents in order to ascertain the extent to which their responses could be relied upon to make conclusions on the study problem using their working experience. 60% indicated to have a working experience of 6-10 years, 20% had a working experience of less than 5 years, 15% had a working experience of 11-15 years and 5% had a working experience of 16 years and above.

Supplier Management

The study sought to establish the extent to which respondents agreed with the statements relating to supplier management and performance of logistics firms. The study findings indicated that majority of the respondents stated that they do appraise the suppliers annually (mean of 4.32), they ensure the suppliers are paid in time (mean of 4.10), they do get after sale service from your suppliers annually (mean of 4.56), the suppliers do fail to honor the orders issued (mean of 4.56), their suppliers offer credit facilities (mean of 4.56), they do resolve immediate problems that would disrupt the work (mean of 2.16), Recognize contributions and accomplishments of the suppliers (mean of 4.06), consult with suppliers on decisions affecting them (mean of 2.16), keep suppliers informed about actions affecting them (mean of 4.56).

Inventory Management

The study sought to establish the extent to which respondents agreed with the statements relating to inventory management and performance of logistics firms. A scale of 1-5 was used. The scores “Strongly disagree” and “Disagree” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale (1 ≤ Disagree≤ 2.5). The scores of ‘Neutral’ were represented by a score equivalent to 2.6 to 3.5 on the Likert scale (2.6 ≤ Neutral ≤ 3.5). The score of “Agree” and “Strongly agree” were represented by a mean score equivalent to 3.6 to 5.0 on the Likert Scale (3.6 ≤ Agree ≤ 5.0). The results were presented in mean and standard deviation. The mean was generated from SPSS version 21. The study findings indicated that majority of the respondents stated that the management fail to use economic order quantity on purchases (mean of 2.16), the inventory purchase fail to meet the just in time principal (mean of 3.85), the organizations level of compliance on stores management practice is good (mean of 3.85), the suppliers do fail to honor the orders issued (mean of 3.95), their suppliers offer credit facilities (mean of 4.56), the firms level of reduction in inventory costs is good (mean of 4.56).

Information Communication & Technology

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Performance of Logistic Firms

The study sought from the respondents to indicate rate of increase of customer base in the last five years (2011 to 2015). The study established that the number of new branches had poor increase with an average of 20% of the respondents stated that it increased by 30%, with an average of 30% of the respondents indicated that it increased by more than 30%, with an average of 42% of the respondents posited that it increased by less than 30%, with an average of 35% of the respondents cited that it decreased by 30%, with an average of 54% of the respondents indicated that it decreased by more than 30% and an average of 45% of the respondents indicated that it decreased by less than 30% in the last five years. The study findings imply that there was low rate of increase of customer base in the last five years.

The study sought from the respondents to indicate rate of increase of profits in the last five years (2011 to 2015). The study established that the rate of increase of profits was poor with an average of 30%, with an average of 66% of the respondents indicated that it increased by more than 30%, with an average of 45% of the respondents posited that it increased by less than 30%, with an average of 44% of the respondents cited that it decreased by 30%, with an average of 44% of the respondents indicated that it decreased by more than 30% and an average of 45% of the respondents indicated that it decreased by less than 30% in the last five years. The study findings imply that there was low rate of increase of profits in the last five years.

Multiple Regression Analysis

According to Kothari (2004) regression analysis is a statistics process of estimating the relationship between variables. The results are shown in Table 1. According to the model summary, R is the correlation coefficient which shows the relationship between the independent variables and dependent variable. It is notable that there exists a strong positive relationship between the independent variables and dependent variable as shown by R value (0.822). The coefficient of determination (Adjusted $R^2$) explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the
percentage of variation in the dependent variable (performance of logistic firms) that is explained by all four independent variables. According to the four independent variables studied, they account for 77.30% of the performance of logistic firms as represented by adjusted R². This therefore means that other factors not studied in this research contribute 22.70% of performance of logistics firms. Therefore, a further study should be conducted to establish the other factors that contribute 22.70% which influence performance of logistics firms. This implies that these variables are very significant therefore need to be considered in any effort to boost performance of logistics firms.

Table 1 Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>.879</td>
<td>.773</td>
<td>.663</td>
<td>.009</td>
</tr>
</tbody>
</table>

Analysis of Variance (ANOVA)

Further, the study revealed that the significance value is 0.000 which is less than 0.05 thus the model is statistically significant in predicting how supplier management, ICT, inventory management and competitive environment influence the performance of logistics firms. The F-critical at 5% level of significance was 14.390. Since F calculated (53.750) is greater than the F critical (value = 14.390), this shows that the overall model was significant.

Table 2 Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>4</td>
<td>21.720</td>
<td>53.750</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>60</td>
<td>.4041</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical value = 14.390

Regression Coefficients

The general form of the equation to predict Performance of logistics firms from supplier management, ICT, inventory management and competitive environment is:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \]

Where Y= Performance of logistics firms; \( \beta_0 \) = Constant Term; \( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) = Beta coefficients; \( X_1 \) = Supplier management; \( X_2 \) = Inventory Management; \( X_3 \) = ICT; \( X_4 \) = Competitive environment and \( \epsilon \) = Error term.

The model equation would be: \[ Y=55.453 + 0.761X_1 + 0.793X_2 + 0.673X_3 + 0.832X_4 \]

Performance of logistics firms = 55.453 + (0.761 x Supplier management) + (0.793 x Inventory management) + (0.673 x ICT) + (0.832 x Competitive Environment). From above regression equation; the study found out that when all independent variables (supplier management, ICT, inventory management and competitive environment) are kept constant at zero the Performance of logistics firms will be at 55.453. A one unit change in supplier management will lead to 0.761 increases in Performance of logistics firms. Also a one unit change in inventory management will lead to 0.793 increases in the Performance of logistics firms. Further, a one unit change in ICT will lead to 0.673 increases in the new Performance of logistics firms and one unit change in competitive environment will lead to 0.832 increases Performance of logistics firms. This concludes that competitive environment contributes more to Performance of logistics firms. To test for the statistical significance of each of the independent
variables, it was necessary to test at 5% level of significance and 95% level of confidence of the p-values and from the Table 1 the supplier management had a 0.007; Inventory management showed a 0.003 level of significance, ICT showed a 0.008 level of significance and competitive environment had a 0.001 level of significance. Therefore, the most significant factor was competitive environment.

Table 3 Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>55.453</td>
<td>2.065</td>
<td>2.309</td>
</tr>
<tr>
<td></td>
<td>Supplier Management</td>
<td>.761</td>
<td>.585</td>
<td>.602</td>
</tr>
<tr>
<td></td>
<td>Inventory management</td>
<td>.793</td>
<td>.556</td>
<td>.655</td>
</tr>
<tr>
<td></td>
<td>ICT</td>
<td>.673</td>
<td>.487</td>
<td>.505</td>
</tr>
<tr>
<td></td>
<td>Competitive Environment</td>
<td>.832</td>
<td>.356</td>
<td>.609</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Performance of logistics firms

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The current study sought to examine the influence of procurement practices on performance of logistics firms in Kenya. This chapter presents a brief summary, conclusion and recommendations of the study findings. The conclusion relates directly to the research questions and the recommendations were derived from discussion of the study findings and conclusion. The chapter also presents suggested studies that could be carried out in future to extend knowledge in this particular area.

Summary of the Study Findings

The present study targeted owner-managers of various logistic firms in Nairobi County, Kenya. The summary of the study findings presented herein followed the research questions formulated in chapter one of the study.

Supplier Management

The study findings indicated that majority of the respondents stated that they do appraise the suppliers annually, they ensure the suppliers are paid in time, they do get after sale service from your suppliers annually, the suppliers do fail to honor the orders issued, their suppliers offer credit facilities, they do resolve immediate problems that would disrupt the work, recognize contributions and accomplishments of the suppliers, consult with suppliers on decisions affecting them and keep suppliers informed about actions affecting them.

Inventory Management

The study findings indicated that majority of the respondents stated that they disagreed management fail to use economic order quantity on purchases, the inventory purchase fail to meet the just in time principal, the organizations level of compliance on stores management practice is good, the suppliers do fail to honor the orders issued, their suppliers offer credit facilities, the firms level of reduction in inventory costs is good.

Information Communication & Technology

The study established that majority of the respondents stated that the management fail to use economic order quantity on purchases, the inventory purchase fail to meet the just in time principal, the organizations level of compliance on stores management practice is good, the suppliers
do fail to honor the orders issued, their suppliers offer credit facilities and the firms level of reduction in inventory costs is good.

Conclusions
The study concludes that supplier management affects performance of logistics firms. The supplier management has a positive significant influence on performance of logistic firms. This implies that increasing levels of supplier management by a unit would increase the levels of performance of logistic firms. This shows that supplier management has a positive influence on effective implementation of procurement practices. Supplier management factors such as rate of appraising suppliers, supplier selection strategies, supplier performance management and supplier performance evaluation methods, supplier relationship management, payment of suppliers and after sale service from suppliers affects performance of logistic firms.

The study established that inventory management affect performance of logistic firms. The increasing levels of inventory management by a unit would increase the levels of performance of logistic firms. According to the study findings, inventory management factors such as just in time, economic quantity order in procurement to a large extent affected performance of logistic firms.

Finally the study concludes information communication and technology affect performance of logistic firms. The study shows that ICT have a significant influence of performance of logistic firms. Increasing levels of ICT by a unit would increase the levels of performance of logistic firms. ICT factors such as level of compliance, employee computer literacy, ICT infrastructure and e-procurement to a large extent affects performance of logistic firms.

Recommendations of the Study

The study recommends for management of logistic firms should embrace effective supplier management strategies in order to enhance performance of logistic firms in Kenya. Effective supplier appraisal techniques should be adopted, better supplier selection strategies should be used, effective supplier selection process should be employed, better supplier performance methods should be applied, effective supplier relationship management techniques should be adopted and supplier development and supplier collaboration should be employed.

The management of logistic firms to invest extensively in employees ICT training by emphasizing and promoting the culture of learning organizations. Logistic firms should effectively integrate procurement practices with ICT based systems through application of e-procurement methods, use of automated procurement systems; implementation of supportive ICT infrastructure for encouraging adoption of ICT based procurement systems and training of procurement staff on ICT skills to enhance performance of the firms.

Areas for Further Research
This study suggests that any future study should try to investigate how linkages, consortia and partnerships among logistics firms can increase their chances of performance in the country. This is after it emerged from the present study that the procurement practices of the logistics firms affect their performance. The study recommends a similar study on medium enterprises for which data can be available for comparability of the two categories of entrepreneurs. Otherwise literature reviewed herein indicates that even medium enterprises have no significant advantage over small enterprises when seeking government tenders. Further research can reveal if the challenges are common to both the two categories of entrepreneurs or if they are varied in some ways.
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