



EFFECT OF INVENTORY CONTROL STRATEGIES ON PERFORMANCE OF RETAIL CHAINS IN KENYA. A CASE OF NAIVAS SUPERMARKET

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**EFFECT OF INVENTORY CONTROL STRATEGIES ON PERFORMANCE OF RETAIL CHAINS IN KENYA. A CASE OF
NAIVAS SUPERMARKET**

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ABSTRACT

This study pursued to evaluate the effect of inventory control strategies on the performance of Kenyan retail industry. Retail business is vital in any growing nation and account for over 65% of the GDP. This is why nations must continually invest in this industry. Over the previous two eras there had remained a steady growth of retail chains and most companies were fighting to be market leaders. Amid all this competition retail organizations continued to experience allot of challenges which includes but not limited to; looking for new markets, unplanned rapid expansion, poor governance and weak controls. All this was as a result of poor inventory control strategies. The broad purpose of this study was to analyze inventory control strategies effect on performance of retail chain in Kenya. Primary and secondary Data collection was done. Questionnaires were used to collect primary data and secondary data by use of journal, reports, books and the internet. This study examined the effect of consignment inventory and electronic data interchange (EDI) on the performance of retail organizations in Kenya with a keen interest on the employees of Naivas supermarket with a target population of 125. The sample study of the study was 95 and this was derived from Yamane formula (1967). This study analyzed both descriptive and inferential analysis. This study found out that there was significance relationship between the independent variable and dependent variable. Consignment inventory and electronic data interchange (EDI) had a positive correlation with performance in retail chains. This study recommended that for retail chain to continue increasing their performance they must embrace and focus more the inventory control strategies to have competitive environment in the dynamic business environment.

Key Words: *Consignment Inventory, Electronic Data Interchange (EDI), Retail Organization*

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INTRODUCTION

According to Rudrabasavaraj (2010) retailing plays a major part in the wealth of a nation as the final part of the vending process in which different function of sellers usually a store or a service establishment and the purchaser, an individual consumer and primary oriented to accomplishing the exchange of economic goods and services for the purpose of personal, family or household use. Kearney (2015) argued that Economic and GDP growth, coupled with an emerging shopping culture and a bang in shopping center space, is energizing the African retail sector. Africa especially the Sub-Saharan is still the next big thing, and likely continues to be for the next several decades. It is one of few markets with annual GDP growth of more than 5 percent. Its young and connected middle class is growing fast and still deciding on its favorite brands. In short, it is brimming with potential.

Kamau and Kagiri (2015), suggests that the aim of controlling inventory is to ensure that sufficient level of stock is often maintained, hence constant supply of stock must be in place to avoid issues of interruption in terms of sales and delivering service to consumers and equally maintaining sufficient stock, inventory control investment while keeping optimum level of stock and minimizing cost associated with inventory and time. Inventory control is concerned with how much stock is present at any given time and how to keep trail of it. Effective inventory control was ensure that funds are not tied up unnecessarily and threats of stock losses are reduced and cost of products and services are maintained, stocks are sufficient to meet the consumer demand.

According to (Ozer, 2011) the success of a product in today's global marketplace depends on the capabilities of firms on the supply chain, which includes successful stock management and control. Managers must therefore make information about inventory available and be able to quantify the value of information. Inventory control requires decision

tools that enable a coordinated decentralized inventory operations. Jacob, chase and Lummus (2014) argues that researchers over the years have fundamental problem that is affecting inventory control in matching supply and demand by efficiency coordinating the production and distribution of goods. Advancement in information and communication technology in today's dynamic business environment has increased and organization have equipped managers with ways of obtaining better timely information regarding demand lead times and assets and capacity. Customers on the other hand are also able to obtain vast amount of information about a product such as the physical attributes and availability. Consumers are constantly pressuring suppliers to simultaneously reduce costs and reduce lead time and increase the quality of product. Good inventory control therefore is no longer a competitive advantage but is an essential capability to survive in the global market.

According to Gareth (2015) Winning Africa requires more than just knowing that the market's future is bright. Entering or expanding in Africa requires preparation, a thoughtful process, and the right approach not to mention determination, commitment, and time. And selecting countries in Africa is more difficult than ever; there are no safe bets anymore. For many years, South Africa was seen as the gateway to Sub-Saharan Africa because it was better developed, because there was good infrastructure, because there was a market, because of its stock exchange, because there were facilities, and, lastly, because it was what everyone did. No one told you you're wrong when you enter through a region's most stable, most developed market. Gareth (2015) continues to say, a good starting point is to understand local markets as well as your competitive advantage in those places. The idea is to align your offerings by working off your strengths, and customize as necessary to be successful

According to a research conducted by Euro monitor (2017) the retailing market in Kenya has constantly experienced substantial growth over the period of review. This can be accredited to better purchasing power amongst the middle-class population and competition amongst modern grocery retailers in Kenya. Other key factors are improved infrastructure and inventory control strategies that have allowed for ease of movement of goods, therefore better products at cheaper rates for consumers, as well as promoted rapid retail expansion to untapped rural and urban markets and an enduring property boom allowing retailers to take up prime locations near residential areas for customer convenience. Increased investment by leading international retail firms has further boosted consumer confidence, encouraging spending and growing international brand demand.

Naivas supermarket is among the leading retail chain based in Kenya, with its headquarters in Nairobi. Muasa (2014) noted that Naivas supermarket has a network of branches in major town centers in the countryside. The supermarket was registered on 24th July 1990 as a Rongai self-service stores limited in Nakuru County. Rongai Nakuru store was later tainted to be Naivasha self-service store limited and later rebranded to be the current Naivas limited. In 2007 Naivas limited became a privately owned business whose shares were held by descendants of its initiator Peter Mukuha Kago who later died in May 2010. Ngige (2014) pronounced that the supermarket has grown its network to 45 branches spread all over the country in major towns like; Nakuru, Eldoret, Embu kapsabet kisii kisumu Nairobi and, with its latest branch to be opened in kitengela as an anchor tenant. The company's central warehouse and head office are located in Nairobi's industrial area at Sameer Business Park.

The Kenyan retail space has continuously grown over the last decade, with majority of supermarket fighting for prime locations in major towns. Kibwage, Odondo and Momonyi (2008) attribute this to the rapid

market rate and annual growth rate of shopping culture amongst the Kenyan middle class. Other supermarket outside Kenya like choppies from Botswana, Carrefour from France, Game and lately Shoprite both from South Africa have entered the Kenyan retail market and are doing better. While this is the case the retail sector is still facing challenges. According to Panigrahi and Kumar (2013), over the past years retail industry has faced many challenges in terms of growth, service delivery, customer focus and fulfilling stakeholder's needs. In Kenya many retail chains are struggling to thrive and key players move or close down operations or even sale their businesses. This trend has been evident by the close of supermarkets like Ukwala, Wool mart, Jack and Jill and most currently Uchumi supermarket and Nakumatt supermarket respectively. Mwangi, (2017) argues that this has been triggered by the dynamic scenery of the business atmosphere, competition and creative destruction by small traders who have given customers a bargaining power to choose from a variety of service and service provider.

Statement of the problem

According to Sollish, Fred and Semanik (2012) controlling the flow, storage and stocking levels of materials or stock is a key function of supply chain management. Firms involved mostly in operations, manufacturing, and retail who believe material management and supply chain management is core competency. Inventory must be closely controlled and monitored since it absorbs a big deal of the organization's available working capital. Chopra and Meindi, (2013) suggests that Organizations that own and manage inventory are constantly seeking ways to decrease the amount of stock in order to decrease the amount of non-productive inventory that are tied up. If inventory is not controlled it does not do anything expect consume valuable space and requires a lot of cycle counting. Global giant companies like coca cola founded in 1886 and the world leading manufacturer , marketer and distributor of non-

alcoholic beverages, concentrate and syrup and Unilever have continually grown because of effectively implementing inventory control strategies, particularly the electronic data interchange at the sale point, vendor managed inventory that has enabled to build the collaboration between the suppliers and buyers or organization and proper demand forecast have been put in place to allow for proper flow of information about customer taste and preferences and in turn enabled for effective production.

Ochieng and Wanjia (2014) bring to light the barriers to effective implementation of vendor managed inventory among supermarket in Kenya. Martin (2014) did a study on the effects of inventory control management satisfaction by Mumias retailers. The study established that keeping reasonable inventory is difficult due to demand forecasting and expectation of demand. Nyaga (2014) did a study titled factors affecting distribution of fast moving consumer goods in Eveready east Africa and established that companies strive to reduce production and supply chain costs to achieve a world class delivery performance and satisfy customers demand and changing requirements due to demand forecasting problems. Axsater (2016) suggests that among the problems that have led to this is the issue of non-effective inventory control strategies in the retail sector. Inventory control strategies play an important role in any organizations success, in that it ensures companies have a competitive edge and get money value.

In Kenya Musau, Namusonge and Makonga (2017) determined the effect of inventory management on organization performance amongst textile manufacturing firms in Kenya and established that inventory management is a determinant of performance in supply chain. Samuel and Ondieki (2014) studied automation in inventory management and the performance of supermarkets in Kenya. Mongare and Nasidai (2014) determined ICT impact

on inventory control systems in transport organization, on the other hand Kimaiyo and Ochiri (2014), established the inventory management role on the performance of industrial firms in Kenya, a case of KCC. Nonetheless all this studies concentrated on inventory management systems in manufacturing firm but not inventory control. This study rises from the need to control inventory in retail organization more efficiently and effectively, with a view to enhance continuity and viability of operations. The performance of retail chains in Kenya has been a major concern to the Kenyan fraternity. More often than not retailers have been facing slower growth, low profit margins, high customer turn over and most lately closure of giant retailers. This has raised more questions than answers leaving the retail sector a hot bed to invest in. this downward trend has been pointed out to be as an outcome of Inventory control strategies not adopted and implemented. This study therefore sought to uncover the effect of inventory control strategies on performance of retail chain in Kenya.

Study objectives

The chief purpose of this study was to establish the effect of inventory control strategies on performance of retail chains in Kenya. The specific objectives were:-

- To establish the effect of electronic data interchange (EDI) on performance of retail chains in Kenya
- To determine the effect of consignment inventory management on performance of retail chains in Kenya

LITERATURE REVIEW

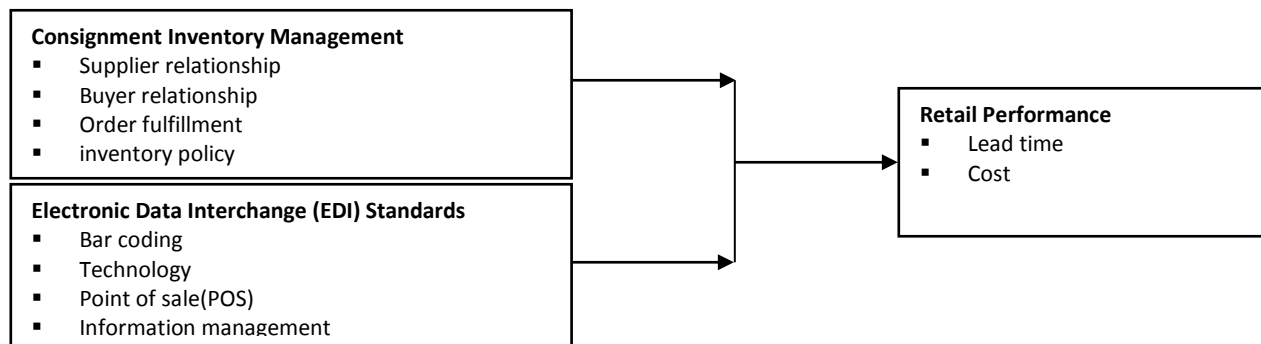
Resource dependency theory

Resource dependency theory developed by Pfeffer (1981) to assist in organizational success in maximizing their power in business and build intra-organization relations to relations between organization. RDT described the link among

organizations a set of relation power based on the exchange resources. This theory based relations by actor being resulted by lack of essential resource forcing other firms to depend on others to obtain the resources (Yin-Pin, 2005). RDT has become one of the dominant theoretical rationales that helps explain why firms form partnership and transaction cost economies. Hillman (2009) elaborates more on Pfeffer theory and suggests three reasons why organizations engage in partnership basically mergers and acquisition, reasons being to reduce competition by absorbing important competitors, to manage inter dependence with either sources of inputs or purchasers out puts by absorbing them and diversifying operations. Werner (2008) explains organization behavior and the actions and decisions that organization take on issues to do with resources. Different decisions are taken by organization based on different management decisions influenced by both external and internal agents controlling critical resources.

Transaction cost theory

Transaction cost theory developed by Ronald Coase (1937) is an approach advanced for firms under the title of transaction cost economics. Transaction cost economics traces the existence of firms to the rational, planning and contracting expenses that come with any transaction but are usually ignored in the neo classical model. The proposal being in some situations these expenses was reduced if a transaction is carried out in a firm rather than through the market. According to Coase (1937) the key cost of transacting in the marketplace is learning and negotiating over the terms of trade. This cost can particularly be great if the transaction is a long term one in which negotiating must be performed repeatedly. According Wasiamson and Masten, (2016) transaction cost theory tries to explain why companies exist, and why companies expand or source for activities to the external environment.



Independent variables

Figure 1: Conceptual framework

According to Yi and Sarker (2013) Consignment is steadily gaining recognition in the supply chain management practice. Consignment guidelines are a new move that retailers are using all over the globe, the likes of Carrefour, amazon.com and tmall.com among others. A contract fee is given to share revenue among the parties involved in the consignment with its manufacturers. Battani, Grassi, Persona and Sgarbossa, (2010) points out that in this

Dependent Variable

business model the manufacturer retains ownership of the goods and provides a fixed fee referred to as a slotting allowance to the retailer. The retailer on the other hand deducts a certain percentage of the selling price for each item sold and remits the balance to the manufacturer.

Lakra and Bedi (2014) did a relative study of consignment inventory and vendor managed

inventory by a distinct reference of cost formation in India. In This study the rapid development of internet has dramatically transformed the traditional meanings of manufacturer, suppliers and customers. Traditional methods of business has gone through modifications and today vendor managed inventory (VMI) and consignment serves as a principal link between suppliers and customers that enable faster and less complex transactions. In this study Consignment is an act of consigning, which is placing any material in the hands of another, but ownership is retained until the goods are sold or is transferred. Consignment is normally done on carriage, transfer of goods to auctions or for sale in a sale. In case the consignment goods are sent to a representative with the intention of sale. The representative sales the products on behalf of the dispatcher according to his instruction. The dispatcher of the belongings is known as consignor and the agent is known as the consignee. In procurement on a consignment basis your vendor delivers certain materials to you that you handle in consignment stock of your industry. Consignment stock remains the property of the vendor until you remove materials from consignment stores. On event when there is withdrawal of material liabilities toward the vendor needs to be paid in periodic installments.

Leung and Law (2012) conducted a study that was set to examine information technology (IT) applications, the adoption of electronic data interchange (EDI) among hotel systems and management support for IT departments in samples of hotels in Hong Kong hotels. This study results indicates that most hotel have not installed decision support or strategic management tools. The ratio of EDI implementation between hotel systems and web application is relatively low. The rate of adoption of automated credit card automation, which can enhance the security of customer data, is only 6 percent for property management system (PMS) and 17 percent for point of sale (POS) applications. In this study it is

noted that the background of IT managers has changed in the past decade due to the increased importance of hotel IT systems. This study proposes a revise model of EDI to be adopted because of the increase of IT-related qualification of over 70 percent scholars.

According to research done by Musawa and Wahab (2012) titled the adoption of electronic data interchange (EDI) technology by Nigerian SMEs. This study indicates clearly that information technology in business operation is no longer privilege to large organization but also small medium enterprises are also trying to adopt the IT at a slower but steady speed, but in process of gaining benefits of using it. The reason for the slow adoption of EDI is perceived to be high cost of implementation, lack of trading partners and lack of awareness of EDI benefits. Though little research is conducted and published on the adoption of electronic data interchange among small medium enterprises in Nigeria. This study accepts three factors as the determinant of the adoption of EDI which included; perceived benefits, organizational readiness and perceived pressure. This study also indicates EDI as a useful tool when repetitive manual tasks are required to support a business relationship. EDI simply eradicated the repeated manual work by automating the process and removed paper work elements.

METHODOLOGY

This study used descriptive research design. This is because descriptive research design demonstrates association between things in the world around us. The target population for this study was retail chain with a special interest on Naivas supermarket limited employees in all branches with a keen focus on departments which included: operations department, inventory control department, procurement department and finance department. The study utilized stratified sampling technique; this was because the sample was to be divided into sub group

referred to as department. In this study the unit of analysis was the Naivas head office that had a target population of 125 employees. The study utilized structured questionnaire to collect data. Primary data was collected using questionnaires as they were considered to be highly efficient for primary data collection. Secondary data included use of reference materials like newspapers, internet, magazines research libraries, journals or and any other relevant material that was required internally or externally. The researcher used descriptive statistics which integrated both the qualitative and quantitative techniques in the data analysis.

FINDINGS

Electronic data interchange (EDI)

The first objective of the study was to examine the influence of electronic data interchange (EDI) on retail chain performance in Kenya.

Table 1 provided a descriptive statistic and the effect of electronic data interchange (EDI) on the performance of retail chain; this was indicated clearly by the average mean score of 3.9719 and standard deviation of 1.0578. On the statement of planning and raised ordering majority of the respondent had a mean score of 4.1169 and standard deviation of 0.95936, proper use of technology was second on the list with a mean score of 4.0779 and standard deviation of 1.06086 others on the list included; monitor and control inventory level mean score of 3.9871 and standard deviation of 1.04496, proper use of barcodes mean score of 3.9741 and standard deviation of 0.9996, track of inventory flow mean score of 3.8701 and standard deviation of 1.21775 and closing the list was proper information management which had a mean score of 3.8052 and standard deviation of 1.0642.

Table 1: Effect of EDI on the performance of retail chain

Descriptive Statistics	N	Mean	Std. Deviation
EDI strategies tracks inventory flow in our store	77	3.8701	1.21775
EDI strategies improve use of barcodes in your outlet.	77	3.9741	0.99966
EDI strategies ensure proper use of technology in your outlet.	77	4.0779	1.06086
EDI strategies monitors and controls the level of inventory at the point of sale (POS)	77	3.9871	1.04496
EDI strategies ensured proper information management in our outlet.	77	3.8052	1.06424
EDI strategies have improved good planning of raising orders in our store.	77	4.1169	.95936

Consignment Inventory

Descriptive statistical analysis was done on the variable and majority agreed that consignment inventory had an influence in retail performance evidence by an average mean score of 3.9199 and standard deviation of 1.0742. Majority of the respondent agreeing that consignment inventory had led to elimination of waste and a decline in inventory cost and a mean score of 4.026 and standard deviation of 1.1236 and mean score of 4.013 and

standard deviation of 1.04496 respectively. Order fulfillment was next with a mean score of 3.9351 and standard 1.00443, tailed by quality improvement of inventory that had a mean score of 3.8831 and standard deviation of 1.13525, closing the list were minimization of shrinkage, damages and relocation cost mean of 3.8571 and standard deviation of 1.06022 and supplier relationship and buyer relationship that had a mean of 3.8052 and standard deviation of 1.07653

Table 2: Influence of Consignment inventory on retail chain performance

Descriptive Statistics	N	Mean	Std. Deviation
Consignment Inventory strategies has improved the quality of inventory.	77	3.8831	1.13525
Consignment Inventory has affected both the suppliers relationship and buyer relationship in your store	77	3.8052	1.07653
Consignment Inventory has minimized shrinkage, damages and relocation costs in our store	77	3.8571	1.06022
Consignment Inventory strategies has enabled order fulfillment your branch	77	3.9351	1.00443
Use of Consignment Inventory has led to reduction in cost inventory in your store	77	4.013	1.04496
Consignment Inventory strategies has eliminated waste in our store	77	4.026	1.1236

Performance of retail chains

The study attributed the fact that inventory control strategies played a very important role in enhancing the performance of retail chain. Majority of the respondents that was 29.9% indicated that planning was key and led to the reduction of inventory cost between 0-20%, inventory policies was another factor that 26% of the respondent of between 0-20%, however 28.6% of the respondent strongly agreed that stock management led to a reduction of inventory cost of above 50%. The figure below clearly indicated the extent to which inventory control strategies affected the inventory cost, this was clearly

evidenced with an average mean of 2.9610 and an average standard deviation of 1.26858. Stock management had a greater influence in inventory costs with a score of 3.1818 and standard deviation of 1.51941, this was narrowly followed by internal communication which had a mean score of 3.0519 and standard deviation of 1.51220. The use of technology also reduced the inventory associated costs by a mean score of 3.0130 and standard deviation of 1.25524, closing the least of factors was an increase in manpower which had a positive influence of cost reduction with a mean score of 2.7273 and standard deviation of 1.23156.

Table 3: inventory cost of performance of retail chains

Descriptive Statistics	N	Mean	Std. Deviation
Planning demand lead to cost reduction of inventory	77	2.9091	1.59919
Man power increase by organization led to procurement cost reduction	77	2.7273	1.23156
Inventory policy lead to inventory transportation cost reduction	77	2.8831	1.43246
Technology lead to inventory cost reduction	77	3.0130	1.58524
Internal communication lead to location cost reduction	77	3.0519	1.51220
Stock management lead to cost reduction	77	3.1818	1.51941

Lead time and performance of retail chain

Lead time is the period between ordering and delivery and a shorted lead time is key to the performance of any organization. This study indicated that there was an influence of inventory control strategies on performance in terms of lead time. Majority of the respondents that was 55.8% attributed supplier relationship as a key factor in

reducing lead time to between 0-5 days, this was keenly followed by 45.4% of the respondents attributing supplier communication as a factor that reduced the number of lead time day to less than 5 days. However other respondents 38.9% argued that sourcing flexibility could extend the number of day between 5-10 days. Figures indicated the extent to which inventory control strategies had affected lead

time with an average mean score of 1.8935 and standard deviation of 1.1231. Sourcing flexibility had a higher influence in lead time with a mean score of 2.0779 and standard deviation of 1.24358. Sourcing flexibility and the use of technology affected the lead time of inventory with mean scores of 2.0779 and

1.9610 and standard deviation of 1.2435 and 1.20789 respectively. Information management and supplier communication both had a mean score of 1.8701 with standard deviation of 1.04316 and 1.10442 respectively.

Table 4: Lead time on performance of retail chains

Descriptive Statistics	N	Mean	Std. Deviation
Supplier relationship leads to reduction of lead time.	77	1.6883	1.01644
Information management reduces lead time to how many days	77	1.8701	1.04316
Supplier communication leads to reduced lead time of inventory	77	1.8701	1.10442
Sourcing flexibility leads to reduction of inventory lead time	77	2.0779	1.24358
Use of technology leads to reduced lead time.	77	1.9610	1.20789

CONCLUSIONS

On the effect of electronic data interchange on the performance of retail chains in Kenya, the research established that the organization collaborated the use of technology both in the front and back office that allowed the monitoring and control of information about inventory. The firm had also a proper bar-coding system that allowed every good to be entered in the system both at the receiving and dispatch area and the point of sale (POS). The firm had also a stable information management system that was able to track inventory both internally and external from suppliers using an auto replenishment tracker that gave signal in the event of stock out or stock reduction, this therefore kept the level of inventory at par leading to customer satisfaction.

On the effect of consignment inventory on performance of retail chain in Kenya, the study found out that the relation amongst the contractor and purchaser was very key and ensured mutual benefit between the supplier organization and the buyer organization. Order fulfillment in the part of supplier to the organization was also a reason why inventory control was very successful in the organization. Lastly proper inventory policies that governed the overall handling of inventory had a direct influence on the performance of retail chain in the organization.

Technology played a key role in ensuring there was transparency in how the employees within the organization transacted their day to day business. The organization was able to get value for their money by giving customer an experience when it came to faster delivery of service that lead to more loyalty and retention of the customer. EDI was also key to ensuring real time transaction of inventory was enable hence no delays.

Consignment inventory was also very crucial in how organization did their business. Consignment inventory strategy allowed suppliers to have the autonomy of control in their own inventory therefore were able to monitor the sales and ordering of the same keeping a balance of the stock holding of their particular inventory. The organization embraced this strategy because it transferred the risk of inventory to the suppliers therefore leading to lower liability when it came to overall inventory.

An increase in electronic data interchange and holding other factors constant would lead to a significant rise in the performance of retail chains. The study therefore suggested that the organization should work with all stakeholders in the retail chain and ensure automation of all operation at the point of sale (POS) and at the back office to enhance transaction for both the suppliers and customer who

form the bedrock of the overall performance. The organization should also consider constantly updating their system to align with the dynamic nature of business environment.

An increase in one unit of consignment leads to an increase in performance of retail chain therefore organization should keenly consider both the relationships between the suppliers and the buyers and at the same time implementation of technology and information management use to run core business function for the organization and create a data base for consignment suppliers, this then should

be able to maintain and better their performance at a constant increase rate.

Further research should be directed to other forms of industries in Kenya apart from the retail industry to observe if all other industries in Kenya have the same case application as From the R Square given earlier, the research found out that only 71.4% of the effects in the model had been explained, leaving 28.6% unexplained. Further studies were therefore recommended on other inventory control strategies factors apart from the ones discussed that influence the performance of the retail chain.

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