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Role of Aircargo in Export of Pershiable Goods from Coimbatore to Global Markets

Mr. Sanjeev V[1], Dr. R. Sivaramakrishnan[2]
[1]*II M.Com IB, PG & Research Department of International Business, Sri Ramakrishna College of Arts and Science, Coimbatore*
[2]*Assistant Professor, PG & Research Department of International Business, Sri Ramakrishna College of Arts and Science, Coimbatore*

Abstract: ***The export of perishable goods has become a vital component of international trade, particularly for developing economies like India. Due to the time-sensitive and quality-dependent nature of perishable products, efficient logistics and transportation systems are crucial. Air cargo has emerged as the most reliable mode of transport for perishable exports, offering speed, safety, and quality preservation. Coimbatore, a major industrial and agricultural hub in Tamil Nadu, has significant potential for exporting perishable commodities such as fruits, vegetables, flowers, poultry, dairy products, and processed foods. However, the region faces infrastructural and operational challenges in air cargo logistics.***
This study examines the role of air cargo in facilitating the export of perishable goods from Coimbatore to global markets. The paper analyses the concept of perishable exports, importance of air cargo, infrastructure requirements, challenges faced by exporters, and policy support mechanisms. Based on secondary data and conceptual analysis, the study identifies major issues such as high freight costs, limited international connectivity, and inadequate cold chain infrastructure. The article concludes with practical suggestions for strengthening air cargo facilities and enhancing export competitiveness.
Keywords: Air Cargo, Perishable Goods, Export Logistics, Cold Chain, Coimbatore, Global Trade, Supply Chain Management

I. INTRODUCTION

International trade plays a significant role in economic development by facilitating the exchange of goods and services across borders. Among various export commodities, perishable goods occupy a critical position due to their high demand and value in global markets. Perishable goods include agricultural produce, dairy products, meat, seafood, flowers, and processed food items that require rapid transportation and controlled environmental conditions. India is one of the world's largest producers of agricultural and food products.

With increasing demand for fresh and quality products in international markets, the importance of efficient export logistics has increased significantly. Transportation is a crucial factor in determining the success of perishable exports, as delays can lead to spoilage, quality deterioration, and financial loss. Air cargo has emerged as the most effective mode of transport for perishable goods due to its speed, reliability, and global connectivity. It enables exporters to deliver products quickly while maintaining quality standards.

Coimbatore, located in Tamil Nadu, is a prominent industrial and agricultural hub with strong production capacity for perishable commodities. However, despite its potential, the region faces several challenges in air cargo-based exports. This article aims to analyze the role of air cargo in exporting perishable goods from Coimbatore to global markets and to examine the challenges and opportunities associated with it.

II. OBJECTIVES

The major objectives of the study are:

1) To examine the role of air cargo in the export of perishable goods from Coimbatore.
2) To analyze the importance of air cargo logistics in maintaining product quality.
3) To identify the challenges faced in air cargo-based perishable exports.
4) To study the infrastructure and policy support available for air cargo operations.
5) To suggest measures for improving air cargo efficiency and export performance.

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III. CONCEPT OF PERISHABLE GOODS AND AIR CARGO LOGISTICS

1) Perishable Goods: Perishable goods are products that have a limited shelf life and are highly sensitive to time, temperature, humidity, and handling conditions. These goods deteriorate rapidly if not transported and stored properly. Common perishable export products include fruits, vegetables, flowers, meat, seafood, dairy products, and processed food items. The export of perishable goods requires specialized packaging, refrigeration, temperature control, and fast transportation. Any delay or mishandling can result in spoilage, loss of quality, and rejection in international markets.
2) Air Cargo Logistics: Air cargo logistics refers to the transportation of goods by aircraft, including associated handling, storage, documentation, and customs procedures. Air cargo is the fastest mode of transport and is particularly suitable for high-value, time-sensitive, and perishable goods.

The advantages of air cargo include reduced transit time, global reach, reliability, security, and quality preservation. Although air freight is costlier than sea or road transport, it provides superior value for perishable exports due to reduced spoilage, faster delivery, and higher market prices.

IV. CHALLENGES IN AIRCARGO-BASED (PERISHABLE EXPORTS FROM COIMBATORE)

Despite strong production potential, exporters from Coimbatore face several challenges in utilizing air cargo effectively:

1) Limited International Connectivity: Coimbatore International Airport has limited direct international cargo flights. Exporters often depend on nearby airports such as Chennai, Bengaluru, or Kochi, which increases transit time and logistics costs.
2) Inadequate Cold Chain Infrastructure: Cold storage facilities, temperature-controlled warehouses, and refrigerated transport systems are insufficient, affecting product quality and shelf life.
3) High Air Freight Costs: Air cargo involves high freight charges, fuel surcharges, handling fees, and documentation costs, making it expensive for small and medium exporters.
4) Complex Regulatory Procedures: Export documentation, customs clearance, and compliance with international quality standards increase procedural delays.
5) Infrastructure Constraints: Limited cargo terminal capacity, lack of modern handling equipment, and insufficient perishables-specific facilities restrict efficient operations.

V. DATA ANALYSIS AND DISCUSSION (SECONDARY DATA-BASED)

Secondary data from government reports, export authorities, and air cargo industry studies indicate steady growth in India's perishable exports, particularly in fruits, vegetables, flowers, seafood, and processed foods. Tamil Nadu contributes significantly to national exports, with Coimbatore playing a vital role in production.

Studies show that air cargo significantly reduces transit time from several days (sea transport) to less than 48 hours for major international destinations. This improves freshness, reduces spoilage rates, and increases acceptance in high-value markets.

Comparative analyses reveal that air cargo users receive better price realization due to superior quality and faster delivery. However, logistics cost accounts for a significant portion of total export cost, particularly for small exporters.

The data highlights the urgent need for regional air cargo infrastructure development, especially cold chain facilities and direct cargo connectivity.

VI. FINDINGS

Based on the analysis, the key findings of the study are:

1) Air cargo plays a critical role in exporting perishable goods by reducing transit time and preserving quality.
2) Coimbatore has strong production potential but lacks adequate air cargo infrastructure.
3) High freight costs and limited connectivity restrict export competitiveness.
4) Cold chain facilities are insufficient to meet international standards.
5) Policy support and infrastructure development can significantly improve export performance.

VII. SUGGESTIONS

To improve air cargo-based perishable exports from Coimbatore, the following measures are suggested:

1) Development of Dedicated Air Cargo Terminal: Establishing a modern cargo terminal with cold storage and perishables handling facilities.
2) Introduction of Direct International Cargo Flights: Enhancing connectivity to major export markets.

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3) Strengthening Cold Chain Infrastructure: Investment in refrigerated transport and temperature-controlled warehouses.
4) Cost Reduction Measures: Government subsidies, freight incentives, and tax benefits for exporters.
5) Digitalization of Export Procedures: Simplifying documentation and customs clearance through digital platforms.
6) Skill Development Programs: Training personnel in cold chain management and air cargo operations.

VIII. CONCLUSION

Air cargo plays a vital role in facilitating the export of perishable goods from Coimbatore to global markets. Its speed, reliability, and quality preservation capabilities make it indispensable for time-sensitive commodities. Although the region possesses strong production capacity, infrastructural and operational challenges limit its export potential. Strategic investments in air cargo infrastructure, cold chain development, policy support, and connectivity enhancement can significantly boost export competitiveness. Strengthening air cargo logistics will not only benefit exporters but also contribute to regional economic growth and employment generation.

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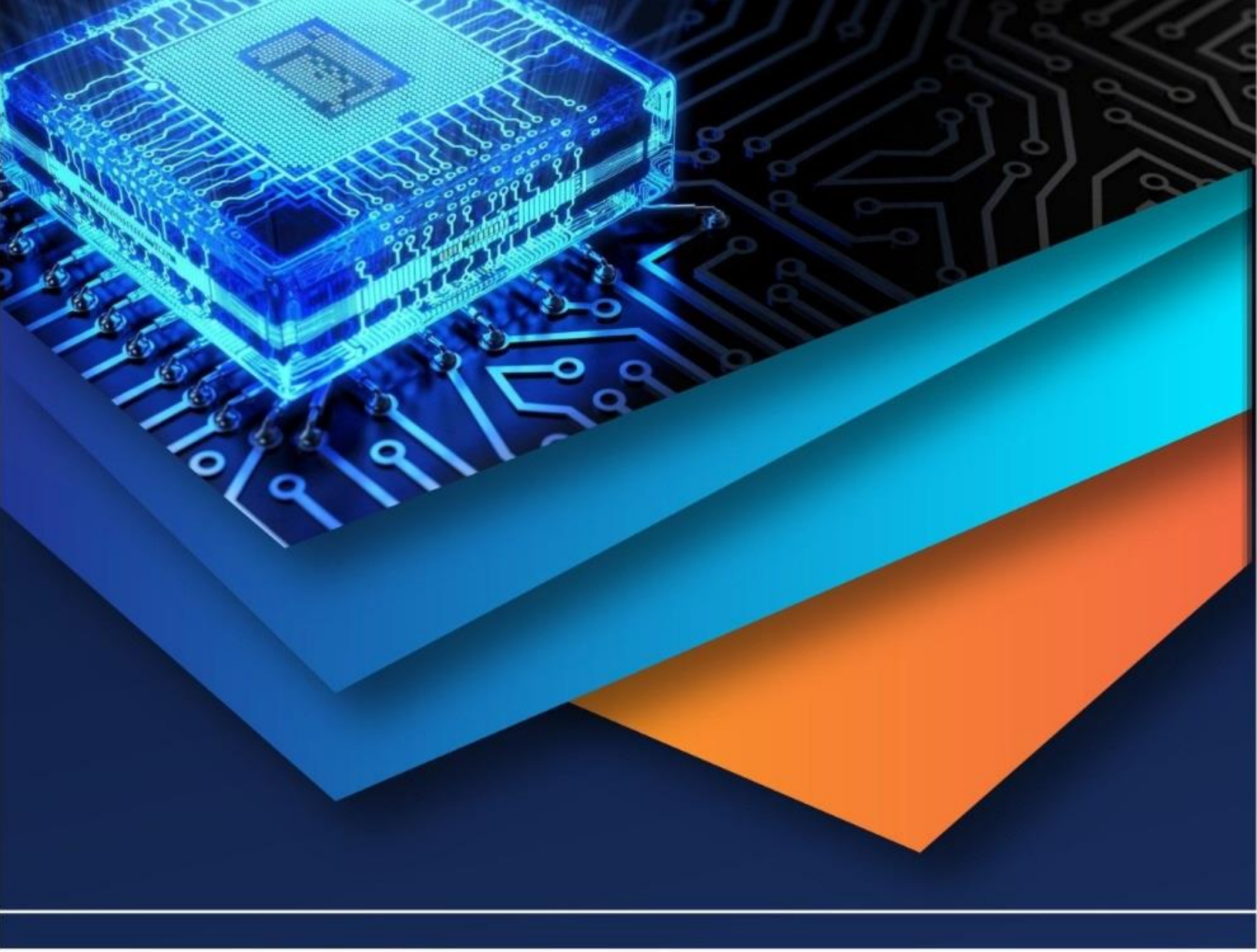

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