



Logistics and supply chain challenges in Indian E-commerce with special reference to Mysore city

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Abstract

This research addresses the hurdles and solutions associated with e-commerce logistics in Mysore City, an increasingly developed urban area in India. The e-commerce sector has experienced significant growth recently, and effective logistics are crucial for ensuring prompt delivery, customer satisfaction, and overall business success. Nevertheless, the logistics industry in Mysore encounters several obstacles, including insufficient infrastructure, challenges with last-mile delivery, elevated operational costs, and a lack of technology integration. This study intends to pinpoint the primary logistics difficulties unique to the area and assess the influence of these issues on the e-commerce sector. In addition, it investigates possible solutions such as embracing advanced technologies, refining supply chain management, upgrading infrastructure, and executing effective last-mile delivery methods. This study offers valuable insights into how e-commerce businesses can address logistical challenges and enhance service quality, based on an analysis of case studies and interviews with industry experts, thereby supporting the development of e-commerce in Mysore City.

Keywords: Urban development, technology integration, infrastructure challenge, delivery efficiency, last mile delivery, industry experts

Introduction

The fast growth of online shopping has changed how stores work, making it necessary to have better and faster ways to move goods. E-commerce logistics is about getting products from sellers to customers, and it includes steps like storing items, managing stock, preparing orders, packing them, and delivering them to the final destination in Mysore. Which is becoming a bigger online shopping area because more people are moving there, the logistics process faces several problems. These include not enough good roads, heavy traffic, late deliveries, and high costs to run the business. This study looks at the particular difficulties that e-commerce logistics faces in Mysore city and examines the obstacles that stop things from running smoothly.

Objectives

- To recognize major challenges in logistics and supply chain operations within Mysore e-commerce environment.
- To examine how limitations in infrastructure affect the performance of deliveries.
- To review the efficiency of last-mile delivery and the level of satisfaction among customers.
- To study the existing logistics methods used by e-commerce companies and service providers.
- To suggest strategies for making the supply chain more reliable in Mysore.

Statement of the Problem

E-commerce has grown very quickly in India, and Mysore city is also seeing a lot of this tumor. This study looks into the different logistics problems that e-commerce businesses face in Mysore and finds out what is stopping them from running smoothly. In the end, the research will give useful solutions and advice to solve these problems, helping to Improve Logistics and build a better lasting e-commerce environment in Mysore.

Review of Literature

1. Sahay & Mohan (2003/Updated in Later Reviews) ^[5]: They Argue That the Lack of a High-Quality "Cold Chain" And Poor Road Infrastructure Significantly Increase the Cost of Logistics, Which Can Be as High As 13-14% Of India's GDP, Compared To 8-9% In Developed Nations.
2. Dutta *et al.* (2020) ^[1]: These researchers emphasize that "reverse logistics" is not just a cost center but a critical factor in customer retention. They note that Indian e-tailers struggle with the high cost of processing returned goods, which often reach the warehouse in damaged conditions.
3. Khurana (2019) ^[3]: Points Out That Cod Leads to a Higher Rate of RTO (Return to Origin), Where the Customer Refuses the Package, Resulting In the Seller Bearing Two-Way Shipping costs without a sale.
4. Jain *et al.* (2021) ^[2]: Discussed the challenges of "hyper-local logistics" and how local municipal regulations and entry taxes in certain states still create friction in seamless cross-border movement within India.
5. Prajash & gupta (2018) ^[4]: their study on the impact of GST on Indian logistics found that while it reduced "check-post" delays, the "e-way bill" system initially created a learning curve and technical glitches for smaller logistics players.

Research Methodology

Research Design: Descriptive and Exploratory.

Sample Size: 100 Respondents in Mysore city.

Data Sources:

- **Primary:** surveys of consumers, e-commerce companies, logistics providers in Mysore.

- **Secondary:** Industry reports, Government Publications, Academic Journals.

Sampling: Stratified Random Sampling of Households and Logistics firms.

Tools: Questionnaires, Interviews, and Percentage Analysis.

Data Analysis and Interpretation

1. Demographic Profile of Respondents (Consumers)

Age Group	No. of Respondents	Percentage
18-25	30	30%
26-35	35	35%
36-45	20	20%
46 & above	15	15%

Interpretation

Most online shoppers in Mysore are between 18 and 35 years old, making up 65% of the group. This shows that younger people are the main users of e-commerce in the city.

Frequency of Online Shopping

Frequency	Respondents	Percentage
Weekly	25	25%
Monthly	45	45%
Occasionally	30	30%

Interpretation

Most consumers, about 45%, shop online every month, which shows they are moderately involved with online shopping platforms and keep using them regularly.

2. Key Logistics Challenges Identified

- **Delay in delivery**

Response	Respondents	Percentage
yes	60	60%
no	40	40%

Interpretation

A large number of people, specifically 60%, faced delays in their deliveries. This shows that the last-mile delivery process in Mysore is not working as efficiently as it should be.

3. Challenges Faced by Logistics Providers in Mysore

Issues	% of Providers Reporting
Traffic Congestion	70%
Address Inaccuracy	50%
High Fuel Cost	65%
Manpower Shortage	40%

Interpretation

- Traffic jams in Mysore city make it hard to deliver packages on time.
- Higher fuel prices lead to more costs for running the business.
- Wrong delivery addresses cause delays in getting items to customers.
- A lack of enough workers slows down how quickly services can be provided.

4. Infrastructure and Technology Usage

Technology Used	% of Firms Using
GPS Tracking	80%
Warehouse Management System	60%
Automated Sorting	30%

Interpretation

Many logistics companies use GPS tracking, but the level of automation is still not very high—only about 30%—which means there is room for better technology.

Findings

- Most people who shop online (65%) are between 18 and 35 years old.
- Young adults are the main reason online shopping is growing in Mysore.
- Online shopping is more popular among people are good with technology and use the internet often.
- Most people now shop online regularly, with 70% shopping either weekly or monthly. This shows there is a steady and growing need for fast and reliable delivery services.
- 60% of people have had problems with late deliveries.
- Delivery delays are a big problem in Mysore's delivery system.
- More than half of the customers are not happy with how long it takes to get their packages. This affects how much people trust the brands and their satisfaction with the service.
- Logistics companies face many problems, especially traffic congestion and high fuel prices. These issues greatly affect the last-mile delivery process in Mysore.
- 80% of businesses use GPS tracking. Although most companies use basic digital tools like GPS, they don't use advanced automation much. This shows that many logistics businesses still rely on manual work.

Suggestions

- Improve Last-Mile Delivery Efficiency.
- Use software that helps find the best delivery routes.
- Invest in automated sorting to help with package handling.
- Use AI tools to predict how much demand there will be for goods.
- Improve how warehouses work with digital systems to make order processing faster.
- Encourage customers to give exact locations using digital maps.
- Give delivery workers better tools to find the right places.
- Use electric delivery vehicles to save on fuel.
- Plan delivery routes that use less fuel.
- Hire temporary workers during busy times.
- Provide training to help workers deliver more efficiently.
- Give workers rewards based on how well they perform.
- Improve support for customers who have delivery problems.
- This will build more trust and improve customer satisfaction.

Conclusion

Logistics companies in Mysore face serious challenges like traffic, high fuel prices, incorrect addresses, and not enough workers. Although many companies use GPS systems, they don't use advanced automation much. To improve logistics performance in Mysore companies should focus on:

- Improving last-mile delivery systems.
- Increasing use of automation and digital tools.
- Reducing operational costs.
- Improving how they manage their workers.

Enhancing customer communication. If these changes are made, logistics performance will improve, leading to faster and more reliable deliveries, lower costs, and more satisfied customers. This will help support the ongoing growth of online shopping in Mysore.

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