

A Comparative Analysis of Material Management on Traditional Method and Modern Method at More Retail Private Limited Mysore, Karnataka

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ABSTRACT

The project was undertaken at More Retail Private Limited Mysore. The objective of this training is to enable a better understanding of working in the organization and to develop a comparative approach between the theory and practical application. The study has been undertaken on the topic of a comparative analysis of material management on traditional method and modern method at more retail private limited, Mysore, Karnataka. The main objective of the study is to analyze the financial performance and Inventory Management of the company. By assessing investor preferences, financial goals, and risk appetites, the study aims to provide insights into optimizing investment portfolios. To analyse the research used a primary data like questionnaire and secondary data are taken from company and research papers and **Chi-Square Test** as a statistical tool for analysing categorical data, such as investor preferences. The research delves into key areas, including inventory management, logistics, procurement, and last-mile delivery. It evaluates the challenges faced by More Retail Pvt Ltd, such as infrastructure limitations, rising customer expectations, and the need for technological integration. Furthermore, the study highlights the strategies implemented by the company to overcome these challenges, such as adopting advanced supply chain technologies, leveraging data analytics, and optimizing warehouse and distribution processes.

KEYWORDS: Material management, Modern method, Traditional method, Risk, Inventory management, financial security, Material handling.

1.INTRODUCTION:

Material management in the retail sector encompasses a broad set of activities aimed at ensuring that the right products are available at the right time, in the right quantity, and at the right cost. It is a critical component of the supply chain that directly impacts a retailer's ability to meet customer demand, manage inventory, and control operational costs. Effective material management in retail involves the coordination of various functions such as procurement, inventory management, warehousing, transportation, and distribution.

This study focuses on the impact of e-commerce on supply chain operations at More Retail Pvt Ltd, with special reference to its Mandy, Karnataka location. More Retail Pvt Ltd is a prominent player in the Indian retail market, known for its widespread presence and customer-centric approach. The company has been adapting its supply chain strategies to cater to the growing demands of e-commerce, integrating technology and data-driven solutions to streamline its processes.

2.RESEARCH METHODOLOGY

This study adopts a mixed-methods approach to analyse the impact of e-commerce on supply chain operations at More Retail Pvt Ltd, Mysore, Karnataka. It uses an exploratory and descriptive research design to examine challenges and strategies for material management in both traditional and modern method. Primary data is gathered through structured interviews with material management and surveys with employees and customers. Secondary data is sourced from company reports, journals, and industry publications. Purposive sampling is used to select 15-20 employees involved in material management operations, while convenience sampling targets 50-100 customers. Qualitative data is analysed using content analysis, and quantitative data is evaluated using statistical tools like percentages and trend analysis

Research configuration is the strategy and procedure of directing a specific report. Generally, it very well may be assembled into three primary classes: exploratory, spellbinding, and causal.

2.2 OBJECTIVES OF THE STUDY

- 1.To compare the efficiency of traditional and modern material management methods at More Retail Private Limited.
- 2.To assess the cost implications of both traditional and modern material management systems.
- 3.To examine how each method impacts inventory tracking and accuracy.
- 4.To recommend the strategies and methods should be applied for material management.

2.3 REVIEW OF LITERATURE

- **Stevenson (2020)** notes that ERP and WMS systems allow for seamless integration with suppliers, enabling automated replenishment processes based on real-time inventory data. This results in more efficient supply chains, reduced lead times, and a more streamlined procurement process.
- **(Saxena & Mishra, 2017)**. In this context, modern material management systems are crucial for retailers like More Retail Private Limited, where inventory accuracy and timely stock replenishment can directly influence sales and customer loyalty.
- **Chopra and Meindl (2016)** indicate that modern material management systems improve inventory turnover rates, reduce holding costs, and enhance customer service levels. More specifically, RFID technology has been shown to improve stock accuracy by up to 95%, significantly reducing the risks of stockouts or excess inventory
- **Aster (2015)** emphasizes the role of technology, particularly systems like Enterprise Resource Planning (ERP) and warehouse management systems (WMS), in automating stock tracking, procurement, and inventory control. These systems enable real-time data
- **Lee and Billington (2014)**, modern material management systems directly impact customer satisfaction in retail by ensuring better stock availability, reducing lead times, and improving order accuracy. These factors are critical for maintaining competitiveness in today's fast-paced retail environment.

3. DATA METHODOLOGY

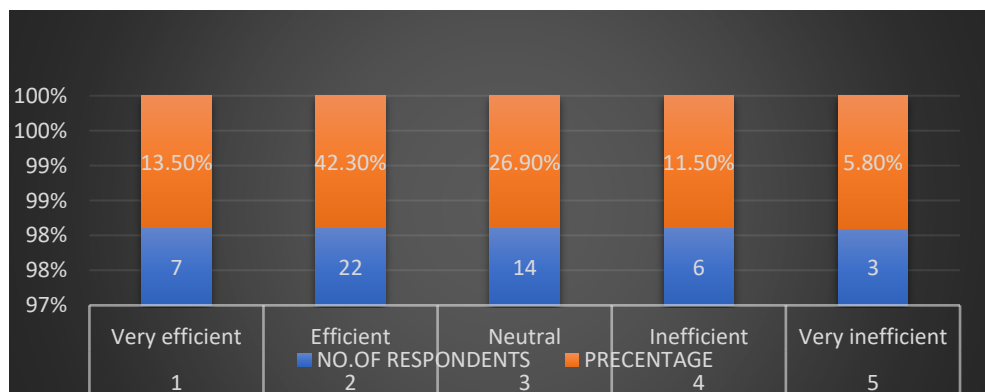
The data interpretation and analysis focus on comparing the performance and material management in traditional and modern method of material handling in more retail put ltd Mysore Karnataka. A **descriptive and comparative research design** to analyse the effectiveness of traditional and modern material management methods at **More Retail Private Limited, Mysore, Karnataka**. **Primary data** is collected through structured questionnaires, interviews, and observations, while **secondary data** is sourced from company records and industry reports. A **stratified random sampling method** is used, targeting **50 respondents** (25 from each method). Data analysis utilizes statistical tools such as the **Chi-Square Test**, percentage analysis, and qualitative insights. The study aims to compare efficiency, cost-effectiveness, and operational performance across both methods, with findings presented using **tables, graphs, and charts** for clarity.

TABLE 3.1 The rate of efficiency of the modern material management method in terms of speed and accuracy as

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SL.NO	OPTIONS	NO. OF RESPONDENTS	PERCENTAGE
1	Very efficient	7	13.50%
2	Efficient	22	42.30%
3	Neutral	14	26.90%
4	Inefficient	6	11.50%
5	Very inefficient	3	5.80%
6	TOTAL	53	100%

Table 3.1



ANALYSIS: The survey shows mixed feelings about the process's efficiency. Only 13.50% of respondents think it is "very efficient," while 42.30% say it is "efficient," indicating that many find it satisfactory but not exceptional. About 26.90% are neutral, suggesting they might need more information or experience. Additionally, 17.30% feel the process is either "inefficient" or "very inefficient," highlighting some dissatisfaction.

INTERPRETATION:

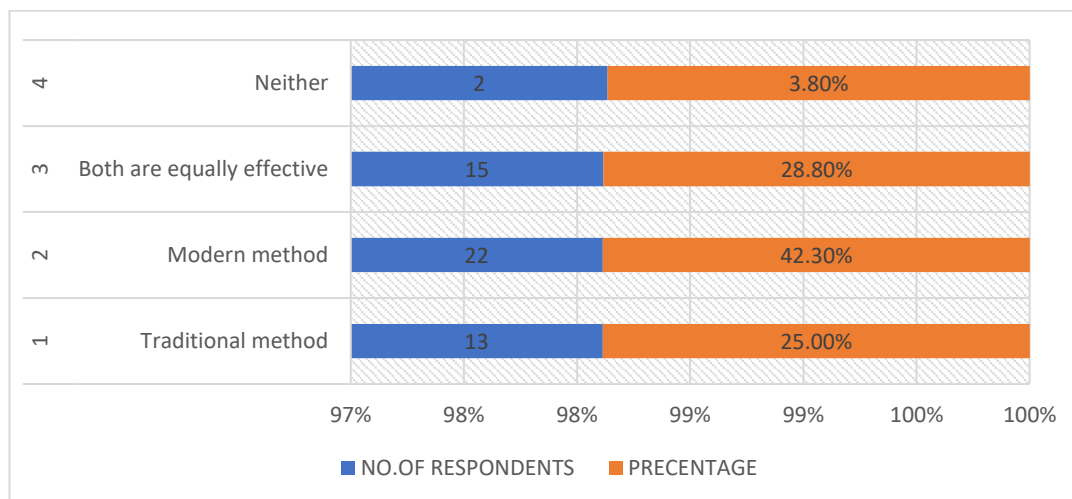
The interpretation results indicate that opinions on the process's efficiency are varied. Only 13.50% of respondents rate it as "very efficient," while 42.30% consider it "efficient," suggesting that while many find it acceptable, there is significant room for improvement. With 26.90% of respondents remaining neutral,

TABLE 3.2 I find this method more cost-effective for managing materials.

SL.NO	OPTIONS	NO. OF RESPONDENTS	PERCENTAGE
1	Traditional method	13	25.00%
2	Modern method	22	42.30%
3	Both are equally effective	15	28.80%
4	Neither	2	3.80%
5	TOTAL	53	100%

TABLE 3.2

ANALYSIS: The survey results show that 42.30% of respondents prefer modern methods, making it the most popular choice. In comparison, 25.00% Favor traditional methods, indicating that while some people still support them, they are less favoured. About 28.80% believe both methods are equally effective, showing an appreciation for both approaches. Only 3.80% feel that neither method is effective.



INTERPRETATION: A clear preference for modern methods, with 42.30% of respondents favouring them compared to 25.00% who prefer traditional methods. Additionally, 28.80% believe that both methods are equally effective, indicating an appreciation for the advantages of each approach. Only 3.80% feel that neither method is effective, which is reassuring. To improve overall practices, it would be beneficial to gather feedback from respondents to understand why they prefer modern methods and what aspects of traditional methods they still value.

TABLE3.3 The training required for staff to use the traditional material management method effectively can be described as .

SL.NO	OPTIONS	NO. OF RESPONDENTS	PERCENTAGE
1	Extensive	10	18.9%
2	Moderate	28	52.8%
3	Minimal	10	18.9%
4	No training required	5	9.4%
5	TOTAL	53	100%

Table no 3.3

Testing using Chi-square:

Hypotheses Formulation:

- H1: There is no significant association between the training requirement level and staff effectiveness in traditional material management.
- H2: There is a significant association between the training requirement level and staff effectiveness in traditional material management.

Chi-Square Test Formula

The Chi-Square (χ^2 /chi²) statistic is calculated using the formula:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where:

- O: Observed frequency
- E: Expected frequency

CALCULATION OF THE CHI SQUARE TEST

Particulars	Yes	No	Row total
Extensive	9	1	10
Moderate	23	5	28
Minimal	8	2	10
No training required	5	0	5
Column TOTAL	45	8	53

Analysis:

The analysis reveals that training plays a crucial role in staff performance within traditional material management systems. Most respondents (52.8%) indicated that moderate training is necessary for optimal performance, while extensive and minimal training were equally reported by 18.9% of respondents. Only 9.4% believed no training was required. The significant chi-square value suggests that variations in training levels are strongly associated with differences in staff effectiveness.

Statistical Calculation:

O	E	(O-E)	(O-E) ²	(O-E) ² /E
9	8.33	0.33	0.10	0.013
23	22.23	1.23	1.51	0.06
8	7.26	0.74	0.54	0.07
5	4.42	0.58	0.33	0.07
1	0.8	0.2	0.4	0.5
5	4.53	0.47	0.22	0.04
2	0.8	2.98	8.88	11.1
0	0	0	0	0

Degree of Freedom:

Level of Significance: 5% (Tabulated Value = 7.815)

Comparison:

- Calculated Value: **23.147**
- Tabulated Value: **7.815**

Hence the alternative hypothesis (H₁) is accepted.

Interpretation:

Since the calculated value (**23.147**) is greater than the tabulated value (**7.815**), the null hypothesis (**H₀**) is rejected. This indicates a significant association between the training requirement level and staff effectiveness in traditional material management.

Conclusion: The analysis confirms that the level of training required significantly impacts staff effectiveness in traditional material management. Moderate training emerges as the most impactful level, highlighting its importance in achieving optimal staff performance.

4. FINDINGS AND SUGGESTIONS:**Findings**

- Only 13.5% of respondents rate the modern method as very efficient, though 42.3% find it efficient.
- 42.3% of respondents find modern methods more cost-effective, while 28.8% believe both traditional and modern methods are equally effective.
- Chi square analysis shows Moderate training is the most effective, with 52.8% of respondents supporting its importance.

SUGGESTION:

- Address the concerns of the 26.9% neutral respondents on modern methods by offering more training on how to use them efficiently.
- Encourage a hybrid approach for cost-effectiveness, as many respondents see value in both traditional and modern methods.
- With the help of chi square test the Organizations should prioritize moderate training programs for staff involved in traditional material management.

5.CONCLUSION:

The study sheds light on the growing transition from traditional to modern material management methods within organizations, showcasing the gradual adoption of digital tools and technologies to streamline processes. Despite the rise of modern methods, the findings indicate that a significant portion of users continues to rely on traditional systems, suggesting that the transition is still in progress and that both methods currently coexist within many organizations. The reliance on traditional methods, particularly among certain demographics and sectors, shows that while modern solutions may offer improved efficiency and real-time tracking, the comfort and familiarity of traditional practices are still valued by many users.

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