

Impact Of Logistics on Purchase Intention

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ABSTRACT

The logistics industry is an essential component of modern commerce, connecting businesses with their customers. However, many ordinary people continue to face several challenges in obtaining efficient and cost-effective delivery services. Consumers face two significant challenges: inefficient delivery services and high shipping costs. Inefficient delivery services can cause delays, lost packages, and poor customer service, resulting in consumer frustration and dissatisfaction. High shipping costs, on the other hand, can limit access to goods and make it difficult for consumers to buy products from different regions, especially in low-income communities. These issues have a significant impact on consumers' delivery experiences and may discourage them from making future purchases. The target population were consumers using online platforms to purchase products across the State of Kerala, India. Demographic information and data related to the delivery issues faced by Consumers were collected. Chi square test was done to test the association between gender and frequency of purchase. Exploratory factor analysis was used to explore the factors related to online purchase intention of consumers with the IBM SPSS .

Keyword : *Online purchase intention, Chi Square Test, Exploratory Factor analysis, Logistics, Delivery Challenges, Shipping Cost*

1. INTRODUCTION:

The modern business landscape is intricately woven with the logistics industry, an indispensable conduit that bridges the gap between businesses and their customers. The efficiency and effectiveness of delivery services within this industry play an instrumental role in shaping the overall customer experience. However, despite its crucial role, the logistics realm is plagued by challenges that impede its seamless operation, leaving ordinary consumers grappling with issues that range from tardy deliveries to soaring shipping costs. As the world becomes increasingly interconnected through online commerce, understanding the implications of these challenges is paramount. This research paper delves into one of the most pressing issues affecting online shopping today: the impact of delivery delays on consumers' intentions to make online purchases.

Among the manifold challenges faced by consumers, two loom large on the horizon - inefficient delivery services and exorbitant shipping costs. The prevalence of inefficient delivery services is a matter that has plagued the online shopping landscape for years. Delays in delivery, packages gone astray, and subpar customer service have become more than just occasional hindrances; they have become recurrent sources of exasperation and discontent for consumers. The anticipation associated with the arrival of a long-awaited purchase turns into frustration when that package fails to arrive on time or, worse yet, goes missing in transit. Such experiences mar the reputation of online retailers and cast a shadow over the convenience that online shopping promises. This erosion of trust between businesses and consumers can have profound consequences, potentially deterring customers from making future purchases.

Complementing the realm of inefficient deliveries is the issue of high shipping costs. As consumers revel in the convenience of shopping from the comfort of their homes, they are met with a stark reality when they proceed to checkout - the cost of shipping. The convenience promised by e-commerce loses some of its luster when the total cost of a purchase is significantly augmented by shipping fees. For many consumers, especially those in economically disadvantaged communities, these inflated costs can be a deterrent. The concept of accessing products from different regions, which online shopping ambitiously offers, can be financially out of reach for these

individuals. Consequently, what could have been an opportunity to bridge geographical gaps and access a plethora of goods becomes a limitation, stifling the potential of online commerce.

Both of these challenges, inefficient delivery services and high shipping costs, have a ripple effect that transcends the immediate inconvenience. Consumer experiences are at the core of the success of online businesses, and when these experiences are marred, the consequences can be far-reaching. A delivery that arrives late or not at all can sour the taste of even the most enticing product, leading to dissatisfaction that reverberates beyond that specific purchase. The cumulative effect is a hesitance to engage in future online transactions, as the consumer weighs the risk of disappointment against the allure of convenience. Likewise, the financial burden of elevated shipping costs can discourage consumers from exploring new products or indulging in impulse buys, both of which are central to the e-commerce ecosystem.

As online commerce continues its upward trajectory, it is imperative to comprehend the intricate interplay between delivery challenges and consumers' intentions to make online purchases. This research paper endeavors to illuminate this dynamic, shedding light on the nuanced ways in which delivery delays impact consumer behavior. Through a comprehensive exploration of existing literature, empirical studies, and expert insights, a deeper understanding of the factors influencing consumers' decision-making processes in the face of delivery challenges will be unveiled.

Related studies also show that tuning delivery capabilities to increase sales volume or boost price can be achieved by fine-tuning delivery performance based on customer types. (Peng & Lu, 2017). Consumer perceptions of shipping charge fairness have a significant impact on satisfaction, repurchase intention, and positive word-of-mouth outcomes for a focal firm. (Jones et al., 2019). For online retailers engaged in e-commerce, a successful transaction isn't finished when a customer completes their purchase at the checkout stage. It concludes when the ordered item is delivered to the customer's residence in a timely manner and in proper state. If the delivery is delayed, it might mark the end of the customer's future purchases. Deliveries that are delayed lower your client retention rate. In turn, late deliveries significantly reduce the lifetime value of your clients (and the money you made back on the money you spent to get the lost customers in the first place).

The logistics industry's role in facilitating modern commerce cannot be overstated. However, within its realm exist challenges that demand attention. Inefficient delivery services and high shipping costs, two prominent issues, have the potential to significantly alter consumers' online shopping experiences. The consequences of these challenges extend beyond mere inconvenience, shaping consumers' perceptions and intentions. By delving into the impact of delivery delays on online purchase intentions, this research paper aims to contribute to a more profound comprehension of this vital aspect of e-commerce, paving the way for strategies and solutions that enhance the online shopping journey for all.

1.1 OBJECTIVE OF THE STUDY

- To examine the impact of how high shipping costs and inefficient delivery services affect customers.
- To investigate the factors that impact online purchase among consumers

1.2 HYPOTHESIS

H0: There is no significant relationship between gender and frequency of online buying

H1: There is significant relationship between gender and frequency of online buying

2. LITERATURE REVIEW:

E-commerce presents suppliers with a variety of prospects to minimize the perceived geographical gap for online consumers. Suppliers can mitigate psychological obstacles to international demand by creating websites that streamline the process of locating and contrasting products and suppliers across different nations. Additionally, they can alleviate financial barriers by implementing pricing tactics that reallocate shipping expenses, and they can surmount temporal barriers by providing expedited delivery options (Kim et al., 2017). A study by Kumar et al. (2018) found that the growth of e-commerce in India was being driven by the increasing internet penetration and the growing middle class. The study also found that customers were more likely to shop online for products that were

not available in traditional brick-and-mortar stores. Another study by Singh et al. (2020) found that the rise of smartphones was also playing a role in the growth of e-commerce in India. The study found that customers were more likely to shop online if they had a smartphone. A study by Agarwal et al. (2021) found that the online purchase intention of customers was influenced by a number of factors, including the product price, the shipping costs, the product reviews, and the perceived security of the website. The cost of shipping is a major factor that influences online purchase intention. Customers are more likely to complete a purchase if the shipping costs are reasonable and transparent. However, high shipping costs can deter customers from making a purchase, especially for low-value items.

A study by Zhang et al. (2018) found that shipping costs had a significant negative impact on online purchase intention. The study found that customers were more likely to abandon their shopping carts if the shipping costs were high. Another study by Zhang and Su (2020) found that shipping costs were more important to customers than product price when making an online purchase decision. The study found that customers were willing to pay more for a product if the shipping costs were lower. A study by Wang et al. (2021) found that the perceived fairness of shipping costs also influenced online purchase intention. The study found that customers were more likely to complete a purchase if they felt that the shipping costs were fair. The rise of e-commerce has led to a growing demand for shipping delivery services. Customers are increasingly expecting fast, reliable, and affordable shipping options when making online purchases. The shipping costs and delivery services offered by an e-commerce retailer can have a significant impact on the customer's purchase intention. A study by Zhang et al. (2018) found that shipping costs had a significant negative impact on online purchase intention. The study found that customers were more likely to abandon their shopping carts if the shipping costs were high.

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3. METHODOLOGY:

Research Design: The research design adopted for the purpose of study is descriptive in nature. Likert Scale was part of the questionnaire framing. The data collected included the demographics of the respondents

Sampling method: The Study used convenience sampling method to collect data from 134 respondents. Primary data was collected through a Questionnaire. Secondary data was collected from journals and websites/related Reports on the

Sample Size: The sample size consisted of 134 people in the age group above 18 years for the purpose of the research. The respondents were all individuals who have made online purchase.

Data Collection method: A structured questionnaire designed using Google forms was used for executing this survey. The first part of the questionnaire focused on demographics data collections and questions related to online purchase intention. The second part focused on factors that influenced online purchase intentions among the consumers. The questionnaire included LIKERT scale responses.

Statistical Techniques used: The statistical techniques used included Percentage analysis, Chi Square Test and Exploratory factor analysis done in IBM SPSS v23.

4. RESULTS AND DISCUSSION

4.1 Demographic Characteristics:

The provided demographics table presents the percentage distribution of respondents based on various demographic characteristics that may influence online purchases.

Demographic characteristic	Percentage of Respondents (%)
Age Group	
Under 18	11.9
18-25	44.8
26-50	31.3
51-65	9
Above 65	4
Gender	
Male	59
Female	41
Occupation	
Employed	23.9
Unemployed	9.7
Self Employed	15.7
Student	45.5
Retired	5.2
Income	
Under 50,000	35.1
50,000-1,00,000	41.8
1,00,000-2,00,000	7.5
Above 2,00,000	15.7
Education	
Primary	1.5
Secondary	12.7
Bachelor degree	56
Master degree	26.9
Ph.D. or higher	3

Table 1: Demographics

The table includes five demographic characteristics: age group, gender, occupation, income, and education. The interpretation of the table reveals that the majority of the respondents were between 18 and 25 years old (44.8%), and 59% of the respondents identified as male. Regarding occupation, 45.5% of the respondents were students, and 23.9% were employed. In terms of income, 41.8% of the respondents had an income between 50,000 and 1,00,000, and 56% of the respondents had a bachelor's degree. These demographic characteristics provide insights into the

composition of the respondents and can help understand how different factors may influence online purchases among customers.

4.2 Frequency of Purchase

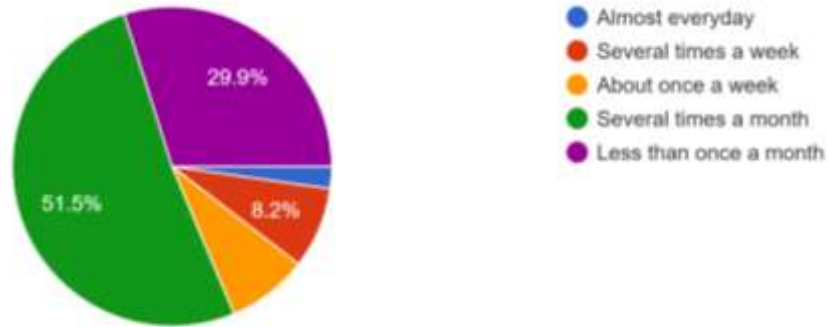


Fig 1: Frequency of Online Purchase

The pie chart (see Figure 1) shows that the majority of the respondents (51.5%) shopped online several times a month. This suggests that online shopping is now a common and regular activity for many people. The second most popular category was "about once a week" (29.9%), followed by "several times a week" (8.2%) and "less than once a month" (2.4%).

4.3 Relevance of Shipping Cost and Delivery Service on Online Purchase

How Important Is The Delivery Service And Shipping Cost For You When Making An Online Purchase?

Scale	Frequency	Percent
Extremely important	54	40.3
Important	63	47
Moderately important	11	8.2
Slightly important	4	3
Not important at all	2	1.5
TOTAL	134	100.0

Table 2: Importance of Delivery service and Shipping Cost

The importance of delivery service and shipping cost in online purchases was assessed using a Likert scale ranging from "Extremely important" to "Not important at all." The results, presented in a table, indicate the frequency and percentage distribution of responses. The interpretation of the table reveals that 40.3% of the participants rated delivery service and shipping cost as "Extremely important," while 47% rated it as "Important." These findings suggest that a significant proportion of participants consider delivery service and shipping cost to be important factors when making online purchases. The majority of respondents rated it as either "Extremely important" or "Important."

Published studies show that delivery performance dimensions such as on-time delivery rate, early delivery inaccuracy, late delivery inaccuracy, and delivery speed have varying impacts on future customer transaction quantities and unit prices. (Peng & Lu, 2017).

4.4 Online Purchase abandonment due to high Shipping Cost

Have You Ever Abandoned An Online Purchase Due To High Shipping Costs?

	<i>Frequency</i>	<i>Percent</i>
<i>Yes</i>	107	79.9
<i>No</i>	27	20.1
<i>TOTAL</i>	134	100.0

Tale 3: Abandonment of Online Purchase

The results of this survey suggest that businesses should be mindful of the shipping costs they charge for online purchases. High shipping costs can lead to online purchase abandonment, which can result in lost sales. Businesses may want to consider offering free shipping or discounted shipping on certain items to reduce the likelihood of online purchase abandonment.

4.5 Willingness to pay higher Shipping Charges by Consumers

How Much Are You Willing To Pay For Shipping On An Online Purchase?

	<i>Frequency</i>	<i>Percent</i>
<i>Free shipping</i>	29	21.6
<i>Up to 50 Rs</i>	49	36.6
<i>50-100 Rs</i>	40	29.9
<i>100-150 Rs</i>	12	9

More than 150 Rs	4	2.9
TOTAL	134	100.0

Table 4: Willingness for Payment for Shipping

The table shows that 29 (21.6%) respondents are willing to pay nothing for shipping, 49 (36.6%) are willing to pay up to 50 Rs, 40 (29.9%) are willing to pay 50-100 Rs, 12 (9%) are willing to pay 100-150 Rs, and 4 (2.9%) are willing to pay more than 150 Rs for shipping. The majority of respondents (21.6 + 36.6 = 58.2%) are willing to pay up to 100 Rs for shipping. This suggests that most people are willing to pay a reasonable amount for shipping, but they are not willing to pay a lot of money for it. The fairness of shipping charges influences online shoppers' selection of a retailer and subsequent purchase behaviour. (Jones et al., 2019).

4.6 GENDER * FREQUENCY OF ONLINE BUYING

H0: There is no significant relationship between gender and frequency of online buying

H1: There is significant relationship between gender and frequency of online buying

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.465 ^a	4	.483
Likelihood Ratio	3.715	4	.446
N of Valid Cases	134		

Table 5: Chi Square Test

The chi-square statistic was 3.465, which is below the critical value of 9.488. The p-value was 0.483, which is greater than the significance level of 0.05. Therefore, we fail to reject the null hypothesis. In other words, there is no significant relationship between gender and frequency of online buying. This suggests that the frequency of online buying is not affected by gender.

4.7 Exploratory Factory Analysis: Factors Contributing to Online Purchase intention

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.729
Bartlett's Test of Sphericity	Approx. Chi-Square	329.278
	df	21
	Sig.	.000

Table 6: KMO and Bartlett's Test

It assesses the proportion of variance in the variables that might be caused by underlying factors. In this case, the KMO value in 0.729 which indicates that the data suitable for factor analysis

	Component	
	1	2
How satisfied are you with the following factors with your online purchase? [Shipping time]	.869	.090
How satisfied are you with the following factors with your online purchase? [shipping cost]	.840	-.006
How satisfied are you with the following factors with your online purchase? [Timely delivery]	.737	.219
How satisfied are you with the following factors with your online purchase? [Price of the product]	.555	.401
How satisfied are you with the following factors with your online purchase? [Availability of variety products]	-.056	.882
How satisfied are you with the following factors with your online purchase? [Customer service]	.173	.839
How satisfied are you with the following factors with your online purchase? [Product quality]	.302	.690

Table 7: Rotated Component Matrix

The Rotated Component Matrix shows the relationship between the variables and the factors extracted. In this analysis, two factors were extracted using iterated principal axis factor extraction with varimax rotation. The factors were named based on the variables that had the highest factor loadings. Factor 1: This factor is related to the satisfaction with shipping and delivery, as well as the price of the product. The variables that had high factor loadings on this factor were "Shipping time," "Shipping cost," "Timely delivery," and "Price of the product." Previous studies have highlighted variables of delivery cost and delivery speed to influence the online purchase intention among consumers (Bucko, J. et al. , 2018, Wang, Y. et al. , 2023). Another study by the University of California, Berkeley (Kwon, Lee, & Kim, 2022) found that consumers are willing to pay a premium for faster delivery.

Factor 2: This factor is related to the satisfaction with the variety of products and customer service. The variables that had high factor loadings on this factor were "Availability of variety products" and "Customer service." Related previous studies have mentioned that convenience, and customer service in influencing online shopping intention (Park & Kim, 2003, El Moussaoui & Benbba ,2023)

CONCLUSION

This research paper examined factors that impacted the online shopping intentions of consumers. The results showed that high shipping costs and inefficient delivery services can have a negative impact on customer satisfaction and online purchase intention. This suggests that businesses should be mindful of the shipping costs they charge for online purchases. Also, high shipping costs can lead to online purchase abandonment, which can result in lost sales. The research also found that most people are willing to pay a reasonable amount for shipping, but they are not willing to pay a lot of money for it. The outcome of Chi-square test suggested that the frequency of online buying is not affected by gender. The investigation points that businesses should focus on providing good shipping and delivery services, competitive prices, a wide variety of products, and excellent customer service in order to improve customer satisfaction and online purchase intention. Exploratory factor analysis was able to generate two factors, namely- Shipping Costs and Customer Service, as the outcome which stressed the need of organisation involved in online business to look into the same. The study only looked at a few factors that influence online purchase intention. Future research could be interesting to see if other factors, such as social media or word-of-mouth, also play a role.

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