

THE ROLE OF INVENTORY MANAGEMENT ON PERFORMANCE OF FOOD PROCESSING COMPANIES: A CASE STUDY OF CROWN FOODS LIMITED KENYA

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ABSTRACT

The study aimed at determining the role of inventory management on performance of food processing Companies in Kenya. This study used descriptive research design. Using stratified random sampling design, the researcher selected 110 respondents on whom he conducted the study. The study used a questionnaire to collect primary data. The data was summarized and categorized according to common themes. Descriptive statistics was employed to analyze the data. A multiple regression model was applied to determine the relative importance of each of the variables with respect to performance of food processing companies in Kenya. The findings of the study shows that a unit increase in maintaining production will lead to an increase in the scores of the performance of food processing company. A unit increase in cost control will lead to an increase in performance of food processing companies in Kenya. Also, a unit increase in record reduced loss will lead to an increase in the scores of the performance of food processing companies in Kenya; and a unit increase in continuous supply will lead to an increase in the scores of performance in food processing companies. The study recommends that inventory management should be well articulated, there should be a good management on cost control such as carrying cost, ordering cost as well and maintain production should be managed to meet demand, increase production turnover and identify opportunity. The study recommends inventory management should ensures continuous supply, minimized loss, increased production and cost control on the performance of food processing companies in Kenya.

Key Words: Inventory management; Cost control; Raw material; Performance; Work in progress

1.0 INTRODUCTION

Inventory management comprises various actions taken by the management to reduce cost, maintain production, continuous supply and reduce loss (Salemi, 2009). According to Pandey, (2005) the objectives of inventory management are: To maintain a large size of inventory for efficient, smooth production and sales operation, and to maintain a minimum investment in inventory to maximize profitability. Inventory management refers to various techniques used to ensure that right quantity of an item is used at the right time and place. Efficiency in inventory means the ability to quickly receive and store products as they come in and retrieve and ship when they go out. Every extra second spent in these processes adds to the costs of inventory management. Plus, efficient distribution is a customer satisfaction issue for trade channel sellers and retailers. Retailers expect suppliers to meet prescribed delivery timetables, and customers expect customized orders and products to arrive on time (Lucey, 2006). Well-managed inventory control is often a key in meeting profit margin objectives. Gross profit margin is the difference between revenue earned from sales and the costs of goods sold. Take away fixed costs including buildings, utilities and labor and you get to operating margin. Investing as little as possible in inventory control while meeting the other objectives is critical in earning profit and growing your business, (Waters, 2006).

1.1.1 Kenyan Perspective of Performance of Food Processing Companies

Although inventory management is not highly pronounced in the Kenya government, ministries, public sectors and manufacturing companies, the use on inventory management can be felt through reduced costs, maintaining production, continuous supply and reduced loss. If you walk into their warehouses, chances are that the profitable business has a clean, well-organized building while the struggling business operates out of a messy, disorganized space. This is because the effect of inventory systems can be felt throughout an organization, (Chase, 2010). Inventory control is no easy task, and yet once your business has employed best practices, maintenance is far simpler in an organized space than a cramped, messy one. If one can't find inventory put away in their warehouse they can't sell it. Paying for inventory that will simply sit unsold in the warehouse is a waste of resources, puts additional strain on the business, and certainly doesn't contribute to profitability. The ERP software is designed to include inventory systems, but it's up to the firm to put them to good use. One can take advantage of the planning modules to organize the warehouse in an efficient manner; putting inventory away properly and in the right place reduces the risk of damage and loss (Upadhaya, Munir, & Blount, 2014)..

The same logic needs to be applied to outgoing shipments. It's one thing to misplace stock at own facility, and quite another to send the wrong order to your customers. Outgoing shipments should be correct, as the cost of a replacement order is significant. On top of the human capital it takes to re-pick all of the components and verify the additional shipment, Most times one losses time and money that should be spent processing orders for other customers (Levi, 2007). A disorganized warehouse means that staff will have to search for inventory items; if you look at the cost of labor, the level of inefficiency leads to a huge and unnecessary expense. If the warehouse is tidy and organized, not only does risk of misplacing inventory items decrease, but the efficiency of order pickers will increase as well. Having items consistently stored in a way that is convenient to order pickers means that staff will be able to ship more orders in a given amount of time. Increased orders means better productivity; if part of the cost savings this level of organization brings is rolled into an employee incentive program staff will have more motivation to work faster and smarter(Chen, & Paulraj, 2004).

1.1.2 Crown food limited

Crown Foods Ltd. produces mineral water and juices. It offers bottled natural mineral water; water with mineral and salts; and bottled water for sports applications. The company also provides fridges; dispenser installation, sanitization, and repair services; and bottled water dispensers for purchase or hire for commercial and domestic applications. It offers its products to hotels, restaurants, resorts, spas, and casinos. The company sells its products through distributors and online in East African Countries, as well as Sudan, Ethiopia, Rwanda, and Burundi. The company is based in Nairobi, Kenya. As of November 30, 2010, Crown Foods Ltd. operates as a subsidiary of SABMiller plc (Waters, 2006).

1.3 Statement of the problem

The inventory management of food processing companies in the recent decades has been facing challenges of non- performance due to poor cost control, failure of production, increased cost, lack of available supply. The overall operations of supply chain are affected by the increase of demand uncertainty. Inventory control is an important part in supply chain management. It's shown that the result of this study is valuable to reduce the total cost of inventory and improve the performance of supply chain (Roumiantsev & Netessine 2005). Neglecting the importance of inventory in any organization can lead to the closing down of the company, especially if the factors of production are not well managed in order to meet customers' needs. The inventory problem consists of having insufficient supply of raw material, finished goods and parts components. The stock of items must be reasonable, meaning that it should not be too much or too little. The company should be in a position to meet customers' demand in terms of quantity and quality. Inventory management is of great importance especially for managers who must decide how to administer the rest of the logistics system more creatively in order to ensure that customer service does not suffer as a result of lower inventory levels. That's the reason why inventory management requires a particular attention or the support of the entire company's management levels in order to meet customers' satisfaction (Brudan, 2010). There is no study that has been conducted on effects of inventory management on performance of food processing companies in Kenya. The purpose of the study is to determine the role of inventory management on performance of food processing Companies in Kenya.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

A Theoretical review is a set of statements or principles devised to explain a group of facts or phenomena especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena (Kothari, 2004). Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter. It comprises the conceptual frame work, theoretical review, and empirical review, critique of the review and the research gap of the study.

2.1.1 Management Theory

Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims (Koontz & Wehrich 2000,). In its expanded form, this basic definition means several things. First, as managers, people carry out the managerial functions of planning, organizing, staffing, leading, and controlling. Second, management applies to any kind of organization. Third, management applies to managers at all organizational levels. Fourth, the aim of all managers is the same to create surplus. Finally, managing is concerned with productivity this implies

effectiveness and efficiency. Managing, like all other practices whether medicine, music composition, engineering, accountancy, or even baseball is an art; it is know-how. It is doing things in the light of the realities of a situation. Yet managers can work better by using the organized knowledge about management. It is this knowledge that constitutes science. However, the science underlying managing is fairly crude and inexact. This is true because the many variables with which managers deal are extremely complex. Nevertheless, such management knowledge can certainly improve managerial practice. Managers who attempt to manage without management science must put their trust to luck, intuition, or what they did in the past (Locke & Latham, 2002).

2.2.2 Stochastic Inventory Theory

According to Zheng, (2002), for most order quantity/reorder point inventory systems, the stochastic model, which specifies the demands as stochastic processes, is often more accurate than its deterministic counterpart the EOQ model. However, the application of the stochastic model has been limited because of the absence of insightful analytical results on the model. This paper analyzes the stochastic order quantity reorder point model in comparison with a corresponding deterministic EOQ model. Based on simple optimality conditions for the control variables derived in the paper, a sensitivity analysis is carried out, and a number of basic qualitative properties are established for the optimal control parameters. The main results include the following: (1) in contrast to the deterministic EOQ model, the controllable costs of the stochastic model due to selection of the order quantity (assuming the reorder point is chosen optimally for every order quantity) are actually smaller, while the total costs are clearly larger; the optimal order quantity is larger, but the difference is relatively small when the quantity is large; the cost performance is even less sensitive to choices of the order quantity; (2) the relative increase of the costs incurred by using the quantity determined by the EOQ instead of the optimal from the stochastic model is no more than 1/8, and vanishes when the ordering costs are significant relative to other costs(Donaldson, 2001), .

2.1.3 Multi-Echelon Inventory Model

According to Stephen C. Graves (2006), this is to address the inventory stockage levels in a multi-echelon inventory system for a repairable item. In its simplest form the multi-echelon system consists of a set of operating sites supported by a centrally-located repair depot. Each operating site requires a set of working items and maintains an inventory of spare items. The repair depot also holds an inventory of spare items. Item failures are infrequent and are replaced on a one-for-one basis. In this paper we present an exact model for finding the steady-state distribution of the net inventory level at each site. This model assumes that the failures are generated by a compound Poisson process and that the shipment time from the repair depot to each site is deterministic. No assumptions are made with regard to the repair cycle at the depot. We contrast this model with existing models for these systems. Based on the exact model we present an approximation for the steady-state distribution for the case with ample servers at the repair depot. We show that this approximation is very accurate on a set of test problems (Locke, & Latham,2002).

2.2 Factors influencing Performance of Food Processing Companies in Kenya

This study highlights a number of critical factors which influence performance of food processing company in Kenya (Jabareen, 2008).

2.2.1 Increased production

The new millennium features an increased number of world class competitors forcing organizations to improve their internal processes, in order to stay in competition. Sophisticated customers no longer talk

about price increases- they demand price reduction. As organizations capabilities improved further in the 1990s, managers began to realize that materials and services inputs from suppliers had a major impact on their ability to meet customer needs, this led to an increased focus on inventory, not enough getting to keep inventory at sufficiently high level to perform production and sales activities smoothly but also to minimize investment in inventory at minimum level to maximize profitability (Monczka, 2008).

2.2.2 Cost control

Whether you are making an adjustment to record monthly sales or to account for inventory loss, you must determine the cost of the items. The cost includes the actual price of the goods and also any shipping or freight costs you must pay to receive the items. Inventory cost does not include outbound freight to ship orders to customers, interest paid if you finance your purchases, storage or warehousing of your inventory or insurance on the inventory in your possession (Roels, & Perakis, 2006). Effective cost management and reduction in inventory management can be a road map to achieving your most critical organizational objectives. With careful planning and good cost reduction techniques and planning, purchasers by use of inventory management can save big amount of company's budget major concepts in cost in purchasing are price, cost, and total value analysis. The nature, purpose, scope and benefits of inventory management in reducing costs associated with inventory make it suitable for different applications (Marcus and Keil, 2004; Kaplan and Sahney, 2000). Characteristics of inventory management are highlighted to have important determinant of cost reduction in organizations. The value of inventory management is defined as the benefit over costs of implementing. Inventory management is justified only when the perceived benefit is large enough to cover the cost. Inventory management offer a practice-intensive learning experience to anyone responsible for selecting suppliers, negotiating prices and fees, and purchasing goods and services. Adoption of inventory management is effective on Cost Management in performance of food processing companies.

According to (Shaw & Subramaniam, 2002), the value of inventory management can be defined as price benefits plus transaction minus technology lock in cost. Price benefits result from saving in theft, obsolesce, damage, holding capital and cost of ordering, cost of carriage and shortage cost. Lower inventory cost is a definite advantage for the company that effectively controls its inventory. Business owners need to fully understand the costs of carrying inventory, not just how much the inventory costs to purchase. Inventory carrying costs consist of all the expenses a company incurs for owning inventory. These expenses include the cost of capital, storage and risks costs (including obsolescence, damage, theft and deterioration) plus the appropriate taxable amounts. Effective inventory control reduces these costs because it reduces the total amount of inventory required to manage the business. Inventory control monitors the level of inventory and proactively manages obsolescence and deterioration by ordering in the appropriate quantities. Effective inventory control also reduces storage costs, because it orders enough inventories to fill consumer demand and not much more (Perakis, &Roels, 2010). Well-defined inventory control policies can reduce the labor costs associated with managing the inventory. Each time inventory gets handled, whether to move it from one location to another, to retrieve it for order picking or to put it away for storage, it involves labor. This handling makes up part of the cost associated with managing inventory. Companies prefer to handle the inventory as little as possible. When a company constantly searches for lost inventory, moves inventory from one location to another because of poor space utilization or handles the inventory multiple times, it results in increased labor costs. Properly managed inventory reduces these incidents and reduces the labor cost associated with the inventory (Jordan 2007).

2.2.3 Reduce loss

Many companies are faced by the challenges of increased loss in inventory due to poor inventory management. Whether you are making an adjustment to record monthly sales or to account for inventory loss, you must determine the cost of the items. The cost includes the actual price of the goods and also any shipping or freight costs you must pay to receive the items. Inventory cost does not include outbound freight to ship orders to customers, interest paid if you finance your purchases, storage or warehousing of your inventory or insurance on the inventory in your possession (Lysons and Farrington, 2006). Obsolete Merchandise, when a company takes a physical inventory count at the end of a period, it may discover obsolete or out-of-date merchandise. When this happens, the difference in cost needs to be recorded on the books to keep the inventory account as accurate as possible. If a company has 100 items recorded on the books for \$10 each, but it figures the items are really worth only \$6 each, an adjusting entry needs to be made. In this case, an entry of \$400 would be debited to the Cost of Goods Sold account and \$400 would be credited to the Inventory account. This reduces the cost of inventory shown in the bookkeeping records (Roels, &Perakis, 2006).

Damaged Goods, often, a company accepts returns that are damaged goods. These goods are sometimes returned to the manufacturer, but not always. If they are not returned to the manufacturer, the company must write off the damaged goods so they are not part of the inventory count. To do this, the journal entry would be a debit to Cost of Goods Sold and a credit to Inventory (Jordan,2007). Theft, no matter how good a company's internal controls are, theft is bound to occur. The difference between what the inventory is supposed to be and what it is calculated at is usually because of theft by employees and customers. The inventory account needs to be adjusted because of this. When theft is discovered during a physical inventory count, the business must debit the Cost of Goods Sold account and credit the Inventory account(Stevenson, &Hojati, 2007).

2.2.4 Continuous supply

For the past several years, organizations have focused on cutting supply chain and logistics costs. Their efforts have been partially successful, but they have left a lot on the table, not only in terms of cost reduction opportunities, but also productivity and quality. Applying continuous supply principles to supply chain and logistics operations is one way organizations have improved continuous supply of raw materials and finished goods. Inventory management is a team-based form of continuous improvement that focuses on identifying and eliminating waste and activities that do not add value for the customer. After all, customers are ultimately paying for the end product or service, which to them is the value-added effort of transforming raw materials into finished goods. By this definition, activities that don't add value to the customer, such as product being stored, inspected, or delayed and is 100 percent waste(Richard et al. (2009).

In most supply chains, the full cycle time of when material or information enters the supply chain until it is delivered to the customer is primarily waste. Little of this processing time is value-added from the customer's viewpoint. Many manufacturing professionals refer to this cycle time as dock-to-dock time. The shorter the dock-to-dock time, the more lean the manufacturing process. The same can be said of your supply and demand chain (continuous supply). In lean terms, supply chain and logistics areas are frequently viewed as a box (one activity, such as warehousing) or a line (transportation) on a value stream map, which is a form of process flow mapping unique to lean. Value stream mapping separates value-added and non-value-added activities starting at the customer and working its way through the system back to the supplier. Many concepts and tools in the continuous practitioner's toolkit can be applied to your supply chain and logistics function. Some are relatively simple and easy to understand, such as 5S-Workplace Organization, Visual Workplace, and Layout. Others, such as Batch Size Reduction, Quick Changeover, and Total

Productive Maintenance (equipment-related waste), are more complex. All require ongoing training, support, and commitment from both management and the rank and file. To get started requires a fundamental understanding of what is non-value-added or waste in the eyes of both the ultimate customer and the parties downstream who you are giving material or information to (Stevenson, & Hojati, 2007).

2.3 Empirical review

In a dynamic environment, maintaining a competitive advantage is a major survival factor. The advent of inventory management has led to a more complicated operating environment. Not only does the individual firm have to maintain its competitive edge, the entire supply chain must be competitive. The individual members of the inventory department cannot function without economies, quality and service performance of the other supply chain members. The purpose of a competitive inventory management system is to drive the supply chain towards continuous improvement. The main objective of inventory management is to maintain inventory at appropriate level to avoid excessive or shortage of inventory because both the cases are undesirable for business (Benton, 2007)

3.0 RESEARCH METHODOLOGY

3.1 Research design

The study design that was appropriate to use was descriptive research design. According to Mugenda & Mugenda, (2009), a good research design is characterized by its ability to detect the relationship among variables, its appropriateness to research questions, amount of errors being small and its ability to yield and provide an opportunity from considering different aspect of a problem. The researcher used descriptive research to find out about the inventory management processes in both companies and compare them against the stated objectives. Descriptive research is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way (Carolado, 2009).

3.2 Sampling Procedure and Sample Size

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole. A good sample should be adequate and representative of the underlying population. A sample of 10% is an adequate sample in a descriptive study of this nature as supported by (Kombo & Tromp (2006). Sampling as a process of selecting units from a population of interest so that by studying the sample, one may fairly generalize results and attribute it to the population from which the units were chosen. It is the process of selecting a number of objects from a population. This process is carried out in such a way that the selected members of the population have characteristics representative of the entire population. Mugenda & Mugenda, (2003) states that stratified sampling are applicable if a population from which a sample is to be drawn does not constitute a homogeneous group. Simple random sampling was then used to select 30% of the population from each stratum. This led to a total of 110 respondents as the sample size for the study. A sample size of 10 % is justifiable since according to Mugenda & Mugenda (2009) 10% of the sample gives unbiased representation of all respondents' opinions in the target population and this assists in generalization of research findings when the study design is descriptive. The general procedure for taking a stratified sample was to stratify population, defining a number of separate partitions using sample size, and then the researcher combined the results to obtain the required stratified sample. The sample was therefore drawn from each stratum from which respondents was selected. The study took a proportion of 10% from each category to give a sample size of 110. The sample population of the study was thus 110 respondents i.e. 10% of the study population as shown in Table 1.

Table 1: Sample size

Category	Target population	Sample size	Percentage
Top Management	20	2	10%
Middle Level Management	80	8	10%
Lower Level Management	1000	100	10%
Total	1100	110	10%

3.3 Data Collection and analysis

Data was collected by use of self-administered semi - structured questionnaires which were hand delivered to the respondents and collected after they were completed. This method was adopted because it covered all the areas that the researcher intended to cover and the perception that the respondents were well versed with the subject under research, thereby requiring no guidance when responding to the questions. The data collected was inspected, filtered, transformed and modeled with the goal of highlighting useful information and suggesting conclusions. Descriptive statistics was employed to analyze the data. Tables and other graphical presentations as appropriate were used to present the data collected for ease of understanding and analysis. Cooper and Schindler (2003) notes that the use of percentages is important for two reasons; first they simplify data by reducing all the numbers to range between 0 and 100. Second, they translate the data into standard form with a base of 100 for relative comparisons. The mean score for each attribute was calculated and the standard deviation used to interpret the respondents deviation from the mean. The results were presented on frequency distribution tables, pie charts and bar charts. Here the interest focused on frequency of occurrence across attributes of measures. A multiple regression model was applied to determine the relative importance of each of the variables with respect to performance of food processing companies in Kenya as shown below.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Where;

Y= Performance of food processing firm

a = Constant

b₁, b₂, b₃ and **b₄**=Regression coefficients of predictors in the model

X₁= Cost control; **X₂**=Increased production; **X₃**= Minimized loss; **X₄**= Continuous supply

e = error term

4.0 Empirical Results and Discussion

The study sought to establish the influence of inventory management on performance of food processing companies in Kenya. Specifically, the study focused on cost control, maintaining production, minimized loss and continuous supply.

4.1 Cost control

The study sought to investigate the influence of cost control on the performance of food processing companies in Kenya. Specifically the study focused on carrying cost, shortage cost and ordering cost

Carrying cost

Table 2: Carrying cost

Response	Frequency	Percent
Yes	75	68.6
No	35	31.4
Total	110	100.0

An analysis of the respondent's opinion the effect of cost control revealed the 68.6% of the respondent confirmed that inventory management influence organization performance 31.4% did not confirm.

Shortage cost

Majority (74.3%) of the respondent interviewed strongly disagreed with the assertion that their organization had stock shortage. This could possibly indicate that stock shortage was not among the challenges faced by the performance of organization.

Table 3: Shortage cost

Response	Numbers	Percentage
Yes	43	25.7%
No	67	74.3%
Total	110	100.0%

Ordering cost

An analysis of ordering cost in inventory management revealed that majority 73.3% of the respondent interviewed strongly agreed that their organization experience high ordering cost.

Table 4: Ordering cost

Response	Numbers	Percentage
Yes	35	26.7%
No	75	73.3%
Total	110	100.0%

4.2 Increased Production

The study sought to investigate the influence of inventory management on the increased production of organization performance. Specifically the study focused on meet demand, stock turnover, identifying opportunity

Meet Demand

An analysis of the respondent level of agreement with the assertion that inventory management influenced increased production was (60%), while 40% of the respondent disagreed with the assertion.

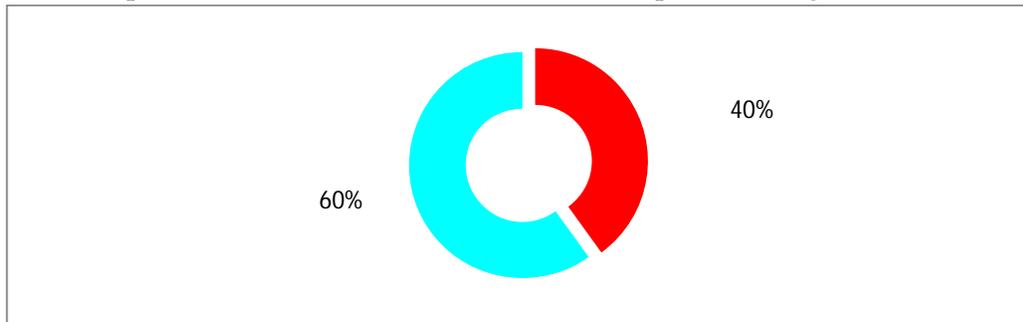


Figure 1: Meeting Demand

Stock Turnover

An analysis of respondent level of agreement with assertion that inventory management influenced stock turnover revealed that majority (78%) agreed with the assertion that stock turnover influence organization performance. This could probably explain the reasons as to why many organizations had not adopted inventory management despite encouragement from the government.

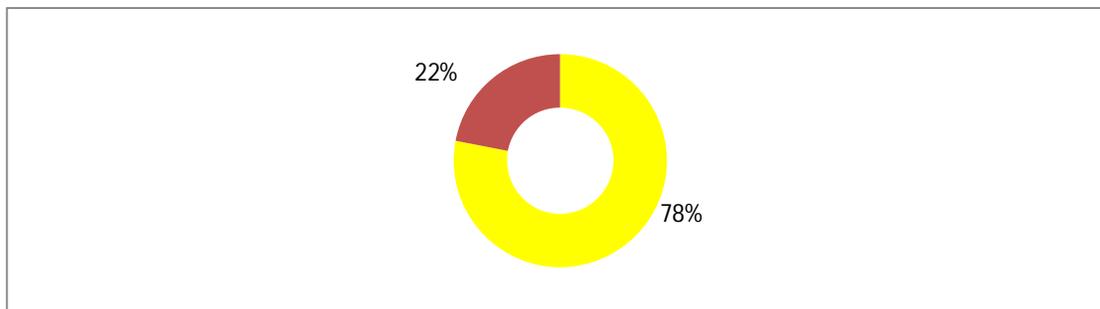


Figure 2: Increased Stock Turns Over

Identifying opportunity

An analysis of respondent level of agreement with assertion that increased production has effect on identifying opportunity revealed that majority (62%) agreed with the assertion that inventory management influences increased production of an organization performance.

Table 5: Identifying Opportunity

Response	Numbers	Percentage
Yes	28	38%
No	72	62%
Total	110	100.0%

4.3 Minimized loss

The study sought to investigate the influence of minimized loss on organization performance in Kenya. Specifically the study focused on minimized theft reduced waste and obsolesces.

Minimized theft

The study sought to establish the extent of how minimized theft influences the organization performance. 32% of the respondents indicated that minimized theft does not influence organization performance, while 68% indicated that it influence organization performance.

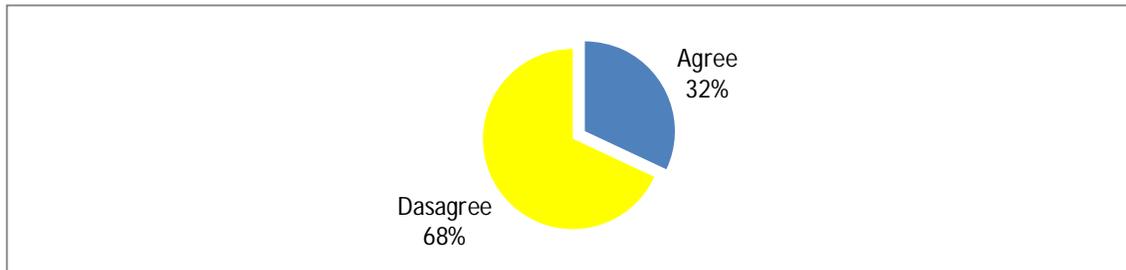


Figure 3: Minimized theft

Reduced waste

The study sought to find out whether reduced waste influence organization performance. Figure 4 shows that 29.3% of the respondents indicated that reduced waste influence the Organization performance to a very great extent, 17.3% indicated that reduced waste influences Organization performance to a great extent, 29.3% indicated that reduced waste influence the Organization performance to a moderate extent, 18.8% indicated that reduced cost influence the organization to a low extent while 5.8% indicated that reduced waste influence the organization performance to a very low extent.

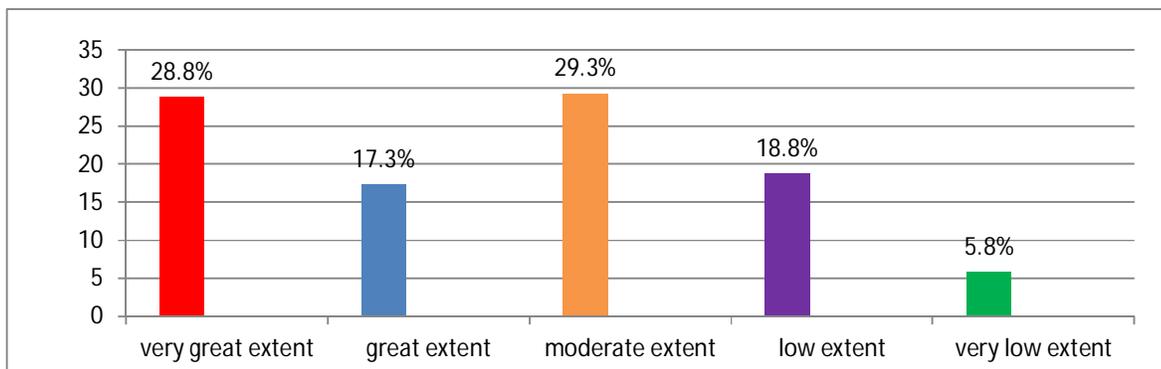


Figure 4: Technical skills

4.4 Continuous Supply

The study sought to investigate the influence of continuous supply on the performance of food processing companies in Kenya. Specifically the study focused on raw material availability, finished goods availability and work in progress.

Raw material availability

Most 60% of respondent interviewed said that raw material availability influence organization performance, while 40% indicated that raw material availability does not influence organization performance.

Table 6: Raw Material Availability

Response	Numbers	Percentage
Yes	70	60%
No	40	40%
Total	110	100.0

Finished goods availability

From the finding, 62% of the respondents indicated that finished goods availability influences organization performance while 38% indicated they don't influence.

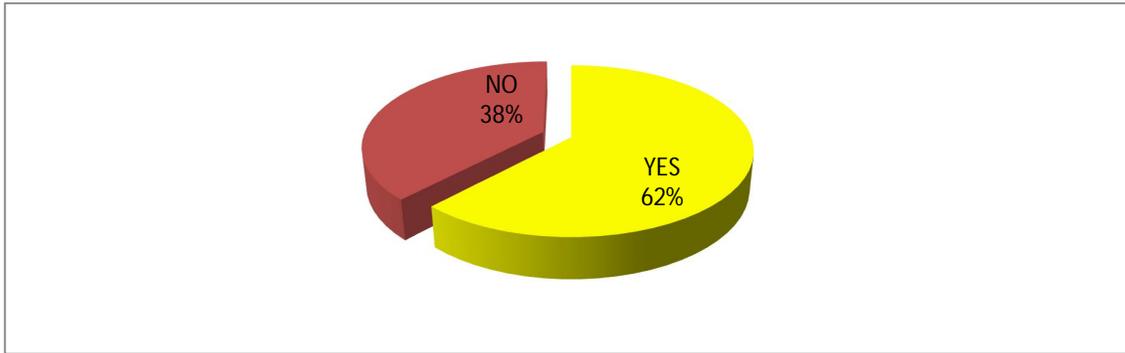


Figure 5: Finished Goods Availability

4.5 Regression Analysis

In this study, multiple regression analysis was conducted to test the influence among the predictors. Regression analysis shows the relationships inventory management and performance of food processing firms.

Table 7a: Model Summary

Theory	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.846	0.712	0.709	0.073

Table 7b: Model Estimates

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t-value	P-Value
Constant	1.024	0.142		2.10	0.000
Cost control	0.482	0.355	-0.201	0.249	0.003
Continuous supply	0.323	0.102	0.102	-0.245	0.002
Minimized loss	0.051	0.104	0.417	0.109	0.001
Increased Production	0.012	0.110	0.691	0.131	0.005

a. Dependent Variable: Performance of food processing firms

R – Squared is commonly used statistic to evaluate model fit. The R^2 also called the coefficient of multiple determinations is the percent of the variance in the dependent or jointly the independent variables. 84.6% of variance in the performance of food processing firms and this seen as the variables of inventory management. It's therefore true to conclude that the inventory management is crucial in performance of food processing firms. The equation associated with the above results is given by

$$Y = 1.024 + 0.482 X_1 + 0.323 X_2 + 0.051 X_3 + 0.012 X_4$$

According to the regression established the researcher was interested in comparing the contribution of each variable that is taking all factors (Cost control, Continuous supply, minimized loss, Increased Production) it was noted has 1.024. In this study, it was found that all the variables had probability value of less than 0.05. This indicates the variables were highly statistically significant and hence influence performance of food processing firms. It is clear that proper inventory management is very crucial performance and advancement of food processing firms.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The paper provides an understanding of the challenges faced by organization on poor performance. The results have shed light on the state of inventory management practice and use of local organizations in this area, and show currently adopted technologies and the barriers that prevent their optimization. The findings of Mole, (2000) show that there is a need for support for the food processing companies to be able to better benefit in inventory management. Creation of more widespread awareness about inventory management, better provision of the requisite technologies, as well as adequate training and skills upgrading and updating are some of the support that would help organization plan strategy. The results clearly indicate the necessity to provide support to organization if they are to successfully manage inventory. Accordingly, support to overcome or alleviate the identified barriers of inventory management need to be recognized. However, most of the businesses are not confident with inventory management as technique of influencing performance of food processing companies (Richard et al. 2009).

5.2 Recommendations

The study recommends that inventory management should be well articulated, there should be increased support for training to improve the inventory management. It is also recommended that investors officials should be part of the inventory management team for this will reduce loss of inventory. The study therefore recommends that in order to ensure that the organization remain sustainable, they should procure employees that are competent in inventory management.

The study also recommends that cost control should be observed well and proper training should be encouraged to improve the current used methods. The study also recommended that modern technology should be used which is more efficient and removes bulk of files storage in hardcopy.

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