

Centralized Purchasing Strategies and Organizational Performance in the Manufacturing Industry: A Case of Mabati Rolling Mills

¹Ruth Kerubo Orina, ¹Dr. Linda Kimencu,

Masters Of Business Administration, Kenyatta University Lecturer, School Of Business, Kenyatta University

Corresponding Author: Ruth Kerubo Orina

Abstract: Purpose: *Despite the central role of the purchasing department there is minimal scholarly literature examining the strategies employed in purchasing. Hence this study examined the influence of centralized purchasing strategies on the organization performance within manufacturing firms.. The study was guided by the following objectives; to determine the bulk ordering and inventory management on the organization performance of Mabati Rolling Mills.*

Methodology: *The research adopted descriptive research design. The target population for the study was personnel at Mabati Rolling Mills. The study employed probability sampling in selecting a sample size of 50 respondents drawn from production department, finance, human resources, marketing and sales and the procurement department within Mabati Rolling Mills in Athi River. The study collected both primary and secondary data to examine the relationship between the two variables. The collected data was edited and coded into SPSS Version 23 for subsequent descriptive and inferential statistics.*

Results: *The above indicates that bulk ordering $p = .367$; $sig = .004 < 0.005$ had a significant and positive effect on organization performance. The findings also indicated that inventory management $p = .424$; $sig = .025 < 0.005$ had a significant and positive effect on organization performance.*

Unique Contribution to Theory: *The study recommends that the firm should enhance the bulk ordering process by undertaking a value chain analysis. The firm should also ensure that personnel strictly follow the inventory management practices which will help in enhancing the efficiency and effectiveness of the firm.*

Keywords: *Bulk ordering, inventory management, organization performance, Mabati Rolling Mills*

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I. Introduction

Globalization has transformed the process by which global business partners connect with one another for faster and efficient operations in supply chain, (Nagurney & Nagurney, 2010). According to Obiso (2011), through globalization there has been unprecedented growth in business competition across different industries. Procurement practices have been extensively been adopted as a tool of fostering organization performance. This has led to a greater number of firms adopting strategic decisions geared towards promoting procurement management (Msimangira & Tesha, 2009). The purchasing process is a strategic process that culminates into an interconnection between the firm suppliers and the organization strategic objectives (Hutt & Speh, 2012).

Procurement strategies today play an important role in organizations' success more than ever before and have become an integral part of the organizational strategic plan. Technology has developed giving opportunity to more efficient and effective procurement. Cost drivers form an important aspect of businesses and it is important for organizations to identify and critically review these cost drivers with the aim of controlling and managing them through relevant strategies. Purchasing strategies have been widely implemented in the manufacturing sector as part of value creation strategies (Sullivan, Kashiwagi, & Chong, 2010).

Empirical evidence shows that procurement strategies are therefore instrumental to an organization's success and enable management of costs while embracing principles of best value for overall organizational performance (Mwikali & Kavale, 2012). Masiko (2013) indicated that strategic procurement practices were a key determinant of the organization performance in the current competitive environment. Wanyonyi (2014) indicated that poor procurement strategy adoption led to poor organization performance.

Procurement operational systems as asserted by such authors (Deva-raj, Vaidya, & Mishra, 2012; Dimitri, Dini, & Piga, 2006; Angeles & Nath, 2007) are needed for successful running of any corporate organization. The procurement operational systems as operated by most corporate organizations are the centralized, decentralized and the hybrid. Procurement centralization is utilized as a tool of achieving benefits in the purchasing process (Karjalainen, 2009). In centralized procurement, the procurement is coordinated and

regulated from the headquarters of an organization (Karjalainen, 2009; Lysons & Farrington, 2012). This involves coordination from the firm central headquarters which allows for all the firms purchasing to be coordinated from a central point (Van-Weele, 2010); this contributes to better negotiating power and scale benefits.

Organizational performance refers to the final achievement of an organization and contains; existence of certain targets to be achieved efficiently and effectively within a specified period of time (Gibson, Mundy & Sink, 2010). According to Koontz and Donnell (2003), organizational performance refers to the ability of an organization to achieve objectives such as high profit, quality product, large market share, good financial results, and survival at pre-determined time using relevant strategy for action. The Norton (2001) measurements focuses on the financial and non-financial constructs of business organization performance. This study adopted the definition that firm performance involves both financial and non-financial performance including both environmental and intangible performance. The current study utilized the balance scorecard as proposed by Kaplan and Norton (2001) to measure the organization performance. The financial measures were sales growth, profit margin, ROA while non-financial measures were on time delivery, new product adoption, customer satisfaction, increased market share.

Gakinya (2013) conducted a study on inventory management and supply chain in Kenya and indicated that inventory management, standardized purchasing and bulk orders are the current trend in centralizing purchasing within state agencies. In another study of sugar manufacturing firms; Lwiki, (2013) indicates that in line with implementing inventory management practices; businesses have shifted to centralizing their purchasing process through adoption of e-procurement, standardizing their purchases as well as adhering to procurement regulations. In the current study centralized purchasing practices that were considered are; e-procurement, standardized purchasing, inventory management and bulk ordering in the procurement process.

Mabati Rolling Mills Limited (MRM) is the largest company within the Safal Group, and was its founding operation, commencing in 1962 at Mariakani, near Mombasa Kenya. MRM specializes mostly in roofing materials, steel production and other essential facilities and infrastructure necessary in the building industry. MRM also has the largest Distributor network in the Country for Coated Steel products (MRM, 2016). Owing to the vast distribution and production process of the company; one of the key drivers of its growth is the purchasing department. Hence this study seeks to explore how centralized purchasing that is implemented within the company supports its positive organization performance.

Statement of the Problem

The growth in manufacturing has been a key element in the successful transformation of most economies that have seen sustained rises in their per capita incomes (World Bank, 2014). In most of Africa, performance in manufacturing has been particularly poor over the last decades (World Bank, 2014). In Kenya, which ranks 17th from the top, manufacturing accounts for 10.6 % of the GDP, which is low compared to most middle income countries, yet it is the most manufacturing-intensive economy in Eastern Africa. The government's goal is for manufacturing to account for 20% of GDP by 2030, nearly twice today's level, at 10.6% (RoK, 2014). Achieving these goals will require addressing some outstanding purchasing constraints on manufacturing activity. This calls for the implementation of best strategic practices in the purchasing process that will foster the performance of the sector and accelerate attainment of the vision 2030 goals.

The implementation of centralized purchasing strategies has been advocated as one of the central tenets of supporting better purchasing benefits and enhance organization performance (Amemba, Nyaboke, Osoro, & Mburu, 2013). The need for centralization of purchasing has been driven by the need for firms to reduce costs and enhance the efficiency of the purchasing process. The centralization of purchasing enhances the economies of scale through low prices for large volumes of pooled purchases and the standardization of purchases (Cousins, Lawson, & Tyler, 2008). The study of centralized purchasing practice and organization performance at such a time is imperative. This is because many organizations have been accused of massive procurement irregularities that have led to adverse business results, for instance loss of shareholders money and procurement of inferior goods at high prices. This has led to serious compromise on quality of offered goods and service to end customers (Njagi & Shalle, 2016).

Augustine and Agu (2013) indicated that effectiveness can be achieved through e-procurement and enhanced standardization in materials. John, Etim and Ime (2015) established that inventory management practices can improve the operational performance of organizations. None of the above studies examined the influence of centralized purchasing practices on the organization performance at Mabati Rolling Mills. From the aforementioned studies it is evident that the procurement process in general plays a key role on the performance of firms. However, despite this there has been lack of sufficient literature indicating if any the influence of centralized purchasing on organization performance. The current study sought to fill this gap by examining effects of centralized purchasing strategies on organization performance at MRM.

Objectives of the Study

The main of the current research is to examine the effect of centralized purchasing strategies on the organization performance of Mabati Rolling Mills.

Specific Objectives

- i. To determine the influence of bulk ordering on the organization performance of Mabati Rolling Mills
- ii. To determine the influence of inventory management on the organization performance of Mabati Rolling Mills.

Research Questions

- i. What is the influence of bulk ordering on the organization performance of Mabati Rolling Mills?
- ii. How does inventory management influence the organization performance of Mabati Rolling Mills?

Significance of the Study

The study will be of importance to the managers at Mabati Rolling Mills who may use the findings in understanding the supply chain and centralized procurement strategies and factors influencing performance of the company and thus guide in development of guidelines and policies which would improve the performance of the company. The findings are also expected to enhance policy formulation and purchasing strategies within other organization especially in the manufacturing industry. More so the research findings will help to enhance policy formulation within the devolved and national government where bureaucracy and corruption have extensively dampened public procurement. To future researchers and academicians, the findings would contribute new knowledge in the centralized purchasing strategies and performance. The study would also acts as a source of reference for future scholars to suggest areas for further research.

II. Theoretical Review

Resource Dependency Theory

Resource Dependence Theory (RDT) as proposed by Pfeffer and Salancik (1978), studies how the exterior resources of organizations affects the performance of the organization. The theory holds that the firm can only sustain its operation through dependency on both its internal and external resources. Internal resources include aspect such as human capital, management competency and financial holdings. The external resources include stakeholders within the industry such as suppliers, the government and other firms. Achieving dependency on internal and external linkages is a key tactical strategy to better firm performance.

Sambharya and Banerji, (2006) have supported the RDT theory for it has shown that through the firm's bond with the other firms, RDT allows it to create superior products hence giving the firm competitive advantage and improved performance both financial and operational. Thus this theory props up the concept of supplier development proposes that actors lacking in crucial resources will seek to create relationships with (i.e., be dependent upon) others in order to acquire required resources. Just like sellers on buyers for precious markets and buyer will depend on suppliers for external resources. Also, organizations endeavour to alter their reliance relationships by lessening their own reliance or by increasing the dependence of other organizations on them (Brownell, 2005). Acquiring the external resources required by an organization comes by modifying an organization's influence with other organizations (Gadde&Håkansson, 2001). This theory was integral in linking how network of suppliers and other players in value chain enhance organization performance in the process of central purchasing.

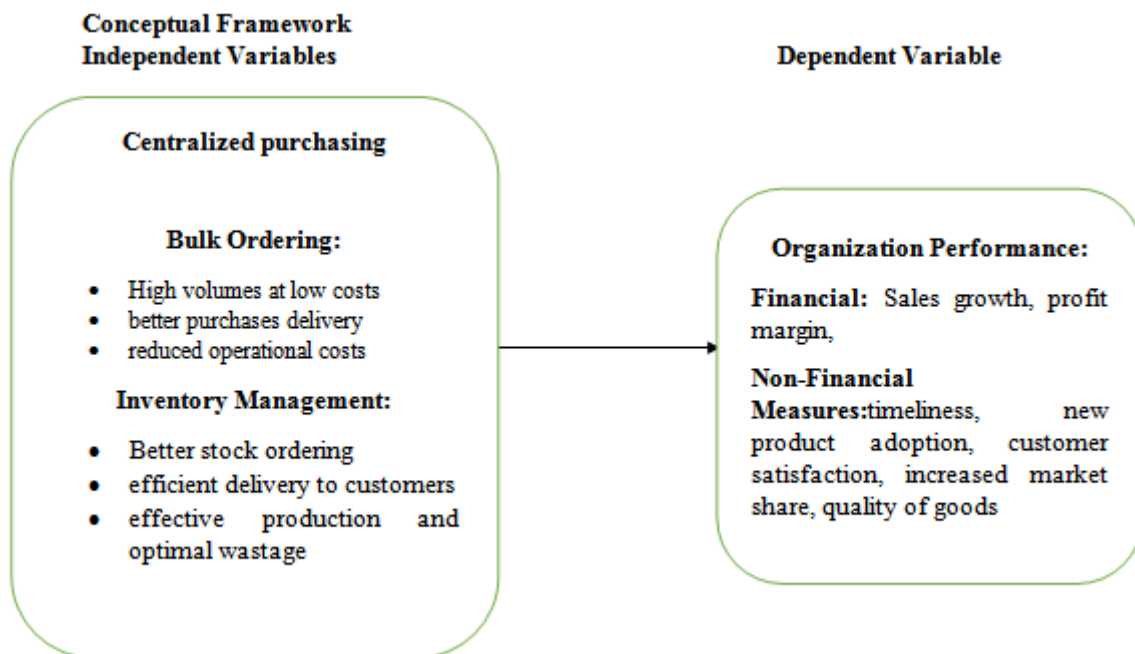
III. Literature Review

Dimitri et al. (2006) argue that e-procurement favors centralization as it helps central purchasing bodies successfully manage acquisition processes, while providing sufficient flexibility to local units to satisfy some specific needs. He further indicates that centralization magnifies the benefits of e-procurement which fosters efficiency in large procurement volumes. Angeles and Nath (2007) are of the view that firms should foster the centralization of their procurement process as this will ensure there is better control within the purchasing process which can contribute to firm performance.

Hemmatfar, Salehi and Bayat (2010) posit that every organization seeks to gain a competitive advantage over their competitors in the same industry. They contend that companies can achieve competitive advantages by delivering products or services at a lower cost. Adopting centralized purchasing can promotes better cost-efficiency for organizations. In a study to determine the drivers of global procurement at Kenya Tea Development Agency, Nyanchoka and Namusonge (2014) indicated that even though there is a continuing push for economies of scale, it is evident that in Kenya, suppliers have not yet been able to produce machinery and other agricultural inputs at economical costs which increases the cost of product development relative to market life hence the drive to source internationally where there is a huge pool of qualified suppliers. The above studies however fail to take into consideration the effect of centralized purchasing strategies on the organization performance.

Eroglu and Hofer (2011), studied the Empirical Leanness Indicator (ELI) which brought out a positive link between a firm’s performance and inventory management. Empirical Leanness Indicator (ELI) as stated by Eroglu and Hofer (2011) is an inventory management technique which is supreme. In lean production practice, inventory is considered to be a type of waste which should be reduced is seen to be equivalent to quality inventory management. This study showed that profit margins are positively affected by leanness which encrust the years 2003 – 2008 of US manufacturing firms. It also showed that firms that attain favourable returns from leanness are leaner compared to the industry itself. A study on international supply chain practices in Tanzania by Msimangira and Tesha (2009) identified logistics challenges of coping with long supply chains as one of the problems affecting procurement systems. The researchers further indicated that poor inventory management translates to poor purchasing and customer satisfaction levels. Hence, effective inventory management is a critical issue for firms’ productivity. The above studies did not examine organization performance.

Ndunge (2012) found out that inventory management applications enabled edible oil firms to minimize wastage of inventory and also minimize their costs. This study however did not show how the practices of inventory management affect productivity of manufacturing firms. Gakinya (2013) found out that inventory management can influence a firm’s supply chain performance by achieving service delivery to the customers, meeting forecast demands and gaining a competitive edge. But this study however was not on manufacturing firms and did not show the impact of inventory management practices on overall organization performance.



IV. Research Methodology

Research Design

This study utilized a descriptive research design. According to Mugenda and Mugenda (2003) a descriptive study enables a researcher to be systematic in evaluating the research situation and coming up with an elaborate blueprint to probe and draw statistical findings on the research problem.

Target Population:

The study targeted personnel working at Mabati Rolling Mills in Athi River in the production department, finance, human resources, marketing and sales and the procurement department.

Table 1 Target Population

Department at MRM	Personnel per Department	Percentage of Population
Production	83	40%
Finance	20	10%
Procurement	24	11%
Marketing and Sales	65	31%
Human Resource	17	8%
Total	209	100%

Sampling Design and Sample Size

The study utilized proportionate stratified sampling in selecting the respondents with the desired characteristics of the study. In adopting the stratified sampling the research considered the personnel within MRM who have the requisite knowledge on adoption, implementation of centralized purchasing and the performance of the firm.

The sample size was determined using the criteria advance by Mugenda and Mugenda (2003) where she proposed that 10% to 30% of the target population is sufficient to make statistical inference. Hence the current research considered 30% of the population to make inferences on the study;

$$30\% * 165 = 50 \text{ respondents}$$

Data Collection Procedures

Primary data was obtained from the main respondents of the study using semi-structured questionnaires. The questionnaires were designed in line with the research objectives. This ensured that the data collected was essential in solving the research problem. The study utilized drop and pick method in the data collection. The study further collected secondary data from company reports and other peer reviewed journals. The researcher carried out a pilot test before the final and actual data collection process. Mugenda and Mugenda (2003) prescribed that a pre-test sample should be between 10% and 30% depending on the sample size.

Data Analysis and Presentation

The study adopted both descriptive and inferential statistics. The specific descriptive statistics will include percentages, means, standard deviations and frequencies while the inferential statistics will include a multiple linear regression model. The study utilized content analysis for the qualitative data. Microsoft excel was used to complement SPSS especially in production of diagrams and tables. The multiple linear regression models was used to measure the relationship between the independent variables and the dependent variable which are explained in the model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

Y = Organization Performance of MRM

{ β_i ; $i=1, 2$ } = The coefficients for the various independent variables

X_i for;

X_1 = Bulk ordering

X_2 = Inventory Management

V. Results and Discussion

Response Rate

The research was able to obtain a response rate of 86% (n=43) while only 14 % (n=7) of the respondents did not participate in the study. This response was deemed appropriate (Fowler Jr, 2013) for the study based on the criterion by Fowler (2013) who indicated that a response of above 60% is adequate for statistical analysis.

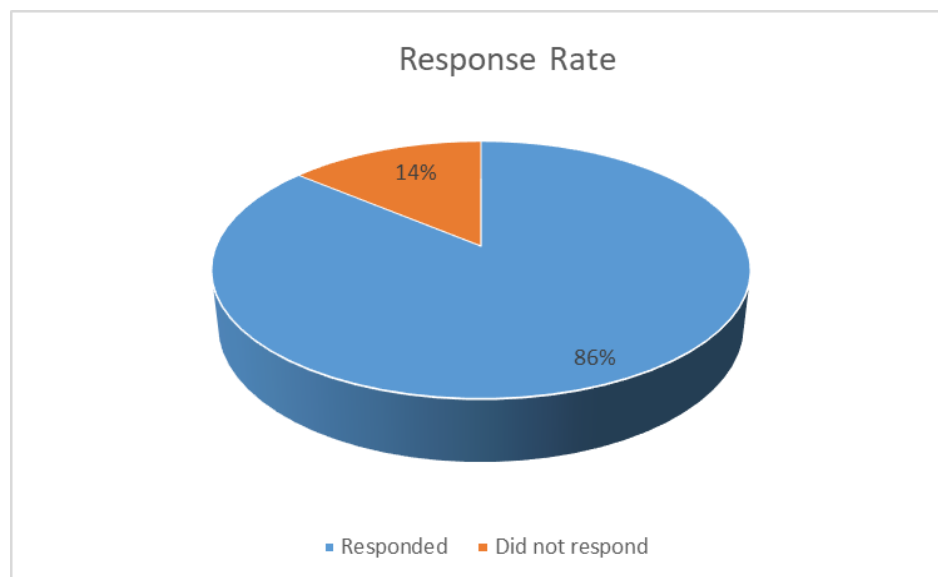


Figure 1 Response Rate

Education Level of Respondents

Table 2 Education of Respondents

		Frequency	Percent
Valid	Diploma	15	34.9
	Graduate	25	58.1
	Postgraduate	3	7.0
	Total	43	100.0

The findings of the study on table 4.2 above indicated that the majority of the respondents 58% (n=25) had attained graduate level education, 35% (n=15) had attained diploma level education while only 7% (n=3) of the respondent had postgraduate level of education.

Position within the Organization

The findings of the study indicated that the majority of the respondents 58% (n25) were in the finance department, 33% (n=14) of the respondents were in procurement department while only 9% (n=4) of the respondents were in operations department as shown in figure 1.3 below.

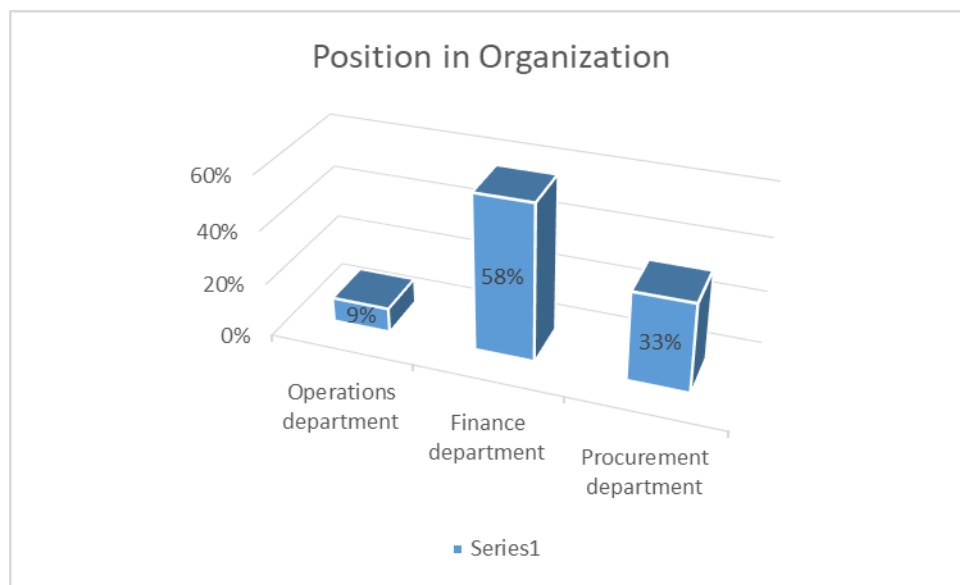


Figure 2 Position in the Organization

Descriptive Statistics

Organization Performance

Table 3 Organization Performance Descriptive

	Mean	Std. Deviation
There is increased sales within the firm	4.4884	.63140
The profit margins of the firm have been increasing since adoption of centralized purchasing	4.1163	.79310
The firm has fostered on time delivery to its' clients	4.3721	.69087
There is increased customer satisfaction with adoption of centralized purchasing	4.4884	.76756
The firm has increased its' market share with adoption of centralized purchasing	4.3953	.87667
There is increased quality of good being produced within the firm.	4.3953	.84908
Average	4.3759	0.7681

The findings of the research on table 3 indicated there was strong agreement among the respondents that there was an increase in sales within the firm as indicated by a mean value of 4.4884 and a standard deviation of .6314 indicating minimal dispersion in the findings. The results also showed that there is increased customer satisfaction with adoption of centralized purchasing as shown by a mean of 4.4884 indicating strong agreement among the respondents and moderate dispersion as shown by the deviation of .7931. The findings also showed strong agreement among respondents in regard to the profit margins of the firm have been increasing since adoption of centralized purchasing as shown by the mean value of 4.1163. These findings are in line with Lwiki, (2013) who indicated inventory management practices had led to an increase in timely

delivery, efficiency and profitability within manufacturing firms. Njagi and Shalle (2016) also indicate that there is higher performance within the manufacturing sector in Kenya.

Influence of Bulk Ordering and Organization Performance

Table 4 Bulk Ordering Descriptive

	mean	std. deviation
increased bulk ordering contributes to price savings due to discounts offered.	4.3953	.79101
bulk ordering arrangements promotes efficiency in the procurement process.	4.3488	.86969
bulk ordering enables competitiveness in creating supplier linkages for the business	4.6047	.72832
batch ordering ensures timely delivery of supplies.	4.3953	.82056
large orders ensures that the firm has sufficient inventory to support continuous production	4.3488	.97306
Average	4.4185	0.8365

The results of the study on table 4 examined the influence of bulk ordering on the performance of Mabati rolling mills. The results indicated strong agreement among respondents with regard to increased bulk ordering contributes to price savings due to discounts offered as shown by the mean value of 4.3953. The results of the study on the table above also indicated a strong agreement among respondents in regard to batch ordering ensures timely delivery of supplies as shown by a mean value of 4.3953. These findings are consistent with (Gakinya, 2013); who posited that bulk order placements enhanced timely delivery, competitiveness and cost-efficiency. van Weele, (2010) also indicated that bulk purchasing led to price savings and fostered supplier relationship.

Influence of Inventory Management on Organization Performance

Table 5 Inventory Management Descriptive

	mean	std. deviation
inventory management ensures that there is minimal wastage of organization resources.	4.1163	.58592
inventory management ensures timely flow of supplies which fosters production.	3.9535	.72222
inventory management fosters constant feedback with suppliers which enhances collaboration.	4.1395	1.01375
proper inventory management fosters customer satisfaction within the firm.	4.3256	.77830
inventory management fosters efficient capacity utilization within the firm	4.4884	.76756
effective inventory management enhances the profitability of firms through minimized pilferage	4.3953	.87667
Average	4.2364	0.7907

The research findings on table 5 sought to examine the influence of inventory management on organization performance. The results of the study indicated there was strong agreement among respondents that inventory management ensures that there is minimal wastage of organization resources as shown by the mean value of 4.1163 and deviation of .58592 indicating minimal variation in the responses. The findings of the study also indicated strong agreement among respondents in regard to proper inventory management fosters customer satisfaction within the firm as shown by a mean value of 4.3256. The research data also showed strong agreement in regard to effective inventory management enhances the profitability of firms through minimized pilferage as shown by the mean value of 4.3953 in table 4.7 above.

These study results are supported by Lwika (2013) who indicated there is a positive association between inventory management and financial performance of manufacturing firms in terms of cost-efficiency and efficiency in production. Augustine and Agu (2013) indicated that inventory management fostered effectiveness within the firm which enhanced the performance of the firm. Gakinya (2013) concluded that inventory management enhanced the supply chain performance and was key to organizational efficiency.

Regression Coefficients

Table 6 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.529	2.844		.538	.003
Bulk ordering	.367	.128	.304	2.854	.004
Inventory management	.424	.106	.082	-1.167	.025

The resulting regression model was of the form;

$$Y = 1.529 + .367 \text{ Bulk Ordering} + .424 \text{ Inventory management}$$

The above indicates that bulk ordering $p = .367$; $sig = .004 < 0.005$ had a significant and positive effect on organization performance. A unit change in bulk ordering would result in 36.7% change in organization performance. The above findings also indicated that inventory management $p = .424$; $sig = .025 < 0.005$ had a significant and positive effect on organization performance. A unit change in inventory management would result in 42.4% change in organization performance. These findings are in congruence with Iloranta and Pajunen-Muhonen, (2012) who indicated that centralized purchasing was a key predictor of organization performance. van Weele, (2010) also concluded that new and innovative purchasing strategies such as decentralized purchasing were positively related to organization performance.

VI. Conclusions

The research concludes that Mabati rolling mills has been able to obtain higher organization performance as a result of centralized purchasing as shown by the increasing profit margins, a growth in overall firms performance, a higher market share and enhanced efficiency within the firm. The study also posited that increased bulk ordering was essential for increasing economies of scales within the firm which resulted in better cost savings, enhanced the production process due to timely purchase deliveries and efficiency in delivery systems. The study also concludes that inventory management is essential in ensuring that adequate supplies are within the firm's storage to support continuous production process.

Recommendations

The study recommends that the firm should enhance the bulk ordering process by undertaking a value chain analysis which will help the firm in selecting suppliers who will foster the firm savings and enhance its economies of scale. The study also recommends that the organization should review the best procurement standards from large multinational corporations which will be of great importance in designing better and more effective procurement policies. The research also recommends that the organization should enhance the adoption of information technology systems which will be essential in promoting inventory management. The firm should also ensure that personnel strictly follow the inventory management practices which will help in enhancing the efficiency and effectiveness of the firm.

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