



# IJRASET

International Journal For Research in  
Applied Science and Engineering Technology



---

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

---

**Volume:** 10    **Issue:** V    **Month of publication:** May 2022

**DOI:** <https://doi.org/10.22214/ijraset.2022.41399>

[www.ijraset.com](http://www.ijraset.com)

Call:  08813907089

E-mail ID: [ijraset@gmail.com](mailto:ijraset@gmail.com)

# Research on the Impact of Inventory Management Practice on Organizational Performance in Telecommunication Companies

Kamugisha Derrick Kansime

School of Management, University of International Business and Economics, 100029, Beijing China

**Abstract:** *This research study examined the impact of inventory management on organizational performance in telecom companies. The study used a descriptive study design, and SPSS was used to conduct statistical analysis. In order to choose the samples, the researcher used both purposive and simplerandom sampling methods. Data for the study was collected from 130 respondents out of which*

*92 responded making the research valid. The relationships and hypothesis proposed in the conceptual framework were tested using multi-linear regression equation model. The research results indicate that higher levels of inventory management practice can lead to an enhanced competitive advantage and improved organizational performance. The study also accepted the hypothesis that was tested that inventory management and organizational performance have a significant positive relationship. Therefore, it is recommended that telecom organizations in Uganda should adopt Vendor management inventory, maintain good communication with the suppliers as this helps to eventually transfer inventory management responsibilities from the company's procurement function to the vendors thus revamping organizational performance and increasing their competitiveness. They should also update their inventory management system in order to improve effectiveness by investing more money in the latest IT systems and utilizing sophisticated technologies such as purchasing fuel sensors for inventory monitoring and management so as to minimize on downtime and as well as cost reduction. The research study alsosuggests that management should take a more proactive approach to the problem of inappropriate inventory management strategies being used by constantly exposing its employees to training ona regular basis in order to strengthen their inventory management skills and allow them to understand current inventory management systems thus if implemented it can enable the companyin lowering costs by ensuring that stock records are maintained accurately and kept in order to prevent the risk of overstocking or understocking.*

**Key words:** *Inventory management, Organizational Performance, Telecommunication companies.*

## I. INTRODUCTION

Inventory control, inventory planning and scheduling have all proven to be competitive advantages even though most organizations are facing challenges in today's competitive environment, for instance some consumers demand for modified goods and services and necessitate that their requests are served rapidly, yet again not willing to spend money for this level of flexibility and accessibility (Graman and Magazine, 2006). Thus, in response to the perpetually ever-changing demands, organizations are exploring ways towards postponement strategy (Yang et al. 2004).

Earlier studies than the twentieth century have also linked organization performance to inventory management. This is made possible through balance score card approach in which financial, customer, internal processes and innovation can be combined in an organization to assist the management in decision making processes and problem solving. For instance, the manager in an organization can use the balance score card as a strategic management system to detect late deliveries of inventories which have a potential to result in poor performance at work place (Kaplan & Norton, 2017). Another evidence is by use of just in time purchasing (JITP) as studied by Ansari and Modarres (between 1987 to 1990), the study showed that companies which implemented just in time estimated an increase in projected product quality by 43% and increase in productivity by 21%.

Inventory management is the process of effectively managing the continuous distribution of materials into and out of a current stock store, as well as screening and monitoring how companies control and regulate the quantities of finished goods. Since stock contributes for 30% of a company's invested capital, enhancing its inventory control can have a huge influence on the business. The complexity of managing inventory also involves the fine lines that exist between replenishment lead time and inventory holding costs available, future stock with forecast, stock valuation, future inventory value prediction, available physical space for inventory and quality management.

The cardinal goal of inventory management entails making strategic decisions about determining an acceptable amount, when to put a purchase order, as well as how much inventory to hold per given time period in order to maintain an optimum volume of inventory required to sustain operations and procurement process at any lowest total cost (Garry1997).

In Uganda, inventory control has allowed companies to have adequate number of good products obtainable to meet client needs, though conjointly minimizing expenses of holding stock (Brigham & Ehrhardt, 2005). But also, controlling these inventories so as to attain their objectives has exhibited a good challenge to the corporations. Several corporations have conjointly not nonetheless established what proportion of the number of resources to put into inventories and also the correct stock levels to carry so as to fulfill and satisfy customers.

For example, excessive amount of stock takes up physical space, generates monetary liability, will increase likelihood of wastage. While deficient inventory usually disrupts production operations and will increase the probability of poor client service. Consequently, great customers could become irate and take their business elsewhere if the required items aren't directly and quickly offered thus attempts should be created by the board to choose ideal interest in stock investment since it costs more cash to secure capital in overabundance stock (Lysons et al 2006). Unavailability of coordinated and integrated inventory management has influenced profitability in telecom organizations prompting diminished benefits.

To continue sustaining development and contribution increment and commitment of these telecom firms to Gross domestic product, organizations should support their degree of efficiency by ensuring a countrywide network coverage so as to assist the telecom sector with recapturing its seriousness in regaining its aggressiveness and completeness by having good management in the progression flow of stock.

Most telecom companies were characterized by operational problems including frequent breakdowns in their communication network, inadequate materials to expand distribution lines to meet its own need and those of its customer's, poor customer care; this made their network increasingly unreliable hence poor financial performance and the overall performance of the organization. Subsequently any firm should be able to keep optimum inventory that it can so as to avoid damage and waste and to limit the expense of holding inventory.

When the inventory level of a particular item reaches re-order level, the corporation places an order, and they strive at all costs to keep inventory levels to a minimum level, which are recorded, to avoid the corporation risking unnecessary buying and carrying costs and sometimes stock out. Besides all the efforts to control inventory level by instituting blanket purchase agreement from prequalified suppliers as the corporation has continued to experience stock levels below minimum with consequent emergency procurements (Mary M. Shirley and F. Tusubira, 2002). Since the business climate in Uganda is rapidly evolving, highly competitive, and this has a significant impact on the organization's performance, it is critical for businesses to have sound, reliable, and well-coordinated inventory management systems. The right materials should be available at the right time with the least amount of storage costs and expenditure if appropriate inventory management strategies are used. It is against this background that the researcher sought to critically assess the impact of inventory management practices on organizational performance with reference to the telecom industry.

#### A. *Statement of the problem*

Inventory is the most important component of any organization's total assets globally, and due to the overall importance of inventories managed by most companies, a significant portion of a company's budget is devoted to them but as a result poor inventory control and planning in telecom companies, it has been identified as a critical challenge area that requires immediate attention if an organization needs to meet its performance target as this has led to short falls in service delivery due to stock out problem of inventories to support efficient and effective service delivery to the public.

Furthermore, Telecom companies in Uganda have on several occasions contracted suppliers on call off orders to supply critical inventories like fuel, electricity meters and cables which is a just in time method of procurement to enable the suppliers deliver when requested to guard against stock outs of critical inventories but the problem of stock out of critical inventories has persisted resulting into poor service delivery and eventually affecting the overall performance of telecom companies thus calling for effective inventory management and monitoring as a realistic solution. Based on the gap identified, the following basic research questions were formulated.

- 1) What are the inventory management practices do telecom companies employ?
- 2) How does inventory management influence organizational performance?

## II. LITERATURE REVIEW

### A. *Concept of Inventory Management*

Inventory management is the diligent control of input goods, spare parts, work - in - progress, and final product in order to ensure working capital returns and noticeable inventory levels so as to forestall the economic cost. To operate well, it is challenging to refute inventory to the context as resources are needed to assure the continuous operations to meet several customers' demand. Usually, inventory has a function as to why it is kept and this intention is extremely valuable to companies (Lowe, 2012).

### B. *Inventory Management Practices*

The inventory management process, according to Zhang (2005), begins when an organization decides manufacturing and orders raw resources, semi-finished products from a supplier.

Waterman (2013) has it that Economic Order Quantity is the best size for an order in an inventory control system. This analysis was done early in the last century and it remains the most ideal method to manage a lot of inventory with independent demand. It is versatile, simple to use and offers good procedures for a wide scope of circumstances. The aim of EOQ is always to determine the order quantity that gives the least cost for each inventory, accounting for both inventory control costs that rise as orders grow larger because larger stocks result and ordering costs that rise as orders grow smaller because more orders result (Baily, 1994).

A vendor managed inventory system (VMIS) assists in the reduction of a firm's stock holdings and encourages the supplier to retain items, ensuring the retailer's service level. Vendor inventory management, according to Zer and Wei (2006), can be defined as supplier-controlled inventory or continuous replenishment.

Just in Time focuses on the planned reduction of all waste as well as the continuous enhancement of inventory productivity. It includes all stages of transition from raw material to making inventories accessible to consumers, as well as the successful execution of all production processes required for the manufacture of the final product, from design engineering to delivery as required in the correct quantities and at the correct period (Lyson, 2006). The aim is to produce goods and services without waste in a reasonable time. This is attained by analyzing each procedure of the process to evaluate if it adds value to the final item Krajewski and Ritzman (1999).

Martins (2015), has it that ABC can be used as a base for conventional inventory management by providing the highest level of service (as represented by safety stock) for "A" products, a significantly lower level for "B" products, and reduced level for "C" products. ABC is a method of prioritizing matters based on their relative importance rather than giving equal weight to all of them. Products will be categorized into three categories, according to Nair (1990): Items marked with a "A" will have a high value, while items marked with a "B" will have a medium value, and

items marked with a "C" will have a low value. The objective of ABC technique here is to reduce both minimum stock and the working stock. The scope for this reduction lies mainly in A item. Therefore, minimum stock of A items should be kept as low as possible or even eliminated but this would involve a constant watch of the stock position of the items concerned and in ensuring that there is no delay in receiving supplies. Minimum stock of B items can be little higher and the items fairly high so that no special effort will be necessary to avoid stock outs.

### C. *Relationship Between Inventory Management And Organizational Performance*

Many scholars have examined various inventory management practices and performance, and as a result of these investigations, a vast amount of knowledge about inventory management and organizational performance has been accumulated. According to Maria and Jones (2003), implementing appropriate inventory management practices entails supplying high-quality products at a lower cost. They also emphasize the importance of establishing daily ordering and periodic inventory turn calculations. Ballon (2000), on the other hand, contends that inventory costs should be addressed while making inventory decisions. Choosing the right inventory management practice is critical to a company's inventory management performance (Palmer and Dean, 2000).

Nzuza (2015), urges that much of a company's assets are made up of the content it holds, so most businesses waste so much money on components that is indeed important for them to set up a strong material handling system to better control the inventory. A company's performance can be affected by a bad inventory management framework. The material management system put in place to monitor the effectiveness of a certain product as well as the company's performance has had a very detrimental impact on the company's performance.

Furthermore, Fawcett, Magnan, and Bixby Cooper (2006) suggest that in order to meet customer demand, organizations must minimize stock-outs while avoiding high inventory costs. Factors such as a lack of information exchange and inaccurate projections contribute to stocking level fluctuation.

He revealed that the majority of inventory variability is caused by companies failing to use inventory control systems. He mentioned the negative effects of inventory fluctuation as inaccurate forecasting, which leads to periods of insufficient capacity, poor customer service, and high inventory costs.

H2: Organizational Performance will be higher in firms with high levels of inventory management practices.

In his research study, Koumanakos (2008) tested a hypothesis to see if efficient inventory management improves a company's financial performance. The findings revealed that an enterprise's rate of return is lower, there is a higher level of inventories preserved when departing from lean manufacturing.

Inventory management influences manufacturing firms' competitive advantage (Naliaka and Namusonge, 2015). The study explains that an organization can compete on quality and that it fulfills customer orders on time. Competitive advantage is the result of crucial management decisions that enable a firm to differentiate itself from its competitors (Li et al. 2006).

H2: Telecom organizations with greater Inventory Management Practices will have a significant competitive advantage.

When compared to competitors, a company with a competitive advantage can have one or more of the following capabilities: lower costs, higher quality, higher dependability, and quicker delivery time. As a result of these qualities, the organization's total performance will improve (Mentzer et al. 2000).

H3: Organizational Performance will be high in firms with high levels of competitive advantage.

There are a number of studies that have explored the impact of inventory management practices on performance around the globe and in Uganda, according to the extant literature. These researches revealed that inventory management has a significant impact on a company's performance. Studies by Oballah, Waiganjo, and Wachiuri (2015) revealed a positive relationship between inventory management practices and performance in Kenyan public health institutions. However, the majority of the literature examined was from 2015 and earlier, and the majority of the research focused on the private sector, largely outside of Uganda. In Uganda, there are currently a number of novel empirical results that should be experimentally examined in order to evaluate progress, particularly in inventory management techniques that influence organizational performance. This will highlight significant work in progress, particularly in the areas of inventory management and organizational performance.

### III. METHODOLOGY

This study used a descriptive research design as the overall approach, with both quantitative and qualitative methods as the paradigm for information gathering on the effect of inventory management on organizational performance. (Patten and Newhart, 2017). The researcher combined quantitative and qualitative analysis methods since they supplement each other thus employing these approaches assists in covering more areas. The target population of the study comprised of staff and support staff members in the telecom industry. They include departments like station managers, call center, technicians and procurement managers.

The researcher used simple random sampling from each stratum to represent views of the rest in the stratum. Simple random sampling gives each member an independent and equal opportunity of selection from each of the categories, hence eliminating bias (Mugenda and Mugenda, 2013). Purposive sampling was also used to select key informants like administration, Stores, Operations/Production departments and others on account of their knowledge on inventory management and profitability. This method was used because it ensures that the critical aspects and feedback of the study will not be misused out and increases the probability that any social phenomenon's variability was captured in the data (Schwandt, 2001).

A target sample size of 130 people was selected for interviews to respond to the questionnaires. A questionnaire was prepared and disseminated for this study to collect information from a sample of respondents/informants. A comprehensive literature review yielded a series of questions on each area of inventory management practice. All of the questions were categorized using a Likert scaleranging from 1 to 5. Structured interviews were standardized in order, of which questions were asked to the respondents to minimize the impact of variation so that each interview has the exact same questions in the exact same order. This ensured that responses are reliably obtained and that comparisons are made with trust between test subgroups and the respondents (Siute, 2005). As a result, the instrument passed the reliability test for each of the variables, as well as for all of them, because they were all greater than 0.7, given that a sufficient Cronbach's alpha level is any number equal to or greater than 0.7. (Amin, 2005). Hence the instruments were suitable for data gathering.

The results obtained from the questionnaires and interviews were edited, coded, tabulated and interpretation of the data was done using SPSS. Completeness, precision, uniformity, consistency, and comprehensiveness of the data were all checked. To test the hypothesis and examine the relationship between the variables, the multi-linear regression equation model was adopted.

**IV. FINDINGS**

*A. Responses on the Inventory Management Practices used by Telecom companies.*

The study used questionnaire statements that allowed the respondents to demonstrate their degree of satisfaction or dissatisfaction. The quantitative results from the questionnaire are discussed in the table below.

Table 1: inventory management practices used by telecom companies.

| Statements measuring inventory management practices used  | N  | Minimum | Maximum | Mean  | Std. Dev |
|---|----|---------|---------|-------|----------|
| LIS1 Use of EOQ technique minimizes operational costs   | 92 | 1       | 5       | 3.897 | 0.997    |
| LIS2 Telecom companies use JIT inventory control system to minimize on network downtime.  |    |         |         |       |          |
| LIS3 Telecom companies' practices ABC Analysis to categorize items according to their stock value   | 92 | 1       | 5       | 4.101 | 0.821    |
| LIS4 Telecom companies use VMIS for reduction of stock out costs and obsolescence items   | 92 | 1       | 1       | 3.068 | 1.179    |
| LIS5 Telecom companies use RFID for efficient management of inventory records and it has also helped the company to monitor its inventory | 92 | 1       | 1       | 2.779 | 0.868    |
| Valid N (listwise)  | 92 |         |         |       |          |

The research findings showed that inventory management practices contribute significantly to the success of telecommunications organizations. Based on the findings of the research, telecom companies adopted ABC inventory management model, Economic order quantity and Just in Time approach to manage its inventory, however Vendor management inventory, and RFID technology are not fully used in the organization to a large extent.

*B. Responses On Whether Inventory Management Influences Organizational Performance*

Table 2: inventory management influences organizational performance

| Statements measuring how inventory management influences organizational performance  | N  | Mini mum | Maxi Mum | Mean  | Std. Dev. |
|--|----|----------|----------|-------|-----------|
| Telecom companies has policies and procedures for inventor control and replenishment is based on lead time to ensure n stock out.  | 92 | 1        | 5        | 3.674 | 1.1780    |
| Inventory management in telecom companies helps to improve inventory planning and scheduling.  | 92 | 2        | 5        | 4.065 | 0.887     |
| Telecom companies have a procurement section which doesn't delay inventory delivery during replenishment and purchase dates and quantities are improved by inventory management practices. | 92 | 1        | 5        | 3.935 | 0.992     |
| Cost reduction in telecom companies is a result of inventor management practices and hence this helps to improve cas flow and profitability  | 92 | 1        | 5        | 3.554 | 1.152     |
| Proper inventory management practices in the organization lea to improvement in service quality and also better customer service can be realized   | 92 | 2        | 5        | 4.217 | 0.947     |
| Telecom companies have stock files to record inventor receipts and also ensures inventory accuracy and usage whichelps in effective management.  | 92 | 1        | 5        | 3.739 | 1.185     |

It can be seen that the statements used to analyze the influence of inventory management practices on organizational performance in telecom companies are agreed upon by the staff respondents. With a mean response of 3.674 and standard deviation of 1.178 the respondents agreed implying that there are policies and procedures in place for inventory control and replenishment is based on lead time to ensure no stock out hence this contributes greatly to the performance of telecom companies since the majority were in agreement thus basing on this finding, all the organizations should consider inventory control policies and procedures as a safer way to prevent workers from manipulating inventory in order to gain organizational effectiveness. Hence when inventory is well controlled, stock out can be avoided.

Basing on the table above, the respondents were asked whether telecom companies have technology which helps to improve inventory planning and scheduling hence they agreed with this statement (mean = 4.065 and standard deviation = 0.887. This was in line with the results of Edward

A. Silver, and David F. Pyke (2016) who asserts that utilization of technology in inventory planning and scheduling allows the company to monitor and maintain appropriate inventories in order to properly satisfy customer demand, and quickly respond to events that happen so as to avoid any downtime of the telecom network.

Similarly, with a mean response of 3.935 and standard deviation of 0.992 there were varied reactions as respondents also agreed that telecom companies have a procurement section which doesn't delay inventory delivery during replenishment and purchase dates and amounts are enhanced by inventory management practices. Basing on findings, organizations that have resorted to adaptation of procurement strategies to ensure review of stock replenishment practices to avoid over stocking or under stocking that can result into stockout, purchase of inventory to maintain proper stock levels and also enable delivery of inventory on time hence this has greatly contributed to the improvement of the internal activities of the organization.

According to the table above, the respondents were asked whether improvement in cash flow and cost reduction in telecom companies is a result of inventory management practices thus mean reaction = 3.554 and standard deviation = 1.152 they accepted to this assertion. According to the analysis, improving the order management process by ensuring that the correct amount of inventory is purchased per batch such that the organization does not have to place orders too often thus the performance and profitability of an organization can be improved to ensure that there is no surplus of inventory sitting on hand or lost. Thus, cost reduction as a result of good inventory management practices ensures that an organization has sufficient resources through accurate forecasting which in turn helps in preparing employees towards managing the inventory at hand and also in achieving profitability objective.

According to the literature, A.O. Olukunle, (2008) that cost reduction through inventory management can be achieved by creating an inventory review process to get rid of obsolete stock and wastages on the materials used during operations and maintenance.

Hence also based on the findings, cash flow cycle depends on the company inventory thus if the company spends the cash to buy materials such as batteries, fuel so as to ensure maintenance and availability of the telecom network to its customers, that inventory also turns back into cash when the customers subscribe to the company's network for business and communication. The company will therefore have a higher net cash flow to expand by optimizing the efficiency of its inventories.

According to the findings, with a mean response of 3.739 and standard deviation of 1.185 the participants accepted that telecom companies have inventory files to record inventory receipts and ensure inventory accuracy which helps in effective supervision as it impacts on organization's resources and performance in terms of time, cost, and risk. According to the field study, effective record management entails aiming to create a comprehensive and well-organized infrastructure as well as an efficient inventory management system. The appropriate supply of items in the stores is also concerned, while at the same time reducing inventory costs. These were in line with the findings of Hellen (1993), who noted that the performance of an organization can be significantly influenced by the effectiveness of its inventory accuracy, and successful management of stores can help you save money, help retain customers and sustain continuous operations; but mismanagement of inventory can make you lose money and customers from the organization.

Basing on the table above, the respondents were asked whether proper inventory management practices in the organization can lead to improvement in service quality and also better customer service can be realized and they agreed to this statement (Mean=4.217, Standard deviation= 0.947). This was in accordance with findings of Blackburn et al., (1992) who emphasized that today's worldwide consumers demand for a service as they want it, when they want it, and at the best affordable price. They put greater emphasis on quality, consistency and time of delivery in today's highly competitive global marketplace. Telecom companies who are providers of services similarly have started to put more value on quality and delivery time as corporations are seeking to gain a competitive advantage and increase profitability by reducing expenses, increasing service quality and ensuring that telecom network is ever available so that the customers can enjoy great customer service and a positive customer experience every time.

### C. Organizational Performance

The performance of an organization, in this case telecom companies were assessed using a questionnaire that included six statements for which respondents had to indicate their whether they agreed or disagree. The quantitative findings from the respondents are shown in the table below.

Table 3: Views of respondents on organizational performance

| Statements measuring performance   | N  | Mini mum | Maxi Mum | Mean   | Std. Dev. |
|--|----|----------|----------|--------|-----------|
| Whether telecom companies are one of the best performing organizations because of proper inventory management  | 92 | 1        | 5        | 3.815  | 1.026     |
| Whether telecom companies are providing higher quality services and commendable customer care due to proper inventory management   | 92 | 2        | 5        | 4.120  | 0.862     |
| Whether telecom companies ensure good performance by resolving customer complaints and continuous improvement through ensuring adequate inventories available all the time | 92 | 1        | 5        | 3.652  | 1.235     |
| Whether telecom companies use a balance score card to monitor the organizational performance   | 92 | 2        | 5        | 4.087  | 0.873     |
| Whether telecom companies ensure cost reduction and profitability increase as a result of proper inventory management  | 92 | 1        | 5        | 3.554  | 1.304     |
| In my organization training about inventory management is given to employees to enable be more productive.   | 92 | 1        | 5        | 3.3804 | 1.349     |



On whether telecom companies are one of the best performing organizations because of proper inventory management, majority of the respondents agreed. (Mean = 3.913 and standard deviation = 1.028). And on the issue of whether telecom companies are providing quality services and commendable customer care due to proper inventory management, the majority of the respondents also agreed to this statement. (mean= 4.272 and standard deviation = 0.782)

With a mean response of 3.870 and standard deviation = 1.076 participants accepted that telecom companies ensure good performance by resolving customer complaints and ensuring continuous improvement through ensuring adequate inventories available all the time. Similarly, on whether telecom companies use balance score card to monitor the organization performance, the majority of the respondents also agreed to this statement.

However, there were mixed reactions on whether telecom companies ensure cost reduction and profitability increase as a result of proper inventory management as a substantial number of the respondents disagreed. (Mean= 3.685, standard deviation=1.132)

From the qualitative findings, it was found that when critical inventories like fuel, electricity meters, batteries and cable wires for new connections were out of stock and some customers werenot connected to the telecom network which resulted into reduced sales and the volume of revenue reduced as a result impacting on revenue collection which is key to performance of an organization.

*D. Relationship Between Inventory Management and Organizational Performance*

Regression analysis was further utilized to establish the statistical relationship and the extent to which inventory management contributes towards organizational performance. The results were determined using the coefficient of determination (R Square), and they are tabulated below.

Table 4: Model Summary

| Regression Statistics |         |
|-----------------------|---------|
| Multiple R            | 0.6000  |
| R Square              | 0.3548  |
| Adjusted R Square     | 0.3173  |
| Standard Error        | 0.7211  |
| Observations          | 92.0000 |

The coefficient of determination (Adjusted R Square) is 0.3173, as shown in Table 4 thus this implies that the 31.7% of the change in organizational performance in telecom companies is attributable to proper inventory management practices. This implies that there is a positive correlation between organizational performance and inventory management techniques, as shown by a correlation coefficient of 0.600 but there are other variables, according to the findings of this study that affect organizational performance.

To assess the overall significance of the model, Analysis of Variance (ANOVA) was done and the results presented in the table below.

Table 5: Analysis of Variables (ANOVA), Regression and Significance of Coefficients

| ANOVA      | df | SS       | Mean Square | F     | Sig. |
|------------|----|----------|-------------|-------|------|
| Regression | 5  | 24.58778 | 4.917556    | 9.458 | .001 |
| Residual   | 86 | 44.71657 | 0.51996     |       |      |
| Total      | 91 | 69.30435 |             |       |      |

Regression and Significance of Coefficients

|           | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
|-----------|---------------------|-----------------------|---------------|----------------|------------------|------------------|--------------------|--------------------|
| Intercept | 4.081772            | 0.864403              | 4.722068      | 0.000001       | 2.363395         | 5.800149         | 2.363395           | 5.800149           |
| EOQ       | 0.247885            | 0.114655              | 2.162015      | 0.033395       | 0.019959         | 0.47581          | 0.019959           | 0.47581            |
| JIT       | 0.420135            | 0.123149              | 3.411602      | 0.000986       | 0.175323         | 0.664948         | 0.175323           | 0.664948           |
| ABC       | 0.4351              | 0.124015              | 3.50846       | 0.000719       | 0.68163          | 0.18857          | 0.68163            | 0.18857            |
| RFID      | 0.31963             | 0.137439              | 2.32565       | 0.022391       | 0.59285          | 0.04642          | 0.59285            | 0.04642            |
| VMIS      | 0.061151            | 0.05783               | 1.057423      | 0.293280       | 0.05381          | 0.176114         | 0.05381            | 0.176114           |

| Model                      | Unstandardized Coefficients |            | Standardized Coefficients | T      | Sig. |
|----------------------------|-----------------------------|------------|---------------------------|--------|------|
|                            | B                           | Std. Error | Beta                      |        |      |
| (Constant)                 | -1.633                      | .453       |                           | -3.603 | .001 |
| Inventory management       | .408                        | .146       | .311                      | 2.787  | .007 |
| Organizational performance | .850                        | .165       | .579                      | 5.158  | .001 |
| Competitive advantage      | .336                        | .135       | .272                      | 2.654  | .009 |

a. Dependent Variables: Performance

From the findings above, we accept the hypothesis:

H1: inventory management practices have a significant positive influence on organization performance.

H2: Inventory management practices have significant impact on the competitive advantage of telecom companies

H3: There is a significant relationship between organizational performance and competitive advantage.

Based on Table 5, by using the regression model the results from the ANOVA test ( $F=9.458, p \leq 0.001$ ) show that inventory management has a significant impact on organizational performance since the p-value (0.001) is less than 0.05 ( $0.001 < 0.05$ ). Hypothesis' statistical importance also demonstrates that inventory management practices have a direct positive effect on competitive advantage thus implementing inventory management practices can enhance a company's competitiveness by allowing it to offer better prices, quality, and product delivery to the market. This finding is in line with a study conducted in Kenya by Naliaka and Namusonge (2015), which found that inventory management had an impact on manufacturing firms' competitive advantage. As a result, inventory management improves organizational performance significantly. It was also seen that based on the research findings from correlation analysis, inventory management has a statistically significant positive relationship with organizational performance thus the study accepted the hypothesis that was stated as thus: there is a significant positive relationship between inventory management and organizational performance in telecom companies and rejects the null hypotheses. The findings also reveal that competitive advantage has a smaller impact on organizational performance than inventory management practices hence this shows that inventory management practices are significantly correlated to organizational performance.

## V. CONCLUSION

From the study it is evident that telecom companies adopt EOQ, ABC, JIT techniques to a large extent and VMI, RFID to a smaller extent however this means that improvements in inventory management are needed such as by adopting vendor management inventory and RFID technology accompanied with proper records keeping as this will enable to have a significant positive contribution towards performance of telecom companies in Uganda.

Management of telecom companies should therefore be encouraged to adopt vendor management inventory and radio frequency identification technology so as to contribute towards performance of the corporation.

It was concluded from the research results that inventory management affects organizational performance and there is a positive relationship between inventory management and organizational performance hence improvements in inventory control shall possess a significant positive contribution towards performance of telecom companies. Thus, telecom companies should improve on its quality of the service, ensure cost reduction by having accurate record keeping at all of its telecom sites so as to contribute towards performance of the organization. Through utilization of technology in inventory planning and scheduling, it also allows the company to reduce stockouts by monitoring and maintaining appropriate stock levels in order to accurately satisfy the customer demands, and quickly respond to changes that take place so as to avoid any downtime of the telecom network

Basing on the findings, organizations with outdated inventory management systems usually use legacy systems that are old and in great need of replacement or overhaul. Thus Recording, updating, and/or retrieving data in these systems is often cumbersome. It was found out that in some cases, the systems are not even interoperable within some departments, let alone able to interface with more advanced systems of suppliers. This is because telecom companies face severe budgetary constraints, and their legacy systems are not updated, improved, or replaced in a timely manner. As a result, they are unable to take advantage of the latest information technology system capabilities that drive best practices in inventory data management, especially at a time when people are growing accustomed to very user-friendly applications and software systems.

## VI. RECOMMENDATIONS

The study recommends that telecom companies should adopt vendor managed inventory system and improve on its strategic supplier relationship and complete information sharing so as to be more efficient in inventory control as this will help to reduce lead time, minimize storing costs as the contractors should be able to deliver as and when it's necessary and as well as also assist in stock level monitoring.

The study also recommends that to minimize inventory expenses while continuing to provide the same customer service level and satisfaction, telecom companies should adopt installation of fuel management systems technology especially in its all-remote sites so as to avoid stock outs and ensure that inventory like fuel in generators is well monitored and managed to mitigate the risk of theft. By so doing the company will ensure better customer service and therefore remain competitive in the market.

They should also ensure complete information sharing with the suppliers as this will help to improve on their relationships with suppliers and also ensuring that they are paid on time. This is because the research found that certain vendors were hesitant to supply materials when orders were placed in cases where the company owed them money.

### A. Data Availability Statement

The author confirms that the data supporting the findings of this study are available within this article

## REFERENCES

- [1] Amelia S. Car, John N. Pearson (2002) "The impact of purchasing and supplier involvement on strategic purchasing and its impact on firm's performance", International Journal of Operations & Production Management, Vol. 22 Issue: 9, pp.1032-1053.
- [2] Amin Abdulaziz (2005). "Aligning supply chain strategies with product uncertainties", California Management Review, Vol. 44 No.3, pp.105-19.
- [3] A. Ansari & Batoul Modarress (1988) JIT purchasing as a quality and productivity centre, International Journal of Production Research, Vol 26:1, pp. 19-26.
- [4] Ballou R.H. (2000), "Evaluating inventory management performance using turnover curve", International Journal of Physical Distribution and Logistics Management.
- [5] Ballou, R.H. (2004) Business Logistics/Supply Chain Management: Planning, Organizing and Controlling the Supply chain. 5th Edition, Pearson/Prentice Hall Inc., New Jersey.
- [6] Bates, K.A. and Flynn, E.J. (1995), Innovation history and competitive advantage: a resource based view analysis of manufacturing technology innovations, Academy of Management Best Paper Proceedings, pp. 235-9
- [7] Blackburn J.D., Kropp D.H., Millen R.A. MRP system nervousness: Causes and cures Engineering Costs and Production Economics, 9 (1-3) (1985), pp. 46-141
- [8] Brigham F & Ehrhard E, (2005), Achieving World-class Supply Chain Alignment: Benefits, Barriers, and Bridges, National Association of Purchasing Management, Phoenix, AZ.
- [9] Chopra, S., and Meindl, P., (2013), "Supply Chain management strategy, planning and operation", 3rd Ed, Pearson Education Inc. Jersey, 11 (3), pp. 380-397
- [10] Christopher, M. (2005). Logistics and Supply Chain Management: Creating Value-Adding Networks (3rd ed.). London: FT Prentice Hall.
- [11] Dimitrios P. Koumanakos, 2008. "The effect of inventory management on firm performance," International Journal of Productivity and Performance Management, Emerald Group Publishing, vol. 57(5), pages 355-369.
- [12] Edward A. Silver, David F. Pyke, Douglas J. Thomas (2016). Inventory and Production Management in Supply Chains. Pp. 30-50
- [13] Farzaneh, D. P. (2012). The Effect of inventory management on firm performance. International Journal of Productivity and Performance Management, 57(5), pp. 355-369.



- [14] Fawcett, S. E., Ogden, J. A., Magnan, G. M., & Bixby Cooper, M. (2006). Organization commitment and governance for supply chain success. *International Journal of Physical Distribution and Logistics Management*, 36, pp. 22–35.
- [15] Fullerton, r. r.; Mewatters, C. S.; Fawson, C. An examination of the relationships between JIT and financial performance. *Journal of Operations Management*, v. 21, p. 383-404, 2003.
- [16] Graman, G.A. and Magazine, M.J., (2006) "Implementation issues influencing the decision to adopt postponement" *International Journal of Operations & Production Management*; Volume: 26 Issue: 10; pg.25
- [17] Koumanakos, D. P. (2008). The effect of IM on firm performance. *International Journal of Productivity and Performance Management*, 57(5), 335–369.
- [18] Kraatz, M. S. and Zajac, E. J. (2001). How organizational resources affect strategic change and performance in turbulent environments: Theory and evidence. *Organization Science*, 12 (5): 632-57.
- [19] Lyons K. (2006), *Purchasing and supply chain management*, 7<sup>th</sup> edition, Pearson International
- [20] Li, S. R., Ragu-Nathan, B., Ragu-Nathan, T. S., & Subba Rao, S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*, 34(2), pp. 107–124.
- [21] Maria, X. L., & Jones, J. T. (2003). Quality initiatives and business growth in Australian manufacturing SMEs: An exploratory investigation. *School of Commerce Research Paper Series*, pp. 03-13.
- [22] Martin Christopher, (2015), *logistics and supply chain management*, 4th edition, prentice hall Vol. 1, pp. 1-15
- [23] Mentzer, J. T., Min, S., & Zacharia, Z. G. (2000). The nature of inter-firm partnering in supply chain management. *Journal of Retailing*, 76(4), pp. 549–568.
- [24] Mugenda M. O. and Mugenda A. (2003), *Research Methods: Qualitative and Quantitative Approaches*, African Centre for Technology Studies, Nairobi, Kenya.
- [25] Naliaka, V. W., & Namusonge, G. S. (2015). Role of inventory management on competitive advantage among manufacturing firms in Kenya: A case study of Unga Group Limited. *International Journal of Academic Research in Business and Social Sciences*, 5(5), 87–104.
- [26] Nzuza, Z. W. (2015). Factors affecting the success of inventory control in the stores division of the Thekwini Municipality Durban: A case study. Durban, South Africa: Durban University of Technology.
- [27] Ray, G., Barney, J. B., and Muhanna, W. A. (2004). Capabilities, business processes, and competitive advantage: Choosing the dependent variable in empirical tests of the resource based view. *Strategic Management Journal*, 25 (1): 23-37
- [28] Salami, L. O. & Adeyemi, S. L. (2010). Inventory management: A tool of optimizing resources in a manufacturing industry. *Journal of Social Science*, 23(2), 135-142.
- [29] Waterman R and Peter J (2005), *Managing Budget emphasis through the explicit design of conditional Budgetary slack*" *Accounting for organization and Society* vol.30 pp 587- 608
- [30] Zhang, G. Q. (2008), "Combining acquisition planning with inventory management under uncertain demand", *INFOR*, 46(2), 129-135



10.22214/IJRASET



45.98



IMPACT FACTOR:  
7.129



IMPACT FACTOR:  
7.429



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24\*7 Support on Whatsapp)