

LB/TH/39/2025  
TH5985

**STRATEGIES FOR INTEGRATING E-COMMERCE  
PLATFORMS WITH GLOBAL SHIPPING NETWORKS:  
A LOGISTICS OPTIMIZATION APPROACH**

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Thesis submitted in partial fulfilment of the requirements for the degree of Master of  
Business Administration in Supply Chain Management at University of Moratuwa,  
Sri Lanka

Master Of Business Administration in Supply Chain Management

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## DECLARATION

I do hereby declare that no portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning. Further, all the work in this dissertation is entirely my own, unless referenced in the text as a specific source and included in the bibliography.

2024 / 08 / 20

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Signature of the Student

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## RECOMMENDATION OF THE SUPERVISOR

As I have been educated by the candidate this study has not been conducted by any of the researcher previously and this was thoroughly conducted under my supervision. Therefore, it could be accepted in partial fulfilment of the requirements of Master of Business Administration in Supply Chain Management Degree.

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## **ACKNOWLEDGMENTS**

I would like to express my sincere and humble appreciation to all the lecturers who taught me on virtually all the issues falling under the MBA program. The knowledge provided by these lecturers were not only aiding the enhancement of the academic knowledge that I possessed but also did a lot of more.

As far as enhancements of my personality to be fit the personality of a master's graduate is concerned. In particular, I would express tremendous respect and appreciation to the Coordinator of MBA program, Dissertation supervisor and the MBA lecture panel in Department of Transport & Logistics Management, Faculty of Engineering, University of Moratuwa, Sri Lanka who helped me throughout the serious of lectures on Research Methodology.

Last but not the least, I would also like to add that I am very grateful to my family to have the patience and understanding in assisting me during the course of achieving successful MBA.

## ABSTRACT

This research seeks to establish how artificial intelligence, or AI, blockchain, and last mile delivery solutions will enhance e-commerce shipping management. Examining four primary factors of improvement that include shipping procedures, last mile delivery, client expectations and information technology, this research demonstrates how these factors contribute to improvement of operation efficiency, increased customer satisfaction and sustainability. In the area of route optimization, it demonstrates a 20% increase in delivery speed, 15% saving on fuel, hence emissions. Blockchain increases supply chain transparency, eliminates up to 15% fraud and improves customer trust especially when dealing with other nations.

The outcome of the study also underlines the importance of last-mile delivery in e-commerce supply chain network and sees innovative techniques and technologies like drones and self-driving vehicles as a way of optimizing the last-mile delivery channels it. Moreover, the study establishes new insights into how the company must adapt to new customer demands using real-time tracking, intensive communication, and tailored product delivery solutions.

Therefore, this research is significant to the extensive discourse on e-commerce logistics by giving an encyclopedic approach that can be applied to occasion enhancements in delivery systems. The work advocated a system integrated approach to optimization that takes account of the operation, customer value and the environment. The implications of the findings are for e-commerce firms and practitioners applying the insights as a compass to guide e-commerce organizations in the direction of developing strategies to meet rapidly evolving market requirements for sustained growth and competitiveness. Finally, the study focuses on the noble cause of synchronizing the business processes with environmental and customer-oriented objectives in a rapidly evolving e-commerce shipping environment.

**Keywords:** *E-commerce, Digital market, Cost, Customer Satisfaction, Environmental Sustainability*

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