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"An Analytical Study On Inventory Management Of Selected Sugar Companies In India"

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Abstract: This paper analyzes the inventory management of selected sugar companies. Five samples have been selected for the study period 2019-20 to 2023-24. Non probability technique has been used for sample selection. Inventory turnover ratio was used as accounting tool while t test has been sued for statistical analysis. Finding of the study was that at 5% level of significance there was a significant difference between inventory turnover ratios of selected sugar companies in India.

INTRODUCTION:

Over the world, manufacturing organizations have faced challenges in their daily operations; this has been particularly noticeable in the areas where these companies deal with material goods or inventories on a frequent basis. Several factors contribute to the declining performance of manufacturing organizations, including improper or insufficient inventory management by businesses. The performance of many manufacturing organizations has been challenged by a multitude of issues that have been experienced. Keeping track of stock, inadequate service levels, low product turnover, excess inventory, and trouble identifying demand are just a few of the difficulties these businesses face. (Sonko, 2020)

INVENTORY MANAGEMENT

The term "inventory" describes all of the products, materials, and things that a company keeps on hand with the intention of selling them for a profit. In a manufacturing company, inventory includes semi-finished items stored in a warehouse or on the factory floor, as well as the produced final product that is prepared for sale. Most inventories in the service sector is intangible as there isn't a physical stock market. The processes required prior to closing a deal are therefore primarily included in the inventory of the service sector. (Zoho)

Mainly inventory includes three components Raw material, work in progress and finished goods. Management of inventory means management of raw material, work in progress and finished goods. Around 60% portion of current assets has been constituted by the inventories so it is directly related with the working capital management and also it affects the performance of the firm because major proposition of investment is invested in it. That is why proper management of inventory is very essential for the smooth functioning of any organization.

LITERATURE REVIEW

(Hamza Kasim, 2015) The aim of this research was to evaluate inventory control procedures and their impact on the financial outcomes of small and medium-sized enterprises (SMEs) in Ghana's northern area. One thousand small and medium-sized business owners and managers were the target demographic. Utilizing the stratified random sampling technique, a sample of 300 SMEs 164 trading, 26 manufacturing, 10 hairstyling, 62dressmaking, and 38 carpentry was obtained. Both descriptive and inferential statistics were used in the analysis of the data. A one percent significance level analysis of the study's data showed a favorable relationship between SME financial performance and inventory management's (EIM) efficiency. The study found that stock management strategies affect the financial performance.

(Mostafijiur Rahaman, 2022) This article seeks to illustrate how a retailer's decision to maximize profit is influenced by memory, selling price, and exhibited stock taken together. Demand is viewed as a linear function of selling price and visible inventory in the suggested mathematical model. The most significant outcome of the numerical result is that the work first demonstrates how memory adversely affects the retailer's objective of maximizing profit. Furthermore, increasing the selling price will result in a negative correlation between demand and the selling price, since it maximizes the profit through the selling price. Ultimately, the influence of the apparent stock is marginally reduced when compared to the selling price. In the end, the theoretical and numerical results suggest that there can be neither scarcity nor memory constraints, resulting in the maximum average profit. The suggested method can be applied to tiny, newly established retail settings where a showroom is not a primary priority but a warehouse is needed for ongoing supplies.

(Henry Inegbedion, 2019) The study looked at organizational effectiveness and inventory management. The inventory system of an organization was subjected to the traditional inventory management approaches. Relevant information on six different types of doors panel, flush, sliding, folding, manual and electronic garage doors was gathered with the help of a door sales company in Ilorin, Nigeria, the average values of the data collected from 2011 to 2017 were used to calculate the EOQ, inventory cycle time, and reorder level for each of the six doors. The findings indicate that the company can reduce the overall cost of inventory by consciously implementing an inventory management policy that involves ordering 55 panel doors, 41 sliding glass doors, 18 folding doors, 18 manual garage doors, and 8 electronic garage doors, respectively, every 17, 14, 17, 30, 35, and 34-day cycles. Alternatively, the above orders can be placed whenever the inventory levels of panel doors, flush doors, sliding glass doors, folding doors, manual garage doors, and electronic garage doors drop to 32, 24, 24, 5, 3, and 2 respectively.

(Kilonoz Jennifer Mbula, 2016) This study set out to examine the impact of inventory management on the financial success of Kenyan companies financed by government venture capital, as well as the moderating influence of the political environment on that performance. Due to the small number of firms, a census approach was used in the study. The literature on inventory management, both theoretical and empirical, was studied for the study. A thorough conceptual framework of the argument of the relationship between inventory management and business financial performance was developed from the review of related literature. Data analysis was conducted using the statistical instrument, Statistical Package for Social Sciences (SPSS) version 20.0. Testing for normality was done on the dependent variable. Tests for homoscedasticity and multicollinearity were run on the independent and dependent variables, respectively. Descriptive and inferential statistics were used to examine and characterize quantitative data. Inferential statistical analysis was performed for each variable after scatter plots were utilized to determine whether linear correlations existed.

OBJECTIVES OF THE STUDY

- To analyze the inventory management of a selected sugar companies of india
- To examine the performance of an inventory
- To provide suggestions to improve the inventory management system

TIME PERIOD OF THE STUDY

Time period of the study is five years from 2018-19 to 2022-23.

SAMPLE OF THE STUDY

Out of 35 sugar companies listed in Bombay stock exchange 5 companies have been selected as a sample of the study on the basis of net profit on 31st January 2024.

1. Triveni Engineering Ltd
2. Sakthi Sugars
3. Balrampur Chini mills
4. Dalmia Sugar
5. EID Parry

DATA COLLECTION

Secondary data is used in the study. Data has been collected from the annual reports and website of the particular companies selected as a sample.

TOOLS AND TECHNIQUES USED FOR DATA ANYLYSIS

As an accounting tool ratio analysis has been used in the study. For the statistical analysis ANOVA has been used.

HYPOTHESIS

H0 There is no difference in inventory turnover ratio of selected sugar companies

H1 There is a difference in inventory turnover ratio of selected sugar companies

DATA ANALYSIS

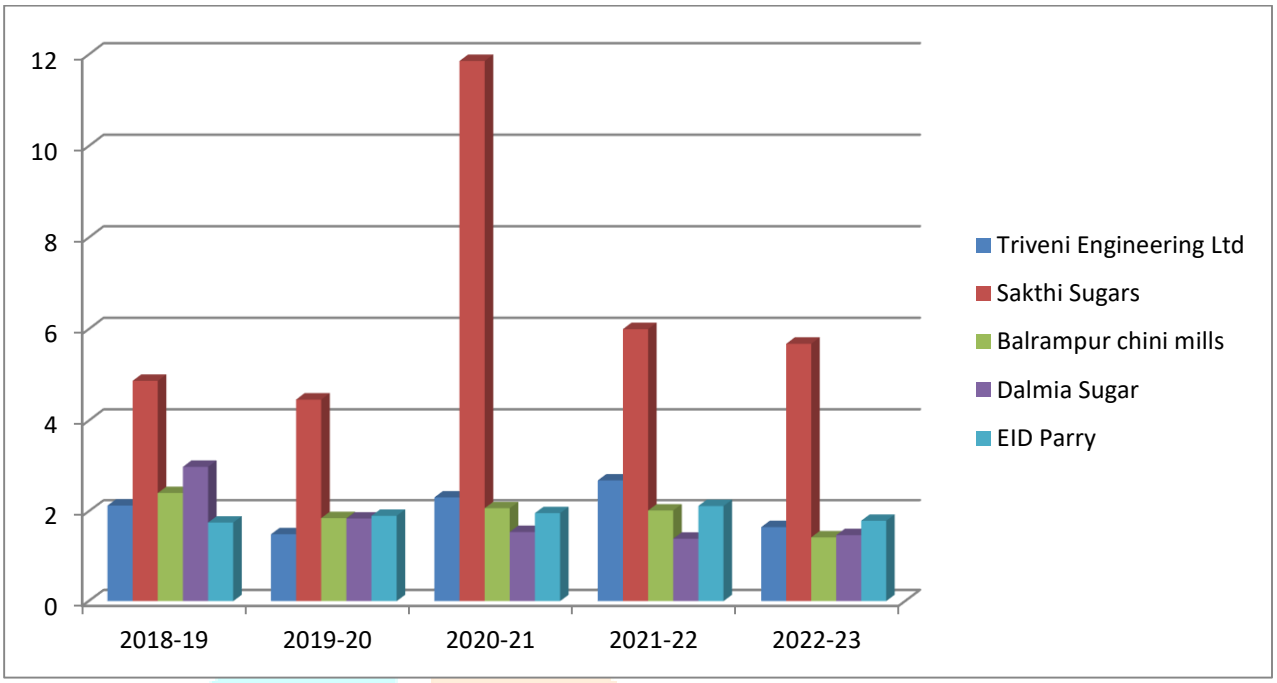
Inventory Ratio:

The inventory turnover ratio is the frequency with which a business sells and restocks its stock over a given period of time. The number of days needed to sell the current inventory can also be determined using the formula. By dividing the cost of goods sold by the average inventory for the same time period, a mathematical calculation yields the turnover ratio. Since a high ratio typically indicates strong sales, it is preferable to a high one.

Year	Triveni Engineering Ltd	Sakthi Sugars	Balrampur chini mills	Dalmia Sugar	EID Parry
2018-19	2.13	4.87	2.41	2.99	1.75
2019-20	1.49	4.46	1.85	1.84	1.90
2020-21	2.31	11.86	2.07	1.54	1.96
2021-22	2.69	6.00	2.02	1.39	2.12
2022-23	1.65	5.68	1.42	1.47	1.79
Maximum	2.69	11.86	2.41	2.99	2.12
Minimum	1.49	4.46	1.42	1.39	1.75
Average	8.95	28.32	8.63	8.05	8.80

(www.moneycontrol.com)

Graphical Presentation:



Analysis:

From the above table and graphical presentation it is shown that the Sakthi sugars has highest inventory turnover rate. Individually each company shows the mix fluctuating trend in inventory turnover rate. Starting with Triveni engineering ltd minimum rate of inventory turnover is 1.49 while highest is 2.69 times. In 20-21 sakhti sugars has the highest rate with 11.68 times. Average inventory turnover rate of Balram chini mills is 8.63 times during this study period. While Dalmia Sugar has mixed trend of inventory turnover minimum is 1.39 while maximum is 2.99 times during this study period. The last one EID Parry has the highest turnover rate in 2021-22 with 2012 times and average rate of this five year study is 8.80.

APPLICATION OF ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	86.03098	4	21.50774	10.81873	7.8E-05	**2.866081**
Within Groups	39.7602	20	1.98801			
Total	125.7912	24				

RESULT OF THE STUDY

From the above table it is clear that calculated value of inventory turnover ratio is **10.81**(F value) and the table value is 2.86(F critic value) at 5% level of significance and 24 degree of freedom. It means that calculated value is higher than the table value so null hypothesis is rejected. It means that there is a difference in inventory turnover ratio of selected sugar companies.

FINDINGS OF THE SYUDY

- Comparing to these five sample Sakthi Sugars is performing excellent in terms of inventory by having highest average inventory turnover ratio with 28.32 among five selected companies.
- Dalmia sugar scores least in ranking among five with the average of 8.05 inventories during this study period.
- Overall performance of selected companies is fair interns of inventory turnover ratio.

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