

Role of Supply Chain Management Practices on Organizational Performance in Manufacturing Firms: A Case of Bata Shoe Company Limited, Kenya

¹Michael Antony Mudimba, ²Dr. Noor Ismael

College of Human Resource Management, Jomo Kenyatta University of Agriculture and Technology

Abstract: Wholesalers, manufacturers, retailers, distributors, suppliers, third party service providers (3PLs) and every party involved in the supply chain are under pressure to reduce and balance their costs, time and inventories in order to continue to be profitable while still meeting their customers' demands. The best way for them to achieve this is to implement effective supply chain management practices (Mwale & Nyamwange, 2014). The objectives of the study will be to explore the role of supply chain management practices, to determine the role of information communication technology, to establish the role of inventory management, to ascertain the role of quality management and to evaluate the role of supplier relationship management on organization performance in Bata Shoe Company Limited in Kenya. The research will be carried out through a cross-sectional research survey design whereby the target population comprised of Bata Shoe Company management and staff. In this study the researcher will use stratified random sampling and simple random sampling where 10% of the target population representative of the entire population will be studied. Questionnaires with close-end questions and likert scales will be used as the research instrument by being administered to the respondents and collected after due completion by the researcher. The collected data will be analyzed using Statistical Package for the Social Sciences (SPSS version 21) frequencies, percentages, means, standard deviations and regression analysis

Keywords: Supply chain Management, Organization Performance, Bata Limited Kenya.

1. INTRODUCTION

Over the years the nature of competition has changed to the extent that companies no longer compete against each other on the basis of quality as traditionally practiced in the 80's. However, the new source of business competition links their operation with their supply chain partners; suppliers, distributors, wholesalers, retailers and end customers. Being able to create business relationships with customers, suppliers and other strategic partners anchored on trust and long term commitment then becomes a crucial competitive parameter (Mwale & Nyamwange, 2014).

For this and other factors like shorter product lifecycle and customer expectation, businesses have had to invest and re-focus greater attention on relationship with customers and suppliers. Consequently an organization supply chain has become a strategic agenda driving decision making at senior management level (Gituro, & Bolo, 2007).

In the 1990's competition intensified and markets became global resulting to challenges associated with getting a product and service to the right place at the right time and at the lowest cost. Organisations began to realize that it is not enough to improve efficiencies within an organization but their whole supply chain has to be made competitive. The understanding and practicing of supply chain management practices has become an essential for staying competitive in the global market and for enhancing profitability (Shale, Iravo, & Guyo, 2014).

Effective supply chain management practices are important to build and sustain competition in products and services of the firm. Mwale and Nyamwange (2014) state that the performance of the supply chain is influenced by managing and integrating key element of information into their supply chain. To achieve effective supply chain integration the firms need to implement information technology which will see them gain competitive advantage through numerous supply chain dimensions such as quality, cost, flexibility, delivery and profit.

1.1 History of Bata Shoe Company:

Bata Shoe Company is unique in that it is the only shoe company in Kenya which produces shoes for all categories of consumers under one brand. Today Bata shoe company products is the market leader in shoes production over seventy(70) countries but faces stiff competition locally from other manufacturers, second hand shoes and other imported brands. Bata Shoe Company was begun in 1894 by three siblings namely, Thomas, Anna and Atonnin bata in Zlin, Czech Republic (Njenga, & Ngahu, 2013).

Anna and Antonnin eventually left and Thomas was left to manage the company alone. Bata Shoe Company is currently in five (5) continents and runs twenty seven production facilities (27) across twenty (20) countries. It operates over seventy countries and has over five thousand stores across the world. It has over twenty in house brands of shoes including the Safari boot which has remained a best seller worldwide. Bata Kenya was begun in nineteen thirty nine (1939) by setting up a plant in Limuru which has a capacity to produce over sixty thousand (60000) pairs of shoes daily. Bata Kenya has a hundred and eleven stores in the country (Njenga, & Ngahu, 2013).

2. STATEMENT OF PROBLEM

The concept of SCM has received increasing attention from academicians, consultants and business managers alike. Many organizations have begun to recognize that SCM is the key to building sustainable competitive edge. Despite this increased attention, the literature has not been able to offer much way of guidance to help the practice of SCM (Mwale & Nyamwange, 2014). Much of the current theoretical/Empirical research in SCM focuses on only downstream or upstream side of the supply chain or certain aspects/perspectives of SCM.

Internationally studies such as those of Miguel and Ledur (2011) focus on the downstream linkages between manufactures and retailers. A few recent studies have considered both upstream and downstream simultaneously. Nawanir, Teong, and Othman (2013) carried out a study that explored the relationship between supplier management practices, customer relationship practices and organization performance.

Frohlich and Westbrook (2001) investigated the effects of supplier-customer integration on organization performance among many others. These studies are representative of efforts to address the diverse but interesting aspects of SCM practices. However the lack of an integrated framework incorporating all the activities both upstream and downstream sides of the supply chain and linking such activities to both competitive advantage and organization performance does not help much in coming up with a framework of implementing previous results on SCM. This study aimed at coming up with a tested framework identifying the relationship among SCM practices and organization performance.

Locally studies have been carried out that have focused on specific aspects of SCM. Bosire (2011) researched on the Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi. He found out that outsourcing of logistics services in supermarkets has a direct effect with the lead times of product delivery and that among those supermarkets that have outsourced procurement of products from the suppliers; time taken to deliver the same products to their warehouses has tremendously reduced.

Kamau (2011) conducted a study on buyer supplier relationship and organization performance where she found out that there is a clear relationship between the two variables. Mose (2012) conducted a study on the adoption of E- procurement in large manufacturing firms. He found out that many manufacturing firms have adopted various e-procurement practices. This is an indication that there is lack of study carried out locally to bring out an understanding of the comprehensive set of SCM practices and how they can enable an organization improve its performance and gain competitive advantage. This study therefore sought to bridge this gap and also sought answers to research questions which are; how does information communication technology influence organization performance? Does inventory management affect organization performance? To what extent does supplier relationship management influence organization performance? How does quality management affect organization performance?

3. LITERATURE REVIEW

Singh, Sandhu, Metri and Kaur (2010) carried out a study on Relating organized retail supply chain management practices, competitive advantage and organisational performance. Data for analysis was collected from top 10 non-livestock organized retail players operating in Punjab, Haryana, Chandigarh, New Delhi and, Gurgaon in India. The relationships among supply chain practices, competitive advantage, and organisational performance were using structural equation 27 modelling. The results indicated that competitive advantage has high impact on supply chain management practices but they failed in matching supply chain practices, competitive advantage and, organisational performance.

Karimi and Rafiee (2014) did a study on analyzing the impact of supply chain management practices on organizational performance through competitive priorities (Case Study: Iran Pumps Company). Descriptive research design was employed. Data was collected from employees of Iran Pumps Company where a sample of 483 employees was selected randomly. The findings showed that SCM practices have a direct, positive influence on organizational performance as well as an indirect one through competitive advantage.

A study by Bratic (2011) on achieving a competitive advantage by SCM had a defined sample of 150 Croatian graphic companies. The companies in the sample were graphic production companies involved in printing and publishing. Questionnaires were e-mailed to the respondents and collected for analysis using the same method. A majority of the respondents belonged to middle and upper management and have average 12.5 years of experience. A response rate of 75.3% was achieved. Results indicated that price, quality and time to market were stronger indicators of competitive advantage than the delivery dependability and product innovation.

The study by Ghatebi, Ramezani and Shiraz (2013) on impact of supply chain management practices on competitive advantage in manufacturing companies of Khuzestan Province was descriptive research design. The target population was manufacturing companies in Khuzestan province, a questionnaire was used to collect data from managers in those manufacturing companies and the sampling method used was stratified random sampling. The results obtained showed that there was a relationship between supply chain management practices and competitive advantage in Khuzestan province's manufacturing companies.

Hamid and Ibrahim (2013) conducted a study on investigation into the relationship between supply chain management practices and supply chain performance efficiency. The study employed the quantitative method where convenience sampling and self-administrated survey 30 questionnaires were sent to 110 manufacturing companies in Sudan. The findings indicated that three of the five dimensions of SCMP had a significant positive effect on supply chain performance efficiency.

4. RESEARCH METHODOLOGY

According to Wiersma and Jurs (2009) a research design is a plan, structure of investigation conceived so as to obtain answer to research questions and to control variances. It is also defined as a blueprint, framework or plan for a study that guides the collection and analysis of data derived from both primary and secondary sources (Churchill & Iacobucci, 2005). The study used a cross-sectional survey research design to help in indicating trends in attitudes and behaviors and enable generalization of the findings of the research study to be done. Cross-sectional survey is a method that involves the analysis of data collected from a population, or a representative subset, at one specific point in time (Orodho, 2003). This design was appropriate for this study because it utilized a questionnaire as the data collection tool which saved on time, expenses and the amount of quality information yielded is valid, while interviewer bias was reduced because participants completed identically worded self-reported measures.

5. FINDINGS

The analysis of the data collected and the interpretation of the findings made in the study. In this regard, the study sought to determine the role of supply chain management practices on organization performance in Bata Shoe Company. The responses to the items directly related to the research questions were presented in frequency tables, pie charts and bar charts, means, standard deviation and regression analysis to simplify their interpretation and understanding.

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). According to table 4.1 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	No of Items
Information communication technology	.7045	2
Inventory management	.7168	3
Supplier relationship	.7263	4
Quality management	.7177	2

Response rate:

According to Bogdan & Biklen (2007) the response rate is the percentage of the sample that returns the questionnaires completed during data collection. In this case, out of the 80 questionnaires issued to the respondents by the researcher, 68 of them were received fully completed recording a response rate of 85% as indicated in Table 4.1. According to Mugenda and Mugenda (2003) a response rate that is 50 percent is adequate to be used in research, 60 percent is good and above 70 percent is very good.

Response Rate:

Respondents	Frequency	Percentage
Responded	68	85%
Did not Respond	12	15%
Sample size	80	100%

Descriptive Statistics:

Descriptive statistics are used to describe the basic features of the data in a study by providing summaries about the sample and the measures. Together with simple graphical analysis, they form the basis of virtually every quantitative analysis of data (Kothari, 2004). The study used descriptive statistics to present the frequency and the percentages of the gathered data on the role of supply chain management practices on organization performance in Bata Shoe Company.

Education Level of the Respondents:

It was important to establish the education level held by the study respondent's in order to ascertain if they were equipped with relevant knowledge and skills on supply chain management functions. The findings indicated that the majority (52.9%) had bachelor's education level, 29.4% had diploma education level and 17.6% had master's education level (See Table 4.2). These findings implied that most of the respondents were qualified to understand the nature of the study problem. This concurs with Joppe (2000) that during research process, respondents with technical knowledge on the study problem assist in gathering reliable and accurate data on the problem under investigation. This demonstrated that most of the organization employees were qualified professionals with technical knowledge and skills on the study problem and thus provided the study with reliable information on the role of supply chain management practices on organization performance in Bata Shoe Company.

Education Level of the Respondents:

Education Level	Frequency	Percent
Certificate	0	0
Diploma	20	29.4
Bachelors	36	52.9
Masters	12	17.6
Doctorate	0	0
Total	68	100.0

Working Experience of the Respondents:

The study determined the working experience held by the respondents in order to ascertain the extent to which their responses could be relied upon to make conclusions on the study problem using their working experience. From the findings, 17.6% of the respondents indicated they had a working experience of less than an year, 29.4% had a working experience of 1-3 years, 41.2 % had a working experience of 3-5 years, 5.9 % had a working experience of 5-10 years and 5.9% had a working experience of over 10 years (See Table 4.3). These findings were in line with Baxter (2008) that respondents with a high working experience assist in providing reliable data on the study problem since they have technical experience on the problem being investigated by the study. This indicates that 50% of the respondents had worked in Bata Shoe Company for a significant time and thus understood technical issues on the role of supply chain management practices on organization performance in Bata Shoe Company.

Working Experience of the Respondents:

Working Experience	Frequency	Percent
Less than a year	12	17.6
1-3 years	20	29.4
3-5 years	28	41.2
5-10	4	5.9
Over 10 years	4	5.9
Total	68	100.0

Information Communication Technology:

Information Communication Technology (ICT) is a technology that involves use of computers, software and internet connections infrastructure for supporting information processing and communication functions (Crompton, 2007). The use of information technology in manufacturing sector has not been effectively implemented since most of the procurement functions are subjected to manual procedures that are slow, inaccurate and infective.

ICT towards Organization Performance:

The findings for the study are presented in the table 4.4. The data was collected from the different indicators of the variable ICT which was ordinal categorical. The data was therefore presented in frequency tables with the median being used as the appropriate measure of central tendency.

Information Communication technology had the first indicator that required the firm to state the percentage of employees in the firm who are computer literacy , 54% of the respondents had 0-20% , 3% had 20-30% , 14% had 30-40%had 9%, 40-50% and 6% had over 50%.The modal class is of the respondents who had between 0 to 20% literacy. The median was found to be 1 which implies that on average the respondents 0 to 20% of employees in the firm that are computer literacy.

When the respondents were asked in the second question what the firm's level of Automation was, 3% of the respondents had 0-20%, 3% had 20-30%, 6% had 30-40%, 37% had 40-50% and 49% had over 50%. The modal class is of the respondents who had over 50% automation. The median was found to be 5 which imply that on average the firms have over 50% level of Automation. The next indicator asked the respondents what the level of procurement systems usage was in the firm, 0% of the respondents had 0-20%, 3% had 20-30%,6% had 30-40%, 37% had 40-50%, and 46% had over 50%. The modal class is of the respondents who had over 50% level of procurement usage. The median was found to be 5 which imply that on average the firms had over 50% level of procurement systems usage.

When the respondents were asked what the level of ICT infrastructure was, 3% of the respondents had 0-20%, 3% had 20-30% , 9% had 30-40% , 31% had 40-50%, 51% had over 50% ” The modal class is of the respondents who had over 50% level. The median was found to be 5 which imply that on average the firm had over 50% level of ICT infrastructure. The last indicator for the variable ICT inquired what the firm's level of embracement of E-procurement was. 0% of the respondents 0-20%, 3% had 20-30%, 3% had 30-40%, 31% had 40-50% and 60% had over 50%” The modal class is of the respondents who had over 50%. The median was found to be 5 which imply that on average the firms have over 50% level of embracement of E-procurement.

ICT towards organization performance

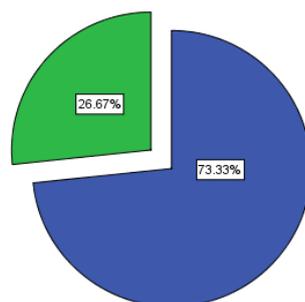
Information Communication Technology	0%	10%	20%	40%	Over 60%
What percentage of employees in the firm are computer literacy	54.3%	2.9%	14.3%	8.6%	5.7%
What is the firms level of Automation	2.9%	2.9%	5.7%	37.1%	48.6%
What is the level of procurement systems usage	0%	2.9%	5.7%	37.1%	45.7%
What is the level of ICT Infrastructure	2.9%	2.9%	8.6%	31.4%	51.4%
What is the firms level of embracement of E-procurement	0%	2.9%	2.9%	31.4%	60%

Inventory Management:

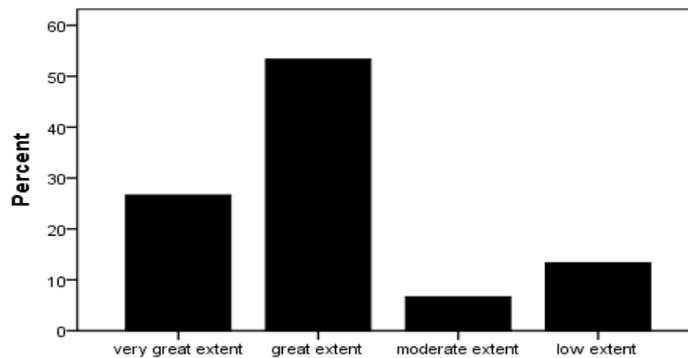
Inventory management is the application of data collection, demand and forecasting, lean and operational principles to manage the total amount of inventory within the supply chain at any point in time and manage inventory holding costs (Satyendra & Singh, 2013). The scope of inventory management concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods, and demand forecasting. Balancing these competing requirements leads to optimal inventory levels (Mackelprang & Nair, 2010).

Has JIT implementation reduced inventory costs?

From Figure 4.1 the researcher found out that a large percentage of 73.3% were of the opinion that JIT implementation in their company actually reduced inventory holding costs while a percentage of 26.67% differed with that opinion. From this data the researcher deduced that implementation of JIT system in inventory management is of vital role in reduction of inventory holding costs and improving organization performance Bata Shoe Company.

**Has JIT implementation reduced inventory costs?****The extent supply chain management practices implementation influences inventory carrying costs:**

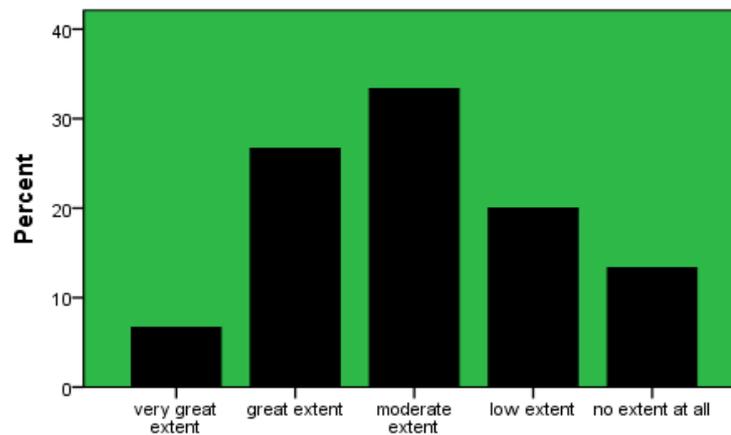
The respondents were asked to indicate the extent to which supply chain management practices implementation impacts on the reduction of various inventory costs which include; inventory carrying cost, quality deterioration cost and material handling cost. They were to represent their opinion on a scale of 1 to 5 where 1. Very great extent, 2. Great extent, 3. Moderate extent, 4. Low extent, 5. No extent at all. From Figure 4.2, the researcher found out that a percentage of 53.3% of respondents showed that supply chain management practices implementation influences inventory carrying costs to a great extent, 26.7% indicated a very great extent, 6.7% showed a low extent, while 13.3% indicated the influence to be of low extent. From the study findings the researcher identified that implementation of supply chain management practices have significant positive impact on inventory carrying costs.



Extent supply chain management practices implementation influences inventory carrying costs.

The extent supply chain management practices influences Quality deterioration cost:

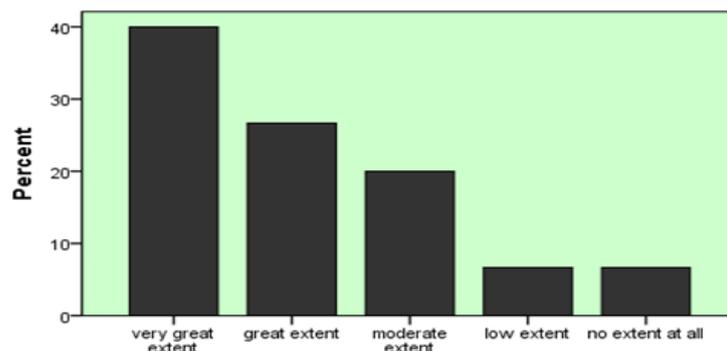
From Figure 4.3, The researcher found out that a percentage of 33.3% of respondents showed that supply chain management practices implementation influences quality deterioration costs to a moderate extent, 26.7% indicated a great extent, 20% showed a low extent, 13.3% indicated the influence to be of no extent at all, while 6.7% of the respondent's opinion was that it was to a very great extent.



The extent supply chain management practices implementation influences Quality deterioration cost

The extent supply chain management practices influences material handling cost:

The study showed the extent supply chain management practices implementation influences reduction of material handling cost, 40% indicated that it was of very great extent, 26.7% indicated that it was of great extent, 20% indicated that it was of moderate extent, 6.7% indicated that it was of low extent and no extent at all consecutively. The researcher therefore concluded that supply chain management practices implementation has a huge role on the organization performance of manufacturing firms in reduction of inventory costs.



The extent supply chain management practices influences material handling cost

Quality Management:**Does training and seminars enhance capability of the employee performance?**

From Table 4.5, the researcher found out that majority of respondents who comprised a percentage of 86.67% agreed that training and seminars enhance capability of the employee performance while 13.33% disagreed. From the data results and analysis above the researcher deduced that cross-training programmes and seminars improve the employee's technical skills which are translated to their relevant work departments resulting to good quality output.

Does training and seminars enhance capability of the employee performance?

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	13	86.7	86.7	86.7
no	2	13.3	13.3	100.0
Total	15	100.0	100.0	

Extent of agreement of Quality Management statements that affect organization performance:

The study sought to find out the respondents' extent of agreement of statements on quality management. The findings as presented indicate that most respondents agreed that the organization has implemented of Quality circle programmes as shown by a mean of 4.6029 and a standard deviation of 0.79438; that the organization has implemented programmes for Continuous improvement as shown by a mean of 4.5294 and a standard deviation of 0.65724; that the organization has effective evaluation and effective supplier selection as shown by a mean of 4.1324 and a standard deviation of 1.22053. However, most respondents disagreed to the statement that the organization has implemented multifunctional skills training programme as shown by a mean of 1.5588 and a standard deviation of 0.87045 (See Table 4.6). According to Fotopoulos and Evangelos (2010) Total Quality Management is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback. Keane and Feinberg (2007) states that in a JIT production system inspection of raw materials, parts and goods ensure early detection of defects contributing to higher quality and productivity through lower levels of inventory and scrap.

Quality management towards organization performance

Statements on quality management	N	Mean	Std. Deviation
Implemented programmes for Continuous improvement	68	4.5294	.65724
Implemented multifunctional skills training programme	68	1.5588	.87045
Implemented of Quality circle programmes	68	4.6029	.79438
Evaluation and effective supplier selection	68	4.1324	1.22053

Supplier Relationship Management Extent of agreement of statements on Supplier Relationship Management that affect organization performance:

The study sought to determine the extent of agreement of statements on supplier relationship management that affect organization performance. The study findings were, most respondents agreed that the company's relationship with its suppliers is based on mutual trust as shown by a mean of 4.1176 and a standard deviation of 1.33304; cooperation as shown by a mean of 3.9853 and a standard deviation of 1.22770; long term commitment as shown by a mean of 3.9853 and a standard deviation of 1.22770 and strategic partnerships as shown by a mean of 3.8971 and a standard deviation of 1.45725 (See Table 4.7). Supplier Relationship Management (SRM) is a systematic approach for developing and managing partnerships. Hughes (2010) defined SRM as the discipline of strategically planning for, and managing, all interactions with third party organizations that supply goods and/or services to an organization in order to maximize the value of those interactions. Lu and Yan (2007) also agree that mutual trust must be developed between companies and vendors. This cannot be accomplished if vendors change every time new bids are sent out. For this reason a company should have few suppliers (preferably one) for each purchased material or component. A partnership is then formed between the company and the vendor so that they can actively work together to continually lower the cost of purchased material. It would be impossible to form such relationships with several, ever changing vendors (Xiaofei & Chun, 2008).

Table Supplier Relationship management and Organization Performance

Statements on supplier relationship management	N	Mean	Std. Deviation
Mutual trust	68	4.1176	1.33304
Cooperation	68	3.9853	1.22770
Long term commitment	68	3.9853	1.16533
Strategic partnerships	68	3.8971	1.45725

6. REGRESSION ANALYSIS

A multiple regression model was fitted to determine whether independent variables notably, X_1 = Information Communication Technology, X_2 = Inventory management, X_3 = Supplier relationship management and X_4 = Quality management simultaneously affected the dependent variable Y = Organization Performance. As a result, this subsection examines whether the multiple regression equation can be used to explain the nature of the relationship that exists between the independent variables and the dependent variable.

Based on the study findings, the regression model Organization Performance coefficient of determination R Square was 0.993 and R was 0.996. The coefficient of determination R Square indicated that 99.3 % of the variation on Organization Performance can be explained by the set of independent variables, namely; X_1 = Information Communication Technology, X_2 = Inventory management, X_3 = Supplier relationship management and X_4 = Quality management (See Table 4.8). The remaining 0.7% of variation in organization performance can be explained by other variables not included in this model. This shows that the model has a good fit since the value is above 80%. This concurs with Orodho (2009) that R-squared is always between 0 and 100%: 0% indicates that the model explains none of the variability of the response data around its mean and 100% indicates that the model explains the variability of the response data around its mean. In general, the higher the R-squared, the better the model fits the data. The adjusted R square is slightly lower than the R square which implies that the regression model may be over fitted by including too many independent variables. Dropping one independent variable will reduce the R square to the value of the adjusted R-square.

Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.996 ^a	.993	.991793	.124438

The study further used Analysis of Variance (ANOVA) in order to test the significance of the overall regression model. Kothari (2004) posit that Analysis of Variance helps in determining the significance of relationship between the research variables. The results of Analysis of Variance (ANOVA) for regression coefficients in Table 4.10 reveals that the significance of the F statistics is 0.007 which is less than 0.05 and the value of F (3.908) being significant at 0.00 confidence level. The value of F is large enough to conclude that the set coefficients of the independent variables are not jointly equal to zero. This implies that all of the independent variables (Information Communication Technology, Inventory management, Quality management and Supplier relationship Management) have an effect on the dependent variable.

ANOVA

Model	Sum Squares	df	Mean Square	F	Sig.
Regression	11.235	4	2.809	3.908	.007 ^b
Residual	45.280	63	.719		
Total	56.515	67			

Coefficients of Overall Regression model was used to present the beta coefficients of all independent variables versus organization performance.

$$Y = 0.164 + 0.641X_1 + 0.570X_2 + 0.170X_3 + 0.048X_4$$

The study findings were, Information Communication Technology (X_1) had a coefficient of 0.641 which is greater than zero. The t statics is 2.813 which has a p-value of 0.000 which is less than 0.05 implies that the coefficient of X_1 is

significant at 0.05 level of significance. This shows that Information Communication Technology have a significant positive influence on organization performance. The coefficient of inventory management (X_2) was 0.170 which was greater than zero. The t statistic of this coefficient is 2.965 with a p value of 0.004 which is less than 0.05. This implies that the coefficient 0.170 is significant. Since the coefficient of X_2 is significant, it shows that inventory management has a significant effect on organization performance.

Coefficients of Overall Regression model

Model	B Coefficients	Std. Error	T	Sig.
Constant	.164	.472		.029
Information Communication Technology	.641	.228	2.813	.000
Supplier Relationship Management	.570	.106	5.351	.000
Inventory Management	.170	.176	2.965	.004
Quality Management	.048	.019	2.444	.019

The study findings also indicate that quality management (X_3) had a coefficient of 0.048 which is greater than zero. The t statistics is 2.444 which has a p-value of 0.019 which is less than 0.05 implies that the coefficient of X_3 is significant at 0.05 level of significance.

This shows that quality management has a significant positive influence on organization performance. The study findings reveal that supplier relationship management (X_4) had a coefficient of 0.570 with a t static of 5.351 which has a p-value of 0.000 which is less than 0.05. This implies that the coefficient of X_4 is significant at 0.05 level of significance. This shows that supplier relationship management has a significant positive influence on organization performance.

Findings summarized from the four specific objectives are as follows:

How does information communication technology influence organization performance in Bata Shoe Company Limited in Kenya?

The study sought to find out the extent to which information communication technology affected organization performance in Bata Shoe Company. From the findings, the study found out that information communication technology has a significant strong positive correlation with organization performance of 0.641. Increasing levels of information communication technology by a unit would increase the levels of organization performance by 0.641. On overall, a high percentage of the respondents rated all information communication technology factors which sought to determine what percentage of employees in the firm are computer literacy, What is the firms level of Automation, What is the level of procurement systems usage, What is the level of ICT infrastructure and What is the firms level of embracement of E-procurement as influencing organization performance to a large extent. The study further revealed that a low percentage of employees in the firm are computer literacy which had a significant negative effect on organization performance in Bata Shoe Company.

Does inventory management affect organization performance in Bata Shoe Company Limited in Kenya?

The study sought to find out the extent to which inventory management influences the various inventory costs which affected organization performance in Bata Shoe Company. From chapter 4 data results and analysis the researcher found out that majority of respondents in Bata Shoe Company attributed reduced inventory holding costs to supply chain management practices. However from the findings, the study also found out that inventory management had a significant low positive correlation with organization performance of 0.170. Increasing levels of inventory management by a unit would increase the levels of organization performance by 0.170. This indicates that there exists a low positive relationship between inventory management and organization performance.

To what extent does supplier relationship management influence organization performance in Bata Shoe Company Limited in Kenya?

The study sought to find out the extent to which supplier relationship management affected organization performance in Bata Shoe Company. The study findings showed that supplier relationship management factors notably; mutual trust,

cooperation, long term commitment and strategic partnerships to a large extent influenced how supplier relationship management affected organization performance in Bata Shoe Company. From the findings, the study also found out that supplier relationship management had a significant strong positive correlation with organization performance of 0.570. Increasing levels of supplier relationship management by a unit would increase the levels of organization performance by 0.570. This indicates that there exists a strong positive relationship between supplier relationship management and organization performance.

How does quality management affect organization performance in Bata Shoe Company Limited in Kenya?

The study evaluated the effect of quality management on organization performance in Bata Shoe Company. The study findings showed that quality management factors notably; Implemented programmes for Continuous improvement, Implemented multifunctional skills training programme, Implemented of Quality circle programmes, Evaluation and effective supplier selection, Implemented programmes for Group technology/cellular layout to a small extent influenced how quality management affected organization performance in Bata Shoe Company.

7. CONCLUSIONS

Based on the study findings, the study concludes that organization performance in Bata Shoe Company is affected by information communication technology followed by supplier relationship management, inventory management and then quality management. These are the major factors that mostly affect organization performance in Bata Shoe Company. The study concludes that information communication technology is an important factor that affects organization performance in Bata Shoe Company. The regression model of the study shows that information communication technology has a significant influence on organization performance. This implies that increasing levels of information communication technology by a unit would conversely increase the levels of organization performance. Information communication technology factors which sought to determine What percentage of employees in the firm are computer literacy, What is the firms level of Automation, What is the level of procurement systems usage, What is the level of ICT infrastructure and What is the firms level of embracement of E-procurement in fluencies organization performance to a large extent..

The study also concludes that inventory management is the other important factor that affects organization performance in Bata Shoe Company. The regression model of the study shows that inventory management has a significant influence on organization performance in Bata Shoe Company. Increasing levels of inventory management by a unit would conversely increase the levels of organization performance by the same measure.

Supplier relationship management also affects organization performance in Bata Shoe Company. According to the study findings, supplier relationship management factors notably; mutual trust, cooperation, long term commitment, supplier selection strategies, supplier performance management and supplier performance evaluation methods, supplier relationship management, payment of suppliers and strategic partnerships to a large extent affected organization performance in Bata Shoe Company.

The study concludes that quality management is also a factor which affects organization performance in Bata Shoe Company. Quality management factors notably; Implemented programmes for Continuous improvement, Implemented multifunctional skills training programme, Implemented of Quality circle programmes, Evaluation and effective supplier selection, Implemented programmes for Group technology/cellular layout to a small extent influenced how quality management affected organization performance in Bata Shoe Company.

8. RECOMMENDATIONS

Efficient supply chain management in manufacturing firms in Kenya is hindered by the employed inventory management methods that don't conform to pull production system requirements. The study recommends management of manufacturing firms to apply the principle of economic order quantity in inventory management practices, use effective stores management practices, avoid procurement methods that lead to long lead time and embrace inventory management strategies that help in minimization of inventory costs. Efficient supply chain management in Kenyan manufacturing firms cannot be realized without integration of quality management techniques in the production processes. It is recommended that quality oriented product designing, investigation of defects at the source, immediate defects screening on occurrence and inspection of raw materials should be implemented in the operations to promote efficient supply chain management. The study also recommends that on-final product inspections should be eliminated and that the primary

responsibility for product quality with each team member should be practiced. The company should also support the workers with process audits or spot analysis of workstation procedure. The more companies can build into these procedures, the easier it becomes to identify problems and strengthen quality.

Finally, the management of manufacturing firms in Kenya should embrace effective supplier relationship management strategies in order to support efficient supply chain management. It is recommended that effective supplier appraisal techniques are adopted, better supplier selection strategies are used, effective supplier selection process is employed, better supplier performance methods are applied, effective supplier relationship management techniques are adopted and supplier development and supplier collaboration are also employed. Another recommendation is development of a few nearby suppliers' preferably local suppliers so as to increase supplier reliability and reduce lead times.

9. FURTHER RESEARCH

The findings emphasized on the role of supply chain management practices on organization performance in Bata Shoe Company, which is information communication technology, inventory management, quality management, supplier relationship management in Bata Shoe Company in Kenya. As a future avenue of research, there is need to undertake similar research in other industries in Kenya and other countries in order to establish whether the explored factors can be generalized to affect organization performance.

REFERENCES

- [1] Abdullah F. (2012). *Lean Manufacturing tools and Techniques in the process industry with a focus on steel*. Pittsburgh: University of Pittsburgh.
- [2] Alvarado, U. Y., & Kotzab, H. (2001). Supply Chain Management: The Integration of Logistics in Marketing. *Industrial Marketing Management*, 30(2), 183–198
- [3] Ansari, A. (2009). Survey identifies critical factors in successful implementation of Just-in-Time purchasing techniques. *Industrial Engineering Journal*, 5(1)46-50.
- [4] Biggart, T., & Gargeya, V. (2002). Impact of JIT on inventory to sales ratios. *Industrial Management & Data Systems*, 102(4)197-202.
- [5] Billesbach, T. J., Harrison, A., & Morgan, S. C. (2009). Supplier Performance Measures and Practices in JIT Companies in the U.S. and U.K. *International Journal of Purchasing and Materials Management*, 2(2) 24-28 .
- [6] Black, S. P. (2010). Internal Certification: The Key to Continuous Quality Success. *Quality Progress*, 8(1) 67-68.
- [7] Blomqvist, K., Kyläheiko, K., & Virolainen, V. (2002). Filling a gap in traditional transaction cost economics: Towards transaction benefits-based analysis. *International Journal of Production Economics*, 79(1), 1-14.
- [8] Bosire, (2011). *Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi*: unpublished MBA Project School of Business, University of Nairobi.
- [9] Boston: McGraw-Hill Irwin.
- [10] Boyd, D.T., Kronk, L., & Skinner, R. (2002). The effects of just-in-time systems on financial accounting metrics. *Industrial Management & Data Systems*, 102(3), 153-164.
- [11] Bozarth, C., & Handfield, R. (2008). *Introduction to Operations and Supply Chain Management* (2nd ed). Boston: Pearson Education.
- [12] Bratic, D. (2011). Achieving a Competitive Advantage by SCM. *IBIMA Business Review*, 2011(2011), 1-13.
- [13] Buzacott, J. A., & Mandelbaum, M. (2008). Flexibility in manufacturing and services: achievements, insights and challenges. *Flexible Services and Manufacturing Journal*, 20(2), 13-58.
- [14] Caniëls, C. J., & Gelderman, C. J. (2007). Power and Interdependence in Buyer Supplier Relationships: A Purchasing Portfolio Approach. *Industrial Marketing Management journal*, 36(2), 219-229.

- [15] Chang, S. (2008). An Investigation of Stock Depletion Cost and Its Effect on Inventory. *Journal of Supply Chain Management*. Vol.27, No.7. pp. 144-163.
- [16] Charles, N. (2008). Centralised and decentralized procurement functions. *Journal of supply chain Management*. Vol.29, No.4. pp. 66-73.
- [17] Chen, I. J., & Paulraj, A. (2004). Towards A Theory of Supply Chain Management: The Constructs and Measurements. *Journal of Operations Management*, 24 (7), 1019-1050
- [18] Cheng, T.C., & Podolsky, S. (2011). *Just-In-Time manufacturing an introduction* (2nd edition), London: Chapman & Hall Publisher.
- [19] Churchill, G. A., & Iacobucci, D. (2005). *Marketing Research. Methodological Foundations*(9th ed). Australia: Austria Press.
- [20] Compton, D. (2007). *Purchasing and supplies chain Management*. (3rd Edition). Newyork: Pearson Publishers
- [21] Conti, T. (2010). Systems Thinking in Quality Management. *The TQM Journal*, 22(4), 352-368.
- [22] Cooper, D.R., & Schindler, P.S. (2006). *Business Research Method* (9th ed).
- [23] Creswell, J.W. (2003). *Research Design: Qualitative, quantitative and mixed methods approaches* (2nd ed). Thousand Oaks: Sage.
- [24] Dhamala, T.N., & Khadka, S.R. (2009). A review on sequencing approaches for mixed-model just-in-time production systems. *Iranian Journal of Optimization*, 1(1), 266-290.
- [25] Diaz, R., & Ardalan, A. (2009). An Analysis of Dual-Kanban Just-In-Time Systems in a Non-Repetitive Environment. *Production and Operations Management Journal*, 19(2), 233-245.
- [26] Edward, W. (2010). EOQ application. *International Journal of Operations & Production effective Procurement*, 27(3), 46-48.
- [27] Elliot, R. (2007). What is the right inventory management approach for a purchased item? *Journal of purchasing Management*, 22, (7), 148-153.
- [28] Evans & James, R. (2007). *Quality & Performance Excellence: Management, Organization and Strategy*. Mason, OH: Thomson Higher Education.
- [29] Factors and Organizational Performance. *The TQM Journal*, 22(5), 539-552.
- [30] Fotopoulos, C.V., & Evangelos, L.P. (2010). The Structural Relationship between TQM
- [31] Frohlich, M. T. & Westbrook, R. (2001). Arcs of Integration: An International Study of Supply Chain Strategies. *Journal of Operations Management*, 30 (5), 526-545
- [32] Gall, M. D., Gall, J. P., & Borg, W.R. (2007). *Educational Research* (8th ed). Boston: Pearson Education Inc.
- [33] Ghatebi, M., Ramezani, E., & Shiraz, M. A. E. (2013). Impact of Supply Chain Management Practices on Competitive Advantage in Manufacturing Companies of Khuzestan Province. *Interdisciplinary Journal of Contemporary Research in Business*, 5(6), 269- 274.
- [34] Gituro, W., & Bolo, A. Z. (2007). *An Empirical Investigation Of Supply Chain Management Best Practices In Large Private Manufacturing Firms In Kenya*. Department of Business Administration: University of Nairobi
- [35] Golder, A. (2007), Outsource recruitment to slash unnecessary costs. *Journal of supply chain Management*. Vol.36, No.4. pp. 144-148.
- [36] Goldratt, E. M., & Cox, J. F. (1984). *A Meta* (1st ed). São Paulo: Nobel.
- [37] Gupta, M., & Boyd, L. (2008). Theory of Constraints: A Theory for Operations Management. *International Journal of Operations and Production Management*, 28(9/10), 323-345.

- [38] Gyampah, K., & Gargeya, V. (2001). Just-in-Time manufacturing in Ghana. *Industrial Management & Data Systems*, 101(3), 106–113.
- [39] Hall, R. W. (1983). *Zero Inventories*. Homewood, IL: Dow Jones-Irwin.
- [40] Hamid, A. A., & Ibrahiem, S. B. (2013). Investigation into the relationship between supply chain management practices and supply chain performance efficiency. *Sudan Journal of Science and Technology*, 15(2), 1-20.
- [41] Handfield, R.B. (2009). *Purchasing and supply chain management* (2nd Ed). New Jersey:
- [42] Haouzi, H., Pétin, J., & Thomas, A. (2009). Design and validation of a product-driven control system based on a six sigma methodology and discrete event simulation. *Production Planning and Control*, 20(6), 510-524.
- [43] Haynes, P. J., Helms, M. M., & Boothe, R. S.(2008). Rethinking the Manufacturing Focus : An Overlooked Strategic Tool. *SAM Advanced Management Journal*, 3(3)34-37.
- [44] [http://www.\(Kase,2004\)solutions.com/solutions/supplier-management/](http://www.(Kase,2004)solutions.com/solutions/supplier-management/)
- [45] Hughes, J. (2010). *What is Supplier Relationship Management and Why Does it Matter?* Retrieved May 25, 2015.
- [46] Kamau, (2011). *Buyer supplier relationship and organization performance*: unpublished MBA Project School of Business, University of Nairobi.
- [47] Kannan, R.V., & Tan, K.C. (2005). Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance. *Omega Journal*, 33(3), 153 – 162.
- [48] Karimi, E., & Rafiee, M. (2014). Analyzing the Impact of Supply Chain Management Practices on Organizational Performance through Competitive Priorities (Case Study: Iran Pumps Company). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(1), 1-15.
- [49] Manyura, M. P. (2012). *Influence of Vendor Inventory management on organisational performance in retail outlets in Kenya: A Case of Uchumi Supermarkets*: unpublished MBA Project. School of Entrepreneurship and Procurement Management: Jomo Kenyatta University of Science and Technology
- [50] Manyuru, J. P. (2005). *Corporate governance and organizational performance: the Companies quoted at the Nairobi Stock Exchange*: unpublished MBA Project School of Business, University of Nairobi.
- [51] Miguel, P. S., & Ledur, L. A. (2011). Supply Chain Management measurement and its influence on Operational Performance. *Journal of Operations and Supply Chain Management*, 4 (2), 56 – 70
- [52] Moses, (2012). *Adoption of E- procurement in large manufacturing firms*. unpublished MBA Project School of Business: University of Nairobi.
- [53] Mwale, H., & Nyamwange, S. O. (2014). *Supply Chain Management Practices and Organizational Performance of Large Manufacturing Firms in Nairobi, Kenya*. Nairobi: University of Nairobi Press
- [54] Nawanir, G., Teong, L. K., & Othman, S. N. (2013). Impact of lean practices on operations performance and business performance. Some evidence from Indonesian manufacturing companies. *Journal of Manufacturing Technology Management*, 24 (7), 1019-1050
- [55] Ngatia, C. W., & Chirchir, M. K. (2013). *Supply chain management practices and performance of Kenya tea development agency managed factories*. Nairobi: University of Nairobi Press
- [56] Njenga, D. K., & Ngahu, C. (2013). *Factors influencing brand loyalty amongst buyers of bata shoe company products in nairobi, Kenya*. Unpublished MBA Project School of Business: University of Nairobi.
- [57] Njuki, (2013). *Factors influencing green procurement practices at UNEP Kenya*: unpublished MBA Project School of Business, University of Nairobi.
- [58] Ou, C.S., Liu, F.C., Hung, Y.C. & Yen, D.C. (2010). A Structural Model of Supply Chain Management on Firm Performance, *International Journal of Operations & Production Management*, 30 (5), 526-54 Pearson Publishers

- [59] Shale, N.I., Iravo, M., & Guyo, W. (2014). Role of e-procurement strategy on the performance of state corporations in Kenya. *International Journal of Science and Research*, 2 (11), 336-341.
- [60] Simpson, M. (2007), Benchmarking and the organization the performance Vol.18, No.9. pp. 138-142
- [61] Singh, R., Sandhu, H. S., Metri, B. A., & Kaur, R. (2010). Relating organized retail supply chain management practices, competitive advantage and organisational performance. *The Journal of Business Perspective*, 14(3), 173-190
- [62] Wambui, (2008). *Factors influencing the implementation of Information Communication technology in procurement among firms listed on the Nairobi Stock Exchange*: unpublished MBA Project School of Business, University of Nairobi.
- [63] Wang, J. C. (2012). ICT in supply chain. *Journal of operation management*, 22 (7), 138-142.
- [64] Waters, D. (2009). *Supply Chain Management: An introduction to logistics* (2nd ed). Basingstoke: Palgrave Macmillan.

AUTHOR'S PROFILE:

About the Author Michael Antony Mudimba he is Masters Student of Jomo Kenyatta University of Agriculture and Technology pursuing Masters In Procurement and Supply Dr Noor Ismael He is Lecturer Jomo Kenyatta University of Agriculture and Technology Juja Kenya, He is Doctorate Holder in the Field of Procurement and Supply and also Supply management, He belongs to the said Department of Procurement in the College of Human resource department.