



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Impact Of E-Commerce Growth in The Global Logistics Industry

Kharva Bhargav, Khan Mohammed Usman

¹Post Graduate Student, ²Post Graduate Student,
¹Faculty Of Management Study,
¹Parul University, Vadodara, India

Abstract

Problems like where products are delivered and returned might have an impact on the value of e-commerce. The study published in the publication discovered a relationship between time to delivery and timeliness and flexibility. Through efficient communication, the logistics sectors can keep a close eye on what is being delivered. The e-commerce business has grown rapidly over the last ten years thanks to companies like Alibaba and Amazon, which have made it feasible for customers to shop online, even from mobile devices. As customers start making more purchases from online retailers rather than traditional brick-and-mortar stores, there is an increasing need for logistic enterprises' services in the delivery of goods and packages. Following the epidemic, e-commerce growth significantly increased in strength, according to the research. Modern technologies are being used by businesses in the logistics sector more and more to optimize their operations. Amazon has emerged as the clear market leader in e-commerce because to their creative utilization of delivery trucks and cargo planes.

Key words: E-commerce, Logistics, Delivery time, Timeliness and Flexibility.

Introduction

The emergence of e-commerce and the phenomena of digital marketplaces, commonly referred to as "The Amazon Effect," have altered customer expectations and purchasing behavior. Today's consumers demand quick, free shipping as well as affordable prices. Traditional supply chain and logistics methods are put to the test by this strict delivery schedule, and businesses are now obliged to modify their business plans in order to meet customer demand for affordable, on-demand delivery services.

The retail market is seeing an increase in the percentage of e-commerce. According to reports, e-commerce made up 14.3% of total retail sales in 2018, an increase of 15% over the previous year. By 2021, ecommerce sales are predicted to account for 17.5% of global retail sales. The logistics and transportation sector will surely be impacted by this need and exponential expansion since they would need must be ready to handle rising volumes and delivery demands.

Logistics companies can identify strategies to stay profitable and competitive in the face of industry changes by working with a reliable finance partner who has extensive understanding of the collateral and the industry.

Literature Review

1. Greve, M., Banerjee, S., and Jensen, R. (2018). the effects of growing e-commerce on logistics systems. 48(8), 787803; International Journal of Physical Distribution & Logistics Management.

Example: To better understand how the expansion of e-commerce has affected logistics networks, the study looks at how businesses like Amazon and Alibaba have increased the size of their distribution centers and improved their transportation systems in response to rising consumer demand.

2. In 2019, Lee, H., and Whang, S. An overview and research plan for e-commerce and logistics. Journal of Transportation, 58(4), 359–392.

Example: This in-depth analysis discusses the challenges that e-commerce is posing to traditional logistics providers. It also offers examples of companies using innovative logistics strategies, such as Walmart's online grocery delivery service and partnerships between retailers and outside logistics companies.

3. Yamada, T., Thompson, R. G., and Taniguchi, E. (2017). effects of e-commerce on local traffic and the operation of commercial vehicles. Transportation Business & Management Research, 24, 13–22. For instance, the study looks at how e-commerce has affected urban logistics and shows how more people are ordering things online and having them delivered to their homes, which has increased traffic for commercial vehicles and congestion in city centers.

4. Grilo, A., Pereira, G., and Araújo, A. (2020). Review and future directions of last-mile logistics for ecommerce. 23(3), 246-267, International Journal of Logistics Research and Applications.

As an illustration, the study looks at creative last-mile delivery strategies including crowd-sourced delivery models and gives instances of how businesses like Postmates and Door Dash collaborate with neighborhood couriers to speed up deliveries.

5. (2017): Bettini, D., Persona, A., Faccio, M., & Sugarbush, F. A thorough analysis and future perspectives for warehouse management in the e-commerce era. 2255-2275 International Journal of Production Research, 55 (8).

Example: The study shows how automated and robotic technologies have been installed in the warehouses of e-commerce behemoths like JD.com and Zalando to effectively manage the huge volume of small and varied orders.

6. Holcomb, M. C., and D. M. Gligor (2019). The placement and functionality of fulfilment centers in ecommerce logistics. 49(5), 472-493, International Journal of Physical Distribution & Logistics Management.

An illustration of this research's strategic placement of e-commerce fulfilment centers is provided by Amazon's network of distribution centers, which are situated close to key cities to facilitate expedited delivery.

Objective

- Examine how the rise of e-commerce has affected traditional logistical procedures.
- Analyze how innovation and technology can help satisfy the logistical demands of e-commerce.
- Examine how e-commerce has Impact global distribution and warehousing networks.
- Examine how shifting customer expectations are affecting logistical operations.
- Examine the effects of optimizing last-mile delivery in relation to the growth of e-commerce.
- Analyze the advantages and disadvantages of e-commerce-facilitated cross-border trade.

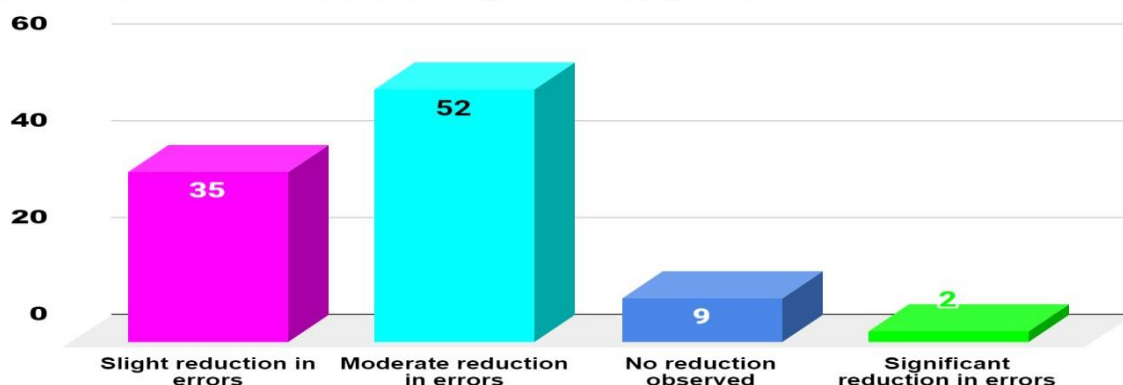
Research Methodology

A research technique is a way to approach a research problem more accurately. It might be seen as a subfield of science that examines scientific methodology. In it, we examine the various procedures a researcher follows and the rationale behind each one while examining a research problem. Research methodology describes the methods or procedures used to locate, select, handle, and examine data related to a topic. A research paper's methodology section helps the reader conduct an unbiased evaluation of the study's general validity and dependability. Data doesn't become information unless the proper methodology has been used. The research methodology includes the justification for the methods we use during the course of our investigation.

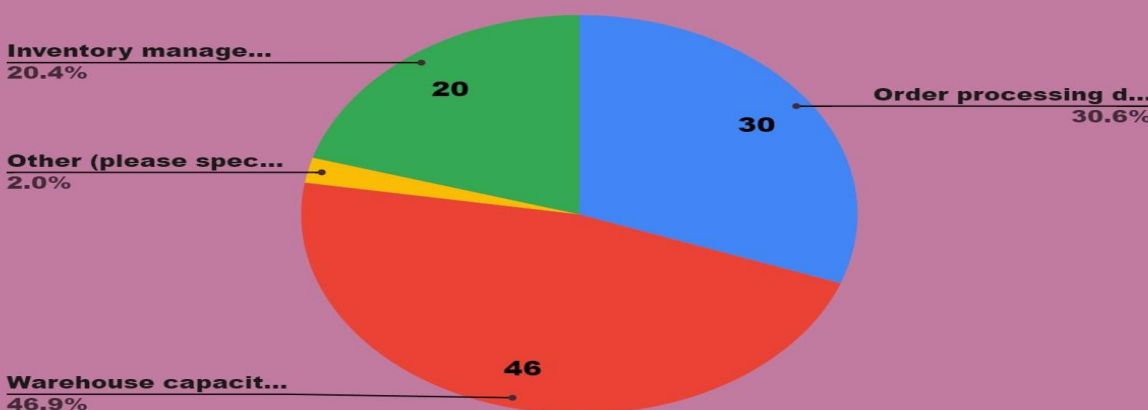
Research Design

A research blueprint is a set of instructions for gathering and analyzing data that could affect how costeffective the procedure is. In order to optimize the limited time of the exploration, it refers to planning ahead for the collection of relevant data and the techniques to be used in the analysis. **Data Collection**

In your opinion, how does the use of Automated Storage and Retrieval Systems (AS/RS) contribute to reducing errors in the picking and packing processes in the e-commerce logistics supply chain?



Can you identify specific challenges or bottlenecks within fulfillment systems that arise due to the struggle to handle the increasing number of orders in the context of ecommerce expansion?



Data Analysis

- H1: There is a significant association between age and frequency of online shopping.
- H2: There is a significant association between the frequency of online shopping and experiencing delays in the delivery of products ordered online in the past year.
- H3: There is a significant association between the type of products purchased online and the factors influencing the choice of online retailer.

Hypothesis Testing

	p	Signi- Level (p-value)	Result
Hypothesis 1	0.384969	> 0.05	Rejected
Hypothesis 2	0.088372098	> 0.05	Rejected
Hypothesis 3	0.01415	< 0.05	Accepted

Table (1) Test Result

Hypothesis 1: Since the p-value (0.385) is greater than the significance level of 0.05, we fail to reject the null hypothesis. Based on the chi-square test results, there is insufficient evidence to conclude that there is a significant association between the age of respondents and the frequency of online shopping at the 5% significance level.

Hypothesis 2: The chi-square test result ($p = 0.0883$) suggests that there is insufficient evidence to conclude that there is a significant association between the frequently do you engage in online shopping of respondents and delays in the delivery of products ordered online in the past year at the 5% significance level. Hence, this hypothesis is rejected.

Hypothesis 3: The chi-square test result ($X^2 = 0.102$, $p = 0.749$) indicates that there is insufficient evidence to conclude that there is a significant association between the Type of products purchased online and Factors influencing the choice of online retailer at the 5% significance level. Therefore, this hypothesis is accepted.

Conclusion

To sum up, e-commerce is drastically altering the way that goods are distributed. It's comparable to a massive wave in the realm of delivering goods to people. Everybody wants their online orders to arrive as soon as possible, which is driving businesses to develop quicker methods of doing so.

Smart technology is being used, and additional storage facilities are being constructed. With drones and customized delivery vehicles, even the final leg of the journey delivering the product to your door is becoming more thrilling. Thus, e-commerce is changing the way that goods are transferred from sellers to buyers globally, and this trend isn't going to stop anytime soon.

Reference

- Zeng, Z., Tian, H., Xu, X., & Shi, J. (2020). The impact of e-commerce on logistics service providers: The mediating role of logistics capabilities. *Technological Forecasting and Social Change*, 158, 120173. DOI: 10.1016/j.techfore.2020.120173
- Li, Y., & Wong, C. Y. (2020). E-commerce development and logistics infrastructure: An analysis of the Alibaba effect in China. *International Journal of Production Economics*, 223, 107520. DOI: 10.1016/j.ijpe.2019.107520
- Tölkes, M., Grønhaug, K., Hagen, A. E., & Sydnes, A. K. (2019). The Impact of E-commerce on the Norwegian Grocery Industry: A Qualitative Study of Logistics. *Procedia CIRP*, 81, 842-847. DOI: 10.1016/j.procir.2019.04.301

Gao, L., Yang, Y., & Kurnia, S. (2018). Impact of E-commerce on Logistics Service Providers: A Longitudinal Case Study in China. *International Journal of Production Economics*, 198, 172-182. DOI: 10.1016/j.ijpe.2017.12.017

Wang, X., Wang, S., & Yuan, X. (2017). Impacts of E-commerce on the Logistics Industry in China: Empirical Study Based on Grounded Theory. *International Journal of e-Education, e-Business, e-Management and e-Learning*, 7(6), 402-406. DOI: 10.17706/ijeeee.2017.7.6.402-406

Lee, C. K. M., Chan, K. W., & Tseng, S. Y. (2015). The impacts of E-commerce on E-fulfillment logistics: A resource-based view. *Transportation Research Part E: Logistics and Transportation Review*, 81, 148-161. DOI: 10.1016/j.tre.2015.06.012

Anand, A., Babbar, S., Kapoor, R., & Luthra, S. (2015). Investigating the influence of E-commerce on reverse logistics: A case of electronic industry. *International Journal of Production Economics*, 170, 444-457. DOI: 10.1016/j.ijpe.2015.06.018

Wong, J. Y., & Jiang, Y. (2015). The impact of E-commerce on express delivery industry: A case study of China. *Journal of Transportation Management*, 3(3), 46-51. DOI: 10.12783/dtssehs/icfm2015/1391