

## Assessment of Inventory Control on the Performance: A Case Study Fair Construction Company

Job Onyinkwa Osoro\*, Denis Nkurunziza

Mount Kenya University Box 5826, Kigali Rwanda, Thika, Kenya

\*Corresponding Author

Job Onyinkwa Osoro

Email: [jobonyi@gmail.com](mailto:jobonyi@gmail.com)

**Abstract:** This research was the assessment of inventory control on the performance of Fair Construction Company and its specific objective was, to determine approaches of inventory control used by Fair Construction Company, to find out the inventory costs incurred in procurement process in Fair Construction Company and to establish the relationship between inventory control and financial performance in Fair Construction Company, The research design used was both qualitative and quantitative methods. The researcher used a Self-Administered Questionnaire (SAQ) in order to solicit the needed information; The collected data was analyzed using spss software packages in order to count the responses and made statistical frequency distribution. Putting the information provided by the respondents in tables together with corresponding ratings in terms of percentage.

**Keywords:** inventory control, procurement process, financial performance

### INTRODUCTION

Inventory control or management is critical to an organizations success in today's competitive and dynamic market. This entails reduction in cost of holding stocks by maintaining just enough inventories, in the right place and the right time and cost to make the right amount of needed products. High levels of inventory held in stock affect adversely the procurement performance out of the capital being held which affects cash flow leading to reduced efficiency, effectiveness and distorted functionality. It involves the coordinating of materials availability, controlling, utilization and procuring of materials [1]. According to Bertolini & Rizzi [2], inventory control is the direction of activities with the purpose of getting the right inventory in the right place at the right time and in the right quantity and it is directly linked to production function of any organization which implies that the inventory management system operated will affect the profitability of an organization directly and indirectly.

According to Holdren & Hollingshead [3], inventories are the stock of raw materials, work in progress, finished goods and supplies held by a business organization to facilitate operations in the production process. Also if the company fails to manage its inventory efficiently, it is likely to face profitability problems. The goal of inventory management therefore is to provide the inventories required to sustain operations at minimum costs.

Inventory control helps organization to establish the proper inventory levels through the economic order quantity; and to keep track of this level

through inventory control system which may be manual such as two bin method and red line method, or computerized inventory control systems. Proper inventory controls also require an organization to undertake stocking and use appropriate method to value stock so as not to under or over state profits [4]. Inventory is one of the largest assets for any company and optimal management of inventory is one major part of maximizing sales. Inventory management is one of the important key activities of business logistics. Because of its role in business organizations, it is one of the most important instruments of logistics planning and control. Inventory plays an un-negligible role in the growth and survival of an organization in the sense that failure to an effective and efficient management of inventory, will mean that the organization will lose customers and sales will decline [5].

Wild [6] states that working capital tied up in inventory can't be used for more productive purposes that could generate higher returns or growth for the company. Secondly, inventory is a component of the company's overall capital investment. Those firms that can generate a given level of profit with a lower level of investment in inventory will generate higher cash flows and better return on invested capital. Thirdly, higher levels of inventory tend to lead to more problems with write-offs of slow, excess and obsolete inventories, which can hammer a company's profit line, especially in today's environment of rapid product lifecycles [7].

In America, inventory contributes to almost sixty percent 60% of the annual turnover in the manufacturing firms [6]. This shows clearly that a lot of

concern should be given to inventory management to avoid unnecessary costs. Actually any function of the firm which accounts for well over half of its receipts certainly deserves a great deal of managerial attention.

Inventory plays a big part in service firms as it account for about 56% of the annual turnover [8]. Kenyan organizations are faced with a lot competition in the current markets. This has led to the need for coming up with better method of managing and measuring how resources are utilized by various jobs or products, and therefore be able to eliminate any wastage in the value chain. The new inventory management methods require having the right persons doing the right job [7].

Companies incur substantial costs in the procurement and maintenance of inventories, which costs form a large portion of production costs. Inventory costs include: carrying costs such as storage and insurance; ordering costs like transporting and store placement; and stock out costs like redundancy and loss of sales. A company cannot achieve an outstanding performance without proper and efficient control of materials. Materials are as much as cash itself and any theft, wastage and excessive use of materials are of immediate financial loss and leads to poor performance of a company [6].

In recent years, the construction industry has been facing a number of challenges especially in inventory management or material control, thus affecting the performance of most construction companies. There have been cases of materials overstocking which eventually get expired or out dated, under stocking lack of stock-taking theft of materials by workers and delays in deliveries of materials at the sites, among others [9].

Inventory control can be done through introduction of different measures so as to prevent the company from incurring unnecessary losses made by different departments. Measures which can be put in place, for example, stock-taking which is the accounting of stock at every end of the month, so as to record the lost and available stock; making proper supervisions on sites during construction of buildings so as to avoid theft of materials by workers [10]. The company should set up strict rules to procurement officers and store managers which they should follow during purchasing and storing of material so as to avoid loss of inventory in the Fair Construction Company, medium size firm of building and civil engineering contractors as the case study.

Fair Construction Company has existed for over 20 years with the objective of maximizing profits

and providing better services to customers at the right time. To date the company does not focus on how much of each inventory item a firm should hold in stock, how much should be ordered at a given time and at what point inventory should be ordered. This has greatly affected its production, sales and hence reducing on its financial performance (Audit Report 3<sup>rd</sup> October, 2010).

It is therefore important for an organization to have a sound, effective and well-coordinated inventory management system because the business environment is rapidly changing, highly competitive and it drastically affects the performance of the organization [10].

## METHODOLOGY

In this study the researcher used a survey design in which both qualitative and quantitative methods was employed. The rationale for this choice is that enabled the researcher to collect a lot of information from a number of respondents at one point in time and its results can be generalized to a larger population within defined boundaries [11]. The target population was 150 staff and clients of Fair Construction. in this type of sampling the researcher uses personal judgment or common sense regarding the participants from whom information is collected. The researcher usually selects a sample based on his or her experience of knowledge of the group to be sampled and has in mind that these respondents have the information the researcher requires. In this study the researcher employed simple random sampling and purposive sampling techniques. Simple random sampling was used in order to avoid bias and to ensure that each respondent get an equal chance of being selected.

**Table 1: Showing results on the gender of the Respondents**

Gender	Frequency	Percentage (%)
Male	59	69
Female	26	31
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 1 shows that 69% of the respondents were male and 31% were female. This implies that Fair Construction has bias in employing workers as it has a gender unbalanced workforce.

**Table 2: Showing results on Age of Respondents**

Age group	Frequency	Percentage (%)
Below 25	5	5.8
26-35	33	38.8
36-45	32	37.6
Above 46	15	17.6
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 2 shows that 5.8% of the respondents were below 25 years, 38.8% of the respondents fell between the ages 26-35 years, 37.6% of the respondents were between 36-45 years and 17.6% of the respondents were above 46 years. The majority of the respondents, 38.8% were between the ages of 26-35, and this implies that the Fair Construction employs young employees who are strong, energetic and highly productive.

**Table 3: Level of Education**

Respondents	Frequency	Percentage (%)
O level	21	24.7
A level	18	21.1
Diploma	29	34.1
Degree	17	20.1
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 3 shows that 24.7% of the respondents were Ordinary level leavers; 21.1% of the respondents were Advanced level leavers; 34.1% of the respondents were Diploma holders; and 20.1% of the respondents were Degree holders. Basing on the results obtained, majority of the respondents 34.1% were diploma holders. This implies that the respondents were knowledgeable enough.

**Table 4: Showing results on the duration of Respondents in service/as customers**

Respondents	Frequency	Percentages (%)
Less than 3 years	25	29.4
3-6 years	31	36.4
7-9 years	16	18.8
More than 9 years	13	15.2
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 4 shows that 29.4% of the respondents have been in the company for less than 3 years; 36.4% of the respondents have been in Fair Construction for between 3-6 years; 18.8% of the respondents have been in Fair Construction for between 7-9 years; and 15.2% of the respondents had worked for more than 9 years. Basing on the results obtained 29.4% of the respondents had worked in Fair Construction for less than 3 years. This implies that Fair Construction took part in recruiting new work force due to large work load hence they employed efficient workers because of their efficient skills.

**Table 5: A responsible official authorizes purchase**

Response	Frequency	Percentages (%)
Strongly Agree	22	25.8
Agree	19	22.3
Not Sure	15	17.6
Disagree	13	15.2
Strongly Disagree	16	18.8
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 5 shows that 25.8% of the respondents strongly agreed; 22.3% of the respondents Agreed; 17.6% of the respondent were not sure; 15.2% strongly disagreed; 18.8% of the respondents strongly disagreed.

**Table 6: Goods are inspected on receipt**

Response	Frequency	Percentage (%)
Strongly Agree	18	21.1
Agree	15	17.6
Not Sure	12	14.1
Disagree	14	16.4
Strongly Disagree	26	30.5
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 6 shows that 21.1% of the respondents strongly agreed; 17.6% agreed; 14.1% were not sure, 16.4% disagreed and 30.5% strongly disagreed.

**Table 7: Pay maximum attention to those inventories whose value is highest**

Response	Frequency	Percentage (%)
Strongly Agree	20	23.5
Agree	19	22.3
Not Sure	6	7
Disagree	15	17.6
Strongly Disagree	25	29.4
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 7 shows that 23.5% strongly agreed; 22.3% Agreed; 7.0% of the respondents were not sure; 17.6% disagreed; 29.4% strongly disagreed.

**Table 8: All store staffs of Fair Construction Company are highly skilled**

Response	Frequency	Percentage (%)
Strongly Agree	24	28.2
Agree	22	25.8
Not Sure	5	5.8
Disagree	18	21.1
Strongly Disagree	16	18.8
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Tables 8 shows that 28.2% of the respondents strongly agreed; 25.8% of the respondents agreed; 5.8% were not sure; 21.1% disagreed; 18.8% strongly disagreed.

**Table 9: Fair Construction Company experiences under stocks situations**

Response	Frequency	Percentages (%)
Strongly Agree	37	43.5
Agree	25	29.4
Not Sure	10	11.7
Disagree	8	9.4
Strongly Disagree	5	5.8
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 9 shows that 43.5% of the respondents strongly agreed; 29.4% of the respondents agreed; 11.7% were not sure; 9.4% of respondents strongly disagreed; while 5.8% strongly disagreed.

**Table 10: Fair Construction Company get damaged goods from its stored**

Response	Frequency	Percentage (%)
Strongly Agree	36	42.3
Agree	25	29.4
Not Sure	8	9.4
Disagree	3	3.5
Strongly Disagree	13	15.2
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 10 shows that 42.3% of the respondents strongly agreed; 29.4% Agreed; 9.4% were not sure; 3.5% disagreed; and 15.2% of the respondents strongly disagreed.

**Table 11: Fair Construction Company is faced with transportation and freight costs**

Response	Frequency	Percentage (%)
Strongly Agree	28	32.9
Agree	18	21.1
Not Sure	10	11.7
Disagree	14	16.4
Strongly Disagree	15	17.6
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 11 shows that 32.9% of the respondents strongly agreed; 21.1% agreed; 11.7% were not sure; 16.4% disagreed; and 17.6% of the respondents strongly disagreed.

**Table 12: Fair Construction Company is faced with expenses of making requisitions**

Response	Frequency	Percentages (%)
Strongly Agree	22	25.8
Agree	12	14.1
Not Sure	12	14.1
Disagree	15	17.6
Strongly Disagree	24	28.2
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 12 shows that 25.8% of the respondents strongly agreed; 14.1% agreed; 14.1% were not sure; 17.6% disagreed; and 28.26% strongly disagreed.

**Table 13: Fair Construction Company is faced with costs of writing purchase orders**

Response	Frequency	Percentage (%)
Strongly Agree	35	41.1
Agree	27	31.7
Not Sure	5	5.8
Disagree	7	8.2
Strongly Disagree	11	12.9
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 4.13 shows that 41.1% of respondents strongly agreed; 31.7% agreed; 5.8% were not sure; 8.2% disagreed; 12.9% strongly disagreed.

**Table 14: Fair Construction Company is faced with costs of receiving materials**

Response	Frequency	Percentages (%)
Strongly Agree	10	11.7
Agree	1	1.1
Not Sure	13	15.2
Disagree	28	32.9
Strongly Disagree	33	38.8
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 14 shows that 11.7% of the respondents strongly agreed; 1.1% Agreed; 15.2% were not sure; 32.9% disagreed; 38.8% strongly disagreed.

**Table 15: Fair Construction Company is faced with costs of checking on orders and maintaining records of the entire process**

Response	Frequency	Percentage (%)
Strongly Agree	34	40
Agree	26	30.5
Not Sure	2	2.3
Disagree	8	9.4
Strongly Disagree	15	17.6
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 15 shows that 40.0% of the respondents strongly agreed; 30.5% agreed; 2.3% were not sure; 9.4% disagreed; and 17.6% strongly disagreed.

**Table 16: Fair Construction Company is faced with handling costs**

Response	Frequency	Percentage(%)
Strongly Agree	47	55.2
Agree	28	32.9
Not Sure	5	5.8
Disagree	3	3.5
Strongly Disagree	2	2.3
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 16 shows that 55.2% of the respondents strongly agreed; 32.9% agreed; 5.8% were not sure; 3.5% disagreed; and 2.3% strongly disagreed.

**Table 17: Fair Construction Company is faced with storage costs**

Response	Frequency	Percentages (%)
Strongly Agree	27	31.7
Agree	12	14.1
Not Sure	14	16.4
Disagree	16	18.8
Strongly Disagree	16	18.8
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 4.17 indicates that 31.7% respondents strongly agreed; 14.1% agreed; 16.4% were not sure; 18.8% disagreed; and 18.8% strongly disagreed.

**Table 18: Fair Construction Company is faced with financial expenses of capital tied up in inventory**

Response	frequency	Percentage (%)
Strongly Agree	14	16.4
Agree	12	14.1
Not Sure	5	5.8
Disagree	17	20
Strongly Disagree	37	43.5
<b>Total</b>	<b>85</b>	<b>100</b>

Source: Researcher, 2015

Table 18 shows 16.4% strongly disagreed; 14.1% agreed; 5.8 were not sure; 20.0% disagreed; and 43.5% strongly disagreed.

Findings on the relationship between approaches of inventory control and financial performance of Fair Construction Company were considered and results are shown below .

**Table 19: Relationship between Approaches of Inventory Control and Financial Performance of Fair Construction Company**

	Approaches to Inventory Control	Financial Performance
Approaches to Pearson correlation	1	.83**
Inventory Control sig. (2-tailed)	.	0
N	30	30
Financial Pearson correlation	.83**	1
Performance sig. (2-tailed)	0	.
N	30	30

\*\***. Correlation is significant at the 0.01 level (2-tailed)**

Source: Researcher, 2015

From the table19 above, the findings show that there is a positive relationship between approaches to inventory control and financial performance evidenced by a correlation coefficient between the variables of 0.83.

## FINDINGS

### Inventory Control

Findings revealed that a responsible official authorizes purchase, goods are not inspected on receipt, staff members of Fair Construction do not pay maximum attention to those inventories whose value is highest, all store staffs of Fair Construction are not highly skilled, Fair Construction experiences under stocks situations, and gets damaged goods from its stored.

### Inventory costs incurred in procurement process in Fair Construction Company

Findings revealed that Fair Construction is faced with transportation and freight costs, is faced with expenses of making requisitions is not faced with costs of writing purchase orders, costs of receiving materials. Besides that Fair Construction is faced with costs of checking on orders and maintaining records of the entire process, handling costs, but is not faced with storage costs, financial expenses of capital tied up in inventory.

### Relationship between approaches to inventory control and financial Performance in Fair Construction Company

Findings indicated that there is a strong positive relationship between approaches of Inventory Control and Financial Performance at Pearson correlation coefficient  $r = 0.794$ . This implies that

---

approaches of Inventory Control affect Financial Performance by 79.4% and 20.6% by other factors.

## CONCLUSION

Findings revealed that Goods are not inspected on receipt, staff members of Fair Construction Company do not pay maximum attention to those inventories whose value is highest, all store staffs of Fair Construction Company are not highly skilled, it experiences under stocks situations, and gets damaged goods from its stored. Besides that Fair Construction Company is faced with costs of checking on orders and maintaining records of the entire process, handling costs. Nevertheless, there is a strong positive relationship between approaches of Inventory Control and Financial Performance at Pearson correlation coefficient  $r = 0.794$ .

## REFERENCES

1. Ayad A; Optimizing inventory and store results in big box retail environment .International Journal of Retail & Distribution Management, 2008; 363:180-191.
2. Bertolini M, Rizzi A; A simulation approach to manage finished goods inventory replenishment economically in a mixed push/pull environment, 2002; 15: 1-2.
3. Holdren DP, Hollingshead CA; Differential pricing of industrial series: The case of inventory financing, 1999; 14(1):1.
4. Boomborg DJ, Lemay S, Hanna JB; Logistics. Prentice Hall. New York, 2002.
5. Baganha MP, Cohen MA; The stabilizing effect of inventory in supply chains. Operations Research, 1998; 46(3):72-83.
6. Wild T; Best practice in inventory management. 2<sup>nd</sup> Edition. Butterworth-Heinemann. UK, 2002.
7. Eckert; Inventory management and its effects on Customer satisfaction. Journal of Business and Public Policy I, 2007; 3.
8. Lee, Kleiner; Inventory management in the women's retail and clothing industry, 2001; 24
9. Verwijmeren, Yoist V, Donselaar; Networked inventory management information systems: terializing supply chain management. International Journal of Physical Distribution & Logistics Management, 1996; 26(6).
10. Silver EA, Pyke DF, Peterson R; Inventory Management and Production Planning & Scheduling, 3<sup>rd</sup> ed, John Wiley, New York, NY, 1998.
11. Amin ME; Social Science Research: Conception, Methodology and Analysis. Kampala: Makerere University Printery, 2005.