

A STUDY ON INVENTORY MANAGEMENT WITH REFERENCE TO CARBORUNDUM UNIVERSAL LIMITED (CUMI) IN MURUGAPPA GROUP

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ABSTRACT

The study is on inventory management is a vital part in the manufacturing organization to be more competitive. Inventory are raw materials, work-in-process goods and completely finished goods that are consider to be the portion of business assets that are ready or will be ready for sale. Formulating a suitable inventory is one of the major concerns for an inventory. Therefore the purpose of this research is to identify the problem of inventory management faced by the manufacturing of an enterprise.

The data used for the study is secondary data collected through the journals, magazines, and websites. The data was evaluated with the help of financial tools i.e., economic order quantity, stock levels, inventory turnover ratio, ABC analysis. The analytical research design has been used for the study. The study on inventory management in cumi reveals that the company can take measures for maintenance of proper stores and spares so as to avoid the frequent breakdown of the machinery. To understand and measure economic order quantity for the selected raw material. The stock level is required for an efficient and effective control of materials and to avoid over and under-stocking of materials. The inventory turnover ratio has been increased by sales level and maintaining the required level of inventory.

An efficient inventory management ensures continuous production by maintaining inventory at a satisfactory level. It also minimizes capital investment and cost of inventory. Efficient and effective inventory management goes a long way in successful running and survival of business firm. The study is been concluded that the performance of carborundum universal limited is excellent in inventory management and their increasing in productivity and sales indicates the good sign for the company.

INTRODUCTION

MEANING OF INVENTORY:

A term inventory refers to the stock file of the products a firm is offering for sale and the components that make up the product. In other words, inventory is composed of assets that will be showed in future in the normal course of the business operations. Inventory as a current asset, differ from other current assets because only financial manager are not involved. Rather all the functional areas, finance, marketing, production and purchasing are involved.

DEFINITION OF INVENTORY MANAGEMENT:

Inventory Management is a business process which is responsible for managing, storing, moving, sorting, arranging, counting and maintaining the inventory i.e. goods, components, parts etc. Inventory management ensures that the right inventory is available as per the demand at low costs. Inventory Management makes sure that the core processes of a business keep running efficiently by optimizing the availability of inventory. Inventory management involves,

- Raw Materials
- Work in Process (semi-finished goods)
- Finished Goods
- Buffer Inventory
- Anticipation Inventory
- MRO goods Inventory

ESSENTIALS OF INVENTORY CONTROL:

- A firm needs inventory control system to effectively manage its inventory.
- Proper classification of materials with codes, material standardization and simplification.
- The operation of a system of internal check to ensure that all transactions involving material and equipment are checked by properly authorized and independent persons.
- The operation of a system of perpetual inventory so that it is possible to determine at any time, the amount and value of each kind of material in stock

OPERATING CYCLE OF INVENTORY MANAGEMENT:

Operating Cycle is the time duration to convert sales after the conversion of resources into invention, into sales there is difference between current assets and fixed assets. The operation cycle can be said to be the heart of the working capital.

COMPANY PROFILE



Carborundum Universal Ltd (CUMI) , a part of Murugappa Group, one of the largest and oldest conglomerates in India in 1954 CUMI is the leading manufacturer and developer of abrasives, ceramics, refractories, aluminum oxide grains, machine tools, polymers, adhesives and electro minerals in India. CUMI is the only abrasive manufacturer with the diversification.

VISION:

To be a globally admired ceramics company.

MISSION:

To be a partner of choice for world leaders in innovation and create value for our customers.

VALUES:

The Spirit of the Murugappa Group is inspired by a set of enduring values and beliefs called the 'Five Lights' – a guide to everyday excellence. It clearly defines a way of life and is demonstrated by these strong values we live by: Integrity, Passion, Quality, Respect and Responsibility.

NEED FOR THE STUDY

There is a need to manage the inventory has proposed me to choose the project at carborundum universal limited. It is needed to measure the economic order quantity of the selected raw material. It is also needed to carry out ABC analysis for the item of raw material. It is mandatory to know about the inventory management and lack of inventory in various departments which result in taking corrective measures competitive market.

OBJECTIVES OF THE STUDY

Primary objective:

- To study about the inventory management with reference to carborundum universal limited (CUMI) in murugappa group.

Secondary objectives:

- To understand and measure economic order quantity for the selected raw material.
- To carry out ABC analysis for the items of raw material and components inventory pertaining to stores department.
- To identify the areas where the company lack keeping its stores in production department.
- To find out the corrective measures taken up by the company to enhance its business with respect to inventory management.

SCOPE OF THE STUDY

The scope of study is to understand the material requirement of the company and managing the inventory level. The development of information system helps in improving the productivity, save time and cost etc., By conducting ABC analysis of the given items, the information system helps in decision making and better understanding about the material. An effective management of inventory helps in reducing cost and helps to provide better customer service through fast delivery and low shipping charges, hence meeting the customer expectation and success of the concern.

REVIEW OF LITERATURE

According to Abramowitz & Modigliani, Franco (2011), “Business Reasons for Holding Inventories and Their Macro Economic Implications”, *Problems of Capital Formation, Studies in Income and Wealth, Vol. 19, NBER, pp.495-511*: They highlighted the relationship between capacity utilization and inventory investment. Existing stock of inventories was expected to adjust to the desired levels. Thus the variable, existing stock of inventories, was essential to be negatively related with the desired stock. The result was that there is positive investment. High ratio of stocks to sales in the past suggests requirement of high levels of inventories in the past and promising high investment in inventories in the current period also.

According to Capkun, Vedran, Hameri, Ari-Pekka & Weiss, Lawrence A. (2009). *On the re-lationship between inventory and financial performance in manufacturing. International Journal of Operations & Production Management, vol.29, iss.8, pp.789–806*:

Statistically analysed the relationship between inventory performance and financial performance in manufacturing companies using the financial information of a large sample of manufacturing firms over a 26-year period. They inferred that a significant relationship existed between inventory performance along with the performance of its components and profitability. Raw material inventory performance was highly correlated to gross profit and operating profit. Work in progress inventory was highly correlated to gross profit measures while finished goods inventory performance was more correlated with operating profit measures.

According to Eneje, B. C., Nweze, A .U. & Udeh, A. (2012). Effect of Efficient Inventory Management on Profitability: Evidence from Selected Brewery Firms in Nigeria. International Journal of Current Research, vol.4, iss.11, pp.350-354 :

Investigated the effects of raw materials inventory management on the profitability of brewery firms in Nigeria using a cross sectional data from 1989 to 2008 which was gathered for the analysis from the annual reports of the sampled brewery firms. Measures of profitability were examined and related to proxies for raw materials inventory management by brewers. The Ordinary Least Squares (OLS) stated in the form of a multiple regression model was applied in the analysis. The study revealed that the local variable raw materials inventory management designed to capture the effect of efficient management of raw material inventory by a company on its profitability is significantly strong and positive and influences the profitability of the brewery firms in Nigeria. They concluded that efficient management of raw material inventory is a major factor to be contained with by Nigerian brewers in enhancing or boosting their profitability

According to Gaur, Jigyasu & Bhattacharya, Sourabh. (2011). The relationship of financial and inventory performance of manufacturing firms in Indian context. California Journal of Operations Management, vol. 9, iss.2, and pp.70–77:

Attempted to study the link-age between the performance of the components of inventory such as raw material, work in progress and finished goods and financial performance of Indian manufacturing firms. The study revealed that finished goods inventory as inversely associated with business performance while raw material inventory and work in progress did not have much effect on same. They emphasised that instead of focusing on total inventory, an attempt should be made to concentrate on individual components of inventory so as to adequately manage the same. They concluded that managers not paying heed to inventory performance may become weak in combating competitors.

According to Madishetti, Srinivas & Kibona, Deogratias. (2013). Impact of inventory management on the profitability of SMEs in Tanzania. International Journal of Re-search in Commerce & Management, vol.4, iss.2, pp.1–6:

Found that a well designed and executed inventory management contributes positively to a small or medium-sized enterprises (SMEs) profitability. They studied the association between inventory conversion period and profitability and the impact of inventory management on SMEs profitability. Regression analysis was adopted to determine the impact of inventory conversion period over gross operating profit. The results cleared out that significant negative linear relationship occurred between inventory conversion period and profitability.

According to Panigrahi, Ashok K. (2013). Relationship between inventory management and profitability: An empirical analysis of Indian cement companies. Asia Pacific Journal of Marketing & Management Review, vol.2,iss.7, pp.107–120 :

Undertook an in-depth study of inventory management practices followed by Indian cement companies and its affect on working capital efficiency. The study also investigated the relationship between profitability and inventory conversion days. The study, using a sample of the top five cement companies of India over a period of 10 years from 2001 to 2010, concluded that a considerable inverse linear relationship existed between inventory conversion period and profitability.

According to Singh, Sukhdev. (2006). Inventory control practices in IFFCO.The Management Accountant, vol.41,iss.7, pp.577–582:

Analysed the inventory control practices of single fertilizer company named IFFCO. He statistically examined the inventory system with consumption, sales and other variables along with growth of these variables and inventory patterns. He concluded that an increase in components of inventory lead to an increase in the proportion of inventory in current assets. A special focus was made on stores and spares in order to calculate excess purchases resulting in loss of profit.

RESEARCH METHODOLOGY

Analytical research design is adopted for the study. The data required for the study has been collected from secondary sources through website, journals. There are some of the financial tools are used for the study like Economic order quantity, Inventory turnover ratio, ABC analysis and stock levels.

LIMITATIONS OF THE STUDY

- Detailed study about all the material was not possible.
- The analysis is based on figure present in the internal record only.
- Authorities were reluctant to reveal the information.

DATA ANALYSIS AND INTERPRETATION

Table showing economic order quantity in carborundum universal limited company for the year 2013 to 2018:

Total units required - (A)

The Ordering cost or Buyingcost - (O)

Carrying cost or Storage cost - (C)

$$EOQ = \sqrt{2AO/C}$$

PARTIC ULARS	2013- 14	2014- 15	2015- 16	2016- 17	2017- 18
Total units required (A)	59693	45593	43320	49061	43099
Ordering cost per order (o)	2000	2200	2400	3000	3000
Carrying cost (c)	10%	10%	10%	10%	10%
Purchase price per unit	105.7	113.5	107	107	115.8
EOQ	4752.8	4204	4408.31	5245.0	4725.58

Interpretation:

The above table shows the economic order quantity of the firm. In 2017 EOQ is increased in 5245.07, In 2014 it was in 4752.85, In 2016 & 2015 it is decreased to 4408.31 & 4204. But in 2018 it is increased to 4725.58.

Inventory Turnover Ratio

Inventory Turnover ratio = cost of goods sold/Average value of inventory

YEAR	COST OF GOODS SOLD	AVERAGE VALUE OF INVENTORY	INVENTORY TURNOVER RATIO
2014	5454.95	412.505	13.22
2015	5568.98	447.485	12.45
2016	5296.29	504.36	10.50
2017	6585.38	559.215	11.78
2018	7589.38	729.755	10.40

Interpretation:

The above table shows the inventory turnover ratio of the firm. In 2014 turnover ratio is 13.22, In 2015-16 it has decreased to 12.45 & 10.50, In 2017 it is increased to 11.78. But in 2018 it is decreased to 10.40

SUGGESTIONS

- The proper communication has to be maintained between purchase and production department.
- The EOQ calculated is suggesting that the company can obtain its inventory requirements by placing order frequently to its suppliers rather than one time replenishment.
- Company can take measures for maintenance of proper stores and spares so as to avoid the frequent breakdown of the machinery.
- Periodical review of movement of items can be done so that any non-moving items can be identified and suitable action can be done.

CONCLUSION

Inventory is the physical asset of a company that can create problem if there is shortage, while in production and also if it's in excess even after production. Highly trained inventory management will help make inventory management a success. Inventory management is important for keeping costs down, while meeting regulation. Supply and demand is a decline balance, vendors or suppliers are the main asset of the company, a better suppliers relationship speaks out the company goodwill. The research has come out with some valuable suggestion, which should be adapted in the "carborundum universal limited". When the suggestion are taken into consideration.

Inventory is a vital part of current assets mainly in manufacturing concerns. Huge funds are committed to inventories as to ensure smooth flow of production to meet consumer demand. The company has to periodically review the inventory to avoid production loss. And the proper communication has to be maintained between between stores and production department. This study reveals that the stock levels of the company has been

maintained properly. On the whole, it can be concluded that the inventory level of the company has been maintained effectively.

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