EFFECT OF INVENTORY MANAGEMENT ON SUPPLY CHAIN PERFORMANCE IN NON-GOVERNMENTAL ORGANIZATION IN SOMALIA

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Abstract: In unstable countries like Somalia, beneficiaries require humanitarian agencies to demonstrate operational efficiency especially when disasters strike since this can save lives. This means that an non-governmental organization that does not have inventory management strategies may fail to attain operational efficiency hence failing to achieve their main objective of saving lives due to delayed delivery and high costs of delivery. However, despite the adoption of various inventory management practices, supply chain performance in NGOs in Somalia stills remains poor. The objective of the study was to examine the effect of inventory management on supply chain performance in non-governmental organization in Somalia. The study used a descriptive research design. The target population was the heads of supply chain departments/procurement departments in 149 nongovernmental organizations in Somalia. Sampling frame was drawn from the 8 categories of NGOs in Somalia, which include advocacy, development, education, environment, finance, food, health and relief. Since the sample size is small, this was a census study and hence the whole population was involved. The study used primary data, which was collected by use of both semi-structured questionnaires. Qualitative data was analyzed through use of content analysis. The reporting of qualitative results was presented in a narrative form. Quantitative data was analyzed by use of descriptive and inferential statistics. Descriptive statistics comprised of measures of central tendency and measures of variability (standard deviation), frequencies and percentages. Inferential statistics included correlation analysis and multiple regression analysis. The study results were presented through use of tables and figures. The study found that inventory management has a positive and significant effect on the supply chain performance in non-governmental organization in Somalia. From the results, the study recommends that the management of the NGOs in Somalia should adopt and implement effective demand forecasting techniques to avoid over-stocking and stock-outs. In addition, the therefore recommends that the management of the NGOs in Somalia should formulate and implement better policies of inventory control to ensure stock wastage is minimized.

Keywords: Supply Chain, Performance, Inventory Management

Introduction

Natural disasters, such as hurricanes, earthquakes, drought, floods, wildfires and tornados, have occurred frequently in recently years. Emergency supply chains, which are formed to meet the needs of disaster relief, are responsible for the collection and distribution of rescue supplies to affected areas (Ensour & Alinizii, 2014). Commercial supply chain and humanitarian supply chain in emergencies from multiple perspectives. For instance, commercial supply chain focuses on reducing cost while the emergency supply chain emphasizes on responsiveness. Information, demand patterns and commercial logistics are large in volume but have a stable and repeating pattern, while emergency logistics spike right after the disaster and taper off as time goes by (Khresat, 2015). These major differences make the operations of the emergency supply chain and logistics a more challenging task.
The humanitarian relief environments incorporates local organizations, host governments, regional relief organizations, the military as well as the private companies whereby each of these parties have different capacity, logical expertise and interests (Ulengin & Uray, 2015). Typically, there is no single party that has adequate resources to effectively fight major disaster. For example, during the 2004 Asian Tsunami, more than 40 countries and 700 NGOs availed humanitarian assistance (Chen & Papazafeiropoulou, 2018). Therefore, inventory management is considered importance in improving the performance of supply chain among non governmental organizations. For any organization to succeed in its operations it must ensure effective inventory management which affects the organization’s bottom line directly.

Globally, inventory management has proven that it is more applicable in the commercial sectors as compared to the humanitarian sector. This is so because the key drivers of commercial supply chain include reliable data, predictable demand, measurable outcomes as well as adequate capacities (Adem, Childerhouse & Wang, 2018). On the other hand, the humanitarian demand is unpredictable, and time sensitive as well limited in terms of supply therefore surpassing any profit goals. In addition, funding is limited in terms of availability, while the relief results cannot be easily evaluated and quantified (Korsita & Cania, 2016).

Failure in effectiveness of the humanitarian systems to deliver aid leads to massive loss of lives (Korsita & Cania, 2016). For instance, Tsumani happening in 2004 was catalyzed by poor coordination of the other humanitarian players hence resulting to increased cost of inventory, increased lead time as well as limited beneficiaries. In Macedonia, Ristovska, Kozuharov and Petkovski (2017) show that firms in the country control the levels of stocks in an effort to improve supply chain performance. According to Korsita and Cania (2016), there is low effectiveness in managing the Albania firms. The key factors that influenced the effectiveness included that inventory management and the supply chain of the products. Other challenges facing the firms involved low inventory turnover which led to increased holding cost, delays in stock delivery high level of customer dissatisfaction as well as poor after sales services.

Africa is playing an increasing role in terms of providing market for goods produced from other countries. Therefore, it is very important for firms in Africa to understand the functionality and management of the supply chain and inventory management (Mugo, 2013). For firms and NGOs operating in Africa to ensure effectiveness and competitiveness in the supply chain sector, there is need for the knowledge on the challenges facing the sector as well as the available opportunities in the system (Gitonga, 2017). Ajibade (2016) indicates that manufacturing companies in Somalia overcome the challenge of bottleneck in their production through implementation of practices of inventory management which include timely delivery of services as well as ensuring customer satisfaction.

Statement of the Problem

Humanitarian agencies are required to show effectiveness, particularly in situations when disasters happen, since through effective response lives can be saved (Rucha & Abdallah, 2017). In the last two decade, there has been pressure on humanitarian organizations to respond to emergencies in organized, timely, effective and appropriate manner. However, despite the adoption of inventory management practices, supply chain performance in NGOs in Somalia stills remains poor.

Waris (2018) reports that 70% of the NGOs in Somalia experience high cost of transportation and delays in delivery of services, which in turn lead to low beneficiaries satisfaction. In addition, only 58% of the NGOs in Somalia have adopted technology. Lack of adoption is attributed to lack of necessary infrastructure, which in turn negatively affects collection, storage and distribution of information. In addition, due to poor infrastructure, nongovernmental organizations in Somalia often experience stock out of food and other supplies including medical supplies (Rucha & Abdallah, 2017).
The situation is further worsened by the banning of some NGOS from operating in Somalia. For instance, Al-Shabab (AS) has banned 16 humanitarian organisations (6 UN agencies, 9 INGOs and 1 NNGO) from operating in the areas they control (Rucha & Abdallah, 2017) As a result, authorized organizations need to ensure timely deliveries of services and products at the lowest cost possible. Poor supply chain performance and logistics management means that individuals in the affected regions will not have access to basic needs such as food, water and medical supplies. It is therefore important to determine how various logistics management practices influence supply chain performance.

For decades, studies on logistics management and supply chain performance have focused on manufacturing and commercial organizations whose focus is to deliver value to customers in order to make profit. For instance, Mwinzi (2018) examined inventory management and supply chain performance of manufacturing firms in Nairobi County; and Musau et al (2017) focused on inventory management and organization performance among firms in the textile sector in Kenya. However, while the focus of profit making organizations is to maximize profitability, the focus of humanitarian organizations is to ensure that the needy get the required help as fast as possible. This study therefore sought to examine the effect of inventory management on supply chain performance in non-governmental organization in Somalia

**Theoretical Framework**

This research adopted theory of constraints to explain the effect of inventory management on performance of NGOs. This theory was developed and advanced by Eliyahu Goldratt in the year 1980s in his book entitled the goal. This theory holds that any system that is manageable is limited to attaining more of its objectives through a small number of constraints. There is always a minimum of one constrain, therefore, this theory adopts a focusing process for identifying the existing constraints and therefore ensure adjustment in the surrounding environment so as to ensure efficiency. This theory operates on the idiom that the weakest link of a chain is its weakness (Bagshaw, 2019).

This theory is a perspective that is concerned with a perspective thinking that is concerned with expanding production through evaluating the proficiency based on the proof of the system functionality which is more attached to the procedures of the system. Nevertheless, this theory experiences various challenges which include a very long lead time, poor state of inventories which are meaningless, increased number of dissatisfaction, increased number of crisis requests, lack of client engagement, existence of poor inventories, wrong endeavour levels and timetable classes. This theory therefore is concerned with addressing these limitations with an aim of enhancing efficiency which is applicable in firms in the manufacturing sector that adopts inventory control practices. This theory is concerned with addressing the limitations hindering the attaining of goals of institutional inventory (Arif & Jawab, 2018).

The theory of constraints will be used to describe effect of inventory management on supply chain performance in non-governmental organizations. The theory is concerned with constraint identification and constraint management which in turn leads to timely delivery to customer requests, minimization of stock outs, better operational controls, minimization in the stock turnover period, high response to culture issues as well as minimization of conflicts between team players (Kanda & Iravo 2015). NGOs in Somalia can manage their inventory properly through identification and managing of inventory related constraints.

**Conceptual Framework**

A conceptual framework is a tool combined of various variables both dependent and independent that are incorporated together to make a conceptual distinctions. Figure 1 shows the hypothesized relationships between the independent variables and the dependent variable. The independent variables in this study included inventory management. The dependent variable was supply chain performance.
The process of planning, ordering inventory as well as scheduling materials to be used in the manufacturing process is referred to as inventory management. The process of managing inventory has control over various types of inventories which include; finished goods, work in progress as well as raw materials. Purchasing is concerned with controlling the raw materials which entails fabricated parts, raw materials as well as maintenance items, repair items and operations items (Kelebu, 2013).

Managing inventory is concerned with giving specification of the size and the placement of the stocked goods. Inventory management is very vital in various sections within a certain facility to regulate and control production and supply of raw material and finished goods which in turn improve performance of the firm (Bagshaw, 2019). In addition, the process of inventory management is concerned with inventory carrying cost; inventory forecasting, inventory valuation, stock price forecasting, quality management, demand forecasting, defective goods, carrying cost inventory as well as replenishment (Agu, Ozioma & Nnate, 2016).

Supply chain performance refers to the degree of responsiveness of the supply chain functions in meeting the end-user needs through availing products in the right time, and at the right quantity. Supply chain performance goes beyond company boundaries and functional lines (Kyusya, 2015). There are three aspects used in measuring the supply chain performance. These include reliability aspect, flexibility aspect as well as the responsiveness aspect. Under the humanitarian perspective, failure in delivery of the relief food can lead to loss of lives. This implies that ensuring efficient and effective supply chain leads to smooth flow of products. In order to ensure that lives are saved and suffering is alleviated, there must be timely and effective organization of international emergencies.

Arif and Jawab (2018) argue that there should be flexibility and efficiency of the humanitarian supply chain so as to ensure quick response to unpredictable events. Therefore flexibility is very critical. Flexibility is concerned with the ability of the supply chain to meet the customer demands. During disasters the supply chain is not as demanding because the internal infrastructure of the affected area is still intact. Responsiveness has many aspects requisition lead time purchase order lead time, supplier lead time, transit time and days of inventory (Kelebu, 2013).

Empirical Review

Atnafu, Balda and Liu (2018) investigated on inventory management practices and firms competitiveness together with organization performance of SMEs in Ethiopia. The target group of interest was the 188 SMEs in the manufacturing sector. It was found that firm competitiveness is enhanced through increased level of inventory management. Further, it was revealed that there is a positive and direct impact of inventory management on organization performance. The study concluded that new stock re-ordering system and inventory control system have positive and significant influenced on firm performance.

Agu, Ozioma and Nnate (2016) investigated on inventory management and firma performance in the manufacturing sector. The target group of interest was 285 employees working in the selected firms.
The research aimed at revealing the impact of demand forecasting system and inventory control on firm performance. It was found that inventory management influences performance of any business organization. Further, it was found that inventory as an asset in any firms is vital and implementation of inventory systems ensures effectiveness in the performance of the organization. The study concluded that demand forecasting system and inventory control influence organization performance.

Musau et al (2017) focused on inventory management and organization performance among firms in the textile sector in Kenya. The target group of interest was the 196 employees working in the procurement departments in the selected companies. Through use of convergent parallel mixed methods it was found that inventory management has a positive and significant influence on organization performance. Further, the study indicated that textile firms have adopted inventory management and have implemented clear mechanisms to ensure smooth and free flow of raw materials and finished goods. It was found that adoption and implementation of inventory management practices ensures efficiency in stock control. In addition the study revealed a positive impact of inventory system and demand forecasting systems on organization performance.

Owuor and Noor (2019) focused on the impact of inventory management on service delivery in the public health institutions in Kenya. Through descriptive survey design, the study revealed that service delivery in the health institutions is positively influenced through inventory investment and accuracy of inventory records. Findings revealed that service delivery in the healthcare industry as well as pharmacies has greatly improved as a result of adoption of inventory management. This study further indicated that proper adoption and implementation of inventory management is concerned with taking the correct product, in the required quantity, at the right price and from the right seller at the right time.

Research Methodology

In this research, descriptive survey design was adopted. The unit of analysis in this study was all the 149 nongovernmental organizations in Somalia, categorized into advocacy, development, education, environment, finance, food, health and relief. The unit of observation was the heads of supply chain departments in all the 149 NGOs in Somalia. The target population was 149 heads of supply chain departments in NGOs in Somalia. Since the sample size is small, this was a census study and hence the whole population was involved.

In this research, primary data was collected through use of semi-structured questionnaires. This type of questionnaire contains both open ended questions and closed ended questions. The structured questions that were used in this research formed nominal scale and likert scale. Information on the dependent variable and independent variables was collected through use of five point likert scale. On the other hand the background information of the respondents was collected through use of nominal scale. Open ended questions were also be used to provide qualitative data since it gives the respondent a room to express their views hence availing an in-depth data. The benefit of using questionnaires is that they are cost effective and can collect data from a large group of respondents with a short period of time.

Both qualitative and quantitative data were generated by the semi-structured questionnaire whereby the analysis of the data was done through use of different methods. Content analysis was used in this study to analyse qualitative data. Content analysis is used in determining certain patterns, words and themes within a certain qualitative data. Results from the qualitative analysis were reported through use of narrative form. In this research, both descriptive and inferential statistics were used in analyzing quantitative data. Descriptive statistics therefore refers to the brief descriptive coefficients giving a summary of representation for the entire population or a sample of the entire group of interest.

In this research, the inferential statistics entailed correlation analysis and regression analysis. The regression analysis was used to analyze the relationship between the dependent variable and the independent variable. The regression model was as follows:
Whereby:

\[ Y = \beta_0 + \beta_1 X_1 + \varepsilon \]

Y = Supply chain performance in non-governmental organization in Somalia
\beta_0 = \text{Constant}
\beta_1 = \text{Coefficient of determination}
X_1 = \text{Inventory management}
\varepsilon = \text{Error term}

**Research Findings and Discussion**

The sample size of the study comprised of 149 heads of supply chain departments in NGOs in Somalia. The research assistants dropped the questionnaires and agreed with the staffs at the NGOs when to return to pick them. Out of 149 questionnaires which were distributed, 145 were duly filled and returned. The drop-off and pick-up-later method yielded a high response rate of 97.3%. According to Creswell (2014), response rate is the ratio of the interviewed respondents to the sample size intended to be covered by the study. According to Greenfield and Greener (2016) a response rate of 75 per cent is adequate for analysis, for making conclusions and making inferences about a population. In addition, Metsamuuronen, (2017) indicates that a response rate of 60% and above is acceptable for analysis. Further, Russell (2013) indicates that a response rate of 50% should be considered average, 60% to 70% considered adequate while a response rate of above 70% should be regarded as excellent. This implies that the response rate of 95.65% was adequate for analysis, drawing conclusions and reporting.

**Inventory Management**

The respondents were requested to indicate their level of agreement on various statements relating to inventory management and supply chain performance in non-governmental organization in Somalia. As shown in the results, the respondents agreed that demand forecasting in their organization is done on a scientific basis. This is shown by a mean of 3.924 (std. dv = 0.873). In addition, with a mean of 3.979 (std. dv = 0.863), the respondents agreed that their organization has a minimum stock level after which an order is placed. The respondents also agreed that their organization has implemented inventory control policies. This is supported by a mean of 3.765 (std. dv = 0.933). With a mean of 3.737 (std. dv = 0.984), the respondents agreed that new stock is ordered after a certain period of time. The respondents also agreed that there is minimal wastage of stock in their organization. This is supported by a mean of 3.731 (std. dv = 1.086). In addition, as shown by a mean of 3.724 (std. dv = 0.938), the respondents agreed that inventory control systems in their organization ensures effective stock control. Atnafu, Balda and Liu (2018) revealed that adoption and implementation of inventory control system in an organization minimizes wastage of stock.

From the results, the respondents agreed that their organization has various techniques for estimating of probable demand. This is supported by a mean of 3.648 (std. dv = 0.804). In addition, with a mean of 3.579 (std. dv = 0.852), the respondents agreed that demand forecasting enables top managers in their organization to make informed decision. Nevertheless, as shown by a mean of 1.896 (std. dv = 0.933), the respondents agreed that their organization places new order after the existing stock has been exhausted.
Table 1: Inventory Management and Supply Chain Performance

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our organization has a minimum stock level after which an order is placed</td>
<td>3.979</td>
<td>0.863</td>
</tr>
<tr>
<td>New stock is ordered after a certain period of time</td>
<td>3.737</td>
<td>0.984</td>
</tr>
<tr>
<td>Our organization places new order after the existing stock has been exhausted</td>
<td>1.896</td>
<td>0.933</td>
</tr>
<tr>
<td>Our organization has various techniques for estimating of probable demand</td>
<td>3.648</td>
<td>0.804</td>
</tr>
<tr>
<td>Demand forecasting enables top managers in our organization to make informed decision</td>
<td>3.579</td>
<td>0.852</td>
</tr>
<tr>
<td>Demand forecasting in our organization is done on a scientific basis</td>
<td>3.924</td>
<td>0.873</td>
</tr>
<tr>
<td>Inventory control systems in our organization ensures effective stock control</td>
<td>3.724</td>
<td>0.938</td>
</tr>
<tr>
<td>There is minimal wastage of stock in our organization</td>
<td>3.731</td>
<td>1.086</td>
</tr>
<tr>
<td>Our organization has implemented inventory control policies</td>
<td>3.765</td>
<td>0.933</td>
</tr>
</tbody>
</table>

The respondents were requested to indicate how else inventory management influence supply chain performance in non-governmental organization in Somalia. From the results, the respondents revealed that inventory management systems assist in making decisions on inventory requirements, overstock brands and reorder levels. In addition, the respondents revealed that among the key challenges facing the company include administration costs, loss of inventories, opportunity costs, load shedding, administration costs and many other challenges. The respondents also indicated that inventory as an asset in any firm is vital and implementation of inventory systems ensures effectiveness in the performance of the organization. It was found that demand forecasting system and inventory control influence organization performance. The respondents indicated that adoption and implementation of inventory management practices ensures efficiency in stock control. In addition the study revealed a positive impact of inventory system and demand forecasting systems on organization performance. Mugo (2013) found that inventory management automation has a positive and significant impact on organization performance.

Supply Chain Performance in Non-Governmental Organization in Somalia

The respondents were asked to rate various statements relating to supply chain performance in non-governmental organization in Somalia. The results were as presented in Table 4.6. As shown in the results, the respondents agreed that through adoption of various logistics management practices there is minimized cost. This is shown by a mean of 3.986 (std. dv = 1.084). In addition, with a mean of 3.882 (std. dv = 0.968), the respondents agreed that their organization is very strict on punctuality. The respondents also agreed that most of their customers come through referrals. This is supported by a mean of 3.827 (std. dv = 0.920). Mwinzi (2018) argues that through adoption and implementation of cost minimization strategies the price of the end product becomes cheaper.

With a mean of 3.717 (std. dv = 0.832), the respondents agreed that their customers rarely complain about the services and products offered by their organization. The respondents also agreed that their customers recommend their products/services to their friends and family. This is supported by a mean of 3.703 (std. dv = 0.919). In addition, as shown by a mean of 3.613 (std. dv = 0.891), the respondents agreed that their customers are happy since goods and services are delivered on time. Atnafu, Balda and Liu (2018) revealed that better services to customers builds a positive image and turns the customers into marketing agents.

From the results, the respondents agreed that their organization has adopted cost minimization strategies. This is supported by a mean of 3.569 (std. dv = 0.889). In addition, with a mean of 3.527 (std. dv = 0.903), the respondents agreed that customers rarely complain of increases costs of goods and services from their organization. Further, as shown by a mean of 3.503 (std. dv = 0.937), the
respondents agreed that their organization makes sure that the customers' demands are met on time. Ristovska, Kozuharov and Petkovski (2017) argues that adoption of cost minimization strategies make the price of goods and services cheaper hence ensuring little or no complaints from customers.

Table 2: Supply Chain Performance in Non-Governmental Organization in Somalia

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our customers recommend our products/services to their friends and family.</td>
<td>3.703</td>
<td>0.919</td>
</tr>
<tr>
<td>Our customers rarely complain about the services and products offered by our organization</td>
<td>3.717</td>
<td>0.832</td>
</tr>
<tr>
<td>Most of our customers come through referrals</td>
<td>3.827</td>
<td>0.920</td>
</tr>
<tr>
<td>Through adoption of various logistics management practices there is minimized cost</td>
<td>3.986</td>
<td>1.084</td>
</tr>
<tr>
<td>Customers rarely complain of increases costs of goods and services from our organization</td>
<td>3.527</td>
<td>0.903</td>
</tr>
<tr>
<td>Our organization has adopted cost minimization strategies</td>
<td>3.569</td>
<td>0.889</td>
</tr>
<tr>
<td>Our organization makes sure that the customers' demands are met on time</td>
<td>3.503</td>
<td>0.937</td>
</tr>
<tr>
<td>Our customers are happy since goods and services are delivered on time</td>
<td>3.613</td>
<td>0.891</td>
</tr>
<tr>
<td>Our organization is very strict on punctuality</td>
<td>3.882</td>
<td>0.968</td>
</tr>
</tbody>
</table>

Inferential Statistics

Inferential statistics in the current study focused on correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship while regression analysis was used to determine the relationship between dependent variable (supply chain performance in non-governmental organization in Somalia) and independent variables (logistics outsourcing, information management, adoption of information technology and inventory management).

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variable (inventory management) and the dependent variable (supply chain performance in non-governmental organization in Somalia). The results also revealed that there was a very strong relationship between inventory management and supply chain performance in non-governmental organization in Somalia (r = 0.905, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Ulengin and Uray (2015) who revealed that there is a very strong relationship between inventor management and supply chain performance.

Table 3: Correlation Coefficients

<table>
<thead>
<tr>
<th>Supply Performance</th>
<th>Chain Inventory Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>145</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.905**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>145</td>
</tr>
</tbody>
</table>

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variable (inventory management) and the dependent variable (supply chain performance in non-governmental organization in Somalia).
organization in Somalia). The r-squared for the relationship between the independent variables and the dependent variable was 0.297. This implied that 29.7% of the variation in the dependent variable (supply chain performance in non-governmental organization in Somalia) could be explained by independent variables (logistics outsourcing, information management, adoption of information technology and inventory management).

Table 4: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.545&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.297</td>
<td>.236</td>
<td>.10582</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Inventor Management, Adoption of Information Technology, Logistics Outsourcing, Information Management

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 340.695 while the F critical was 2.680. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of logistics outsourcing, information management, adoption of information technology and inventory management on supply chain performance in non-governmental organization in Somalia.

Table 5: Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>12.027</td>
<td>1</td>
<td>12.027</td>
<td>148.67</td>
<td>.000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>11.568</td>
<td>143</td>
<td>0.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23.595</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Supply Chain Performance
b. Predictors: (Constant), Inventor Management, Adoption of Information Technology, Logistics Outsourcing, Information Management

The regression model was as follows:

\[ Y = 0.034 + 0.445X_1 + \varepsilon \]

The results revealed that inventory management has significant effect on supply chain performance in non-governmental organization in Somalia \( \beta_1 = 0.445, p\text{-value}= 0.000 \). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the results of Ulengin and Uray (2015) who revealed that there is a very strong relationship between inventor management and supply chain performance.

Table 6: Regression Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.034</td>
<td>0.039</td>
<td></td>
<td>0.872</td>
</tr>
<tr>
<td>Inventory Management</td>
<td>0.445</td>
<td>0.088</td>
<td>0.441</td>
<td>5.057</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Supply Chain Performance

Conclusions and Recommendations

The study concludes that inventory management has a positive and significant effect on the supply chain performance in non-governmental organization in Somalia. The study found that inventory management (new stock re-ordering, demand forecasting and inventory control) influence supply chain performance in non-governmental organization in Somalia. This implies that improvement in inventory
management (new stock re-ordering, demand forecasting and inventory control) will lead to improvement in supply chain performance in non-governmental organization in Somalia.

The study found that there are various techniques for estimating of probable demand. This study therefore recommends that the management of the NGOs in Somalia should adopt and implement effective demand forecasting techniques to avoid over-stocking and stock-outs.

The study found that implementation of inventory control policies minimizes wastage of stock in the organization. This study therefore recommends that the management of the NGOs in Somalia should formulate and implement better policies of inventory control to ensure stock wastage is minimized.

Suggestions for Further Studies

This study focused on the influence of inventory management on supply chain performance in non-governmental organization in Somalia. Having been limited to NGOs in Somalia, the findings of this study cannot be generalized to NGOs in Kenya. The study therefore suggests further studies on the influence of inventory management on supply chain performance in non-governmental organization in Kenya. Further, the study found that the independent variable (inventory management) could only explain 89.3% of supply chain performance in non-governmental organization. This study therefore suggests research on other factors affecting supply chain performance in non-governmental organization in Somalia.

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