



INFLUENCE OF VENDOR MANAGED INVENTORY ON PERFORMANCE OF RETAIL OUTLETS IN KENYA. A CASE OF TUSKYS SUPERMARKET LIMITED

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Accepted: October 22, 2018

ABSTRACT

The main objective of the study was to investigate the influence of vendor managed inventory on performance of retail outlets in Kenya with specific reference to Tuskys supermarkets Limited. The study reviewed relevant design with survey of a total of 400 employees working at Tuskys supermarket headquarters offices situated in Nairobi. The employees were selected from; supply chain management department, focusing on top management, middle level management and junior staff. The study adopted a descriptive research design, with stratified random sampling technique to select a sample size of 80 respondents. Questionnaires were used as the main data collection instruments and a pilot study were conducted to pre-test questionnaires for validity and reliability. Data were analysed using descriptive statistics and inferential statistics. This was done by the use of SPSS Version 23. The findings indicated that Information sharing, Strategic Partnerships, information communication technology and Inventory control limits shared a variation of 52.8 % of performance of retail outlets. The researcher recommended that retail outlets should ensure that they become transparent with their suppliers, that there should be continuous replenishment of fast moving items like household items and consumables, the researcher further recommended that they invest in flexible communication channels to ensure real-time communication with their suppliers. It further recommended that supply chain management should ensure that they partnered with suppliers, who supply strategic items, in order to ensure that they are assured of delivery and commitment by suppliers. The researcher further recommended that procurement should take advantage of transactional kind of relationship especially with those suppliers who supply routine items like stationeries. It further recommended that Tuskys should invest heavily on ICT, they should integrate their systems with suppliers to facilitate JIT systems, and this would help them eliminate inventory carrying cost. Supermarkets should observe inventory levels, that is critical fast-moving products like household items and consumables items should not come below the minimum inventory levels and also certain items should not go beyond maximum inventory levels, especially slow-moving items like electronics.

Key Words: Information Sharing, Strategic Partnerships, Communication Technology, Inventory Levels

INTRODUCTION

Vendor-managed inventory (VMI) is a business strategy where the buyer provides the needed information to a vendor concerning the needed goods and the supplier ensures he maintains an inventory level of the products at the location of choice of the buyer. The strategy allows the buyer to have the necessary level of inventory by staying up to the changes in buying habits of users in the market. VMI is one of the most efficient business models used by supermarkets like Wal-Mart and a lot more of global retailers. Oil companies also borrow from the VMI concept to help them maintain optimum the fuel inventories at their service stations.

VMI enables an understanding between the supplier and manufacturer by using EDI (Electronic Data Interchanges) software and other statistical concepts to forecast the buying habits of buyers in the supply chain. Kenya has had a tremendous increase in the number of supermarkets due to increased urbanization which results from rural-urban migration; an increased middle class and change in lifestyles that has enhanced competition in the market. VMI has become a topic for discussions in areas where there is need to discuss and encourage partnership and collaboration and information sharing among business people (Angulo, 2007). Vendor managed inventory (VMI) was mainly implemented in the eighties by companies like Wal-Mart and P & G. The concept was later implemented by companies in other fields, such as GlaxoSmithKline, Electrolux Italia Nestle (Micheau, 2015).

Looking back at the implementation of VMI in the early eighties the importance of it has been visible by the reduction of inventory costs by companies like Wal-Mart and P & G. VMI has also been popularised and used among grocery and clothes industries trying to achieve efficient, effective and quick consumer response and to also ensure goods are available when they are needed (Waller, 2009). Cases of successful VMI implementation have been popular in many international companies. The

companies were able to: reduce customer demand uncertainty, decrease levels of inventory, minimise stock-out, enable flexibility in production, proper plan and distribute and improved customer services (Disney and Towill, 2008).

Both small and large companies in East African countries for instance Rwanda, Uganda and Tanzania use Vendor managed inventory to manage their inventory and business processes. VMI is a complete business management system packed with productivity and efficiency features designed to enable businesses to automate, organize and adapt for sustainable competitive advantage. Companies across numerous industries rely on VMI software for inventory management, warehousing, purchasing, CRM, EDI, mobile computing, shipping and service management (Helpman, 2015).

VMI being a new business strategy in retail outlets in Kenya that started around 2002 and has grown steadily since then due to its use by many outlets (Benson, 2011). Successful implementation VMI in the retail supermarkets has led to the following positive results like management of risk, improved stock management and managing unpredicted demand changes among customers. However, VMI has some deficiencies brought about by lack of trust among the trading partners, high supplier turnover and financial incapability of new and small scale suppliers to implement this strategy. Customer satisfaction may be affected as a result of having goods once in the market characterised by high turnover of suppliers and the uncertainties of trusting a new supplier offering the same good as the previous supplier (Benson, 2011).

Tuskys is one of the largest retail outlets in Kenya and the African Great Lakes region. It employs nearly 7,000 people, 6,000+ in Kenya, and 900 in Uganda. As of June 2015, Tuskys owns and operates fifty two retail outlets in Kenya and Uganda. The supermarket was initially owned by the late Joram Kamau who died in 2002 which changed the ownership of the company. The supermarket is currently owned by five directors who are all brothers and sons of the late Joram namely

Mr.Kago, the chairman; Mr Mukuha, Managing Director and Mr Mugweru, Director of sales and marketing. The supermarket does not have any external director, it is a family owned business.Mr.Kago the chairman and his two sisters owns 30 percent shared equally, the four brothers own a 17.5 stake of Orakam which is the holding company of Tuskys Mattresses Limited(Tusky's report, 2017).

Statement of the Problem

The influence of Vendor Managed Inventory on performance of retail outlets is still a subject that for discussion that is yet to be solved and especially in Kenya where most supermarkets are yet to adopt this strategy. Retail outlets such as Walmart and Safeways faced challenges in the implementation of VMI resulting to 13% increase in inventory costs and 14% decrease in profit (Disney and Towill, 2008). Increased inventory cost caused leading supermarkets like Shoprite based in South Africa, experience a decline in profit margin by over 18% (Jeffrey, 2009).

Vendor Inventory management has not been effectively used by retail outlets in Kenya and as result major supermarket like Nakumatt and Uchumi have closed down some of their branches and the remaining ones such as Tuskys, Naivas and Ukwala have not been able to increase sales hence realizing their performance goals (Benson,2011). Tuskys which is currently the leading supermarket in Kenya in terms of the numbers of branches in the country has still not effectively implemented VMI to reduce costs related to inventory management affecting performance(Jeffrey, 2009).

At Tuskys supermarket Limited, the company had entered into contract with various suppliers in the implementation of VMI. However, this had brought numerous challenges to the organization ranging from stock run outs to overstocking due to supplier turnover and lack of trust. The excess inventory could have been eliminated through effective implementation of VMI and avoided Tuskys' estimated pre-tax loss of Sh262.3 million in the half

year ended December compared to a pre-tax profit of Sh106.9 million a year earlier after sales fell to Sh6.8 billion from Sh7.2 billion (Business daily, 2015)

Studies related to vendor managed inventory in Kenya include Obura (2015) on effects of vendor managed inventory on organization performance in a Manufacturing Industry: A Case of Unilever Kenya Limitedshowing that Strategic supplier partnership, ICT systems, and Information sharing impacts performance in an organization. Further, the study suggested that manufacturing companies should form strategic partnerships and use quality ICT Systems that creates an enabling environment for sharing information.

Objectives of the study

The general objective of the study was to examine the influence of vendor inventory management on performance of retail outlets in Kenya with reference to Tuskys Supermarket Limited. The specific objectives were:-

- To determinethe impact of information sharing on performance of Tuskys Supermarket Limited
- To establish how strategicpartnerships influences performance of Tuskys Supermarket Limited
- To evaluate how information communication technology influences performance of Tuskys Supermarket Limited
- To show how inventory control limits influences performance of Tuskys Supermarket Limited

LITERATURE REVIEW

Theoretical review

Resource Dependency Theory

Resource dependence theory (RDT) maintains that organisations try to diminish uncertainty and manage their level of dependency on other firms by putting the necessary structures on their relationship links with other firms. When firm interdepend on each other they are able to complement each other resources in that where on

firm does not have the capacity it can be complemented by their partner firm who has the capacity therefore building a resource pool that is unique and impossible to be copied by (Harrison, 2011). By cultivating such relationships firms are able to obtain sustainable competitive advantage and improve their organizational performance (Sambharya & Banerji, 2016; Paulraj & Chen, 2017). In this view, resource dependency theory is relevant to Vendor Managed Inventory because it elaborates the importance of firms interdepending on each other to enable them to achieve sustainable goals which otherwise would not be possible singlehandedly. Therefore, firms need to depend on the buyer-supplier relationship to achieve cooperation and coordination among supply chain players (Dyer, 2010). Therefore, information sharing is key in firms that depend on each other and this theory is supporting the variable of information sharing.

Network Theory

The Network Theory is one of the theories that emphasize on the importance of maintaining downstream and upstream relationships for the optimization of value within organizations. The theory explains that for an organization to succeed, it must establish a network with other firms to increase its value and operation (Katz, Lazer, Arrow, & Contractor, 2014). The theory suggests that organization networking with other firms will give them an advantage of each company complementing each other especially in areas where one company lacks capacity which is available in the other. The Network Theory explains that firms within a network interact with other companies by exchanging resources and adapting new processes that result in added value for these companies (Daastol & Stensrud, 2016). However, firms need to build mutual trust and openness with each other for success (Katz, 2014). For firms to form a strong network they must have shared interests, different resources, and effective two-way communication. The Network Theory will be useful in terms of providing concepts for measuring the relationship

that exists between retail supermarkets and their suppliers. The theory suggests that for supermarkets to establish a working relationship with suppliers there must be mutual trust, shared interest, differing resources, two-way symmetrical communication, and cognitive ties; this theory supports the variable of strategic partnership since for an organization to succeed it requires that network or strong chain of supply chain partners.

Theory of Economic Order Quantity Model

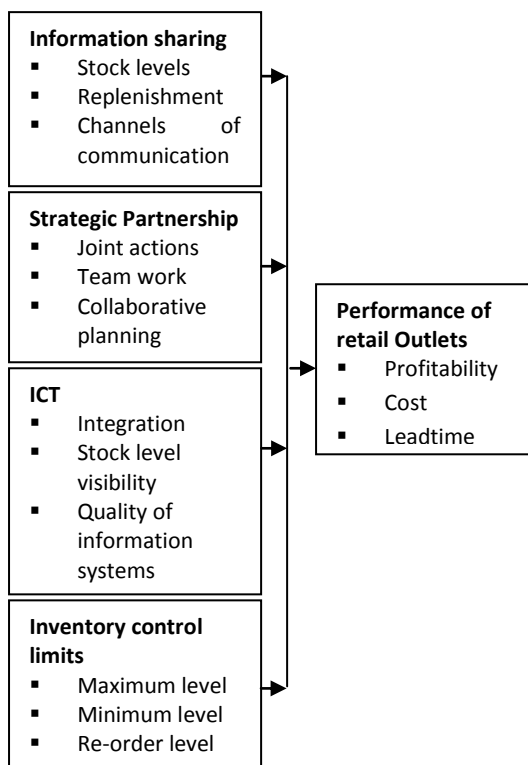
This is a mathematical model developed by F.W. Harris in 1913, to explain and establish the optimal inventory level (Arsham, 2016). Economic Order Quantity is the order quantity that minimizes total holding cost and ordering cost. Ordering costs are incurred while obtaining additional inventories. They include costs incurred on communicating the order and transportation cost. Holding costs are costs incurred on holding inventory which include the opportunity cost of money held up in inventories, storage costs, and spoilage costs. Additionally, the total inventory has a minimum point meaning when inventory reaches the minimum point then the total inventory costs are minimized. The economic order quantity is the level of inventory that minimizes the total of the inventory holding and ordering cost. This is an inventory control model that supports the variable of inventory control limits.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a theoretical model that aims at explaining what causes potential ICT users to want to use ICT or reject its use. TAM tries to establish the determinants of system use that predict users' attitudes towards the system. The determinants include the perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which the user considers using a particular system would result in improved job performance and on the other hand the perceived use refers to how the use of the system would be free of any effort at all (Davis, 2010). TAM is used in three different ways,

namely to compare different adoption models, develop extensions of TAM, or replicate the model. For instance Davis (2010), empirically compared the ability of TRA and TAM to predict and explain how the system was accepted or rejected by users of the voluntary usage of computer-based technology. Venkatesh and Davis (2010) developed and tested a theoretical extension of TAM, referred to as TAM2, which explains perceived usefulness and usage intentions of ICT behaviour with the help of social influence and instrumental processes, and Adams(2012) replicated Davis’ (2013) study. This theory supports the variable of ICT.

Conceptual framework



Independent variable Dependent variable

Figure 1: Conceptual framework

Information sharing

With the introduction of inter-organizational systems (IOS), enabled by Electronic Data Interchange (EDI) or the Internet, the concept of information sharing has been explained further by most refined supply chain management

models like Collaborative Planning, Forecasting, and Replenishment and Vendor Managed Inventory (VMI) all these systems have been used in various industries (Emigh, 2010). The causes and effects of the bullwhip effect have been studied in details (The bullwhip effects is the phenomenon that the size of inventory overages and shortages increase, the further a firm is from the final consumer in a supply chain), showing that this effect can be minimized through information sharing (Chen,2010)

Strategic Supplier Partnership

Lysons and Gillingham (2013) define strategic supplier partnership is an agreement between two parties in supply chain whose main aim is to develop a long term relationship based on trust, common objectives and goals while remaining independent organisations. The supplier-partners relationship emerged as a result of manufacturing companies’ movement towards the just- in-time (JIT) concept. Just like supplier partnership, JIT emphasises on reduction in waste, shortens lead times and improves the process (Bicheno, 2010). The idea is through the co-operation both parties benefit.

Vendor Managed Inventory (VMI) is a new concept for supplier partnerships with the customer. The relationship is ensured by the supplier making sure inventory is available at customer convenient location and the customer can buy the goods when needed. In VMI arrangements, the supplier has a responsibility to replenish stock, which includes ordering, managing the logistics to ship the material and counting inventory. Retailer can minimize the overall cost of their product and maximize their profit margin by passing the inventory costs to the supplier in VMI system (Loughrin, 2008). In their study, Zachariassen, de Haas, and Burkland (2014), found that using an inter-organizational approach increases the probability of success in the implementation of VMI. The inter-organizational approach enables the development of a system that promotes mutual goals and the objectives of both suppliers and the procuring entity.

Information and Communication Technology (ICT)

Implementation of VMI would not be possible without established electronic capabilities and EDI linkages which common features of VMI. Supplier and customers usually use Enterprise Resource Planning systems with an integrated database to enable a common understanding and analysis of business processes (Jakobs&Bendoloy, 2013). Extranets can avail the information required but same ERP systems enable conveyance of more profound and detailed inter-firm integration information on planning and execution of systems by ensuring full visibility through multiple levels of the supply chain can be provided (Jakobs&Bendoloy, 2013). Information systems that are linked help to contribute to a more collaborative planning. (Claassen) 2008, found in his research that quality IT infrastructures have high chances of achieving better results from implementation of VMI. VMI system can be programmed in such away it is either working via the customer or supplier IT system but if it is implemented with different suppliers then the solution should be owned by the customer (Tanskanen&Holmström, 2009).

Inventory Control Limits

The inventory control limits refer to how the supplier controls the inventory to avoid over holding stock and ensuring the stock is maintained at the optimum level (Elvander, 2007). In the implementation of VMI, it is the responsibility of the supplier to maintain a constant stock level within predefined limits. To ensure availability of inventory to consumers at all times the supplier should maintain minimum level. Fry, Kapuscinski, and Olsen (2012), compared performance of old retailer-managed inventory systems and vendor-managed inventory (VMI) with minimum and maximum limit levels. The results showed that for good maximum and minimum limits acquired 10 per cent to 15 per cent savings when moving from traditional retailer methods to VMI and that savings increase with higher levels of demand changes. On the other hand, Yao and Dresner (2008), stressed by

penalising the vendor due to stock outs can result to to a greater inventory reduction. The advantage of implementation of VMI is that it influences performance of most companies (Claassen, 2008).

Performance

The advantages of the VMI are clear since the adoption of the approach in the first implementation case in the early eighties. Some of the benefits of VMI implementation are: Customer demand uncertainties are reduced decreased of stock out number, and improvement of customer services (Aichlmayr, 2010; Kauremaa, 2009; Claassen, Van Weele, & Van Raaij, 2008). According to Sui (2010), VMI presents several benefits to both customers and supplier such as improved service level, inventory reduction, and reduced planning and ordering costs, ease in coordination supply process, and fewer transporters. Most studies indicate that VMI programs improve performance.

Inventory Management is very important for the performance and growth of procurement duties in a company. The profitability of an organization is linked to the amount of products sold which has a direct relationship with the quality of the product. Good inventory management saves the organization from poor quality production, dissatisfaction from seasoned customers, profit loss and good social responsibility (Johnson, 2008).

Empirical review

Information sharing

A study done by Noor &Kariuki(2015)concluded that 67.25 percent of the supply chain performance in the Kenyan retail sector was affected by factors includingquality management, buyer/supplier combination, information sharing, and cost level. Secondly, VMI system can be adopted by the supermarkets to help gain a competitive advantage. However, VMI integration is an expensive process for small retail outlets which form the biggest portion of retail outlets in Kenya. Therefore, VMI system is most suitable for large and medium size supermarkets that have the capacity and financial

capability and high quality ICT systems to run the system effectively. Baihaqi and Sohal (2015) on the effect of Information sharing in Supply Chains on organizational performance, the results show that information technologies and quality of information have positive influence in information sharing. The study findings show that information sharing is not directly related to performance of an organization. The relationship between information sharing and performance is affected by partnerships. This suggests that information sharing is important but insufficient unless coupled with factors like trust among partners to bring substantial performance improvements. According to Lewis (2016), on the effects of information sharing, organizational capability and relationship characteristics on outsourcing performance in the supply chain: an empirical study, gives an extension of previously done studies by examining the characteristics of relationship and the abilities of an organization which showed the influence of strong relationship on organizational performance. The article uses multiple regression based on the quantitative data collected from the research to analyze the relationship between information sharing and the results showed that there is a relationship between information sharing and performance.

Strategic partnership

According to Ngamau (2013) on influence of strategic partnerships on performance of insurance companies in Kenya, descriptive statistics and multiple linear regressions were used to analyse the data collected by examining the effect of the independent variables on the dependent variable (Organizational performance). The findings concluded that strategic partnerships contributed to organizational performance of the insurance firms in Kenya. Some of the identified outcomes from the partnerships between insurance companies and various partners include higher profitability, wider distribution of insurance products, higher retention rates of customers. The results showed that there is a positive influence of each independent variable on dependent variable

with the other independent variables held constant. According to Muiruri (2015), on strategic partnerships and performance of Equity Bank in Kenya. The study found that the partnerships enhanced the acquisition of new customer and creating a pool of funds to enable customers to acquire loans. It was concluded banks get a lot of benefits and challenges at the same time from strategic partnerships due to the high risks of trust involved. It is therefore important for companies to maintain high level of strategic partnership to be competitive. The study also provides information on the emerging trends in public-private strategic partnerships. It can be useful to different institutions in the public and private sector as they all manage their organizations and prepare for future challenges brought about by the environments in which they operate.

Information and Communication Technology (ICT)

According to a study conducted by Obura (2015), ICT systems used by Unilever Company affect the organizational performance and the researcher recommends that manufacturing companies should implement ICT Systems to establish efficient information sharing framework and a supportive environment.

According to Jepchumba and Noor (2015), on their study conducted at KCC identified that ICT systems had a positive effect on supply chain performance because it resulted in reduction on lead time and cost saving. The study recommends that the management of the company should adopt the use of ICT systems, effective top management support and accommodate supplier demand efficiently for improved supply chain performance.

Inventory control limits

According to Kimayo (2014) the role of Inventory control on Performance of Manufacturing Firms in Kenya, a case of new Kenya Cooperative Creameries. The study established that the specific objectives which included determining how inventory management cost reduction affects performance of manufacturing firms in Kenya, to assess how the

use of inventory control systems affects their performance, to investigate how lead time affects their performance and also to establish how supplier demand affects performance of the manufacturing firms.

It was found that organisational performance was enhanced by reducing ordering and holding costs. The reduction of cost is useful in equipping the organisation with the necessary equipment, training staff on the best way to manage stock and help to the organisation to be profitable. Factors such as inventory control system, information sharing and relationships affect the organisational performance of the manufacturing firms.

Performance

According to Kairu (2015) on the role of strategic inventory control on performance of manufacturing firms in Kenya: A case of diversity Eastern and Central Africa Limited. The study showed that accurate inventory control supports organizational efficiencies in terms of product supply to customers. Low inventory causes lost sales while higher inventory negatively affects the performance of the organization due to tying up of large capital. The study also established that the organization had adopted order fulfilment strategies such as make-to-order, assemble-to-order and engineer-to-order to increase efficiency in supplies. Further, it recommends that the management of manufacturing firms need to maintain up-to-date inventory control strategies. This ensures minimal investment in stock, allows money to be available within the organization for other purposes, keeps low ordering and stockholding costs and reduces the probability of becoming obsolete and physical deterioration. There is need for the management to adopt strategies such as assemble-to-order and engineer-to-order since in the competitive manufacturing sector because customer demands are likely to increase due to product quality improvement in parallel with product variety.

METHODOLOGY

The study implemented a descriptive research design to validate the relationship between the independent and dependent variables. A case study was used to narrow down the wide field of research into an easily researchable topic (Kothari, 2008). The design enabled the researcher to get the information pertaining current status of the problem under study and describe it in respect to the dependent and independent variables. The target population of this study was 400 employees working at Tusky's supermarket Limited selected from; Supply chain department, focusing on top management, middle level management and junior staff. These employees were targeted since they are relevant to the study on vendor inventory management functions. The data collected from the field was analysed qualitatively and quantitatively. Quantitative data analysis was done in electronic spreadsheet with the aid of Statistical Package for Social Sciences (IBM SPSS Version 23). The generated data from SPSS was analysed using descriptive and inferential statistics. Qualitative data was analysed using content analysis. Content analysis is research technique used to analyse detailed and systematic examination of the contents of a particular body of material for the purpose of identifying patterns, themes or biases. (Leedy & Ormrod, 2010).

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

Where

Y = Performance of retail Outlets

β_0 = Constant

X_1 = information sharing

X_2 = Strategic Partnership

X_3 = ICT

X_4 = Inventory control limits

$\beta_1, \beta_2, \beta_3, \beta_4$ = Regression co-efficient

ϵ = Error

RESULTS

Information sharing on performance of retail outlets

The study sought to evaluate the influence of information sharing on performance of Tuskys supermarket Limited. The results were as shown in table 1. The findings showed that 52% of the respondents agreed that sharing information about stock levels enhanced profitability. 78% were in agreement that information sharing on replenishment results in profitability. 72% agreed that sharing information on Re-order levels had led

to cost reduction. 76% agreed that sharing information by use of channels of communication enhanced profitability and 72% agreed that sharing information by use of channels of communication reduced lead time. The findings were in agreement with Baihaqi & Sohal (2015) which concluded that comprehensive information technologies and information sharing impact positively on supply chain performance.

Table 1: Information sharing

Information Sharing	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Sharing information about stock levels enhances profitability	0	1	47	40	12
Shared information on stock levels enhances profitability	0	1	21	41	37
Information on replenishment is shared which results in profitability	0	0	21	49	30
Sharing information on Re-order levels has led to cost reduction	1	0	27	60	12
Sharing information by use of channels of communication enhances profitability	0	1	23	37	39
Sharing information by use of channels of communication reduced lead time	0	2	27	46	26

Strategic Partnerships on performance of retail outlets

The study sought to establish how strategic partnerships influences performance of Tuskys supermarket Limited. The results were as indicated in table 2. The findings showed that 76% of the respondents were in agreement that joint actions enhanced profitability. 80% agreed that joint actions resulted in cost reduction. 81% agreed that team work was essential for a profitable organization. 85% agreed that team work reduced organizational cost. 41% agreed that collaborative

planning increased profitability and 48% agreed that collaborative planning was essential to ensure lead-time reduction. The findings were in agreement with Muiruri (2015) whose study established that strategic partnerships between Equity Bank and its partner organizations developed staff capacity and increase the service level. It enabled firms to create a pool of resources to handle challenges experienced thus, improving service delivery. The findings also recognized that partnerships improved customer acquisition through the creation of a pool of funds where consumers can take loans.

Table 2: Strategic Partnerships

Strategic Partnerships	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Joint actions enhances profitability	0	1	23	47	29
Joint actions results in cost reduction	0	0	20	54	26
Team work is essential for a profitable	1	0	18	64	17

organization

Team work reduce organizational cost	0	0	14	63	22
Collaborative planning increases profitability	1	18	40	37	4
Collaborative planning is essential to ensure lead-time reduction	2	9	41	41	7

Information communication technology on performance of retail outlets

The study sought to determine how information communication technology influences performance of Tuskys Supermarket Limited. The results were as indicated in table 3. The finding showed that 67% of the respondents agreed that integration enhanced profitability. 84% were in agreement that integration resulted in productivity. 81% agreed that stock level visibility enabled supply to automatically be delivered when needed hence profitability. 71% agreed that stock level visibility

enabled efficiency hence cost reduction. 74% agreed that quality of information systems was essential to realize profitability. 71% agreed that quality of information systems had reduced cost and 83% agreed that shared resources increased profitability. The findings were in agreement Jepchumba and Noor (2015) conclusion that ICT systems have a positive effect on supply chain performance, because it results in reduction on lead time when everything is done electronically thus saving a significant amount of cost.

Table 3: Information communication technology

ICT	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Integration enhances profitability	0	2	30	54	13
Integration results in productivity	0	1	16	67	17
Stock level visibility enables supply to automatically deliver when needed hence profitability	0	1	18	59	22
Stock level visibility enables efficiency hence cost reduction	1	3	24	42	29
Quality of information systems is essential in order to realize profitability	1	1	23	40	34
Quality of information systems has reduced cost	0	0	29	50	21
Shared resources increases profitability	0	0	18	67	16

Inventory control limits on performance of retail outlets

The study sought to assess how inventory control limits influences performance of Tuskys supermarket Limited. The results are as indicated in table 4. The findings showed that 73% of the respondents agreed that setting maximum levels avoided overstocking. 76% agreed that setting minimum levels cautioned the organization from

running out of stock and 66% were in agreement that re-order level enhanced efficiency hence cost reduction. The findings were in line with Kairu (2015) that accurate inventory control supports organizational efficiencies in terms of product supply to customers as low inventory causes lost sales while higher inventory impacts negatively on performance of the organization due to tying up of large capital resources.

Table 4: Inventory control limits

Inventory control limits	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Setting maximum levels avoids overstocking	1	1	24	63	10
Setting minimum levels cautions the organization from running out of stock	1	1	22	60	16
Re-order level enhances efficiency hence cost reduction	1	3	29	43	23

Performance of retail outlets

The study sought to find the respondents opinion on the indicators measuring procurement performance. The results were as indicated in table 5. The findings showed that 77% of the respondents were in agreement that supplier training effort had helped reduce costs. 71% agreed that supplier

training effort had reduced lead times. 75% agreed that financial support had helped reduced costs. 81% agreed that financial support had enhanced profitability. 71% agreed that supplier participation reduced costs in their organization. 76% agreed that supplier participation had reduced lead time in our organization and 83% agreed that communication enhanced profitability.

Table 5: Performance of retail outlets

Procurement performance	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Supplier training effort has helped reduce costs	0	2	21	56	21
Supplier training effort has reduced lead times	1	1	17	61	20
Financial support has helped reduced costs	1	3	20	54	21
Financial support has enhanced profitability	2	0	17	57	24
Supplier participation reduces costs in our organization	1	1	17	60	21
Supplier participation has reduced lead time in our organization	1	3	19	54	22
Communication can be said to be enhancing profitability.	2	0	14	60	23

Inferential statistics**Correlation Analysis**

The study carried out correlation Information sharing was found to be positively and significantly related to Procurement performance ($r = 0.452$, p -value <0.05) at 95% confidence level. Strategic Partnerships was found to be positive and significantly related to Procurement performance ($r = 0.299$, p -value <0.05) at 95% confidence level. Information communication technology was found to be positive and significantly related to

Procurement performance ($r = 0.618$, p -value <0.05) at 95% confidence level. Inventory control limits was found to be positive and significantly related to Procurement performance ($r = 0.667$, p -value <0.05) at 95% confidence level as indicted in table 6. This finding indicated that VMI had a significant influence of performance or retail outlets in Kenya.

The study adopted a regression analysis to establish the relationship of independent and dependent variables. It was notable that there

existed a relationship between independent variables and dependent variable. The coefficient of determination was between zero and one. The data showed that R squared value in this case was 0.528 .This implied that 52.80% variation in dependent variable (procurement performance) could be attributed to variations in the analysed independent variables (information sharing, Strategic Partnerships, information communication technology, Inventory control limits).

The Analysis of Variance (ANOVA), F-statistic test was used to test whether all the independent variables included in the model jointly influence on the dependent variable. The study results of the ANOVA Test or F-test in Table 8 indicated that the overall model was a good fit since the obtained F-count (calculated) value was 20.987 greater the F-critical value of 4.678 with significance of 0.002. Since the significance level of $0.001 < 0.05$ we concluded that the set of independent variables affected the procurement functions and this showed that the overall model was significant. Thus, the four variables played a significant role in the procurement performance of Tuskys Limited.

The study conducted a regression analysis so as to determine the relationship between the dependent variable and independent variables. The model to predicted procurement performance form information sharing, strategic partnership, CT and inventory control limits was : $(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon)$ becomes:

$$\text{Performance} = 1.408 + 0.217_{\text{info}} + 0.156_{\text{partner}} + 0.373_{\text{ICT}} + 0.351_{\text{Inventory}} + \epsilon$$

Table 9 indicated that the regression weight for Information sharing was positive and significant ($\beta= 0.217, t= 2.192, p < .05$), this indicated that a unit increase in Information sharing would result in 0.217 increase in Procurement performance of Tuskys Supermarket. The regression weight for Strategic Partnerships was positive and significant ($\beta= 0.156, t= 2.260, p < .05$), this indicated that a unit increase in Strategic Partnerships would result in 0.156increases in Procurement performance of Tuskys Supermarket. The regression weight for information communication technology was positive and significant ($\beta= 0.373, t= 3.211, p < .05$), this indicated that a unit increase in information communication technology would result in 0.373 increase in Procurement performance of Tuskys Supermarket. The regression weight for Inventory control was positive and significant ($\beta= 0.351, t= 4.653, p < .05$), this indicated that a unit increase in Inventory control would result in 0.351 increase in Procurement performance of Tuskys Supermarket. The beta coefficients indicated the relative importance of each independent variable (Information sharing, Strategic Partnerships, information communication technology and Inventory control limits) in influencing the dependent variable (Procurement performance of Tuskys Supermarket). Inventory control was the most important in influencing Procurement performance ($\beta=0.468$) followed by information communication technology ($\beta=0.385$) then followed by Information sharing ($\beta=0.225$) and the least was Strategic Partnerships ($\beta=0.204$).

Table 6: Correlations

		Procurement Performance	Information sharing	Strategic Partnerships	ICT	Inventory control
Procurement performance	Pearson Correlation	1	.452**			
	Sig. (2-tailed)		.000			
	N	80	80			
Information Sharing	Pearson Correlation	.452**	1	.409**		
	Sig. (2-tailed)	.000		.000		

	N	80	80	80		
Strategic Partnerships	Pearson Correlation	.299**	.409**	1		
	Sig. (2-tailed)	.007	.000			
	N	80	80	80		
ICT	Pearson Correlation	.618**	.650**	.455**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	80	80	80	80	
Inventory Control	Pearson Correlation	.667**	.522**	.301**	.579**	1
	Sig. (2-tailed)	.000	.000	.007	.000	
	N	80	80	80	80	80

** . Correlation is significant at the 0.05 level (2-tailed).

Table 7: Model Summary

Model	R	R Squared	Adjusted R Square	Std. Error of the Estimate
1	.727 ^a	.528	.503	.33675

a. Predictors: (Constant), Inventory control, Strategic Partnerships, Information sharing, ICT

Table 8: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.520	4	2.380	20.987	.000 ^b
	Residual	8.505	75	.113		
	Total	18.024	79			

a. Dependent Variable: Procurement performance

b. Predictors: (Constant), Inventory control, Strategic Partnerships, Information sharing, ICT

Table 9: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	1.408	.391		3.597	.001
	Information sharing	.217	.099	.225	2.192	.031
	Strategic Partnerships	.156	.069	.204	2.260	.027
	ICT	.373	.116	.385	3.211	.002
	Inventory control	.351	.076	.468	4.653	.000

a. Dependent Variable: Performance of retail outlets

CONCLUSION

The study concluded that sharing information about stock levels and replenishment enhanced profitability. In addition, sharing information on re-order levels had led to cost reduction, and enhanced profitability and sharing information by use of channels of communication reduced lead time.

The study also concluded that joint actions enhanced profitability, cost reduction. Team work

was essential for a profitable organization because a team helps reduce organizational cost. Collaborative planning increased profitability by ensuring lead-time reduction.

The study further concluded integration enhanced profitability by increasing productivity. In conclusion, stock level visibility enabled supply to automatically be delivered when needed hence profitability.

In conclusion, stock level visibility enabled efficiency and cost reduction. Second, the quality of

information systems was essential to realize profitability. Third, the quality of information systems reduces cost. Fourth, shared resources increased profitability. Fifth, setting maximum levels avoids overstocking as minimum levels cautions the organization from running out of stock. Sixth, re-order level enhanced efficiency and cost reduction.

RECOMMENDATION

The study recommended that; retail outlets should ensure that they become transparent with their suppliers. They should be continuous replenishment of fast moving items like household items and consumables. Retailers should invest in flexible communication channels to ensure real-time communication with their suppliers. Supply chain management should ensure that they partnered with strategic items suppliers to ensure that they are assured of delivery and commitment by suppliers. Five, procurement should take advantage of transactional kind of relationship especially with those suppliers who supply routine items like stationeries.

The researcher recommended that Tuskys should invest heavily on ICT, they should integrate their

systems with suppliers to facilitate JIT systems, and this will help them eliminate inventory carrying cost. The supermarket should observe inventory levels, that is critical fast-moving products like household items and consumables items do not fall below the minimum inventory levels and also certain items do not exceed maximum inventory levels, especially slow-moving items like electronics.

Areas for Further Research

The research concentrated on information sharing, strategic partnerships, information communication technology and inventory control limits support performance of retail outlets, which indicated that information sharing, strategic partnerships, information communication technology and Inventory control limits share a variation of 0.528 of Procurement performance. The findings note that there are other aspects influencing vendor managed inventory. Future researchers should investigate the influence of strategic partnership on organizational performance and influence of ICT on organizational performance.

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