



FACTORS INFLUENCING THE EFFECTIVENESS OF INVENTORY MANAGEMENT IN MANUFACTURING SMES

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ABSTRACT: Inventory management is important to industrial enterprises' competitiveness. Prior research has discovered a plethora of elements that influence company inventory management. However, few studies have been conducted on manufacturing SMEs in Hyderabad. This study's major purpose is to uncover inventory management challenges for small and medium-sized manufacturing enterprises. It also examines the efficiency of inventory management. 80 workers were chosen at random from a small to medium-sized manufacturing company in Hyderabad for this study. To participate, these individuals were handed questionnaires. According to the research, inventory management causes underproduction, overproduction, stockouts, raw material delivery delays, and record-keeping issues in industrial enterprises. Planning, people knowledge and abilities, paperwork and store records, and planning all have an impact on inventory management in small and medium-sized manufacturing enterprises. Finance, on the other hand, has little influence on inventory management in these businesses. This quantitative research is pertinent to the Hyderabad-based manufacturing company since it provides important recommendations to hiring managers at small and medium-sized businesses in the city.

Keywords: Inventory Management, manufacturing small medium enterprises, Stock

1. INTRODUCTION

Inventory management is a big concern for Hyderabad's SMEs. These behaviors have a significant impact on firm performance. According to Ngubane et al. (year), a lack of inventory management skills has inhibited manufacturing SMEs from becoming effective competitors. This problem has numerous reasons. Organizations may experience difficulties with record-keeping or paperwork. According to Boyer, manual documentation and record publication take so lengthy that statistics can be lost or recorded incorrectly. Inconsistencies in the records will jeopardize the accuracy of the inventory. According to Raman, DeHoratius, and Ton (year), an incorrect inventory record reduces an organization's profitability by 10%. Inventory shrinkage, transaction errors, and incorrect inventory placement all contribute to inaccurate corporate inventory data. Shrinkage occurs when physical inventory is stolen, damaged, lost, or ruined. According to empirical studies, manufacturing workers decrease physical inventories at a rate of 0.6 percent. This study

investigates inventory control difficulties and finds significant aspects that influence inventory management in small and medium-sized manufacturing enterprises in Hyderabad.

Inventory management strategies in organizations have evolved dramatically. Inventory management, according to Aro-Gordon and Gupte (year), encompasses planning and control structure, management information architecture, inventory system organizational integration, physical infrastructure, and other components (p. 345). Esther's imaginary production line runs out of raw materials due to poor inventory management, slowing the distribution cycle. In the manufacturing SMEs, the company will struggle to compete. Inadequate inventory management may impede a company's production. Esther believes that the firm must manage its inventory, as well as raw materials and finished commodities. Assets, equity, office equipment, WIP inventory, and operating equipment are all included.

2. LITERATURE REVIEW

Inventory management is critical when making inventory selections in a business. Various actions, methods, and guidelines are employed to ensure that there is always enough of each item in the warehouse. To save money, the organization also prioritizes inventory management.

Esther suggested that an efficient inventory management system may boost an organization's success. These difficulties involve the execution, management, and design of distribution and transportation networks. Improving inventory management can help a business function better. Inventory management is the process of ensuring that a corporation has enough resources.

According to Esther and Othman (year), previous research has revealed inventory management challenges in firms. These difficulties include underproduction, overproduction, stockouts, raw material delays, and inventory irregularities.

According to Waters, underproduction happens when production falls short of market demand. Because every unit of fully finished product is immediately transferred to clients, the warehouse has few safety supplies. Inadequate output may deplete safety supplies if it does not meet market expectations. As a result, client satisfaction may suffer, resulting in reduced sales. Overproduction, according to Muller, occurs when a corporation creates more inventory than is required. This approach wastes money, storage space, labor, and other vital resources.

According to Waters, overproduction happens when production surpasses market demand, resulting in an increase in warehouse inventory. Warehouse inventory imply a significant purchase. In an inventory-filled warehouse, a firm may have difficulty distributing resources. According to Toyota, overproduction is a waste that occurs frequently.

According to Waters, overproduction and poor procurement hold a large amount of finished items and raw materials in the warehouse. These circumstances worsen the company's waste problem.

According to Mazanai, stockouts are a problem for many businesses. This issue has a negative impact on organizational performance and customer expectations. According to Waters (year), during times of scarcity, some buyers may refuse to wait for back-ordered products. The company's sales may fall. Inventory management is a problem for businesses, according to Kamau and Kagiri (year). Many businesses have minimized inventory accumulation because too much acquired or created inventory may increase facility expenses.

Stockouts, according to Esther, will halt production, leading in idle workers, equipment, and unanticipated supply requests in warehouse and retail manufacturing. These results will reduce income and irritate customers. Waters has explained why raw material purchases are being delayed. It is often necessary for a supplier to take a long time to receive, process, and deliver an order. Local suppliers can provide goods in a matter of hours, whereas global vendors can take days. Buying imported raw materials may take several months in a convoluted distribution system. The delay in raw inputs will have an adverse effect on output.



The main issue, according to Muller, is discrepancies in annual inventory statistics. Stocktaking compares the amount of inventory in storage to the recorded inventory. According to Waters' results, there is a 0.2% gap for important inventory and a 1% deficit for general inventory.

Inventory mismatches harm a company's competitiveness and profitability, as demonstrated by Kamau and Kagiri. According to Waters, inventory records frequently do not correspond to raw material availability, resulting in a manufacturing line shortfall.

Earlier research discovered that numerous factors influence inventory management effectiveness. Inventory control planning, documentation and store records, personnel knowledge and talents, and funding availability are among the considerations. As a result, these four characteristics were chosen to meet the research purpose. Inventory management boosts operational efficiency by guaranteeing the smooth flow of resources, services, and products. Inventory management requires planning.

According to Jonsson and Mattsson, planning is a systematic approach to managing and regulating business inventory. This necessitates preparation for safety, reorder points, and stock management. Sellers' absence from inventory planning makes estimating market demands more difficult, resulting in inventory shortages or surpluses.

Manufacturing businesses frequently have inaccurate inventory data, which negatively impacts performance. Due to rescheduling, this issue creates delays and lost sales. It may also result in fines for delays, poor planning, and increased transportation costs.

According to Othman, many businesses use unqualified inventory handlers. Employees with insufficient training, knowledge, or attention frequently perform poorly. These circumstances may result in company concerns such as spending too much time looking for lost goods or correcting erroneous inventory data. To run smoothly, the manufacturing company needs have knowledgeable staff and strong inventory management. According to Carter and Price's research, lack financial resources can also disturb an organization's functioning. According to Dobler, Burt, and Lee (year), adequate fund distribution across all organizational responsibilities may improve inventory management.

3. METHODOLOGY

Researchers employed quantitative research to collect numerical data for this study. According to Welman, Kruger, and Mitchell (year), descriptive survey designs frequently employ quantitative approaches. This strategy collects data methodically in order to answer research questions. The quantitative research method was employed in this study to discover inventory management challenges and factors influencing its efficacy in manufacturing SMEs. The investigation employed random sampling.

The Krejcie and Morgan table was used by researchers to establish the sample size for this investigation. Random sampling was used to choose study participants from the general public. Instead, the questionnaire was divided into three parts. The survey began with demographic questions. Section B dealt with the company's inventory problems. A 5-point Likert scale was used to score inventory management concerns ranging from "never" to "often." The effectiveness characteristics of inventory management were explored in this study.

The inventory management questions in the questionnaire were influenced by Munyao et al.'s research. Nzuza's research informed the change. The outcomes will be rated on a 5-point Likert scale ranging from 1 (strong disagreement) to 5 (strong agreement). The Cronbach's Alpha coefficient for the pre-test questionnaire given to 30 employees of SMEs is 0.776. This value, according to Sekaran, is adequate. The survey questionnaire was distributed to 80 Hyderabad-based manufacturing SMEs. Only 74 answers were received, though. This survey has a 92.50% response rate. SPSS was used to analyze quantitative survey data.

4. FINDINGS AND DISCUSSIONS

Problems of Inventory Management in Manufacturing SMEs: A Descriptive Analysis

Small and medium-sized enterprises (SMEs) in Hyderabad encounter inventory management challenges. The data indicate that manufacturing firms frequently experience underproduction, overproduction, stockouts, material delays, and inventory record errors. The study revealed that, with the exception of overproduction, a significant proportion of manufacturing SMBs faced the aforementioned issues. This supports Munyao et al.'s findings. Table 1 ranks the issue of inventory management by mean score. The highest mean score of 3.08 indicates that respondents are most concerned about inventory record discrepancy.

According to Water, discrepancies between inventory records and actual material quantities are common. This disparity frequently reduces worker productivity. In the past, inadequate manual recordkeeping, misplaced products, and inventory theft have been linked to inventory discrepancies. With a mean score of 2.68, supplier raw material delays are a prevalent issue. With a mean score of 1.99, overproduction was the issue that was mentioned the least frequently. Rather than storing completed goods in their warehouses, some businesses produce items upon receipt of sales orders.

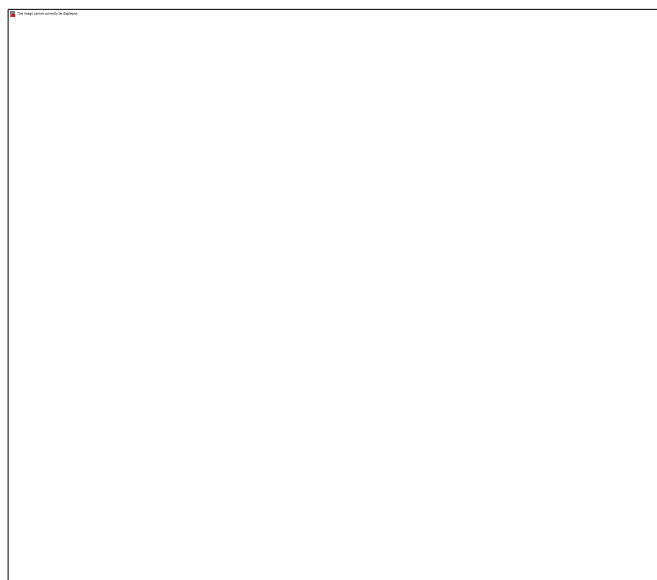


Figure 1: Problems of inventory management

SME Manufacturing Inventory Management Effectiveness Factors

This study seeks to investigate the numerous factors that influence inventory management in small and medium-sized enterprises (SMEs) in Hyderabad. In order to determine the characteristics of effective inventory management, 22 products were evaluated for the second research objective. Finance, employee/staff skill knowledge, planning, documentation/store records, and staff expertise are detailed in Figure 2. Low supplier participation in the inventory plan, defining maximum and minimum inventory levels, and determining the reorder quantity have the greatest impact on inventory management.

Esther asserts that the organizational structures of certain industrial organizations may not conform to inventory requirements. Due to financial constraints and high product storage costs, businesses are unable to maintain acceptable inventory levels and therefore fail. According to Munyao et al., more than fifty percent of warehouse employees were incompetent at inventory administration. Takim, an earlier researcher, concurred that inventory planning and forecasting may produce inaccurate results, resulting in insufficient inventory management.

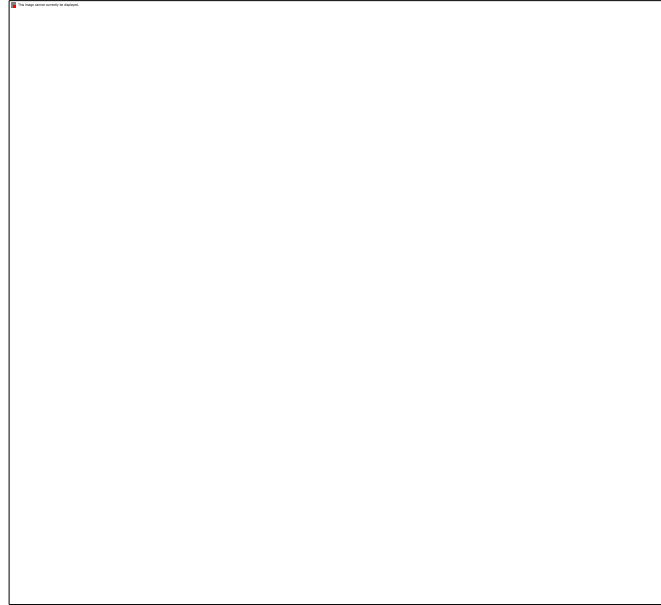


Figure 2: Average mean score for SME manufacturing inventory management effectiveness.

Numerous factors influence inventory management, including documentation and recording. This parallels the earlier work of James Ng'ang'a, a field researcher. Inventory and document management handling or monitoring has a significant influence on the effectiveness of inventory management. The research participants agreed that documentation/store record indicators like the computerized system affected inventory management efficiency. Jessop and Morrison argue that handwritten documentation and inventory transfers delay processing and increase inconsistencies in data. Inventory documents may be inaccurate due to ineffective inventory management and allocation.

Employee knowledge and expertise have a significant impact on the inventory management of SME manufacturers, according to the study. This conclusion is warranted given that this criterion has the highest average mean score out of the four factors. Researchers such as Nzuza concur that inadequate employee communication and training can have a negative impact on sites' inventory management. Esther and Ferenková argue that restrictive information sharing and employee communication can be detrimental to a business, especially in sales, production, and procuring transactions. To keep employees informed, pertinent information must be readily accessible and presented in an understandable format. Numerous businesses hire individuals without experience in inventory management and provide no formal training. Therefore, stock management would decline.

Financial variables may also influence inventory management, but to a lesser extent than the other three. Munyao et al. (year) identified SME inventory monitoring and development processes that lack specificity and efficiency. Due to currency shortages, businesses cannot operate as efficiently. Smaller businesses are frequently subject to inflationary pressures, according to Esther, because they have less working capital than larger businesses. Their inventory and procurement strategy would be disrupted by the unpredictability of raw material costs, necessitating an increase in inventory management costs. Many businesses are unable to sustain minimum and maximum inventory levels due to the high costs of inventory maintenance and the difficulty of converting it into liquid assets. Consequently, small and medium-sized manufacturing companies (SMEs) must improve their production processes, primarily inventory management, in order to boost their overall performance and navigate the increasing market competition.

5. CONCLUSION

In the end, the research objectives were achieved. The analysis revealed that manufacturing companies frequently encounter underproduction, overproduction, stockouts, delivery delays of fundamental materials,



and inventory anomalies. Multiple additional factors impact the efficiency of inventory management. Planning, documentation, store records, employee skill levels, and financial resources are included. The findings of the study provided manufacturing SMBs with inventory management recommendations. Employers can rectify the situation by following this advice.

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