

Assessment of Inventory Management Practice (The Case of Hawasa Textile Factory), Ethiopia

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ABSTRACT

The Ethiopian industry sector both large and medium scale manufacturing show a decline trend and stagnation over time in their productivity, profitability, and growth. Inventory management practice has its own impact on the performance of the company because any manufacturing common need inventory either for the purpose of future production or for selling purpose. By considering this issue this paper is prepared for the purpose Assessment of Inventory Management Practice in Case of Hawassa Textile Share Company. The data for this current study were obtained from primary and secondary source that was analyzed. In the study, both quantitative and qualitative data collection methods were employed. Total of 60 sample population has been used for the study. The results indicated that a proper and effective management of the inventory practices were able to enhance a competitive advantage of the company and lead it to improved competitiveness. The paper has value for the company to save time and resource of the organization and used as a reference for further researcher.

Keywords: Inventory, Inventory Management Practice, Hawasa Textile Factory

INTRODUCTION

Inventories are stocks of raw materials, work in progress, finished goods and supplies held by business organization to facilitate operations in the production (Pandey, 2005).

Inventory management involves all activities put in place to ensure that customer have the needed product or service. It coordinates the purchasing, manufacturing and distribution functions to meet the marketing needs and organizational needs of availing the product to the customers. Inventory management is primarily involved with specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials. The scope of inventory management also involves managing the replenishment lead time, replenishment of goods, returns and defective goods and demand forecasting, carrying costs of inventory, asset

management, physical inventory, available physical space, demand forecasting, inventory valuation, inventory visibility, future inventory price forecasting and quality management. According to (Miller, 2010) With a balance of these requirements, it is possible to reach an optimal inventory level, which is an on-going process as the business needs shift and react to the wider environment.

Inventory management is concerned basically with planning and control of materials. There must be a store, where to buy and how much to buy to control materials. The purpose of inventory management is to ensure uninterrupted supply of inventory at lowest possible cost for ongoing operation to business. Management has to compare different cost components such as cost of supplying inventory, inventory holding cost, and costs resulting from insufficient inventory when making decision on inventory (Hugo, Badenhorst-weiss, and Van Rooyen 2002).

Inventory management is key activity which organizes the availabilities of material for the smooth ongoing

operation. It coordinates purchasing, manufacturing, storing and distribution function to meet the marketing needs and customer satisfaction. This role includes the supply of new products consumables, spare parts, obsolescent items, and all other teams (Fivild, 2002).

Basic Research Questions

The study would try to assess the inventory management practice of the organization by answering the following questions:

1. What are challenges organizations faces in inventory management practice?
2. How 'stock classification' and 'codification in inventory management' are practice?
3. What is the aim of keep inventory in the organization?
4. What type of inventory evaluation method the company use?

General Objectives

The general objectives of this study are to assess the inventory management practice of Hawassa textile Share Company.

Specific Objectives

1. To determine challenges faced by the organization with inventory management.
2. To examine the practices of material classification and codification in organization.
3. To identify the purpose for the factory keeping inventory.
4. To assess the type of inventory evaluation method the organization use.

Limitation of the Study

There was a shortage of secondary sources of data, shortage of journals, articles and books printed out in the area, open ended questionnaire were not answered by respondent. The respondents for this research mainly dominated from inventory, warehouse and finance department and the sample size was also limited.

Scope of the Study

The study would plan to focus on inventory management practice of the company through Geographical: The study is limited to Hawassa textile Share Company. Methodological: The study would use focus descriptive type of research by using both the primary and secondary data collection method by qualitative and quantitative approach. Conceptual: The study will focus on Assessment of inventory management practice in Hawassa textile Share Company.

LITERATURE REVIEW

Theoretical Frame Work

Inventories are the stocks of raw materials, work in progress, finished goods and supplies held by a business organization to facilitate operations in the production process (Pandey, 2005). Inventories can either be assets as well as items held in the ordinary course of business or they can be goods that will be consumed or used in the production of goods to be sold (Green, 2000). (Coyle, et al 2003) defines inventory as “ raw materials, work in - progress, finished goods and suppliers required for creation of a company's goods and services.”

Effective inventory management allows and distributor meets or resaved thus customer expectation of product availability with the amount of each item that will maximize the distributor net profit (Attacker, 2005) an order point is placed for replenishment of encounter when the inventory reaches the reorder point. The order quantity is equal to the working quantity. By the time inventory reaches the minimum level the quantity ordered is reserved. On receipt of the order quantity of materials the inventory which had reached the minimum level increases to the maximum level and consumption cycle restarts.

Empirical Literature Review

According to (Munyo and Omulo2015) in Kenya Mombasa: finding the organization inventory management practices in manufacturing industry is low because the company had not adopted computerized inventory management practices, they had not used inventory management system (IMS) radio frequency, bar code, ware-

house management system (WMS), material requirement planning (MRP).

According to (Osei, 2015) Started in his finding ineffective inventory management practice leads to incidences of over production, under production, excessive stocks, out of spare parts for machines, production bottlenecks and delays in delivery of raw materials. The study established that MRP was most effective in contributing to performance of production department despite the fact that most organizations used action level methods.

A study by (Fullerton *et al.*, 2003) provides empirical support that manufacturing firms that implement higher degrees of modern inventory management practices should outperform competitors; it was found that a positive relationship exists between firms profitability and the degree to which waste reducing production practices such as reduced set up times, preventive, maintenance programs, and uniform workloads are implemented. These findings indicate that manufacturing enterprises employing modern inventory management practices are consistently more profitable than their counter parts.

RESEARCH METHODOLOGY

Research Design and Approach

There are three types of business research, namely exploratory, descriptive and causal (Zikmund *et al.*, 2010). This study designs the descriptive design. The study would be used a descriptive type of research which describe about the characteristics of the aspect of phenomena.

The study problem is more likely to be answered through a combination of qualitative and quantitative approach in order to reduce the limitation and increase the quality and flexibility of the data (Robinson, 1998).

The study was about assessment of inventory management practice in the case of Hawassa Textile Share Company. The researchers used mixed research approaches; because it involves both qualitative and quantitative approach. The researchers used quantitative approach for variety of

mathematical models that rely on historical data based on measurement of quantitative figure or quantity, and also would use qualitative approach because it is a technique that is subjective or judgemental in nature based on personal experience and opinion which is used when historical data may not be available.

Sampling Techniques and Sampling Size

A sample is a smaller group obtained from the accessible population to represent the whole population while sampling is the process of selecting the individuals for the study from the population (Mugenda and Mugenda, 2003). Regarding the sampling technique the researcher used purposive or judgmental sampling from non probability sampling because the researchers had selected respondents who can provide more information about inventory in the organization. The researcher had selected the employees who are directly related to inventory management department and related their jobs careers in the organization.

The total population of the organization consisted of 866 employees. The researchers had selected 60 employees out of the total population, the reason behind was, it is difficult and time consuming as well as too costly to gather information from all employees.

The sample size was computed using Nassiuma D.K (2000) Formula;

$$n = \frac{Nc^2}{C^2 + (N-1)e^2}$$

Where n is the sample size, N is the population, C is the coefficient of variation (0.4) and e is the margin of error (0.05). A confidence level of 95% was used.

$$\begin{aligned} n &= \frac{866*(0.4)^2}{(0.4)^2 + (866-1) 0.05^2} \\ &= 60 \text{ (sample size)} \end{aligned}$$

RESULT AND DISCUSSION

Data Analysis and Interpretation

Table 1: Challenges of Inventory Management

Item	Strongly agree		Agree		Indifferent		Disagree		Strongly Disagree		Total	
	Respondents		Respondents		Respondents		Respondents		Respondents		Respondents	
	No	%	No	%	No	%	No	%	No	%	No	%
Delay in inventory	24	40	16	26.6	8	13.3	7	11.6	5	8.3	60	100
Use of out dated storage facilities	20	33.3	18	30	12	20	6	10	4	6.6	60	100
Lack of training	19	31.6	17	28.4	3	5	11	18.3	10	16.6	60	100
Use of manual inventory management system/lack of technology	40	66.6	9	15	2	3.3	2	3.3	7	11.6	60	100
Holding too much/too little inventory	12	20	20	33.3	6	10	12	20	10	16.6	60	100
Conflict of interest	2	3.3	8	13.3	2	3.3	13	21.6	35	58.3	60	100
Weak management system	22	36.6	15	25	11	18.3	9	15	3	5	60	100
Purchase of material with near expiration date	28	46.6	11	18.3	1	1.6	6	10	14	23.3	60	100
Bureaucratic process in procurement	32	53.3	15	25	3	5	5	8.3	5	8.3	60	100
Lack of skill manpower	21	35	9	15	8	13.3	14	23.3	8	13.3	60	100
The company policy/ manual problem	22	36.6	14	23.4	10	16.7	5	8.3	9	15	60	100

Source: own Questionnaire (2016)

As the above table demonstrates 66.6%, (40) of the respondents strongly agreed to the delay of the inventory. This showed that there was delay of inventory in the company.

As per the above table 63.3% (38) of the respondents agreed or strongly agreed the use of outdated storage facilities, this implied that the company had not used proper storage for inventory. According to the above table 60% (36) of the respondents agreed or strongly agreed with lack of training, this showed that the organization had not provided the training for the employees concerning inventory management.

As indicated in above the table 81.6% (49) of the respondents agreed or strongly agreed the use of manual inventory management system/lack of technology, this implied the organization had used manual or had not used computerized inventory management system which is very difficult and time consuming in inventory management practice.

As seen in the above table 55.3% (32) of the respondents agreed or strongly agreed to holding too much/too little inventory, this implied absence and over inventory was not new/normal situation in the organization. Its risky for the organization to hold too much inventory, it held the money and the organization couldnot purchase the material and with low inventory the organization could not produce the output due to absence of inventory. This happened because of absence or weak inventory management practices.

As shown in the above table 58.3% (35) of the respondents strongly disagreed to conflict of interest, this showed majority of employees accepted that there was no conflict of interest in the company.

As it summarizes in the above table 61.6% (37) of the respondents agreed or strongly agreed to weak management system on inventory management, it showed the management/supervisors who worked in area of inventory was not done well or wasnot effective.

According to the above table 64.9% (39) of the respondents agreed or strongly agreed to purchase of material with near expiration date, this implied the materials purchased by the organization, most of time were not familiar for inventory or near expired/obsolescence.

As the above table demonstrates 78.3% (77) of the respondents agreed or strongly agreed to bureaucratic process in procurement, this implied there were different misleading activities of purchasing activities that hindered inventory management practice. Those activities are: long procedures for purchase material, delay, less quality material purchase, lack of coordinating between purchasing and inventory management department.

According to the above table 50% (30) of the respondents agreed or strongly agreed on lack of skilled manpower in organization, this implied that in the organization many educated people were there but, their profession were different from logistics and other business fields so that was a challenge for managing inventory in a good manner.

As summarized in the above table 60% (36) of the respondents agreed or strongly agreed on the company policy/manual problem in inventory management practices, this implied the company policy was not suitable for inventory management or there was a gap in inventory and policy of the organization.

Table 2: Technique Used by Company

Item 1. What types of technique used by the company to control inventory?		
Response	Respondents	
	Numbers	%
Best quantity orders	8	13.3
ABC analysis	40	66.7
Economic Order Quantity	12	20
Others	0	0
Total	60	100

Source: own Questionnaire (2016)

The above table describes the technique that the company used 67.7% (40) of the respondents replied that the company had used ABC analysis, 20% (12) of the respondents replied that the company had used Economic order quantity, 13.3% (8) of the respondents replied that the company had used best quality orders. This indicated that the majority of the respondents said that the company had used Abc analysis by ignoring other techniques, it shows that ABC technique only cannot manage inventory

in better way. This practice of the company related to ABC inventory management system resulted in failure to provide services to the company on time. The company had used ABC inventory system by giving more attention to the most important materials and less attention to C items’.

Table 3: Types of Inventory Evaluation System

Item 2. What types of inventory evaluation system the company use?		
Response	Respondents	
	Numbers	%
FIFO/first in first out	10	16.7
LIFO/last in first out	42	70
Weighted average	8	13.3
JIT/ Just In Time	0	0
Others	0	0
Total	60	100

Source: own Questionnaire (2016)

According to the above table from the total number of the respondents 70% (42) of them replied the company had used LIFO, 16.7% (10) responded that the company had used FIFO and 13.3% (8) of them responded the company had used weighted average. There was no respondent that said in process JIT and others. From this description it was apparent that the company had used LIFO method only, which had negative impacts on company, such as: the amount of inventory reported in the balance sheet was far removed from its current replacement costs, reduced earning in inflationary times, understatement of inventory, problem of LIFO liquidation, manipulation of income.

Table 4: Inventory Evaluation System

Item 3. Do you believe that the inventory evaluation system improved from time to time?		
Response	Respondents	
	Numbers	%
Yes	48	80
No	12	20
Total	60	100

Source: own Questionnaire (2016)

As the result of above table 80% (48) of respondents said that there were no improvement seen in inventory evaluation: due to non acceptance of employees to new things, fear of employees that they may lose their jobs, skill gap, less commitment of managers, lack of coordination internal within organization.

Table 5: Inventory Report Time

Item 4. When does the company monitor and evaluate inventory holding report?		
Response	Respondents	
	Numbers	%
Weekly	5	8.3
Monthly	9	15
Quarter of year	7	11.7
Yearly	39	65
Total	60	100

Source: own Questionnaire (2016)

The above table indicates 65% (39) of the respondents responded that the company monitored & evaluated inventory yearly/at end of budget year. 8.3% (5) of the respondents responded that the company monitored inventory weekly, 15% (9) of the respondents responded that the company monitored inventory monthly, 11.7% (7) of the respondents responded at quarter of the year. From this description it was clear that the company monitored and evaluated inventory at end of the budget year/yearly but it was not good for inventory management because of: time consumption/wastage of time for counting inventory, difficulty to find the error/problem, it took long time or 12 months but the work was continuously done all days so that it was hard for identifying who was responsible for the problems happening in inventory, challenges for improving inventory system, cost of organization on their budget.

Table 6: Inventory Codification Used by Company

Item 5. Does your organization use manual or computerized inventory codification system?		
Response	Respondents	
	Numbers	%
Manual/paper based	47	78.3
Computerized	13	21.7
Total	60	100

Source: own Questionnaire (2016)

As the above table demonstrates 78.3% (47) respondents responded that the company had used manual/paper based in inventory management, while 21.7% (13) of the respondents responded that the company had used computerized inventory management. This showed that the majority of the respondents said that the company had used manual/paper based inventory management practices, therefore the organization had not used

computerized inventory record, barcodes, inventory management software, automated replenishment and radiofrequency identification device influence production efficiency. The consequence of this one was: lead to incidences of overproduction, underproduction, excessive stock, stock out of spare parts for machine, production bottlenecks and delays in delivery of raw materials.

CONCLUSION

Based on the findings, the researcher had drawn the following conclusion:

The study implied that in the company there was delay of inventory and use of out dated storage facilities. The study showed that the company had not provided training for ware house and materials management employees. The company had used manual inventory management system/lack of technology due to which it was difficult to achieve stated performance plan. The company faced holding too much/too little inventory and weak management system in material management department/unit. According to the study the company faced lack of skilled manpower or a person who was educated about logistics and supply chain management and related department. The company had used ABC inventory analysis technique by ignoring other techniques, so the organization failed to provide services to the company on time and gave more attention to the most important materials and less attention to C items.

The company had used LIFO (Last in first out), by the use of this inventory evaluation practice gave negative impacts on the company such as: the amount of inventory reported in balance sheet was far removed from its current replacement costs, reduced earning in inflationary times, understatement of inventory, problem of LIFO liquidation, manipulation of income. The majority of respondents accepted that inventory evaluation system had not improved from time to time. The company monitored and evaluated at end of the budget year/yearly but it was not good for inventory management because of time consumption /wastage of time for counting inventory, difficulty to find the error/problem, it took long time or 12 months but the work was continuously done on all days so that it was hard for identifying who was responsible for the problems happening in inventory, challenges for improving inventory system, cost of organization on their budget. The majority of the respondents said that the company had used manual/paper based inventory management practice, therefore the organization had not

used computerized inventory record, barcodes, inventory management software automated replenishment and radiofrequency identification device influence service efficiency. The consequence of this one was: lead to incidences of service interruption, delay, and excessive stock, stock out of spare parts of machine, technique-learning bottlenecks and delays in delivery for concerned body. According to the study, concerned classification and classification of the inventory the organization had used alphabetic coding system, this showed that the company had not used numeric coding and mixed (both alphabet and numeric) which was difficult to large organization like Hawassa Textile Share Company to manage inventory effectively. The study showed that, in the company there was no proper formal report and who was responsible for any misuse regarding inventory management in the company. The study showed that there was no problem of emergency and small order that had a series impact in the company till now.

RECOMMENDATION

Based on the information concluded above, the following recommendations are forwarded: As most of the employees worked in warehouse and material management unit they were not from appropriate skill for this work, so the researcher recommended the company to hire a person who learnt logistics and supply chain management department. The company should use computerized or software that enhance inventory management system to improve delay of inventory. The company should give the training for its inventory management employees in order to develop their knowledge and awareness about inventory management. The company should monitor and evaluate inventory at the end of the week or month instead of at the end of budget year/yearly.

The company should use inventory control technique like ABC analysis, BOQ and EOQ and not only ABC analysis. The company had used only alphabetic codification system, but it is better if the company use both alphabetic and numeric codification and alphabetic codification, that is the most effective method of coding store materials and parts and also it indicates name of materials, size, dimension and weight. In the company there was no problem of emergency and small order that had a great impact till now. This is good situation and should be appreciated. It is better if the company improve inventory management practice from time to time by assessing the challenges faced by them and finding a

way of handling. The study clarified the model used to control inventory was lead time but the company did not use minimum model so they should have to use minimum model because it might be a advantage if it could not tie up the capital. The company should use both FIFO (First in first out) and LIFO (last in first out) model rather use only LIFO method.

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