

**ROLE OF DISTRIBUTION REQUIREMENT PLANNING IMPLEMENTATION
ON SUPPLY CHAIN PERFORMANCE IN RETAIL SECTOR IN KENYA: A
CASE OF UCHUMI SUPERMARKET LIMITED**

BETHUEL BETT CHEMITEI

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

NOOR ISMAIL SHALE, PhD

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

CITATION: Chemitei, B.,B., & Shale, N.,I. (2016). Role of distribution requirement planning implementation on supply chain performance in retail sector in Kenya: a case of Uchumi supermarket limited. *International Journal of Human Resource and Procurement*. Vol. 4 (13) pp 60-74.

ABSTRACT

Distribution requirements Planning (DRP) is a process of determining the type, the quantity and time when goods are required at a given location. The main objective of this study was to assess the role of distribution requirements planning implementation on supply chain performance in retail sector in Kenya in the case of Uchumi supermarket ltd (USL). The specific objectives of the study were: to find out the effect of integration of inventory management on supply chain performance in Uchumi supermarkets in Kenya, to determine the effect of minimization of distribution costs on supply chain performance in Uchumi supermarkets in Kenya, to assess how staff training affect supply chain performance in Uchumi supermarkets in Kenya and to ascertain the effect of top management support on supply chain performance in Uchumi supermarkets in Kenya. Descriptive research design approach was used for the case of this study. The target population was all 83 (top, middle and lower level) management staff working at Uchumi supermarket limited headquarters in Nairobi. Both quantitative and qualitative data was collected by use of a questionnaire. Data analysis included the editing for completeness and consistency which will be followed by data coding. Quantitative data was analyzed by use of descriptive statistics and inferential analysis using statistical package for social science (SPSS) version 22.0. The study concluded that integration of inventory management affect supply chain performance at Uchumi supermarkets limited. The study concludes that; DRP implementation at Uchumi supermarket have assisted in setting various parameters for inventory control, distribution requirements planning ensures that inventories, both incoming and outgoing are managed effectively, the use of DRP ensure that stock is available when required and that; DRP allows for decision making for

positioning and quantity of inventory in a distribution system. The study concludes that DRP implementation cost affect supply chain performance. The study also concludes that reduced profits affect supply chain performance, lower labor turnover and improved sales values affect supply chain performance, identifying corrective actions to address issues affect supply chain performance. The study concludes that employee training is necessary in implementation of DRP, training offered by hired experts at Uchumi assist in implementation of DRP, training program about implementation of DRP at Uchumi supermarket is coordinated in time, training reduce cost of sourcing appropriate goods and services and that; training significantly improves the implementation of DRP. Most of the employees were aware of staff training. The study concludes that top level management support contributes to policies on the implementation of DRP and integration issues to a great extent, an implication that DRP adoption and implementation is ultimately the responsibility of top management. the study also concludes that; top management are committed to staff development and DRP adoption, top management make efforts to standardize the supply chain processes in the organization, top management are willing to take accountability for DRP management and delivery time lines, top management make efforts to establish quality assurance management systems and that; the implementation of the practices includes the constructs of management commitment contribute to improve the quality of service to the customers.

Keywords: Distribution requirements planning,

INTRODUCTION

Supply chain in an organization encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers (Chen, 2001; Kemp & Low, 2008). In essence, supply chain management integrates supply and demand management within and across companies. Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology (Swartz & Orgill, 2011).

In modern day organizations, distribution and logistics managers are faced with managing increasingly complex supply chain networks, which include multiple suppliers, manufacturing sources, warehouses, and transportation providers, not to mention a multitude of product variations. Coordination among these disparate players is key to effective performance of the whole supply chain of any given organization. Organizations have therefore adopted Distributions Requirements Planning in their supply chain entities

to plan orders in the whole supply chain taking into account the inventories to be kept along with buffer or safety stock, placing the orders with the manufacturer to replenish inventories to meet customer orders, and so on (Amoako-Gyampah, 2007).

Distribution requirement Planning (DRP) is a system used in managing the flow of materials between firms, warehouses, distribution centers and retail outlets. DRP helps manage these material flows. DRP tries to efficiently carry out the whole process of completing customer orders by minimizing shortages and reducing the overall costs comprising of ordering, transporting and inventory holding costs. Just like Manufacturing Requirements Planning (MRP) does in manufacturing, DRP links firms in the supply chain by providing planning records that carry demand information from receiving points to supply points and vice versa. DRP expanded its scope in the 1990's to other "back-office" functions such as human resources and production planning (Swartz & Orgill, 2011) moreover, in recent years DRP has incorporated other business extensions such as supply chain management and customer relationship management to become more competitive. Lured by guarantees of improved business productivity, streamlined business operations, and increased cost savings, organisations worldwide have launched initiatives to integrate DRP systems into their existing business environments (Tadinen, 2005).

Indeed, Christopher (2008) emphasizes the significance of information flow, as he defines logistics as "The process of strategically managing the procurement, movement and storage of materials, parts, and finished inventory as well as related information flows through the organisation and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfilment of orders." In the past, management used information technology to simply automate routine business tasks (Ward & Griffiths, 2006). A paradigm shift has occurred, as academics and practitioners have witnessed "the transformation of IT from a back-office support role to a strategic business partner" (Roepke et al., 2010).

According to Patterson et al, (2003) the DRP roles include: integration of inventory management, minimization of distribution costs, providing support to top management, staff training, fleet management, supplier management and workflow management all of which have an influence on supply chain performance of any given organization. Patterson et al, (2003) proposes that there is need to integrate the DRP and supply chain activities to accomplish supply chain competitiveness. It is therefore critical for managers to understand which roles of DRP applications best suit their firm's goals in achieving intra- and inter-firm integration.

Statement of the Problem

The impact of distribution requirements planning on organizational performance around the globe has not been realized. In USA and Canada retail outlets like Wall mart, Fodex among others are facing additional inventory management costs that has resulted in 13% decline in profits margins due to challenges associated with implementation of inventory systems like DRP, vendor inventory management (VIM) among other systems (Disney & Towil, 2008). North America and Western Europe are the two largest market segments for the DRP system with approximately 51.6 and 29.9 percent, respectively. However, the Asia/Pacific region is the third largest market segment for DRP system, with approximately 13.6 percent of the total spending on DRP system. The results of a market research conducted by the Korea IT Industry Promotion Agency indicated that the total DRP market in Korea was worth \$252 million in 2011 and increased to \$277 million in 2012 respectively (Katerattanakul et al., 2013).

While there is 89% adoption of DRP systems in Europe and North America, there is only a 27% adoption of the same in developing countries like Kenya (Huang & Palvia, 2001; Huang, et al., 2004). This can be attributed to among others; lack of top management commitment, poor staff training on use of DRP systems, high costs of implementing the systems and how well is the systems integrated within the organization. Many studies in literature have shown the importance of DRP system in companies' effectiveness, and this is because DRP system have become one of the main prerequisites, a price of entry, and a strong and integrated IT infrastructure for many companies enabling them to compete in the local and global marketplace, and ensuring them to gain a competitive advantage in the global economy particularly with the current e-business era (Al-Mashari and Zairi, 2000; Huang et al., 2001; Rashid et al., 2002; Al-Mashari, 2003; Al-Mashari and Al-Mudimigh, 2003).

DRP system adoption and implementation has become a prerequisite in the marketplace and a backbone for e-business in both local and global (Otieno 2005; Ravendran, 2002; Sangaran, 2000). Whereas this is the case, many companies struggle with managing their supply chains effectively. In this case, companies have expended significant amounts of time and effort to re-engineer their supply chains through business process change and technology focused on implementing integrated Supply Chain principles. While substantial financial and human resources have been spent on doing this, there has been little sign of realized benefits. The main problem usually lies in wrong perception of optimization processes in the supply chain. The failure to adopt and implement DRP system is a challenge to many of the managers in most of the organizations for they fail to understand well on its roles towards supply chain. Low involvement of employees, lack of top management support, cultural misfit problem, and ineffective usage of DRP system usually lead to supply chain system failure which will then lead poor distribution of goods

in the retail outlets and hence inconsistencies in supply and inventory management. The inventory cost will still remain high and therefore prevent retail firms from realizing their full potential in delivering commodities to the right place, at the right time and in the right quantities. This study therefore sought to fill this gap by doing an assessment of the role of Distribution Requirements Planning (DRP) implementation on supply chain performance in retail sector in Kenya: a case of Uchumi supermarket ltd.

LITERATURE REVIEW

Inventory management is the overseeing and controlling of the ordering, storage and use of components that a company will use in the production of the items it will sell as well as the overseeing and controlling of quantities of finished products for sale. A business's inventory is one of its major assets and represents an investment that is tied up until the item is sold or used in the production of an item that is sold. It also costs money to store, track and insure inventory. Inventories that are mismanaged can create significant financial problems for a business, whether the mismanagement results in an inventory glut or an inventory shortage (Brewer & Speth, 2001).

According to Brewer and Speth (2001) distribution requirements planning ensures that inventories, both incoming and outgoing are managed effectively. It is used within the business administration function to efficiently plan orders within the supply chain. The DRP will assist the user in setting various parameters for inventory control and then calculate the requirements over a certain length of time. Orders are phased in over a period of time, ensuring that stock is available when required, but conversely stock levels are not so high that there is waste generated by accommodating too much inventory.

Managing inventory in distribution systems involves taking decisions on the quantity of inventory to be placed at different stages so that a desired customer service level can be achieved at minimum cost. If most of the inventory is placed at the lowest stage or the stage facing external demand, the customer service level improves; however, this is accompanied by an increase in the inventory carrying cost due to value addition at the lower stages. On the other hand, if most of the inventory is placed away from the lowest stage, the inventory carrying cost decreases, but at the same time the delivery lead time increases, leading to the deterioration of the customer service level. A trade-off between these two counteracting issues has to be made while taking decisions on the positioning and quantity of inventory in a distribution system (Huang, Kwan & Hung, 2001).

One of the main benefits of using DRP is simply that inventory is managed in a smart way, that ensures maximum efficiency, with adequate levels of stock. Inventory tends to be an asset that is expensive in terms of how much resources it requires, so managing the inventory is important. Successful inventory management involves creating a purchasing plan that will ensure that items are available when they are needed (but that neither too

much nor too little is purchased) and keeping track of existing inventory and its use. Two common inventory-management strategies are the just-in-time method, where companies plan to receive items as they are needed rather than maintaining high inventory levels, and materials requirement planning, which schedules material deliveries based on sales forecasts (Brewer & Speth, 2001).

Using DRP, inventory optimization determines where in the supply chain the service levels can be set, how much manual work is required to set the service levels and whether the mix will be used by one department, or by multiple departments within the warehouse. Data capture is done in real-time ensures data integrity and helps reduce the risk of discrepancies. Creating the right mix and maintaining accessible intelligence to the correct amount of inventory is vital to both customer and investor satisfaction (Chen, 2001).

Visibility allows you to see fluctuating inventory levels, including sales peaks and stagnant product. This visibility allows suppliers to ensure their product is available in the warehouse or facility on-demand. It also informs the forecasting process for cyclical inventory movement experienced year-over-year - so sourcing, holding and delivering can be executed efficiently. Through distribution requirement planning, accurate financial reports can be obtained effectively through integration of inventory transactions with the back office chart of accounts. It is extremely important that these reports are exact because inventory value can be a significant portion of your stated assets. Real-time, accurate data is accessible anytime so there will be increased confidence that operations are in sync (Chen, 2001).

According to Zhang, Chang & Yu (2006) cost minimization is a financial strategy that aims to achieve the most cost-effective way of delivering goods and services to the required level of quality. In most organizations, distribution costs represent a major expense, so that a careful design of a company's distribution system appears to be of vital importance. Relevant costs to be considered concern the location of distribution facilities as well as the allocation of customers to those locations chosen. Minimization of distribution costs focuses on a tradeoff between transportation costs favoring decentralization and operation costs associated with the facilities, where potential losses of economies favours centralization. Realistic assumptions about the underlying cost structure are an important pre-condition for obtaining a reasonable solution.

According to Sila (2007) DRP can minimize the total cost of distribution. The cost in this case is reduced by limiting the number of order placed and all other inventory costs. The cost of handling stock is usually high. The DRP system allows the organization to hold optimal stock at every given time. The efficient functioning of an operation will then depend on how well the suppliers meet up with the expectations of the organization. This

is why the supply chain principle emphasizes the totality of DRP adoption in all facets which includes the producers to retailer. DRP endorses the total quality approach in creating customer satisfaction (Zhang, Chang & Yu, 2006).

The DRP adoption approach creates an integrated method of analyzing operation by focusing on the processes of production on customer satisfaction. Thus, it requires that quality be built into all the processes so as to be efficient in the overall operation (Andrle, 2004). Kaynak (2003) suggested that the effectiveness of DRP integration should be measured by the degree of integration with their distributor bases because distribution management is a critical component of DRP integration. Operational effectiveness is then a function of how well the various units of an organization carry out their functions. Training in DRP helps in preparing employees towards managing the supply chain ideology in the process of production. Training equips people with the necessary skills and techniques of quality improvement. It is argued to be a powerful building block of business in the achievement of its aims and objectives (Stahl, 1995).

Training is the process of developing, changing and reinforcing job related behaviors. DRP management is a new culture and a way of thinking, hence, without training such changes cannot be achieved. Oakland (2003) argues that employees, including supervisors are to be won over, not by compulsion but by training, leadership and recognition. Thus the fundamental to DRP improvement is the availability of adequate supply of people who are educated in the philosophy and technical aspects of quality. Crosby (1999) recognizes the need for quality awareness to be raised among employees through education. His emphasis was on developing a quality culture within the organization so that the right climate exists.

Top management support is very important for the successful implementation of DRP management practices in an organization. According to Hackman and Wagenman (2001) DRP adoption is viewed as ultimately and inescapably the responsibility of top management because top management creates the organizations systems that determine how products and services are produced; the quality improvement process must begin with management's own commitment to DRP adoption. Pheny and Tao (2003) also observed that top management must communicate DRP adoption to the entire organization to create awareness, interest, desire and action.

Supply chain performance is defined as the procedures to measure the effectiveness and efficiency of the supply chain, and that includes the measures of cost, quality, time and customer responsiveness, and flexibility (Neely et al., 2005; Beamon, 2009). Davenport and Brooks (2004) noted that supply chain contributes toward the reduction of inventory costs and working capital. It also makes a close relationship between various distribution channels within an organization.

Supply chain contains activities that can facilitate the movement of goods and the flow of information from the raw materials to end customers. It helps companies to improve the relationship between suppliers and customers in order to produce a high-quality product at a lower cost. This is to gain a competitive advantage in the global market (Chuang & Shaw, 2005). In the present economy supply chain considered as one of the most important and powerful management strategies that has significant impact on business performance. However, when companies place supply chain in their business model they can provide products with premium quality at low price in order to attract customers. In fact, supply chain is an important component to extend and link with suppliers, distributors, and retailers in one distribution network whereby companies can obtain the best products at the lowest cost and thus increase profitability and gain a competitive advantage in the business world (Chou et al., 2004; Zheng et al., 2000).

In fact, supply chain facilitates the movement of products through the supply chain, managing the associated information flow, organizing the business relationship with customers and suppliers and other partner in the supply chain, and creating customer value to achieve customer satisfaction and loyalty (Burca, et al., 2005).

On the other hand, supply chain can be perceived through managing upstream and downstream operations, which resulted in reducing the operational costs in order to improve the profit margin, and in delivering the products to the market in order to reach the customer on time (Sundaram and Mehta, 2002). The goals of supply chain are to reduce uncertainty and risks related to the supply chain, and this can contribute in decreasing inventory levels and cycle time, improving business processes, and enhancing customer service, and finally increase profitability and enhance competitiveness of the company (Turban, et al., 2008).

RESEARCH METHODOLOGY

Descriptive research design approach was used in this study. According to the HR records of Uchumi Supermarket Headquarters, there were 83 management staff (top, middle and lower level staff) who well understand on DRP implementation and responsible of the day to day running of the departments. The target population of this study comprised of all the 83 management staff at Uchumi supermarkets headquarters in Nairobi. The study used census sampling technique select the respondents. It therefore means that all the employees at Uchumi Supermarket Headquarters formed the sample size given their low figure. The sample size of this study was therefore 83 respondents. This study solely depended on primary data which was collected using a questionnaire covering the assessment of the role of distribution requirements planning implementation on supply chain performance in retail sector in Kenya: a case of Uchumi supermarket ltd. The data collected was both quantitative and qualitative in nature. The quantitative data

obtained from the closed-ended was organized, categorized, coded (assigning numerical or other identifying signs or symbols to different data categories) then ran their frequencies using Statistical Package for Social Sciences (SPSS Version, 20.0). The SPSS program Version 20.0 was used as the only statistical tool of computation of the required parameters. Descriptive statistics were used to communicate the results whereas frequencies, percentages, graphs and charts in order to obtain measures of central tendency such as mean, standard deviation was later used to report the data.

RESEARCH FINDINGS AND DISCUSSION

4.8 Reliability Analysis

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). During the pilot study, two repeat mailings of the instrument were carried out to improve the overall response rate before sending the actual instrument to allow for pre-testing of the research instrument. Cronbach's alpha for each value was established by the SPSS application and gauged against each other at a cut off value of 0.7 which is acceptable according to Cooper and Schindler (2008). In this study all the values were above 0.7 which concludes that the data collection instrument was reliable.

Table 4.1: Reliability Test

Variable	Cronbach's Alpha
Organization policy	.7885
DRP implementation Cost	.7968
Staff Training	.8363
Top Management Support	.8177

Inferential Statistics

Regression Analysis

A linear multiple regression analysis was used test the relationship between the independent variables and the dependent variable. The researcher applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study. Coefficient of determination explains the extent to which changes in the supply chain performance of manufacturing sector in Kenya can be explained by the change in the independent variables (Integration of Inventory Management, DRP implementation cost, staff training and top management support).

Table 4.2: Model Summary

Model	R	R Square	Adjusted	R Change Statistics
-------	---	----------	----------	---------------------

			Square	F Change	Sig. F Change
1	.897 ^a	.805	.8025	7.567	.029

According to the findings in the table above, the value of adjusted R^2 is 0.8025. This indicates that there was a variation of 80.25 % of supply chain performance of manufacturing sector due to the four independent variables at a confidence level of 95%. In addition other factors that were not studied in this research contribute to 19.75% of the supply chain performance of Uchumi supermarket in Kenya. Therefore, further research should be conducted to investigate the other factors which contribute to that 19.75% of supply chain performance of Uchumi supermarket in Kenya. The significance value was 0.029 which is less than 0.05 thus the model is statistically significance in predicting how the independent variables (integration of inventory management, implementation cost, staff training and top management support) vary on the dependent variable (supply chain performance of Uchumi supermarket). The F critical at 5% level of significance was 2.789. The F calculated (value =7.567) was greater than the critical value ($7.567 > 2.789$) which indicates that the independent variables (Integration of Inventory Management, implementation cost, staff training and top management support) affect the supply chain performance of retail sector in Kenya with reference to Uchumi supermarket ltd.

ANOVA

Table 4.3: ANOVA^a

Model		Sum of Squares	df	F	Sig.
1	Regression	4.120	4	7.567	.029 ^b
	Residual	50.048	78		
	Total	53.168	82		

$Y_s = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$ become:

$$Y = 0.164 + 0.047X_1 + 0.132X_2 + 0.491X_3 + 0.279X_4$$

Where Y is the dependent variable (supply chain performance of retail sector) X_1 is the integration of inventory management, X_2 is DRP implementation cost, X_3 is Staff training, X_4 is top management support. Taking all independent variables constant at zero, the supply chain performance of Uchumi supermarket ltd will be will be 0.164. The data findings also showed that taking all other independent variables at zero, a unit increase in the Staff training will lead to a 0.491 increase in the supply chain performance of Uchumi supermarket in Kenya, a unit increase in the top management support will lead to a 0.279 increase in the supply chain performance of Uchumi supermarket, a unit increase in DRP implementation cost will lead to a 0.132 increase in the supply chain performance of Uchumi supermarket in Kenya; while a unit increase in integration of inventory

management will lead to a 0.047 increase in supply chain performance of Uchumi supermarket in Kenya.

Therefore inventory management systems contribute more to the supply chain performance of retail sector. At 5% level of significance and 95% level of confidence; staff training showed a 0.001 level of significant; top management support showed a 0.013 level of significant; DRP implementation cost showed a 0.019 level of significant and organization policy showed a 0.024 level of significant.

Multiple Regressions

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	
	B	Std. Error	Beta		
	(Constant)	.164	.472	.029	
1	Integration of inventory management	.047	.083	.141	.024
	DRP implementation cost	.132	.341	.193	.019
	Staff training	.491	.037	.506	.001
	Top management support	.279	.110	.168	.013

Summary of the Findings

The study found out that 67% of the respondents considered distribution requirements planning (DRP) implementation in supply chain worthwhile whereas a few were of the opinion that distribution requirements planning (DRP) implementation in supply chain was not worthwhile. The study established that stock levels and all inventory management approaches, cost of implementation, planning activities, implementation activities, monitoring and control of DRP as well as effective coordination of activities related to distribution in the supply chain were some of the aspects of DRP the management was keen at. Ninety one percent (91%) of the respondents said that distribution requirement planning (DRP) implementation significantly improves supply chain performance of the firm. Of the total sampled respondents, 77% of them said that which DRP implementation affect supply chain performance to a great extent. According to the findings, the study established that majority of the respondents were in agreement that; DRP implementation has led to cost reduction in the supply chain, DRP implementation has brought about timely completion of work and an efficient supply chain management, realistic estimates can be drawn due to effective DRP implementation in the supply chain, DRP implementation has led to efficient use of resources and that

DRP implementation has a powerful building block of business in the achievement of Uchumi supermarket aims and objectives as shown by the mean scores of 1.846, 1.761, 1.777, 1.548 and 1.143 respectively.

Integration of Inventory Management and Supply Chain Performance

The study found out that 97% of the respondents were of the opinion that integration of inventory management affect supply chain performance at Uchumi supermarkets limited. According to the study findings, majority of the respondents strongly agreed that; DRP have assisted in setting various parameters for inventory control, distribution requirements planning ensures that inventories, both incoming and outgoing are managed effectively, the use of DRP ensure that stock is available when required and that; DRP allows for decision making for positioning and quantity of inventory in a distribution system, as shown by the mean scores of 1.411, 1.329, 1.231 and 1.428 respectively.

Implementation Cost and Supply Chain Performance

The study found out that 70.2% of the respondents agreed that DRP implementation cost affect supply chain performance and that DRP implementation cost regarding supply chain performance lower costs and improve performance. The study found out that majority of the respondents agreed that reduced profits affect supply chain performance as shown by a mean of 2.66 and a standard deviation of 0.96; that lower labor turnover and Improved sales values affect supply chain performance as shown by a mean of 2.46 and standard deviation of 0.94; identifying corrective actions to address issues affect supply chain performance as shown by a mean of 2.13 and a standard deviation of 0.31 and that improvement of supply chain variables improve the supply chain performance of Uchumi supermarket limited as shown by a mean of 1.81 and a standard deviation of 1.02. The efficient functioning of an operation will then depend on how well the suppliers meet up with the expectations of the organization.

Staff Training and Supply Chain Performance

The study found that majority of the respondents were in agreement that; employee training is necessary in implementation of DRP, training offered by hired experts at Uchumi assist in implementation of DRP, training program about implementation of DRP at Uchumi supermarket is coordinated in time, training reduce cost of sourcing appropriate goods and services and that; training significantly improves the implementation of DRP as shown by the percentages of 87%, 78%, 70%, 74%, and 77% respectively. This is an implication that training offered in DRP implementation influences supply chain performance to a great extent at Uchumi supermarket. From the findings 45% of the respondents indicated that they were aware of staff training in their firm to a high extent.

Top Level Management Support

The study found out that 81% of the respondents agreed that top level management support contribute to policies on the implementation of DRP. The study showed that majority (54.7%) of the respondents agreed that top level management contributes to integration issues to a great extent, 32.9 of the respondents agreed that middle level management assist and contribute to integration issues while just 12.4% of the respondents agreed that the low level management contribute to integration issues. This was an implication that DRP adoption and implementation is ultimately the responsibility of top management. According to Hackman and Wagenman (1995) DRP adoption is viewed as ultimately and inescapably the responsibility of top management because top management creates the organizations systems that determine how products and services are produced; the quality improvement process must begin with management's own commitment to DRP adoption.

According to the findings, the study found out that majority of the repondnets were in agreement that; top management are committed to staff development and DRP adoption, top management make efforts to standardise the supply chain processes in the organization, top management are willing to take accountability for DRP management and delivery time lines, top management make efforts to establish quality assurance management systems and that; the implementation of the practices includes the constructs of management commitment contribute to improve the quality of service to the customers as shown by the mean scores of 1.42, 1.79, 1.77, 2.25 and 1.98 respectively.

Conclusions

The study concluded that integration of inventory management affect supply chain performance at Uchumi supermarkets limited. The study concludes that; DRP implementation at Uchumi supermarket have assisted in setting various parameters for inventory control, distribution requirements planning ensures that inventories, both incoming and outgoing are managed effectively, the use of DRP ensure that stock is available when required and that; DRP allows for decision making for positioning and quantity of inventory in a distribution system.

The study concludes that DRP implementation cost affect supply chain performance and that DRP implementation cost regarding supply chain performance lower costs and improve performance. The study also concludes that reduced profits affect supply chain performance, lower labor turnover and Improved sales values affect supply chain performance, identifying corrective actions to address issues affect supply chain performance and that improvement of supply chain variables improve the supply chain performance.

The study concludes that employee training is necessary in implementation of DRP, training offered by hired experts at Uchumi assist in implementation of DRP, training

program about implementation of DRP at Uchumi supermarket is coordinated in time, training reduce cost of sourcing appropriate goods and services and that; training significantly improves the implementation of DRP. Most of the employees were aware of staff training.

The study concludes that top level management support contributes to policies on the implementation of DRP and integration issues to a great extent, an implication that DRP adoption and implementation is ultimately the responsibility of top management. the study also concludes that; top management are committed to staff development and DRP adoption, top management make efforts to standardise the supply chain processes in the organization, top management are willing to take accountability for DRP management and delivery time lines, top management make efforts to establish quality assurance management systems and that; the implementation of the practices includes the constructs of management commitment contribute to improve the quality of service to the customers.

Recommendations

This study recommends that top management continue with the motive of establishing means to which integration of inventory management could be improved for this was found to affect supply chain management to a great extent. The management should be aware that if inventories that are mismanaged, they can create significant financial problems for a business.

The top management should continue supporting the implementation of DRP in order to help in the sustainability and effectiveness of the supply chain of Uchumi supermarket. In fact, they should be in the forefront in establishing any risk that would increase the costs of DRP implementation which would in turn affect the supply chain of the supermarket. This way, they need to draw up strategies that mitigate on any risk that would affect DRP adoption and implementation.

It was clear from the findings that staff training is a great aspect in DRP and if the supply chain is to be effective. Special advanced programmes should be created to at Uchumi supermarket to help the staff understand more of what DRP is? Why should organizations continue adopting and implementing it? As well as, the special effects it has to supply chain performance. Some of the staffs were not aware of what DRP was and it took the researcher a hard time to explain to them.

This study recommends that the management be always in the fore front to support any activity that is related to DRP implementation. It has been found out in the study that it's the top management and not other levels of management that should be committed towards DRP implementation. The management should therefore manage all strategic plans that influence the supply chain not only the DRP integration.

REFERENCES

- Al-Mashari, M., Al-Mudimigh, A. (2003). DRP implementation: Lessons from a case study. *Information Technology and People*. Vol. 16 No.1, Pp.21-33.
- Brewer and Speth, (2001). Measuring supply chain performance. *International Journal of Operations & Production Management*. Vol. 19, No.3, pp.275-92.
- Chen, I.J. (2001). Planning for DRP systems: analysis and future trend. *Business Process Management Journal*. Vol. 7 No.5, Pp. 374-86.
- Chuang, M.L., Shaw, W.H. (2005). A roadmap for e-business implementation", *Engineering Management Journal*. Vol. 17 No.2, Pp.3-13.
- Davenport, T.H., Brooks, J.D. (2004). Enterprise systems and the supply chain. *Journal of Enterprise Information Management*. Vol. 17 No.1, Pp.8-19.
- Deloitte E. (1999). DRP's second wave – maximizing the value of DRP-enabled processes. *Deloitte Consultant: making ERP spell ROI*,
- Hsu, L.L. (2005). Supply chain system effects on performance for interaction between suppliers and buyers. *Journal of Industrial Management & Data Systems*. Vol. 105 No.7, Pp.857-75.
- Huang, S.M., Kwan, I.S.Y., & Hung, Y.C. (2001). "Planning enterprise resources by use of a reengineering approach to build a global logistics management system. *Journal of Industrial Management and Data Systems*, Vol. 101 No.9, pp.483-91
- Kemp, M.J., & Low, G.C. (2008). DRP innovation implementation model incorporating change management. *Business Process Management Journal*. Vol. 14 No.2, pp.228-42.
- Rashid, M.A., Hossain, L., & Patrick, J.D. (2002). *The Evolution of DRP Systems: A Historical Perspective*. Idea Group Publishing, Hershey, PA,
- Rom, A., & Rohde, C. (2006). Distribution requirements planning systems, strategic enterprise management systems and management accounting: A Danish study. *Journal of Enterprise Information Management*, Vol. 19 No.1, pp.50-66
- Shepherd, C., & Gunter, H. (2006). Measuring supply chain performance: current research and future directions. *International Journal of Productivity and Performance Management*, Vol. 55 No.3/4, pp.242-58