INFLUENCE OF TRANSPORT MANAGEMENT PRACTICES ON PROCUREMENT PERFORMANCE OF MANUFACTURING FIRMS IN KENYA. A CASE STUDY OF BUTALI SUGAR COMPANY LIMITED

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ABSTRACT
Organizations in manufacturing sector have realized the importance of procurement performance with an essence of establishing and maintaining their competitive advantage. Manufacturing sector in any economy values the relevancy of warehousing since stocks of both raw materials and finished goods is of essence in the production system. Procurement performance is regarded as the efficiency and effectiveness of procurement processes in an organization. Warehousing practice is considered as one of the aspect that can enhance organization’s competitive advantage which at the end yields to effective organization performance. Transportation being one of warehousing Practices plays a role in procurement performance. The specific objective of this study was to examine the influence of transport management practices on procurement performance of Butali Sugar Company Limited, County Government of Kakamega; Kenya. This research problem employed descriptive research design. The target population of the study composed of employees of Butali Sugar Company Limited who were directly associated to decision making on procurement matters in the factory. Census technique was applied on the population and the entire targeted population was examined since it was manageable. The study used structured questionnaire as an instrument of primary data collection. Both descriptive and inferential statistics were focused on and the computation was done by use of SPSS version 24 to test the primary data that was collected to satisfy the objectives of study. Pilot study was conducted in West Sugar Company Limited to find out the validity and reliability of analysis of data for the study. Further, a structural regression equation model was developed to test the relationships between the variables. ANOVA was performed to analyze the effects of various relationships at the variables level as well as item level. The result after the analysis was, transport management practices had significant influence on procurement performance. The conclusion of the study embraced the use of Transport management practices since it improves procurement performance. The study recommended for further study on influence of transport management practices on procurement performance, especially in public sector.

Key words; Transport Management Practices, Procurement Performance

INTRODUCTION

Globally, organizations embrace procurement functions as very important for the success and development in assets and wealth maximization of the stakeholders. In the study by Giunipero et al., (2006) on procurement management, Procurement is referred to as acquisition of goods, services, capabilities and knowledge required by businesses, from the right source, the right quality, in the right quantity, at the right price and at the right time to maintain and manage a company’s primary and support activities. Most scholars among them (Hines, 2006; Porter 1998; Triantafillou, 2007; Van, 2000) regarded procurement as a spine of business functions. According to Mangan et al., (2008), procurement is a process of identifying and obtaining goods and services. Sollish and Semanik (2012) contemplated procurement including sourcing, purchasing and covers all activities from Procurement practices are a set of activities undertaken by an organization to promote effective management of its supply chain. As concerns private firms, Walter et al., (2015) stipulates procurement being the foundation for private firm’s success. Its proper practices lead to competitive purchase and getting quality materials.

In the study by Kim et al., (2013) main goals of procurement are related with quality, financial and technical risks reduction, creating integrity in the organization and safeguarding from competition; hence Procurement is vital to organizations and its strategies have become part of a business success. It boosts efficiency and competitiveness and to realize these, it is vital to give emphasis about the strategic factors that affect the performance of the procurement function. Internal and external forces are influencing the ability to recognize the procurement goal. Relations among different elements like professionalism, staffing levels and budget resources, organizational structure whether centralized or decentralized, procurement regulations, rules, guidelines, and internal control policies, all have impact on the performance of the procurement function and needs consideration.

Van-Weele (2002) embraced the relevance of warehouse management and procurement performance, whereby warehouse management refers to the coordination of the movement and storage of materials within a warehouse and processes associated and transactions, including shipping, receiving, put-away and picking. Warehousing is one of the important auxiliaries to trade. It creates time utility by bridging the time gap between production and consumption of goods. The effective and efficient management of any organization requires that all its constituent elements operate effectively and efficiently as individual SBUs / facilities and together as an integrated whole corporate. Across the supply chains, warehousing is an important element of activity in the distribution of goods, from raw materials and work in progress through to finished products. It is integral part to the supply chain network within which it operates and as such its roles and objectives should synchronize with the objectives of the supply chain. According to Ramnaa and Allaini (2012) It is not a ‘Stand-alone’ element of activity and it must not be a weak link in the whole supply chain network. According to Dimitrios (2008) warehouse management practices have come to be recognized as a vital problem area in the commercial firms needing top priority. Rajeev (2010) contemplates warehousing management practices deserve utmost attention. While all the previous studies had tended to focus more on the developed world (McKinnon, Edwards, Piecyk & Palmer, 2009). Evidence showed that cultural, social, economic and environmental aspects of each country did influence the link between warehouse management and procurement performance.

In Kenya supply chain practices are applied in every organization that has environment challenges. The supply chain sequence begins with the basic suppliers of raw materials and extends all the way to the final consumers through following up of purchasing norms, warehousing and dispatch. Facilities include; Warehouses, processing centers,
distribution centers, retail outlets or service centers. Procurement Functions and activities include forecasting, inventory management, information management, quality assurance, scheduling, production, distribution, delivery and customer service (Mburu, 2012). Supply chain management is a business practice that aims at improving the way a business sources its raw materials, and delivers its final product to the end users. Rajaguru & Matanda (2013) noted that it is a further development in managing the supply base and therefore a development of the purchasing function.

Though there exist little literature on Warehouse Management Practices on Procurement Performance in sugar industry in Kakamega County, it is common knowledge that sugar industry involves a lot of attention on warehousing and procurement function norms since the industry is manufacturing oriented by nature. Butali Sugar Company which is the case study is located in Kakamega County that harbours other competitive sugar companies; for example West Sugar Company Limited and Nzoia Sugar Company Limited. For Butali Sugar Company to be successful and develop competitively, the company should consider warehousing practices and Procurement processes.

Statement of the problem
Procurement activities involve the transformation of natural resources, raw materials, and components into a finished product that is delivered to the end customer (Stadtler, 2015). Procurement management is important for success in the economy as it was for Roman Empire world dominance (Govindan, Soleimani, & Kannan, 2015). Successful Procurement management requires cross-functional integration within the firm and across the network of firms that comprise the procurement chain (Mburu, 2012). Many companies initially focus on Procurement management as a way to improve customer satisfaction and reduce operational inefficiencies. While doing this, the company improves visibility and control over its Procurement Management, which leads to better procurement performance. Procurement management is essential to the company’s competitive capacity. Ford (2012) emphasized that the procurement relationship is therefore critical in today’s Globalised world. Due to the number of rival companies expanding both locally and globally, Companies not only have to re-establish themselves to produce higher-quality products and services, decrease waste and are able to respond to the market but also to handle their procurement management efficiently.

Butali Sugar Company has strong competitive companies against her in terms of raw materials from farmers within western environment. Raw materials require proper storage for continuous production processes; hence many studies carried out on sugar industries globally have been factors affecting procurement performance but not zeroing in on Warehouse management practices on procurement performance. Transport Management practices being one of the warehousing practices plays a big role since materials should be transported in and out of various destinations. Most of the scholars, among them Kariuki and Mburu (2013) contemplated studies on procurement have been general factors on procurement performance without considering specific individual practices that affect procurement performance and hence recommended for further study on procurement performance. The research gap arises from such a recommendation and more so, Butali Sugar Company requires proper Transportation facilities and storage as the raw material are limited in Western Kenya. This necessitated the study to be carried out to find out the effect of transport management practices on procurement performance of Butali Sugar Company Limited in Kakamega County.

Objective of the Study
The objective of the study was to examine the influence of Transport Management Practices on Procurement Performance of Butali sugar company, County of Kakamega; Kenya. The study was guided by the following research hypothesis;
• H₀: There is no significant relationship between transport management practices and procurement performance in Butali Sugar Company; Kenya

LITERATURE REVIEW
This study was based on adoption of technology theories as explained below;

Transaction Cost Theory (TCT)
Transaction Cost Theory was first developed by Ronald Coase in 1937. TCT states that a firm’s ownership decision is based on minimizing the sum of its transaction and production costs. Transaction costs occur in the exchange between client and vendor. Williamson (1994) also asserts that transaction costs are comprised of the costs of seeking the suppliers, inspection of goods and establishing and formalizing the terms of agreement, including the means to both guarantee compliance with the terms and protect against the potential expropriation of the investments made, to ensure that contract conditions are fulfilled. These aspects form the pillar to successful outsourcing from third party providers given the delivery by each party to the relationship. According to Espino-Rodriguez and Gil-Padilla (2006) the greater the transaction costs, that is, the costs of information, negotiation and supervision of compliance entail, the less the tendency to outsource the activity.

The primary factors producing transactional difficulties include: bounded rationality; opportunism; small numbers bargaining; information impactedness (Mclvor, 2003). This theory implies that firms should consider cost implications of outsourcing initiatives for appropriateness. Management should outsource if the cost of doing the process is expensive than can be done by a service provider. According to the transaction cost theory, firms do exist to maximize profit by reducing their transaction costs; outsourcing to third party logistics service providers helps to minimize a firm’s costs because as they grow in their capability they offer services at lower costs to their clients (Bolumole et al., 2007). It is generally accepted that transaction cost analysis is useful for assessing and taking a decision concerning outsourcing in logistics (Andersson, 1997).

Just In Time (JIT) Model
JIT is a Japanese management philosophy which has been applied in practice since the early 1970s in many Japanese manufacturing organizations. It was first developed and perfected within the Toyota manufacturing plants by Taiichi Ohno as a means of meeting consumer demands with minimum delays. Taiichi Ohno is frequently referred to as the father of JIT. Toyota was able to meet the increasing challenges for survival through an approach that focused on people, plants and systems. Toyota realized that JIT would only be successful if every individual within the organization was involved and committed to it, if the plant and processes were arranged for maximum output and efficiency, and if quality and production programs were scheduled to meet demands exactly (Yin, 2014) JIT manufacturing has the capacity, when properly adapted to the organization, to strengthen the organization’s competitiveness in the marketplace substantially by reducing wastes and improving product quality and efficiency of production. When first developed in Japan in the 1970s, the idea of just in-time (JIT) marked a radical new approach to the manufacturing process. It cut waste by supplying parts only as and when the process required them.

Transport Management Practices
- Materials delivered on time
- Decreasing transport costs
- Reduced Departmental complaints

Procurement Performance
- Reduction of costs
- Quality of goods and services
- Timely delivery stock out reduction

Figure 1: Conceptual Framework (source: Author)
METHODOLOGY
This study used descriptive survey design which involved collecting data of the answered questions about the respondents of the study. This design is appropriate when the researcher wishes to provide an accurate representation of persons, events or situations (Saunders et al., 2012). The target population consisted of Butali Sugar Company employees who were directly linked procurement and warehousing processes. Sample frame was drawn from the company’s departments; Finance, Procurement, Warehousing, ICT and Auditing. Since the target population was 52 respondents, all the target population was subjected to the entire study process. Census technique was applied since the population was manageable. The researcher used close ended (structured) questionnaires to collect primary data from Butali Sugar Company Limited-officers who were directly linked to the transaction to do with purchasing and disposals of goods. Data was collected by self-administered questionnaire. The quantitative data collected was analyzed by Statistical Package for Social Sciences (SPSS 25) where descriptive statistics was computed to help in describing and interpreting data in line with study objectives. For variable relationships, correlation and regression analysis was examined. Analyzed data was presented by use of tables, graphs and in prose form.

FINDINGS AND DISCUSSIONS
Descriptive Statistics: Transport Management Practices on Procurement Performance
Findings of the study established that the participants strongly agreed (mean = 4.11; Std. dev = .946) that management considered the vehicles to carry raw materials key to the factory; hence vehicles to carry materials were instrumental for procurement performance. The statistics showed that the employees teamed up for trainings and seminars which enabled procurement performance. The findings also concurred with a mean of 4.24 and Standard deviation of 0.772 that the trainings and seminars improves procurement performance. However, with regards to the question on delivery of materials on time, respondents supported for improvement of procurement performance, hence reflecting a mean of 3.82 and standard deviation of 1.130. However, most respondents remained neutral at 24.1%. The study revealed that while a significant majority of the respondents agreed with a mean of 3.94 and Standard deviation of 0.992 that through Team Work the Judiciary is able explore other modes of adaptation for success and delivery of justice. The respondents were in agreement that vehicles carrying materials are inspected professionally on time had a mean of 3.63 and Standard deviation of 1.064; hence supporting the procurement performance. The overall finding showed that transport management practices had influence on procurement performance with a mean of 4.13 and standard deviation of 0.911.

Inferential Statistics
Pearson product-moment correlation coefficient was used to obtain a measure of the strength of association between two variables Independent and Dependent. The Pearson correlation coefficient, r, takes a range of values from +1 to -1.

Table 1: Summary of Correlations
<table>
<thead>
<tr>
<th></th>
<th>Transport Management Practices</th>
<th>Procurement Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Management practices</td>
<td>Pearson Correlation 1</td>
<td>.528** .000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>N 49 49</td>
<td></td>
</tr>
<tr>
<td>Procurement Performance</td>
<td>Pearson Correlation .528** .000</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>N 49 49</td>
<td></td>
</tr>
</tbody>
</table>
independent variables and the dependent variable were significant apart from one which was insignificant at the 95% confidence level. Therefore, further analysis of the variable were carried out as below;

**Transport Management Practices and Procurement Performance**

First correlation analysis was carried out to ascertain whether Transport Management Practices has any significant effect on Procurement Performance in Butali Sugar Company Limited; Kenya. Correlation results indicated that a strong positive significant relationship existed where \( r \) the correlation was 0.528 and Probability \( p \) reflected \( p < 0.05 \). This led to the rejection of the null hypothesis and subsequently the adoption of the view that Transport Management Practice was instrumental in ensuring Procurement Performance.

Transportation is the shifting of a load from a production site to where demand occurs (Binioris, 2008). Over the last 30 years, we have witnessed that a system of direct transportation of goods from the production site to the place of use or consumption, we gradually lean towards a system with intermediary concentration stopovers and simultaneous decentralization of the distribution of loads. The stations that nowadays, usually, take the form of commodity centres, are called hubs and the whole formation of transfer policy that they follow is called hub and spoke and mainly air-carrier and air-transport companies implement this policy.

**Regression Analysis**

The multiple linear regressions were undertaken for the purpose of examining the effects of warehousing management practices on procurement performance. The model summary on table 2 indicated a multiple linear correlation coefficient \( R \) of 0.548 which indicated that the independent variable \( \) had a positive correlation with the dependent variable \( \).

**Table 2: Multiple Linear Regression Analysis Model Summaries**

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.548</td>
<td>.300</td>
<td>.263</td>
<td>2.37043</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Transport Management Practices.

The coefficient of determination (R Square) of 0.300 indicated that the independent variable constituted 30% of the variance in the dependent variable. These results therefore explained 54.8% while the 45.2% is explained by other variables outside the scope of this study.

**Table 3: Summary of ANOVA**

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>189.856</td>
<td>47.464</td>
<td>6.308</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>443.894</td>
<td>7.524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>633.750</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Procurement performance  
b. Predictors: (Constant), Transport Management Practices.

The results of Table 3 indicated that there is a significant difference between transport management practices and procurement performance\( \left( F_2 = 6.308 > F_c = 2.50; \alpha < 0.05; df = 4, 59; p = 0.000 < 0.05 \right) \). This finding confirmed that the model predicted indicated that it was indeed significant.

In order to determine which of the independent variable strength on Procurement Performance beta value was used. The results were given in
Table 4 which provided a summary of the multiple linear regression analysis correlation coefficient.

<table>
<thead>
<tr>
<th></th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta(β)</td>
<td>Std. Error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.250</td>
<td>4.759</td>
<td>.473</td>
<td>.637</td>
</tr>
<tr>
<td>Transport Management Practices</td>
<td>.444</td>
<td>.084</td>
<td>.511</td>
<td>5.295</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Procurement Performance

It was deduced from the findings in Table 4 that the most influential warehousing management practice in Butali Sugar Company Limited in the model predicting was transport management practices ($\beta = 0.444$, $\rho = 0.000< 0.05$). This indicated that the dependent variable, that is, procurement performance would change by a corresponding number of standard deviations when the respective independent variables change by one standard deviation. The study therefore establishes that transport management practices influences procurement performance.

**Hypothesis Testing**

$H_0$: Transport Management Practices has no significant effect on Procurement Performance in Butali Sugar Company; Kenya

Hypothesis was tested by ascertaining the relationship between transport management practices and procurement performance using multiple regressions whose results were shown. The test was done at a significant level 0.05. The test results showed that there exists a statistically significant correlation between transport management practices and procurement performance ($\beta = 0.445$, $\rho = 0.000< 0.05$). The result led to the rejection of the null hypothesis, hence a conclusion that there exists a significant effect of transport management practices on procurement performance in Butali Sugar Company Limited; Kenya.

Therefore, the linear model, was:

\[ Y = 2.25 + .444X_1 \]

Where the variables are as follows;

$Y= $ Procurement Performance, $X_1=$Transport Management Practices,

**CONCLUSIONS AND RECOMMENDATIONS**

The objective of this study was to examine the influence of procurement performance in Butali Sugar Company Limited; Kenya. Descriptive results revealed that transport management practices is key to the factory in terms moving in and out of raw and finished material from and into the warehouse. The correlation results showed that a strong positive significant relationship existed, this led to the rejection of the null hypothesis and subsequently the adoption of the view that transport management practices is key for procurement practices in Kenya. The study results revealed a very strong approval of transport management practices within the Butali Sugar Company Limited.

The study concluded that the company should use transport management practices to improve on effectiveness and efficiency of procurement activities that raises performance. The findings also concluded that the company should improve on the transport management practices for the better linkage of warehousing department and other departments in terms of moving raw material and finished materials.

The study recommended that transport management practices should build on its success.
on procurement activities, since it is a tool for procurement performance. The company should package its success on transport management practices because failure on delivery of materials and dispatching could lead to poor procurement performance.

**Areas for Further Research**
The study recommended for further research on Transport Management Practices on Procurement Performance in other sector organizations especially public organizations, as well as in non manufacturing sectors.

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