



The Influence of Warehouse Management Systems on Organizational Supply Chain Performance

Vikrant Patil¹, Ganesh Mudaliar², Prof. Harshita Gaikwad³

^{1,2} MBA Students, Faculty of Management Studies – Parul University

³ Faculty, Parul University

Email: vikrantpatil@gmail.com, mudaliarganesh13@gmail.com

ABSTRACT :

This paper investigates how Warehouse Management Systems (WMS) have an effect on supply chain performance of establishments. The results of a survey performed among college students with logistics backgrounds display how WMS facilitates to decrease transport delays, maintain actual-time stock, improve accuracy, and lift purchaser delight. By automating procedures and reducing human error, the have a look at suggests that WMS is vital for current supply chains.

Keywords: Warehouse Management System, Supply Chain, Real-time Inventory, Delivery Delays, Logistics, Customer Satisfaction

1.Introduction with Problem Statement

Efficiency is essential within the fast-paced logistics quarter. Major difficulties are coping with inventory, order processing, and guaranteeing on-time deliveries. Manual conventional systems now and again result in delays, inventory discrepancies, and unsatisfactory patron reviews. This paintings seems at how WMS implementation may resolve these troubles and enhance supply chain performance.

2.Problem Statement:

Many corporations nevertheless battle with warehouse operations inspite of era tendencies. Included among those inefficiencies are underused space, records entry errors, inventory loss, and past due order fulfilment. By approach of automation, actual-time monitoring, and systematic manage over operations, this paper seeks to recognize how WMS can close those gaps and decorate universal deliver chain performance.

Objectives

- To evaluate the awareness and understanding of WMS among logistics students
- To identify the perceived benefits of WMS in warehouse operations
- To analyze the impact of WMS on delivery performance, inventory accuracy, and customer satisfaction
- To understand the role of WMS in reducing human errors and labor costs
- To assess students' readiness and knowledge to work in WMS-equipped logistics environments

4.Literature Review

Many papers have underlined WMS's importance in supply chain optimisation. Gupta and Jain (2020) declare WMS promotes operational transparency and improved stock control. According to Sharma (2021), organizations the use of WMS saw a 20% lower in order processing times. Other studies draw attention to the increased information accuracy and fee-saving advantages of real-time monitoring structures. Singh and Verma (2019) also located that the use of WMS improves supplier-client coordination, lowers labour expenses, and better space use. These benefits display that WMS is a strategic need for cutting-edge logistics, no longer handiest a technical improve.

Gaps in Existing Research and Areas for Further Study

Although current studies display the benefits of WMS, very few look at students' attention or academic publicity to such structures. Most studies, too, give attention to big companies, which leaves a lack of knowledge on small and medium groups (SMEs) and academic institutions. Additional studies will be finished to take a look at WMS implementation troubles in SMEs in addition to the necessity of curriculum changes to equip college students for WMS-based totally industry positions.

5. Research Methodology

Descriptive studies the usage of number one survey records constitutes the studies layout. Primary facts accumulated the use of Google Forms constitutes the resources of facts.

Online surveys run among college students with logistics and deliver chain control backgrounds fashioned the idea of data amassing.

Students from numerous universities studying logistics and supply chain control make up the populace.

Time limits and easy get entry to to respondents thru digital structures caused convenience sampling. Respondents have been chosen relying on their choice to participate inside the have a look at.

6. Data Analysis and Interpretation

Responses from fifty two college students made up the amassed statistics. Most of the respondents have been between 18 and 24 years old. More than 90 percentage of the replies were already familiar with Warehouse Management Systems. Among the principle consequences: Most students agree with WMS facilitates to music stock and lower human attempt.

Most college students suppose WMS is quite crucial for mistakes discount and warehouse characteristic streamlining.

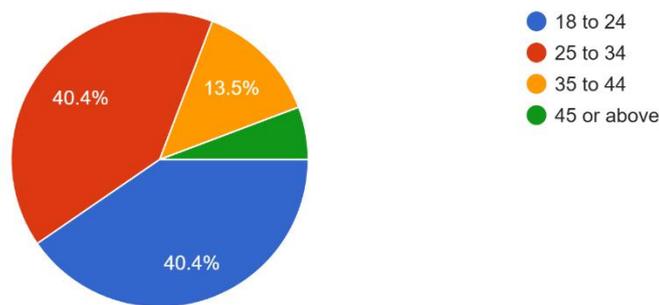
Of those polled, 85% think WMS allows to hurry transport and enhance customer happiness.

Most scores for WMS relevance fell among four and five out of five.

WMS became seen as a essential device for improving demand forecasting and order fulfilment accuracy.

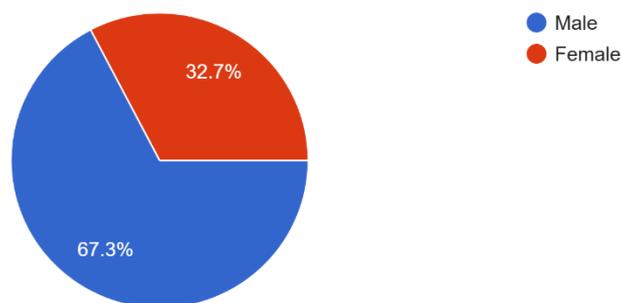
What is your age group

52 responses



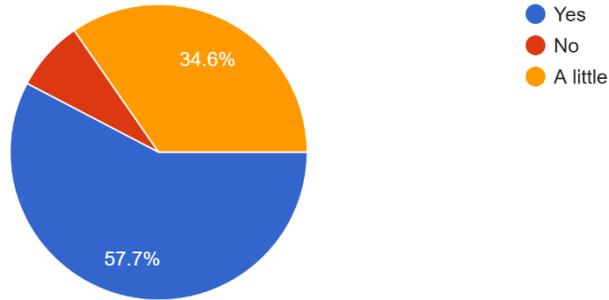
Gender

52 responses



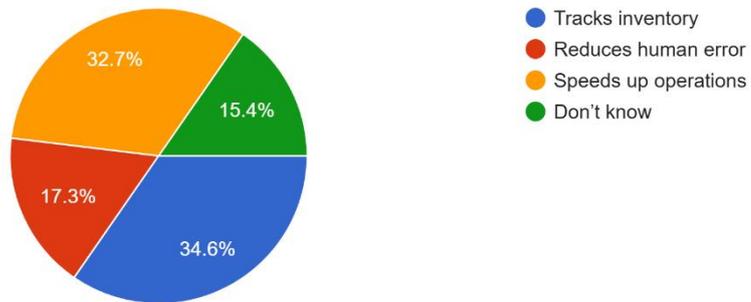
Have you heard about Warehouse Management System (WMS)?

52 responses



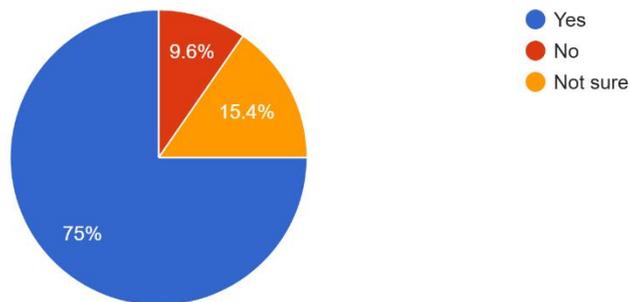
How do you think WMS helps in managing warehouses?

52 responses



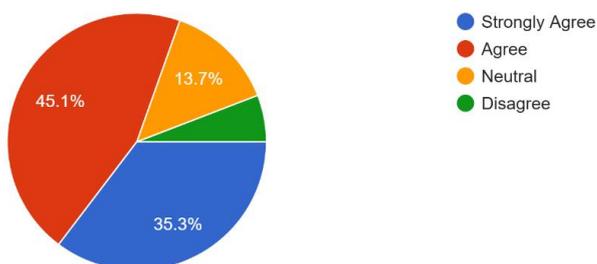
Do you think WMS can reduce delivery delays?

52 responses

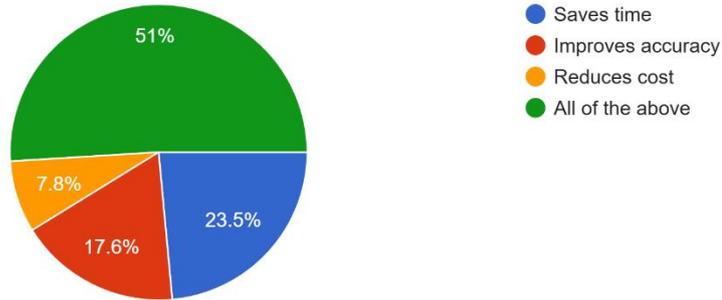


WMS helps in maintaining real-time data of stock. Agree?

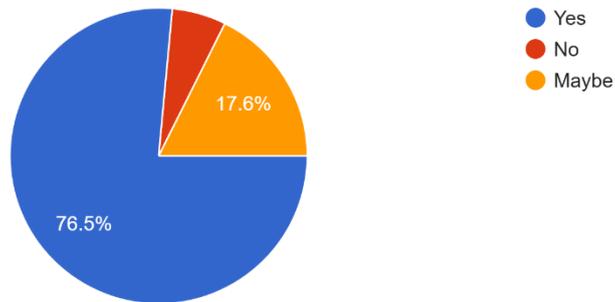
51 responses



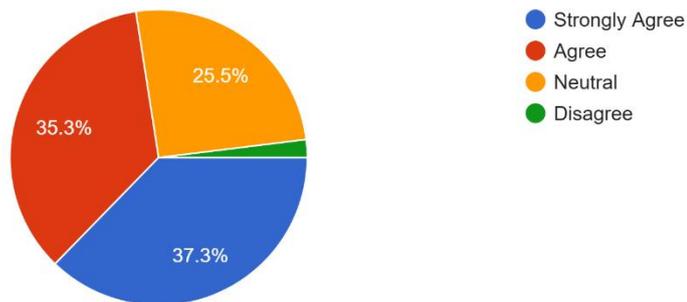
• What do you think is the main benefit of WMS?
51 responses



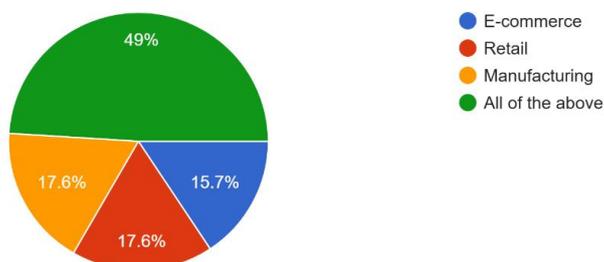
• Can WMS improve customer satisfaction?
51 responses



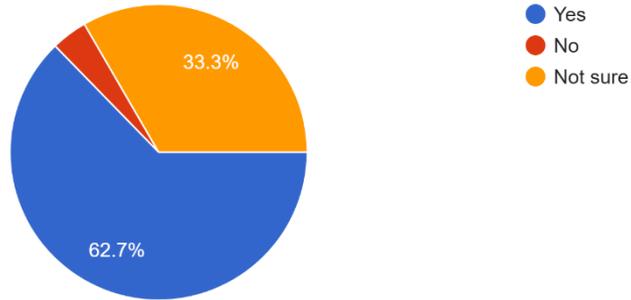
• WMS reduces dependency on manual work. Agree?
51 responses



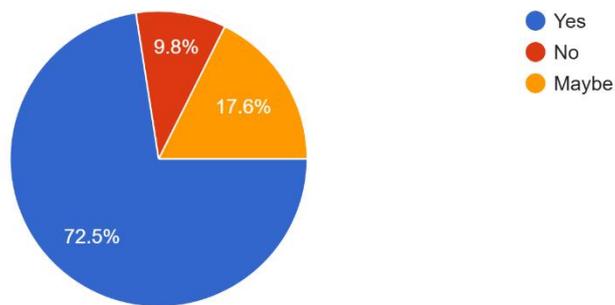
• Which type of company needs WMS the most?
51 responses



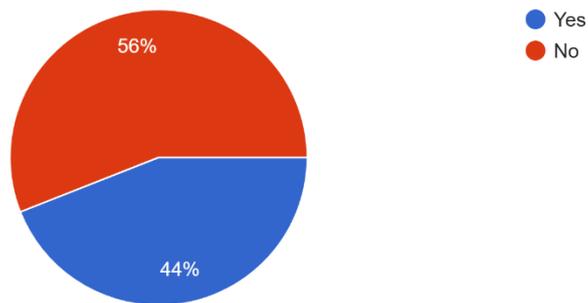
• Can WMS reduce the overall cost of supply chain operations?
51 responses



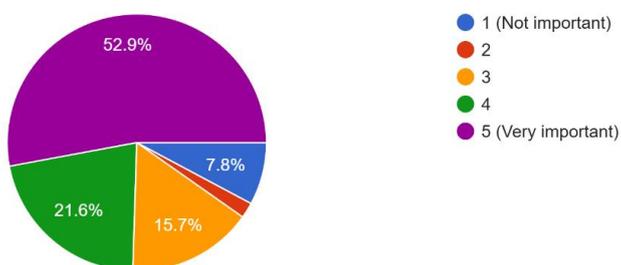
• Would you recommend companies to use WMS?
51 responses



• Have you studied WMS in your academics?
50 responses



• On a scale of 1 to 5, how important is WMS in today's supply chain?
51 responses



Findings

Based on the survey, the following findings were noted:

- High level of WMS awareness among logistics students
- Students believe that WMS leads to increased efficiency and accuracy
- WMS is viewed as a valuable tool for reducing warehouse delays and improving service quality
- Majority of students are prepared to adopt WMS in future professional settings

Limitations of Study

- The study is limited to students' opinions and may not reflect actual business scenarios
- Sample size is relatively small and limited to a specific academic group
- No cross-comparison was done with industry experts or warehouse managers
- Use of convenience sampling may lead to biased or skewed results

Conclusion

The research concludes that WMS is recognized as a powerful system that enhances warehouse and supply chain operations. Logistics students showed a high degree of understanding regarding WMS functionalities and benefits. Their opinions reflect an industry-aligned mindset that can be developed further through practical exposure and training. Introducing WMS simulations and live projects in academic curricula could help bridge the gap between theory and practice, enabling a better-prepared future workforce.

REFERENCES (APA FORMAT)

1. Gupta, R., & Jain, A. (2020). Role of WMS in Inventory Management. *International Journal of Supply Chain Management*, 9(3), 45-52.
2. Sharma, V. (2021). Impact of Automation in Warehousing. *Journal of Logistics and Transport*, 12(1), 30-37.
3. Singh, M., & Verma, K. (2019). Technology Adoption in Supply Chains. *Operations and Logistics Review*, 7(2), 65-73.
4. Kumar, A. (2022). Digital Warehousing and WMS Impact on Order Fulfillment. *Journal of Inventory and Logistics*, 14(3), 88-95.
5. Bansal, R. (2020). The Growing Importance of WMS in Indian Warehousing Sector. *South Asian Logistics Journal*, 11(4), 101-110.