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A STUDY ON THE IMPACT OF INVENTORY MANAGEMENT ON PROFITABILITY

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ABSTRACT

This study shows the Inventory management stands as a vital aspect of operational efficiency and financial health across industries. This research delves into the intricate relationship between inventory management practices and business profitability. The analysis encompasses theoretical frameworks, such as just-in-time (JIT) inventory management, economic order quantity (EOQ), ABC analysis, which are instrumental in minimizing costs and optimizing inventory levels. The study scrutinizes the impact of inventory turnover rates on profitability metrics like return on investment (ROI) and gross margin. This study examines the challenges confronting businesses in managing inventories effectively, including demand volatility, stockouts, and supply chain disruptions The methodology explored is that descriptive statistics with a sample size of 110.Primary Data and secondary data are used to analyze the tools like percentage analysis Correlation and chi square test. The majority of the findings are taken from primary data. The research illuminates opportunities for enhancing inventory management efficiency. The outcomes of this study shows the actionable recommendations for businesses, encompassing strategies for lean inventory practices, technology adoption, supplier relationship optimization, and performance metrics tracking. This project concludes it is essential for businesses to prioritize investments in inventory managements practices and embrace technological advancements to drive sustainable growth and success.

KEY WORDS: Inventory management, operational efficiency, Inventory turnover rates, Profitability metrics

INTRODUCTION:

Inventory management is a critical component of efficient operations and financial success for businesses across industries. Effective management of inventory ensures that companies have the right products available at the right time while minimizing holding costs and maximizing customer satisfaction. In today's dynamic and competitive business environment, where margins are often tight and customer expectations are high, optimizing inventory management practices is imperative for sustaining profitability and competitiveness.

OBJECTIVES:

- To study the relationship between inventory management and profitability.
- To identify the factors that affect the profitability.
- To identify the difficulties encountered by the organization during inventory management.
- To Improve the inventory management and its maintenance.

REVIEW OF LITERATURE:

Wang and Liu (2016) reviewed literature on inventory management practices and financial performance. Their study synthesized findings from empirical studies to provide a comprehensive understanding of the relationship between inventory management and profitability.

Yang and Chang (2016) conducted a meta-analytic review examining the impact of inventory management on firm profitability. By analyzing a large body of research, they provided quantitative insights into the overall effect size of inventory management practices on profitability.

Huang and Lin (2016) investigated the relationship between inventory turnover and profitability, focusing on evidence from emerging economies. Their study provided insights into how economic context may influence the dynamics between inventory management and profitability.

RESEARCH METHODOLOGY:

Data Collection:

Primary Data - Primary data is collected through a questionnaire which is face-to-face communication to 110 respondents.

Secondary Data - Secondary data is already collected data that is available on company websites, journals, the internet, annual reports, and certain published papers.

Research Design: Descriptive. A descriptive research design is a sort of research methodology that seeks to describe or document the traits, actions, attitudes, opinions, or perceptions of a group or population being investigated.

Sampling Technique: Convenient Sampling Method.

Sample size: 110

Period of Study: 3 Months

Tools Used For Analysis:

- Percentage analysis.
- Karl Pearson Correlation Coefficient
- Chi square test

PERCENTAGE ANALYSIS:

TABLE SHOWS THE EVALUATION OF INVENTORY MANAGEMENT

EVALUATION OF INVENTORY MANAGEMENT	NO OF RESPONDENTS	PERCENTAGE
Increase accuracy of inventory records	**30**	**27**
Reduce in carrying costs	**45**	**41**
Decrease in stock outs or shortages	**25**	**23**
Improvement in operational efficiency	**10**	**9**
TOTAL	**110**	**100**

INTERPRETATION

From the above table shows the evaluation of inventory management. 27% of the respondents had the Increase accuracy of inventory records, 41% of the respondents had reduce in carrying costs ,23% of the respondents had decrease in stock outs or shortages, 9% of the respondents had improvement in operational efficiency.

CHART SHOWS THE EVALUATION OF INVENTORY MANAGEMENT

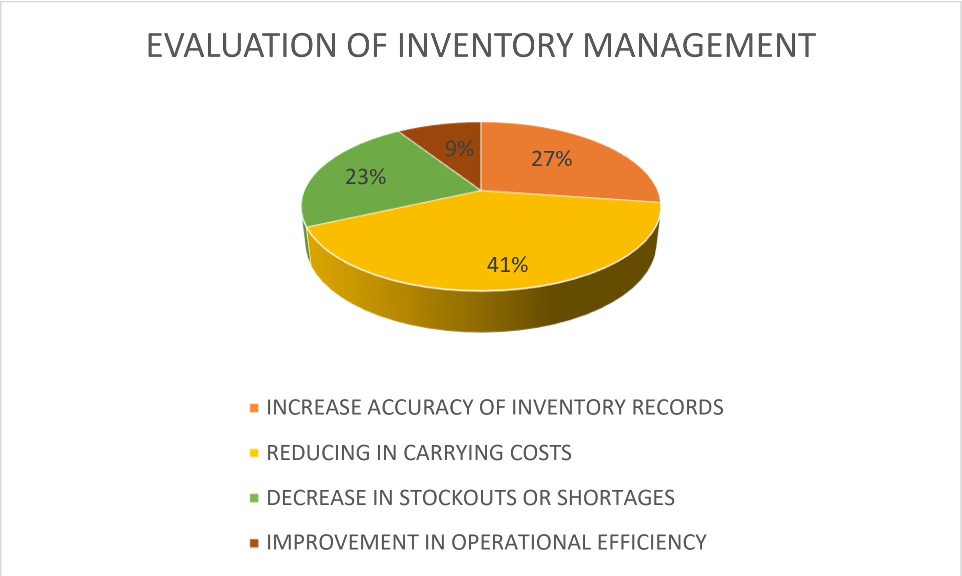


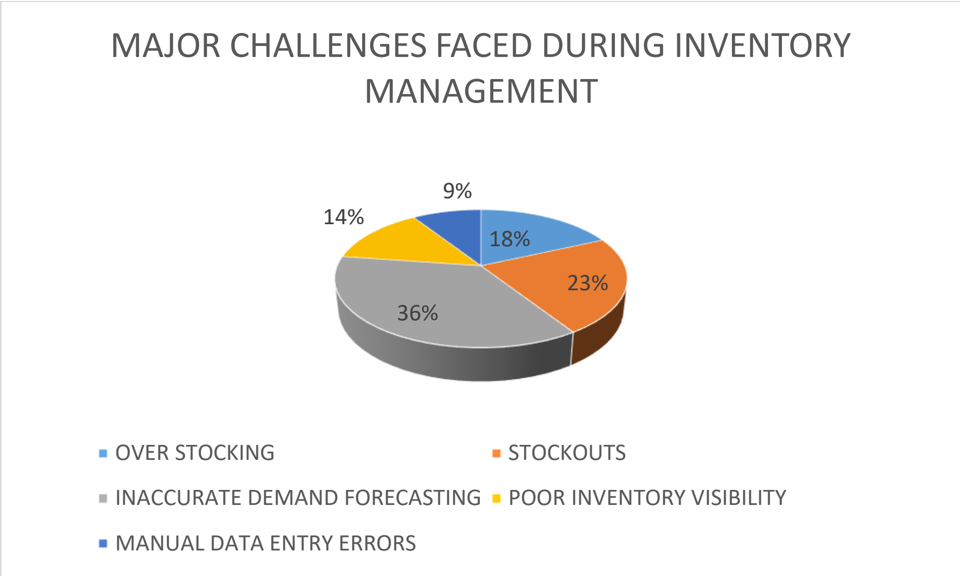
TABLE SHOWS THE MAJOR CHALLENGES FACED DURING INVENTORY MANAGEMENT

CHALLENGES FACED DURING INVENTORY MANAGEMENT	NO OF RESPONDENTS	PERCENTAGE
Overstocking	40	36
Stock outs	25	23
Inaccurate demand forecasting	20	18
Poor inventory visibility	15	14
Manual data entry errors	10	9
TOTAL	110	100

INTERPRETATION

From the above table shows the major challenges faced during inventory management. 36% of the respondents faced Overstocking, 23% of the respondents faced stock outs, 18% of the respondents faced inaccurate demand forecasting,14% of the respondents faced poor inventory visibility,9% of the respondents faced manual data entry errors.

CHART SHOWS THE MAJOR CHALLENGES FACED DURING INVENTORY MANAGEMENT



HYPOTHESIS:

KARL PEARSON’S CORRELATION COEFFICIENT :

H0: There is no significant correlation between age and the perceived impact of effective inventory management on profitability.

H1: There is a significant correlation between age and the perceived impact of effective management on profitability

		Age	Time spent on research
Age	**Pearson Correlation**	**1**	**-.256****
	Sig. (2-tailed)		**.007**
	N	**110**	**110**
Time spent on research	**Pearson Correlation**	**-.256****	**1**
	Sig. (2-tailed)	**.007**	
	N	**110**	**110**

INTERPRETATION

The result in the above table shows that there is a significant relationship between age of the respondents and the perceived impact of effective management on profitability p=-0.256 which is less than 0.05. The findings support the hypothesis and so there is a significant relationship between Age of the respondents and the perceived impact of effective management on profitability

CHI-SQUARE

H0: There is no significant association between education level and the primary inventory control methods used.

H1:There is an significant association between education level and the primary inventory control methods used

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.362[a]	4	.670
Likelihood Ratio	3.488	4	.480
Linear-by-Linear Association	.161	1	.688
N of Valid Cases	300		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .38.

INTERPRETATION

The result in the above table shows that there is no significant association between education level of the respondents and the primary inventory control methods used. p= 0.670 which is more than 0.05. This finding doesn’t support the hypothesis and so there is no significant association between the Education level of the respondents and the primary inventory control methods used

FINDINGS:

- Majority (27%) of the respondents were 30-40 years of age.
- Majority (55%) of the respondents were Male.
- Majority (55%) of the respondents were Master Degree.
- Majority (55%) of the respondents were Employed Full Time.
- Majority (41%) of the respondents were Annually review and update inventory management policies and procedures
- Majority (36%) of the respondents were use Just in time inventory control methods
- Majority (45%) of the respondents had Positive impact in inventory management
- Majority (32%) of the respondents were faced Minimizing stockouts
- Majority (42%) of the respondents had the biggest challenge is Rising operating costs.
- Majority (36%) of the respondents were measure profitability on Return on investment.
- Majority (36%) of the respondents were faced Inaccurate demand forecasting
- Majority (31%) of the respondents had Significant impact on company profitability.
- Majority (41%) of the respondents foreseen in Complexity of integrating new technologies.
- Majority (41%) of the respondents said that Very important in investing inventory management.
- Majority (41%) of the respondents were evaluated the reduction in carrying costs.
- Majority (32%) of the respondents affect by Increased order processing time.
- Majority (41%) of the respondents Leads to overestimation of demand.

CONCLUSION:

In conclusion, effective inventory management plays a vital role in driving profitability for businesses across various industries. By implementing advanced inventory management systems, optimizing supply chain relationships, and adopting a culture of continuous improvement, organizations can minimize carrying costs, reduce stock outs, and improve operational efficiency. The study on the impact of inventory management on profitability yields crucial insights into the intricate relationship between inventory practices and financial performance within organizations. The findings underscore the significance of strategic approaches, such as regular policy reviews and just-in-time inventory control, in optimizing resource allocation and minimizing costs. These strategies not only enhance profitability but also contribute to customer satisfaction and competitive advantage in the marketplace. This project concludes it is essential for businesses to prioritize investments in inventory management practices and embrace technological advancements to drive sustainable growth and success

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