International Journal of Academic Research and Development
www.academicjournal.in
ISSN: 2455-4197
Received: 27-07-2021, Accepted: 11-08-2021, Published: 27-08-2021
Volume 6, Issue 4, 2021, Page No. 61-64

A study of inventory management of cadburys

Sri Gayathri[1], Aishvarya M[2], Kousalya G[2], Amrithaa A S[2]
[1] Assistant Professor, Department of B.Com PA, PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu, India
[2] Students, Department of B.Com PA, PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu, India

Abstract
The project report is the result of "A study on inventory management of Cadburys" The study is based on the secondary data provided by the company. The desired information has been derived from the inventory section. The period which is taken for the study is five years. The objective of the company is to find out how the company managing their stocks in an efficient manner. The range of tools used in this project is ABC Analysis, ratio analysis, linear regression and correlation. From the project the result concluded that an efficient management of inventory helps the company to increase profit position.

Keywords: inventory management, cadburys

Introduction
The term inventory refers to the products or materials employed by a firm for the aim of production and sales. It also includes the things, which are used as supportive materials to facilitate production. These are the three basic types of inventory: Raw material, Work-in-progress, finished goods. Raw material is the items purchased by firm for the use in production of finished products. Work-in-progress includes of all items which are currently in the process of production. These are actually partly manufactured products. Finished goods consist of those items, which have been already manufactured but not yet sold.

Raw Materials
Raw materials inventories are those units which have been purchased, maintained and stored for future consumption. Raw materials are those inputs which are converted into finished product**.**

Work in Progress
These inventories are semi manufactured products. They represent products that need more work before they become finished products for sales.

Packaging Material
Packaging material includes those items which are used for packaging of perfumery product i.e., cap of the bottle, pump, collier, liver, box etc.

Finished Goods
Finished goods inventories are those thoroughly manufactured products which are ready for sale. Stock of raw materials and add progress facilitate production. While stock of finished goods is needed for smooth marketing operation. Thus, inventory's function will serve a link between the production and consumption of products.
The levels of four types of inventories for a firm depend on the nature of its business. A manufacturing firm will have substantially high levels of all three types of inventories, while a retail or wholesale firm will have a very high and no raw material and work in progress inventories. Within manufacturing firms, there will be differences. Large heavy engineering companies manufactures long production cycle products; therefore, they carry large inventories. On the other hand, inventories of a consumer product company will not be large, because of short production cycle and fast turn over.

Supplies
The short inventory could also be defined because the material, which are either saleable within the market or usable directly or indirectly within the manufacturing process. It also includes the things which are ready for creating finished goods in another process or by comparing them either by the priority itself and/or by outside parties. In other words, the term inventory means the fabric having anybody of the subsequent characteristics.
It may be

- Saleable in the market,
- Directly saleable in the manufacturing process of the business,
- Usable directly in the manufacturing process of the undertaking, and
- Ready to send to the outside parties for making usable and saleable productions out of it.

Objective of the Study

- To study and analyse the inventory management system prevailing at Cadbury**.**
- To analyse the supply of raw material for the purpose of production.
- To identify the stock level for various components at Cadbury.
- To predict inventory requirement for various component at Cadbury
- To study the relationship between inventories and current liabilities, inventories and fixed assets of the company.
- To analyse the investment made in inventories and its effective utilization of resource.

Period of the Study
The study period of Cadburys consists of 5 years from 2015-16 to 2019-20.

Research Methodology
The present study is based on secondary data collected from the annual reports of Cadburys from the period 2015-16 to 2019-20. This study is based on analytical research. The information thus obtained will be analysed, interpreted and tabulated and various statistical tools such as bar diagrams, graphs will be applied, so that the calculated information is in accordance with the predefined standard of accuracy.

Tools Used for Analysis
- ABC Analysis
- Ratio Analysis
- Linear Regression Analysis
- Correlation

Analysis and Interpretation
ABC Analysis
ABC analysis divides an inventory into three categories- "A items" with very tight control and accurate records, "B items" with less tightly controlled and good records, and "C items" with the simplest controls possible and minimal records. The ABC analysis provides a mechanism for identifying items that will have a significant impact on overall inventory cost while also providing a mechanism for identifying different categories of stock that will require different management and controls.
The ABC analysis suggests that inventories of an organization are not of equal value. Thus, the inventory is grouped into three categories (A, B, and C) in order of their estimated importance. 'A' items are very important for an organization. Because of the high value of these 'A' items, frequent value analysis is required. In addition to that, an organization needs to choose an appropriate order pattern (e.g., 'Just- in- time') to avoid excess capacity. 'B' items are important, but of course less important than 'A' items and more important than 'C' items. Therefore 'B' items are interring group items. 'C' items are marginally important.

Steps to determine ABC Analysis
Step 1: Compute the annual usage value for every item in the sample by multiplying the annual requirements by the cost per unit.
Step 2: Arrange the items in descending order of the usage value calculated above.
Step 3: Make a cumulative total of the number of items and the usage value.
Step 4: Convert the cumulative total of number of items and usage values into a percentage of their grand totals.

Table 1 (2015)

Classification	No of Items	Percentage of the Finished Goods
A	4578	46.63
B	3289	33.28
C	1986	20.10
Consumption value	27	0.27
Total	9880	100

Interpretation
The above table reveals that in year 2015 ABC analysis for finished goods shows that C class items are less compared to A&B. Whereas A is 46.63% which should have tight inventory control, more secured areas and better sales forecasts. Avoiding stock-out on A-item is a priority. Reordering C items made less frequently. And it leads to stock out situation after each purchase which can acceptable situation. Whereas class B items are in between Class A & C monitor level.

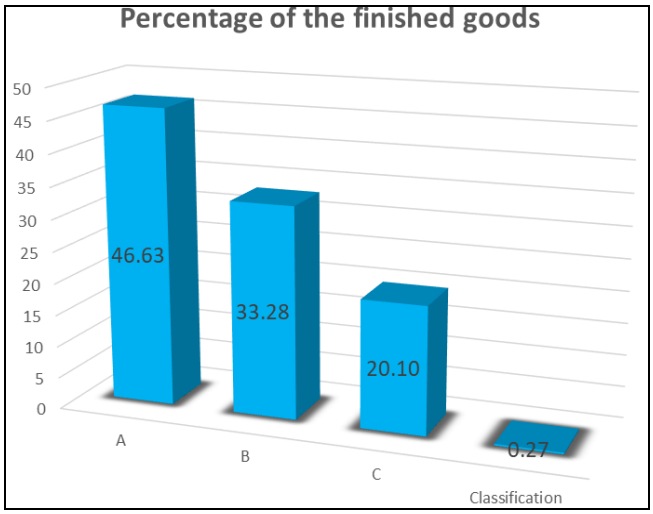

Fig 1

Table 2 (2019)

Classification	No of Items	Percentage of the Finished Goods
A	14820	69.66
B	4003	18.82
C	2394	11.28
Consumption Value	55	0.25
Total	21272	100

Interpretation
The above table reveals that in year 2019 ABC analysis for finished goods shows that C class items are less compared to A&B. Whereas A is 69.66% which should have tight inventory control, more secured areas and better sales forecasts. Avoiding stock-out on A-item is a priority. Reordering C items made less frequently which has the value of 11.28%. And it leads to stock out situation after each purchase which can acceptable situation. Whereas class B items are in between Class A & C monitor level. And it has 18.82% finished goods in the consumption.

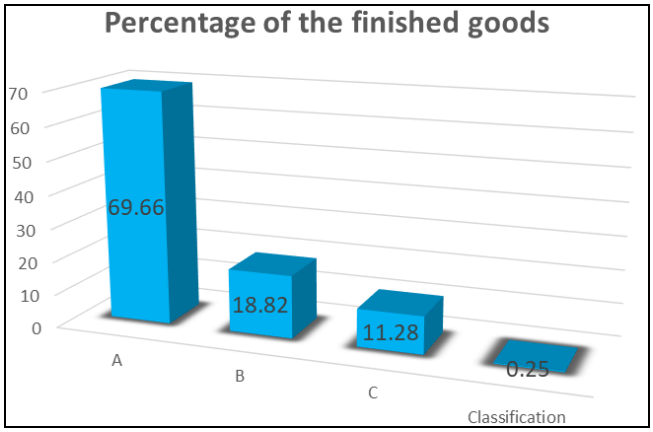

Fig 2

Ratio Analysis

Ratio analysis a tool used by an individual to conduct a quantitative analysis of information in company's financial statement. Ratios are calculated from current year number and or then compared to previous year with the other companies or the industry or even the economy to judge the performance of the company.

- Inventory turnover ratio,
- Raw Material Consumed Ratio
- Working capital inventory turnover ratio,
- Current Asset inventory turnover ratio.

Inventory Ratio

Table 3

Year	Net Sales	Average Inventory	Inventory Turnover Ratio
2016	7880.56	2683.34	5.87
2017	8581.55	5636.65	1.52
2018	9282.04	6058.735	1.53
2019	10973.46	5963.86	1.84
2020	10820.57	5649.43	1.91

Interpretation

The table shows that in the inventory turnover ratio for the last five years. Comparing to the other years inventory turnover is more in 2016 and having the value 5.87. Generally, a high inventory ratio means that the company is efficiently managing and the product is sold well. The faster the inventory sells the fewer fund the company has tied up.

Raw Material Consumed Ratio

Table 4

Year	Raw Material Consumed	Sales	Raw Material Consumed Ratio
2016	1062.59	7880.56	58.85
2017	15242.76	8581.55	65.98
2018	21239.18	9282.04	66.28
2019	22885.32	10973.46	64.48
2020	26705.82	10820.57	58.95

Interpretation

The table shows that in the raw material consumed ratio for the last five years. Comparing to the other years raw material consumed ratio is more in 2018 and having the value 66.28.Generally, a high ratio means that the company is efficiently managing and the product is sold well. The faster the inventory sells the fewer fund the company has tied up.

Working Capital Inventory Ratio

Table 5

Year	Net Sales	Working Capital	Working Capital Turnover Ratio
2016	7880.56	987.79	7.97
2017	8581.55	1710.77	5.16
2018	9282.04	3943.72	3.35
2019	10973.46	5272.65	2.81
2020	10820.57	5927.45	1.82

Interpretation

The table shows that in the working capital ratio for the last five years. Comparing to the other years raw material consumed ratio is more in 2016 and having the value 7.97. The working capital turnover ratio measures how well a company is utilizing its working capital to support a given level of sales. A high turnover ratio indicates that management is being extremely efficient in using a firm's short-term assets and liabilities to support sales. Conversely, a low ratio indicates that a business investing in too many accounts receivable and inventory assets to support its sales, which could eventually lead to an excessive number of bad debts and obsolete inventory. This shows that in the year 2016 that management is being extremely efficient in using a firm's short-term assets and liabilities to support sales.

Linear Regression Analysis

Linear regression is a statistical technique that is used to learn more about the relationship between an independent (predictor) variable and a dependent (criterion) variable. When you have more than one independent variable in your analysis, this is referred to as multiple linear regressions. Linear regression means dependence and involves in estimating the value of dependent variable Y, from the independent variable X.

Table 6

Year (X)	Inventory (Y)	x=X-2017	x^2	XY
2015-2016	2683.34	-2	4	-5366.68
2016-2017	5636.65	-1	1	-5636.65
2017-2018	6058.73	0	0	0
2018-2019	5963.86	1	1	5963.86
2019-2020	5649.43	2	4	11298.86
Total	25992.01	0	10	6259.39

The forecast of inventory for the year 2020-2021 is computed as follow

$$y = a+bx$$

$$y = 5198.402 + 625.93(3) = 7076.19$$

Interpretation

A multiple regression equation is used to estimate the relationship between a dependent variable(Y) and two or more independent variables(X). An estimated regression model may be used to produce forecast of the future value of the dependent variable. The Analysis of Inventory indicates an increasing trend and therefore indicates a good profitable position in future. The inventory for the year 2020 is 11298.86 which shows the value is increased when compared to the previous year thus the company holds good profit in further year.

Correlation

Correlation addresses the relationship between two different factors (variables). The statistic is called correlation coefficient. A correlation coefficient can be calculated when there are two (or more) sets of scores for same individuals or matched group. A correlation coefficient describes direction (positive or negative) and degree (strength) of relationship between two variables. The higher the correlation coefficient, the stronger the relationship. as product movement correlation between two or more variable. Whereas negative value of 'r' indicates negative correlation changes in the two-variable taking place in the opposite direction. A zero value of 'r' indicates that the is

no association between two variables. A positive value of 'r' indicates two variable taking place in the same direction. The value of 'r' nearer to +1 to -1 indicates high degree of correlation between two variables.

Correlation between Inventories and Current Liabilities

Table 7

Year	Inventory (X)	Current Liabilities (Y)	XY	x^2	y^2
2015-2016	2683.34	7641.13	20503749.77	7200313.55	58386867.67
2016-2017	5636.65	12674.93	71444144.18	31771823.22	160653850.50
2017-2018	6058.735	11307.49	68509028.88	36708209.21	127859330.10
2018-2019	5963.86	9993.39	59599178.88	35567626.09	99867843.69
2019-2020	5649.43	12249.81	318397184.01	675584583.84	150057845.03
Total	46334.59	53866.75	538453285.72	786832555.91	596825736.99

$$r = \frac{\sum XY}{\sqrt{\sum (X)\ ^2. \sum (Y)^2}}$$

r = 0.70

Interpretation

The above correlation between total inventories and current liabilities is 0.70. This shows there is linear relationship between inventories and current liabilities. Positive correlation is good for the company.

Conclusion

A better inventory management will surely be helpful in solving the problems the company is facing in respect to inventory and will pave way for reducing the huge investment or blocking of money in inventory. Also, there should be the tight control exercised on stock levels based on ABC analysis & maintain high percentage in fast moving items in inventories. Since the inventory turnover ratio shows the increased trend, there will be more demand for the products in the future periods. If they could properly follow the norms and techniques of inventory management, they can enhance the profit with minimum cost. At the same time in order to avoid excess investment in the inventory according to the requirement only. Thus, it may be concluded that an efficient management of inventory helps the company to increase the profit position

Reference

1. Pradeep Singh. "Inventory and Working Capital Management- An Empirical Analysis", The ICFAI Journal of Accounting and Research,2008:7(2):53.
2. John A Buzzcut, Rachel Q Zhang. "inventory management with Asset- Based Financing",2004:50(9):1274-12921.
3. Alade Julius A, Sharma Dinesh K, Sharma Hari P. "Role of supply chain management decisions in effective inventory control", Journal of Academy of Business and Economics, 2004.
4. Clifford Defee C, Brent Williams, Wesley S Randall, Rodney Thomas. "An inventory of theory in logistics and SCM research", International Journal of Logistics Management,2010:21(3):404-489.
5. Grablowsky BJ. "Financial Management of Inventory", International Journal of Production Economics,2005:93-94:239-252.