

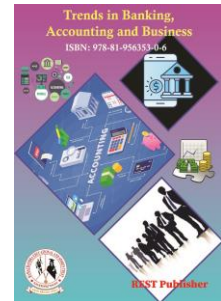


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# **A Study on Material Handling Management in M Plastics Toys and Engineering Pvt Ltd at Hosur**

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**Abstract:** *The highly competitive environment, linked to the globalization phenomena, demands from companies more agility, better performance and the constant search for cost reduction. The present study focused on improvements in internal materials handling management, approaching the case of a large company in the automotive industry. Materials handling is intrinsically associated with production flow. Because of this, it has direct influence on transit time, resources usage, and service levels. The objective was to evaluate, in a systematic way, the impact of implemented changes in materials handling management on the internal customers' perceptions of cost, safety in service, service reliability, agility and overall satisfaction. A literature review preceded a case study in the company's manufacturing unit and the questionnaires were completed by 120 employees directly involved in the process. Analyzing the answers, it was possible to suggest that internal customers understood that the new materials handling management system enlarged service agility and reliability and reduced costs, which caused an improvement in overall satisfaction.*

**Key words:** *internal handling, material flow, materials management, material handling management, service level.*

## **1. INTRODUCTION**

Materials handling Management as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a pre-decided service to the customer at a minimum cost. Materials handling management is a process adopted by companies to strategize, systematically arrange and monitor activities related with the flow of materials. Procurement of raw materials, its quantity, quality, supporting smaller products etc. all fall under materials management. This is a critical function in ensuring streamlined operations & supply chain management.

## **2. IMPORTANCE OF MATERIALS HANDLING MANAGEMENT**

Material, in the raw state, forms the chief share of the ending product and total cost of manufacturing. This is the most significant component of the completed product and hence, should be handled with supreme concern. Material cost influence to a huge degree the rate of production and also the quantity of proceeds which an entrepreneur eventually earns. Materials management is responsible with the purpose of policy making with consideration to procurement of the materials such as quality, amount, worth etc. and payout of the same to the individual jobs as and when it is necessary without any holdup.

## **3. OBJECTIVES OF THE STUDY**

To find and the stability of cost of material management in the industry.  
Materials management system will help to ensure that all materials are used efficiently and effectively  
To identify the growth of the company.

To managing materials in the production process and the overall supply chain in this firm  
The management system will help to minimizing waste and maximizing cost savings in this industry  
The study managed materials system gives businesses the flexibility to respond quickly to changes in demand or supply  
To study the problems faced by the industry in material management.

#### **4. SCOPE OF THE STUDY**

It was referring to the various functions of materials management, coordination of various departments of the industry. Once the material procured and brought by the organization, its value continues to increase other costs of materials required for the sorting, carrying materials in inventory, maintenance and management costs must be allocated to the cost of materials before entering into a product or converted to other form. In order to save the cost of all the material Company's has taken a clear method to determine the amount of material is ordered, the number is stored as inventory and in-process inventory. In order to reduce the cost of materials and other costs in a project, there must be effective and efficient management of materials technology; it must be dynamically adjusted with changes in demand and production.

#### **5. LITERATURE REVIEW**

Ashokkumar. (2017), stated that industry growth depends on the quality of products. In the success of products, quality is one of the important factors. This products focuses primarily on the significance and variables that influence quality control in the execution process. He concluded that, due to quality deficiencies, the main factors affecting are quality and growing costs. This study will create awareness of quality control for especially small-scale enterprises at all levels of companies. He gets the key variables and problems that impact the output and provide an opportunity to figure out the remedial action. This research is helpful in reducing waste of materials, waste of workmanship, waste of time and indirect costs.

Khyomesh V. Patel and Chetna M. Vyas. (2018), stated that a void created by the absence of proper materials management on this companies. Research has shown that materials and equipment may constitute more than 70% of the total cost for a typical product. One of the major problems in delaying products is poor materials and equipment management. They concluded that there should be a centralised material management team co-ordination between the site and the organization, Proper control, tracking and monitoring of the system is required, Awareness and accountability should be created within the organization.

Patil et al (2019) described that the material management brings the objectives are efficient material planning, buying or purchasing, procuring and receiving, storing and inventory control supply and distribution of material, quality and assurance, good supplier relationship. The material management brings the benefits are reducing the overall cost of material, better handling of material, reduction in duplicate orders, material is on site when needed and in the quantities required, improvements in labour productivity, improvements in products schedule, quality control, better field material control, better relations with suppliers

Eckert et al. (2020) described an inventory management and its effects on customer satisfaction. A larger sampling of the population determine the customers that were having problems with shipments and their overall customer satisfaction. The large sale, sampling should show more about the shortages and the effect on the financial performance of both the distributors and the retailers

(Muhammad, Razi & Tarn, 2021) This situation was complicated further by other factors such as industry on material management, a lack of progress in the area of HRD and the organizational characteristics of the SMEs. The use of a formal inventory ordering policy, such as fixed quantity ordering or fixed period ordering policy was not observed in the SMEs. Instead, a random policy was followed by the SMEs for material procurement.

Olusakin S Akindipe. (2022), has shown that the management of raw materials in organisations is a critical operational problem. His paper aims to bring to the fore, through theoretical analysis, the important problem of inefficiency in the practice of raw material management and its impact on production operations of manufacturing concerns. The paper

concludes that, should practitioners become pragmatic through the implementation of the solutions provided, productivity in raw materials management and production operations can be achieved..

## 6. RESEARCH METHODOLOGY

Research Design:“A Research Design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure”. The research design adopted for the studies is descriptive design. The researcher has to describe the present situation in order to know the behavior of the consumers. Hence descriptive research study is used. Descriptive research can only report what has happened and what is happening.

Sampling Method: Sampling refers to the statistical process of selecting and studying the characteristics of a relatively small number of items from a relatively large population of such items, to draw statistically valid inferences about the characteristics about the entire population.

Sample Size: The study based only on the opinion and expectation of retailers. Total number of sample taken for the study is 120 respondents.

Sample design: Convenience sampling techniques descriptive were used for the study.

## 7. DATA ANALYSIS

TABLE 1. Experience of The Respondents

Experience	No. Of respondents	Percentage (%)
Below 3 years	36	30.0%
3 -5 years	51	42.5%
5- 10 years	23	19.2%
Above 10 years	10	8.3%
<b>Total</b>	<b>120</b>	<b>100.0%</b>

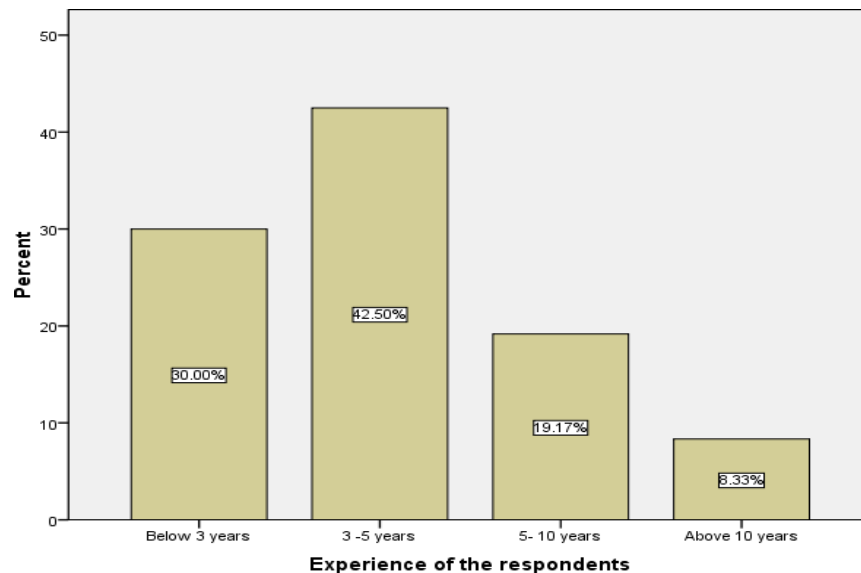


FIGURE 1.

**TABLE 2.** Correlation

		Age of the respondents	Materials are used efficiently and effectively
Age of the respondents	Pearson Correlation	1	.918**
	Sig. (2-tailed)		.000
	N	120	120
Materials are used efficiently and effectively	Pearson Correlation	.918**	1
	Sig. (2-tailed)	.000	
	N	120	120

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## 8. FINDINGS

1. Majority 53.3% of the respondents are using planning activities
2. Majority 34.2% of the respondents are using quality of materials
3. Majority 29.2% of the respondents are using storing and controlling materials
4. Majority 43.3% of the respondents are satisfied with materials are used efficiently and effectively.
5. Majority 41.7% of the respondents are identifying company goals
6. Majority 43.3% of the respondents are conduct quality control checks
7. Majority 43.3% of the respondents are agree with cost effective and efficient
8. Majority 38.3% of the respondents are reduced waste
9. Majority 45.0% of the respondents are helps lower production cost
10. Majority 40.0% of the respondents are strongly agree with timely delivery of materials
11. Majority 45.8% of the respondents are agree with maximizing cost savings in this firm
12. Majority 45.0% of the respondents are strongly agree with service that makes customers happy
13. Majority 42.5% of the respondents are satisfied with quickly to changes in demand.
14. Majority 45.8% of the respondents are feeling good with long term benefits
15. Majority 43.3% of the respondents are strongly agree with improve customer satisfaction.
16. Majority 45.0% of the respondents are highly satisfied with quality control of materials
17. Majority 47.5% of the respondents are highly satisfied with unreported errors

## 9. SUGGESTIONS

In order to increase the quality and time execution of their projects, management should also include materials management in their strategic planning. There is a positive and significant correlation between issues in materials management, plant disruptions, and the profitability of manufacturing firms. An organization can achieve significant cost savings; improve production efficiency, and increase profitability and competitiveness through effective management of materials. There is need to train the staff in the field of material management for the further enhancement. The cost of production or the price of raw materials should always be taken into consideration by organisations before arriving at selling price. From the findings most of the companies lack a adequate planning of the material with only a small percentage adopting an integrated management plan. A systematic and integrated approach is therefore needed to manage materials and minimize the costs associated with poor materials management. In order to encourage quality awareness, materials management policies should be initiated

## 10. CONCLUSION

From the result we confirm that industry personnel will be giving more priority to planning stage which could be more effective in reducing the wastages. And the frequently occurred problem is surplus or missing of the materials. To avoid this, inventory should be managed with care. The material which was wasted more in execution stage is reinforcement while overlapping with adjacent bars, it is unavoidable but the wastages can be used for making manholes. The material which was wasted more in transportation/receiving stage was products. For reducing the wastage sand hooks should be used effectively and place should be made favoured for storage without any trenches nearer to the storage area.

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