

Influence of vendor inventory management on organizational performance in retail outlets in Kenya: A case of Uchumi supermarkets

JOHN KARANJA NGUGI

Lecturer School of Human Resource Development
Jomo Kenyatta University of Science and Technology

Jonah KIPKOGEI Aiyabei

PhD Student In Department of Commerce Economic Studies
Jomo Kenyatta University of Science and Technology

PHILLIP manyura MAROKO

PhD Student
Jomo Kenyatta University of Science and Technology

DR. PATRICK KARANJA NGUGI

Lecturer School of Human Resource Development
Jomo Kenyatta University of Science and Technology

ABSTRACT

Vendor managed inventory (VMI), also known as continuous replenishment or supplier-managed inventory, is one of the most widely discussed partnering initiatives for encouraging collaboration and information sharing among trading partners (Angulo, 2007). The main objective of the study was to investigate the influence of vendor inventory management on organizational performance in retail outlets in Kenya. The study adopted a descriptive research with survey of a total of 172 and applied a stratified random sampling technique to select a sample size of 86 respondents. Questionnaires were used as the main data collection Descriptive statistics and inferential data analysis method was to analyze the gathered data.

The study concluded that that economic order quantity is affected by VIM thereby affecting organizational performance. The study recommends that VIM should be well implemented since it influences the organization to invest a lot of money in purchasing of inventory. Additionally the study recommends that organization should integrate all its inventory management functions with information communication technology as well as ICT realization. Organizations need to enhance Communication among staff members and customers.

INTRODUCTION

Vendor managed inventory (VMI), also known as continuous replenishment or supplier-managed inventory, is one of the most widely discussed partnering initiatives for encouraging collaboration and information sharing among trading partners (Angulo, 2007). Popularized in the late 1980s by Wal-Mart and Procter & Gamble, it was subsequently implemented by many other leading companies from different industries, such as Glaxosmithkline, Electrolux Italia Nestle and Tesco Boeing and Alcoa (Micheau, 2005). It is a supply chain initiative where the vendor decides on the appropriate inventory levels of each of the products and the appropriate inventory policies to maintain those levels.

In VMI, the retailer provides the vendor with access to its real-time inventory level. In this partnership program, the retailer may set certain service-level and/or shelf-space requirements, which are then taken into consideration by the vendor. That is, in a VMI system, the retailer's influence shifts from managing inventory to simply renting retailing space (Watson, 2007). VMI offers a competitive advantage for retailers because it results in higher product availability and service level as well as lower inventory monitoring and ordering cost, for vendors, on the other hand, it results in reduced bullwhip effect and better utilization of manufacturing capacity, as well as better synchronization of replenishment planning (Waller, 2009).

The benefits of the VMI have been clear since the adoption of the approach in the first implementation cases. VMI was popularized in the late 1980s by Wal-Mart and Procter & Gamble and became one of the key

programmes in the grocery industry's pursuit of "efficient consumer response" and the garment industry's "quick response" (Waller, 2009). Successful VMI initiatives have been trumpeted by many companies such as Whitbread Beer Company, Barilla, Johnson & Johnson, Kodak Canada Inc. and Campbell Soup. Some of the advantages of VMI implementation, generally mentioned in literature are: reduction in customer demand uncertainty; reduction of inventory level; reduction of stock out number and frequency; more flexibility in production planning and distribution; and improvement of customer services (Disney and Towill, 2008).

VMI is a recent phenomenon in the retail supermarkets in Kenya having started in 2002 and steadfastly growing (Benson, 2011). The effectiveness of VMI in the retail supermarkets has been registered in improved stock management, cash flows, risk management, and management of the bullwhip effects associated with unpredictable swings in demand. While VMI has been voted best by the retail supermarket managers, it has its shortcomings associated with trust, turnover of suppliers and small scale suppliers who lack financial capacity to implement VMI concepts sustainably. Sometimes this interferes with customer satisfaction as some goods on VMI become one-offs due to the high turnover of suppliers because some new suppliers are yet to develop credibility in their respective area of supply (Benson, 2011).

In Kenya, the concept of Vendor Inventory Management has not yet been widely embraced by many manufacturing and retail organizations and this has made many organizations to experience increased cost in the execution of inventory management functions (Mugo, 2008). In Kenya retail outlets, VMI effectiveness as a system is affected by inventory flow, the quality of ICT and quality of information and sharing but is not affected by the quality of relationship. This indicates that relationship among VMI partners is developed on the basis of implementing the system based on trust and reliability (Benson, 2011). However, the quality of ICT is most important to facilitate sharing of information among the VMI partners in the supply chain (Fisher, 2007). VMI as a system is suitable for large and medium size supermarkets which have well established network systems and the capability to effectively run the system. Very small partners/suppliers may not afford to have a large warehouse, or afford to lease a large warehouse for an effective VMI. Secondly, a supermarket that is too small owing to its low buying power would lack capacity to support demand for goods that VMI warehousing requires (Benson, 2011).

UCHUMI SUPERMARKETS

On 17th December 1976, Uchumi shareholders- Industrial Commercial & Development Corporation (ICDC), Kenya Wine Agencies Limited (KWAL) and Kenya National Trading Corporation (KNTC) - all Government owned parastatals entered into a management contract with Standa SPA of Italy. Standa, a leading supermarket group with a presence in Europe and vast retail experience was given the task to manage and train Kenyan personnel who would eventually take over the running of the organization. The first three branches were opened in 1976 with the Market Branch marking the first Milestone. In the 1990's Uchumi spearheaded the hypermarket concept in Kenya. In early 2000s Uchumi started to experience financial and operational difficulties occasioned by a sub-optimal expansion strategy coupled with weak internal control systems. This resulted in a marked diminution of the Company's resources which culminated in its inability to meet its obligations on an ongoing basis. Initial restructuring of Uchumi did not forestall the deteriorating performance of the Company. As a result, on 31st May 2006, the Board of Directors resolved that the Company ceases operations and on 2nd June 2006, the Debenture Holders placed the Company under receivership. Simultaneously, the Capital Markets Authority (CMA) suspended the Company's listing on the Nairobi Stock Exchange (NSE).

Following a framework agreement between the Government of Kenya, suppliers and debenture holders, the company was revived and commenced operations from 15th July, 2006 under Specialized Receiver Manager (SRM) and interim management. Although it was obvious that the retail giant was in dire financial straits when it posted a loss of Ksh690 million (\$9.3 million) in June 2004 after two years of poor performance, what was not made public was the fact that barely a month later, it was headed for collapse until the PTA Bank gave it a bridging loan of Ksh500 million (\$6.7 million). Kenya Commercial Bank then gave the chain Ksh416 million (\$5.6 million). Although, on the strength of advice from its financial advisor, Royal Investment Management Services, the PTA Bank's facility was converted into a six-year term loan to ease the repayment burden, the bridging facility did not succeed in bringing on board either a strategic equity partner or financier.

An attempt to negotiate with strategic partners fell flat due to the board's wavering and a feeling that Uchumi was a national institution that should not be sold to foreigners. Its suitors included Shoprite, which has a strong presence in Tanzania; Pick & Pay and Metro Cash & Carry, all of South Africa. Confidential documents show that an attempt to negotiate a seven-year term loan of Ksh500 million (\$6.7 million) from the East African Development Bank collapse after Uchumi failed to meet conditions set by the bank. The documents show that by 2003, Uchumi's South African suitors were raising questions about its financial health after it posted a loss of Ksh254 million (\$3.4 million). It owed creditors Ksh1.7 billion (\$22.9 million), while its bank borrowing stood at Ksh705 million (\$9.5 million) and the inventory was tying up Ksh1 billion (\$13.5 million). It was at this point that Uchumi then embarked on resolving its funding problems through financial restructuring and rebuilding rapport with suppliers, lenders and customers. This was done through the Ksh1.2 billion (\$16.2 million) rights issue in August 2005.

STATEMENT OF THE PROBLEM

The influence of Vendor Inventory Management on organizational performance in major retail outlets around the globe remains a major debated problem that has not been solved for many years. In USA and Canada retail outlets such as Walmart, Safeways, Foodex among others complained of facing 12% additional inventory management costs that resulted to over 13% decline in profit margin due to challenges associated with implementation of vendor inventory management practices (Disney and Towill, 2008). In South Africa, Shoprite which is one of the leading retail outlets experienced a declined profit margin by over 18% due to increased inventory management costs (Jeffrey, 2009). While in Kenya Uchumi supermarket is still struggling to effectively embrace the concept of VIM as a strategy to reduce inventory management cost and realize increased profit margin (Jeffrey, 2009).

At Uchumi, the company has entered into contract with various suppliers where they supply directly to the shelves. However, this has brought numerous challenges to the organizational ranging from stock run outs to overstocking. Current assets grew from Ksh.764 million in 2008/9 to Ksh.900 million in 2009/10 and Ksh.1, 062 million in 2010/11. Over the receivership period inventory decreased by 3% in 2009/10 despite the 21% growth in business compared to 2008/9. Post receivership suppliers' debt is in term and total current liabilities after reclassification from term loans of Ksh.567 million stands at Ksh1, 800 million. According to Uchumi (2011), the company lost revenue worth Ksh250 million due to stock outs in its various outlets and incurred Ksh1.9 billion in warehouse charges; this was as a result of various factors at play including investment in more stock that led to tying up the much limited and scarce working capital.

Literature on inventory management is wide. Previous studies done on inventory management include Tanskanen and Holmstrom (2009) who did a study on vendor management inventory in construction, Rajeev (2008) who studied inventory management in Small and Medium Sized Enterprises, Talluri, Cetin and Gardner (2007) who did a study on integrating demand and supply variability into safety stock evaluations and Vigtil (2007) who carried a study on information exchange in vendor managed inventory among others. It was evident that no known local study had been done on this phenomenon and it was against this back ground that this study sought to investigate the influence of vendor inventory management on organizational performance in retail outlets in Kenya with specific reference to Uchumi Supermarkets.

RESEARCH OBJECTIVES

General Objective

The main objective of the study was to investigate the influence of vendor inventory management on organizational performance in retail outlets in Kenya with specific reference to Uchumi supermarkets.

Specific Objectives

- i. To evaluate whether working capital affects organizational performance in retail outlets.
- ii. To establish whether the economic order quantity affect organizational performance in retail outlets.
- iii. To determine whether information communication technology affect organizational performance in retail outlets.
- iv. To assess whether cost of sales affects organizational performance in retail outlets.
- v. To identify whether distribution costs affect organizational performance in retail outlets.

LITERATURE REVIEW

Resource Based Theory

According to Resource Based Theory resources are inputs into a firm's production process; can be classified into three categories as; physical capital, human capital and organizational capital (Crook, 2008). A capability was a capacity for a set of resources to perform a stretch task of an activity. Each organization is a collection of unique resources and capabilities that provides the basis for its strategy and the primary source of its returns. In the 21st-century hyper-competitive landscape, a firm is a collection of evolving capabilities that is managed dynamically in pursuit of above-average returns. Thus, differences in firm's performances across time are driven primarily by their unique resources and capabilities rather than by an industry's structural characteristics (Crook, 2008).

Economic Order Quantity Model

Economic order quantity is the level of inventory that minimizes total inventory holding costs and ordering costs. It is one of the oldest classical production scheduling models. The framework used to determine this order quantity is also known as Wilson EOQ Model or Wilson Formula. The model was developed by F. W. Harris in 1913, but R. H. Wilson, a consultant who applied it extensively, is given credit for his in-depth analysis (William, 2007).

EOQ only applies when demand for a product is constant over the year and that each new order is delivered in full when the inventory reaches zero. There is a fixed cost charged for each order placed, regardless of the number of units ordered. There is also a holding or storage cost for each unit held in storage (sometimes expressed as a percentage of the purchase cost of the item) (William, 2007).

EOQ is used to determine the optimal number of units of the product to order so that to minimize the total cost associated with the purchase, delivery and storage of the product. The required parameters to the solution are the total demand for the year, the purchase cost for each item, the fixed cost to place the order and the storage cost for each item per year. Note that the number of times an order is placed will also affect the total cost; however, this number can be determined from the other parameters (Heikkilä, 2002).

EOQ assumes that, the ordering cost is constant, the rate of demand is constant, the lead time is fixed, the purchase price of the item is constant i.e. no discount is available, the replenishment is made instantaneously, the whole batch is delivered at once. EOQ is the quantity to order, so that ordering cost plus carrying cost finds its minimum. (A common misunderstanding is that the formula tries to find when these are equal.) (Heikkilä, 2002).

Vendor-Managed Inventory (VMI) Model

Vendor-managed inventory (VMI) employs the same principles as those of JIT inventory, however, the responsibilities of managing inventory is placed with the vendor in a vendor-customer relationship. Whether it's a manufacturer managing inventory for a distributor, or a distributor managing inventory for their customers, the management influence goes to the vendor. An advantage of this business model is that the vendor may have industry experience and expertise that lets them better anticipate demand and inventory needs. The inventory planning and controlling is facilitated by applications that allow vendors access to their customer's inventory data. Another advantage to the customer is that inventory cost usually remains on the vendor's books until used by the customer, even if parts or materials are on the customer's site (Halldorsson, 2003).

EMPIRICAL REVIEW

A study by Danese, (2007) found out that in many US retail outlets the success of the extended VMI approach has depended on the adoption of a central information system allowing suppliers/manufacturing plants to decide how much and when to deliver taking into account all the necessary information concerning different supply network members. Such a system supports the production planning and order cycle processes within the supply network on two levels, the first based on the sales forecasts of the distribution centers including a horizon of 18 months; and the second based on the suppliers/manufacturing plants decisions concerning the order

confirmation within the frozen period, taking into account possible unexpected requirements (Murray, 2007).

The first level is not different from the functioning of a traditional integrated production planning DRP-MRP system. The system operates automatically: it collects data concerning the different supply network members, on the basis of which it elaborates purchase, production and delivery proposals for a period of 18 months for each manufacturing plant or distribution centre (Kazim, 2007).

Scott (2007) found out most retail outlets managers in China tend to consider VMI as an approach for managing materials and information flows between one or more customers and their immediate suppliers. On the other hand, Eisenhardt (2009) concurred that fierce competition in today's global markets has forced business enterprises to invest in, and focus attention on, their supply networks in a much broader sense. Zhang (2004) noted that Chinese and Japanese companies employ just in time technique to strengthen relationship between supply chain network participants and thus business relationships in various Chinese firms extends beyond enterprise boundaries and seeks to organize entire business processes throughout a value chain of multiple organizational.

Holmstrom (2007) noted that the implementation of the "traditional" VMI – i.e. limited to supplier-customer dyads – leads to wasting significant opportunities that could instead be exploited by managing the supply network as a whole rather than as a series of dyads. In fact when optimization is local, each supplier-customer dyad optimizes its processes without taking the impact on the other supply network members into account. As a consequence, the implementation of the traditional VMI allows only a partial optimization of the supply network, as it usually only involves supplier-customer dyads.

A survey by marketing research international (2009) revealed that effective integration of information communication technology with inventory functions using inventory management systems such as Electronic Data Interchange and Material Requirement Planning Systems could play a major influence in supporting effective implementation of VIM practice in many retail outlets. Economic order quantity is the optimum size of the order that minimizes the cost of ordering and holding cost. Concern has been raised that Uchumi supermarket management lacked to apply the EOQ as the inventory systems used failed to minimize the cost of ordering and holding stock (Brian, 2008).

Nelson (2009) noted that poor supplier management created problems in monitoring and selecting competent suppliers and this led to delay in delivery, which created stock out costs. The supermarket employees lacked enough skills and this created a problem of in competency. The existing storage facilities were not adequate and this created more problems in ordering large quantities and distributing of inventory to supermarket branches around the country.

CRITICAL REVIEW

The theoretical and empirical review clearly gave an account of past major studies and theoretical issues on vendor inventory management practices. However, all the explored theoretical issues concentrated much on VIM general issues and hence failed to give suggestions on how retail outlets should improve performance through application of VIM functions. This therefore, demonstrates that the empirical and theoretical literature is of little significance towards addressing performance problems caused by VIM in retail outlets and hence cannot offer practical solution to improvement of organizational performance using VIM in retail outlets. This study unlike, studies in the literature review will specifically narrow its research undertakings into the influence of VIM on organizational performance in retail outlets and hence contribute towards adding value to the theory and practice of VIM and organizational performance in organizations.

RESEARCH GAPS

The literature review of the study indicated that different researchers have made numerous attempts to explain various issues surrounding vendor inventory management practices but no major study or theoretical explanation has successfully managed to elaborate on the influence of vendor management inventory practices on organizational performance in the retail outlets. This has hence influenced development of major knowledge gaps

on VIM implementation and hence necessitated the need to conduct a study on relationship between the VIM and organizational performance in retail outlets. The key notable gaps identified include; working capital gap, economic order quantity gap, information communication technology gap, distribution costs gap and cost of sales gap. The research study narrowed its research undertakings into these gaps with an aim of gathering data that would help to come up with effective recommendations on effective use of VIM to increase organizational performance in retail outlets.

METHODOLOGY

The study adopted a descriptive research design since it surveyed the factors affecting implementation of vendor inventory management practices in retail outlets in Kenya. The target population was a total of 5 major retail outlets in Kenya. According to the ministry of trade (2009) there are approximately 5 major retail outlets in Kenya. Since the study intends to gather data from Uchumi supermarket as its one of the leading retail outlet that has been facing VIM problems, the study population was a total of 172 employees working at Uchumi headquarter offices situated in Nairobi. The study applied a stratified random sampling technique to select a sample size of 86 respondents. Primary data was gathered through the use of a semi structured questionnaire which were self-administered to a total of 86 respondents and later picked for data analysis and tabulated through the use graphs, charts and reports.

RESULTS AND FINDINGS

Working capital

The study found out that VIM influences the organization to invest a lot of money in purchasing of inventory, respondents agreed to a very great extent that stock movement affect organizational performance. The study also found out that Current liabilities affect organizational performance to a great extent, Cost of stock affect organizational performance to a moderate extent, and Current assets affect organizational performance to a little extent. This relates to literature review (Shanks, 2009) who found out that if current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. Also Rodney (2009) affirmed that a company can be endowed with assets and performance but short of liquidity if its assets cannot readily be converted into cash. Further Ellram (2007) suggested that if a company's current assets do not exceed its current liabilities, then it may run into trouble paying back creditors in the short term.

Economic order quantity

The study found out that economic order quantity is affected by VIM as well as it affects organizational performance, further Stock out cost affect organizational performance to a very great extent; Inventory acquisition cost affect organizational performance to a great extent; Inventory holding cost affect organizational performance to a moderate extent and that inventory maintenance cost affect of organizational performance to a little extent as indicated. This relates to the literature review, Cooper (2007) who affirmed that lack of application of Economic Order Quantity in inventory management practices increases the total cost of ordering and holding stock and this lowers the effectiveness of organizational Supply Chain Management practices. Long lead time and poor warehousing procedures also lowers the effectiveness of organizational Supply Chain Management functions.

Information Communication Technology

The study found out that organizations that have integrated all its inventory management functions with information communication technology as well as ICT realization increased organizational performance, further the study found out that Customer service affect organizational performance to a very great extent; communication affect organizational performance to a great extent; Inventory Monitoring affect organizational performance to a moderate extent and Information exchange affect organizational performance to a little extent. This relates to the literature review Singhal (2008) who contended that three factors have strongly impacted change in the importance of information technology in SCM. First, satisfying in fact pleasing customer has become something of a corporate obsession. Serving the customer in the best, most efficient and effective manner has become critical. Second information is a crucial factor in the managers' abilities to reduce inventory and human resource requirement to a competitive level. Information flow plays a crucial influence in strategic

planning (Martinez, 2009).

Distribution Costs

The study found out that VIM help in reducing inventory distribution costs. Also the study found out that distribution costs affect organizational performance to a very great extent ; Packaging and merchandise display costs affect organizational performance to a great extent ; Warehousing and storage costs affect organizational performance to a moderate extent and Length Lead time affects organizational performance to a little extent. This relates to the literature review (Benson, 2011): Application of poor distribution practices leads to long lead times and this delays timely delivery of inventory in time. Many retail outlets lack effective computerized distribution systems that link the supplier with the supermarket branches and this affects effective delivery of the ordered items. Coelho (2007) also argued that use of poor distribution systems, poor transportation methods, concentration of procurement functions and sourcing suppliers over long distances affects effective execution of supply chain management functions.

Cost of sales

The study found out that carriage inwards costs affect organizational performance to a very great extent, carriage outwards costs and inventory overheads affect organizational performance to a great extent and moderate extent. Also the study found out that the cost of sales affects organizational performance. This relates to the literature review (Hines,2007) who found out that in retail industry, supermarkets that fails to embrace VIM suffers from high cost of inventory overheads that results to increased cost of sales and declined profit margin.

CONCLUSIONS

Based on the study findings, the study concluded that VIM influences the organization to invest a lot of money in purchasing of inventory also the study concludes that stock movement affect performance of an organization. Also the study concludes that Current liabilities and Cost of stock affect performance of an organizational. This relates to literature review (Shanks, 2009) who found out that if current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. Also Rodney (2009) affirmed that a company can be endowed with assets and performance but short of liquidity if its assets cannot readily be converted into cash. Futher Ellram (2007) suggested that if a company's current assets do not exceed its current liabilities, then it may run into trouble paying back creditors in the short term.

RECOMMENDATIONS

The study recommends that VIM should be well implemented since it influences the organizational to invest a lot of money in purchasing of inventory. Further the study recommends that stock out costs, Inventory acquisition cost, and inventory holding cost and inventory maintenance cost should be well determined since they affect organizational performance.

Additionally the study recommends that organizations should integrate all its inventory management functions with information communication technology as well as ICT realization thereby increasing organizational performance, Customer service should be maintained at a very high standard since this is a direct link of organizations turnover and performance. Organizations should enhance Communication between its entire staff members as well as the customer. This relates to the literature review Singhal (2008) who contended that three factors have strongly impacted change in the importance of information technology in SCM. First, satisfying in fact pleasing customer has become something of a corporate obsession. Serving the customer in the best, most efficient and effective manner has become critical. Second information is a crucial factor in the managers' abilities to reduce inventory and human resource requirement to a competitive level. Information flow plays a crucial influence in strategic planning (Martinez, 2009). Finally the study recommends that VIM to be well implemented in organizations since it helps in reducing inventory distribution costs.

RECOMMENDATION FOR FURTHER STUDY

This study investigated the influence of vendor inventory management on organizational performance in retail outlets in Kenya with specific reference to Uchumi supermarkets. Further study should be carried out on factors influencing implementation of vendor inventory management in Kenya. Additionally a study should be carried out on vendor inventory management practices in organizational.

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