

THE ROLE OF LOGISTICS IN DRIVING CUSTOMER SATISFACTION: AN EMPIRICAL INVESTIGATION IN BANGLADESH

Imran Ahmed, A.F.M Fazle Rabbi, Mst. Jannat Ara Samira

Jatiya Kabi Kazi Nazrul Islam University

imranahmed.jkknui@gmail.com

ABSTRACT

Consumer expectations and behaviors have been substantially altered by the rapid increase in e-commerce worldwide, including in Bangladesh. Logistics has emerged as a critical determinant of consumer satisfaction as online shopping become more popular due to its convenience, variety, and competitive pricing.

Purpose: The objective of this study is to examine the impact of logistics on the contentment of Bangladeshi online shoppers, with a particular emphasis on the quality of service, timing, accuracy, and overall convenience of delivery.

Methodology/design/approach: A structured survey was implemented to collect data from 430 respondents in Bangladesh, representing a variety of demographics, by a quantitative research methodology. SPSS version 27 was employed to analyze the collected data, and descriptive statistics and one-sample t-tests were implemented to assess the hypotheses.

Findings: Logistics elements including prompt delivery, secure and intact delivery, customer service efficiency in addressing delivery issues, order tracking, and convenient payment alternatives significantly affect customer satisfaction. Bangladeshi customers value logistics service reliability and efficiency, with delivery convenience being a key driver of

satisfaction, according to the report. Online shoppers also benefit from reliable product information, order status, and customer service.

Research limitations/implications: Several limitations must be addressed in this study. Due to its local availability, its use may be limited. Self-reported data may be biased and inaccurate. The cross-sectional study collects data at one time. Despite these restrictions, Bangladeshi e-commerce companies benefit from this research. It shows how logistics can exceed customer expectations and build loyalty. Bangladeshi e-commerce enterprises can strengthen their logistics operations to compete and satisfy customers. Future research should examine how logistics technology affects consumer happiness in the ever-changing e-commerce market.

Value/originality: This study enhances the current body of literature by identifying and analyzing the precise logistics factors that influence customer satisfaction in the context of Bangladeshi online purchasing. This theoretical framework is based on the Resource-Based View (RBV), Supply Chain Integration (SCI), Customer Relationship Management (CRM), Lean Supply Chain Management, and Agile Supply Chain Management, all of which emphasize the significance of customer-centric logistics strategies and efficient resource management.

Keywords: Logistics; Consumer Satisfaction; Supply Chain Management; Consumer Behavior; Online Shopping

1. INTRODUCTION

Consumers' behaviors and expectations have been dramatically transformed on a global scale as a result of the rapid expansion of e-commerce, which includes Bangladesh. The ease of use, extensive selection of products, and cheap pricing offered by online shopping platforms have contributed to their growing popularity. There has been a significant shift away from conventional retailers that are made of brick and mortar and toward online markets as a consequence of this outcome. Nevertheless, in addition to these benefits, the logistics of online shopping are a crucial factor in determining the level of happiness experienced by each customer. By ensuring that deliveries are completed on time, that products are readily available, and that returns are handled efficiently, effective logistics management plays a critical part in ensuring that these things happen. Building and sustaining the trust and loyalty of customers requires these factors to be present.

Since Bangladesh faces several unique obstacles, including inadequate infrastructure, excessive traffic, and widespread geographic distribution, logistics plays an extremely important part in the world of online shopping for Bangladeshi consumers. Because of these considerations, delivery times and service quality are significantly impacted, which in turn affects the level of satisfaction experienced by customers. E-commerce companies in

Bangladesh really need to have a solid understanding of the influence that logistics has on the shopping habits and levels of contentment of online customers. Because of this insight, they will be able to improve their operations and have more satisfying interactions with their customers.

Prior studies have emphasized the significance of logistics in the worldwide e-commerce industry. Research has indicated that the efficiency of logistics has a significant impact on customer satisfaction, which in turn influences their likelihood of making repeat purchases and overall loyalty (Esper et al., 2003). According to (Rao et al., 2011), customers have a better overall experience when logistics operations are streamlined since it can result in cost savings, faster delivery times, and enhanced service quality.

When it comes to e-commerce enterprises, the ability to effectively manage logistics is a critical advantage that enables them to differentiate themselves in a market that is extremely competitive (Agatz et al., 2008). In addition, a study conducted by (Yang et al., 2011) suggests that customers' satisfaction with online shopping is greatly impacted by their perception of the efficiency of the logistics process, including the speed and accuracy of order fulfillment.

Research conducted in the South Asian region, particularly in Bangladesh, has highlighted the significance of logistics in determining the success of e-commerce ventures (Ahmed, 2024). Furthermore, (Chiu et al., 2011) have underscored the challenge for multichannel services in effectively managing logistics to discourage cross-channel free-riding behavior. (Xing et al., 2011) conducted a review of the interface that exists between retailers and logistics service providers. In their findings, they emphasized the importance of smooth coordination in order to meet the expectations of consumers. In their study, (Hübner et al., 2016) explored the importance of distribution systems in omni-channel retailing. They emphasized the crucial role of integrated logistics strategies in improving customer satisfaction.

Specifically, the purpose of this study is to investigate the practical implications that logistics have on the levels of satisfaction experienced by online buyers in Bangladesh. This study intends to provide useful insights for businesses involved in e-commerce in Bangladesh by investigating the behavior of consumers and the degrees of satisfaction they experience in connection to the performance of logistics organizations. It is anticipated that the findings would provide useful insights into the key aspects that affect customer happiness in the logistics industry, as well as offer practical recommendations to strengthen logistics tactics and improve the overall shopping experience. We will delve into the relevant literature on logistics and customer satisfaction in the following sections. We will also provide an outline of the research methodology, present the empirical findings, and investigate the implications for firms that are involved in e-commerce in Bangladesh. By conducting an in-depth investigation, the purpose of this study is to improve the present understanding of the

landscape of online shopping in Bangladesh. The particular challenges and opportunities that are present in this expanding sector will be brought to light by this examination.

1.1 Objectives Of The Study

The primary objective of this research is to investigate the impact of logistics on customer satisfaction among Bangladeshi online shoppers. Specifically, the study aims to:

- Identify key logistics factors that influence customer satisfaction.
- Examine the relationship between logistics service quality and overall customer satisfaction.
- Analyze the behavioral patterns of Bangladeshi online shoppers in response to logistics services.

1.2 Research Questions And Hypothesis

To achieve the above objectives, the research will address the following questions:

1. What are the key logistics factors that influence customer satisfaction among Bangladeshi online shoppers?
2. How does the quality of logistics services affect overall customer satisfaction?
3. What are the specific behaviors and expectations of Bangladeshi online shoppers regarding logistics services?

The study will also try to answer the following hypothesis:

H1: Timely delivery of the online order has a positive influence on consumer satisfaction.

H2: Secure and intact delivery of online orders enhanced consumer satisfaction.

H3: Effective resolution of delivery issues by customer service has a positive impact on consumer satisfaction.

H4: Availability of order tracking and updates positively influence consumer satisfaction.

H5: Convenient and secure payment options have a positive impact on consumer satisfaction.

H6: Easy access to order status and delivery information has an impact on overall consumer satisfaction.

H7: Accurate and clear product information positively affects consumer satisfaction.

H8: Ease of contracting with customer support positively influences consumer satisfaction.

H9: The overall convenience of the delivery process of online shopping malls significantly contributes to consumer satisfaction.

2. LITERATURE REVIEW

Extensive research has been conducted on the impact of logistics on customer satisfaction in e-commerce, emphasizing its crucial role in shaping customer experiences and behaviors. In the e-commerce context, logistics covers a wide range of activities, such as order processing, warehousing, transportation, and last-mile delivery. Every single one of these activities has a crucial impact on the perception of service quality by customers. A study conducted by (Esper et al., 2007) highlights the importance of delivering orders on time and with reliability for online shoppers. Failing to meet delivery deadlines can result in considerable customer dissatisfaction and negative word-of-mouth. In a study conducted by (Rao et al., 2011), the importance of order accuracy in maintaining customer satisfaction was highlighted. They stressed the significance of delivering the correct items in the expected condition to ensure high levels of customer satisfaction. Mistakes in fulfilling orders, like sending the wrong items or delivering damaged goods, not only leave customers frustrated but also raise the chances of returns and complaints, which can be quite expensive for retailers.

Efficient logistics plays a crucial role in ensuring customer satisfaction in the realm of e-commerce. It covers every step of the process, starting from order fulfillment and extending all the way to timely delivery (Rashid & Rasheed, 2024). Efficient logistics management plays a crucial role in ensuring that customers receive their products promptly. This is vital for maintaining customer loyalty and improving the overall shopping experience (Liu et al., 2023). In the context of Bangladesh, where infrastructural challenges and traffic congestion can lead to frustrating delays, the smooth and effective management of logistics operations becomes even more vital in order to meet customer expectations.

Customer satisfaction is substantially determined by the efficiency of delivery, which is a critical component of logistics. Customers are considerably more inclined to be satisfied and to conduct subsequent transactions when orders are delivered promptly (Liu et al., 2023).

In urban areas such as Dhaka, there is an increasing demand for rapid delivery in Bangladesh. In these regions, online consumers have developed an expectation of same-day or next-day delivery options (Onik et al., 2021). Nevertheless, the actual situation frequently disappoints due to practical difficulties, emphasizing the need for improved delivery infrastructure and strategies.

Consistency and accuracy are key factors in logistics reliability. It entails ensuring that deliveries are made on time, with the correct product in excellent condition. This level of dependability is crucial in maintaining customer satisfaction (Davis, 2006). Reliable delivery services are of utmost importance to Bangladeshi online shoppers. Any delays or inaccuracies can result in customer dissatisfaction and a loss of trust (Kabir et al., 2021). Ensuring the dependability of delivery services is of utmost significance in a market like Bangladesh, where customers may face limited avenues for resolving any problems that may arise with their orders.

Customer satisfaction can be greatly influenced by the cost of delivery. Customers frequently consider the price of delivery in relation to the ease of online shopping (Cao et al., 2020). In Bangladesh, where price sensitivity is a significant consideration, the cost of delivery plays a crucial role in customers' decision-making process when it comes to making a purchase (Saha et al., 2020). Research has indicated that providing complimentary or affordable delivery choices can greatly improve customer satisfaction and foster repeat business (Zhu et al., 2023).

The quality of service in logistics is of utmost importance when it comes to customer satisfaction. Factors like effective communication, excellent customer service, and efficient handling of returns all contribute to ensuring a positive experience for customers (Grigoroudis et al., 2013). In Bangladesh, where online shopping is still in its early stages, the key to gaining customer trust and loyalty lies in offering top-notch logistics services (Amin et al., 2024). Maintaining open lines of communication during the delivery process is crucial to providing a satisfactory customer experience. This includes keeping customers informed about the status of their orders and promptly addressing any inquiries they may have.

There is an increasing amount of literature that emphasizes the significance of information transparency in logistics. According to (Lin et al., 2023), keeping customers informed about their order status in real-time and providing regular updates can greatly improve customer satisfaction by alleviating anxiety and fostering trust. Having transparency in logistics not only enhances the perceived reliability of the service but also empowers customers to make better plans and manage their expectations more effectively. In addition, the way products are delivered plays a crucial role in determining customer satisfaction (Lin et al., 2023).

The performance of logistics, especially in the field of e-commerce, is complex and involves various aspects such as the speed of delivery, reliability, cost, and the overall quality of service. Various studies have shown that these factors play a crucial role in shaping the customer experience and have a significant impact on satisfaction levels. A study conducted

by (Aljohani, 2024) emphasizes the importance of last-mile delivery quality in determining customer satisfaction in online retail. According to the research findings, it is crucial to provide delivery services that are both prompt and precise. Any delays or mistakes in the delivery process can result in customer dissatisfaction and possibly push them toward rival companies (Aljohani, 2024).

In the context of Bangladesh, the efficacy and reliability of logistics services are especially important because of the country's infrastructure's ongoing development. (Saha et al., 2020) underscore the significance of delivery efficacy to Bangladeshi consumers, which encompasses the speed and precision of deliveries. Their research indicates that consumers are prepared to pay a premium for delivery services that are more dependable and efficient, emphasizing the direct correlation between customer satisfaction and delivery performance (Saha et al., 2020).

Additional research conducted by (Choi et al., 2019) supports these findings, showing that the quality of logistics services, particularly in terms of delivery, has a significant influence on customer satisfaction and repeat purchasing behavior. Their study, conducted in China, offers valuable insights that are applicable to the Bangladeshi market as well, considering the comparable e-commerce dynamics in developing Asian countries. Providing customers with high-quality information, ensuring accurate orders, and delivering excellent customer service are all crucial factors that impact overall satisfaction (Choi et al., 2019).

Efficient logistics plays a vital role in ensuring customer satisfaction in the booming e-commerce industry of Bangladesh. With the rapid expansion of online shopping, the performance of logistics services will have a significant impact on how customers view and interact with businesses. The efficiency, reliability, cost-effectiveness, and quality of these services will be crucial factors in shaping customer perceptions and behaviors. Future research should prioritize the development of fresh logistics strategies that tackle the distinctive hurdles of the Bangladeshi market, including infrastructure limitations and the demanding expectations of customers for speedy delivery.

3. THEORETICAL FRAMEWORK

3.1 Resource-Based View Theory (1991)

According to the Resource-Based View (RBV) hypothesis, the ability of a company to effectively manage resources that are precious, scarce, inimitable, and non-substitutable leads to the development of a competitive advantage for the company. In the context of supply chain management, these resources include modern information systems, excellent supplier relationships, and efficient logistics. All of these resources have the potential to contribute to increased customer satisfaction by improving the quality of service and the responsiveness of the business (Barney, 1991).

3.2 Supply Chain Integration Theory(2010)

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The theory known as Supply Chain Integration (SCI) emphasizes the seamless coordination and collaboration that occurs between various entities that are part of the supply chain. These entities include retailers, manufacturers, and suppliers. Effective integration improves information exchange, cuts down on lead times, and guarantees that customer requests are satisfied in an efficient manner, all of which contribute to an increase in customer satisfaction. It is especially crucial to consider this idea in marketplaces that are both complicated and dynamic (Flynn et al., 2010).

3.3 Customer Relationships Management Theory (2005)

The theory of customer relationship management, also known as CRM, focuses on the methods and procedures that businesses implement in order to manage the interactions and data of their customers across the whole customer lifecycle. It is essential to have customer relationship management (CRM) in supply chain management in order to comprehend the requirements of customers, forecast their demand, and offer individualized services, all of which contribute to increased levels of customer satisfaction (Payne & Frow, 2005).

3.4 Lean Supply Chain Management Theory (1997)

The philosophy of Lean Supply Chain Management focuses on reducing waste throughout the supply chain in order to enhance both efficiency and the level of pleasure experienced by customers. Lean supply chain management (SCM) improves customer satisfaction by delivering value in a more efficient manner. This is accomplished by streamlining operations, lowering lead times, and enhancing product quality. The foundation of this approach is found in the more comprehensive Lean philosophy, which places an emphasis on the creation of value and the reduction of waste (Womack & Jones, 1997).

3.5 Agile Supply Chain Management Theory (2000)

The significance of adaptability and rapid response in the supply chain to effectively address dynamic customer requirements is underscored by the theory of Agile Supply Chain Management. Customer satisfaction is enhanced by a supply chain that is adaptable to market fluctuations, which ensures the availability of the appropriate products at the appropriate time. This method is particularly important in industries that experience substantial fluctuations in demand (Christopher, 2000).

4. RESEARCH METHODOLOGY

Research methodology, which refers the design of the research, data acquisition techniques, sample selection, and data analysis methods, is a methodical approach to conducting a study. A complex process, research is dependent on the generation of new ideas and the application of prior knowledge to resolve specific questions and challenges.

The main objective of this study was to investigate the impact of logistics factors on improving customer satisfaction. The study analyzed different logistics factors that affect customer satisfaction, such as the speed of delivery, accuracy of orders, quality of customer service, and costs associated with delivery. A one-sample t-test was used to test the hypothesis and evaluate the impact of these logistics factors. This statistical test was instrumental in determining the significance of the observed effects, thus confirming the study's findings and hypotheses.

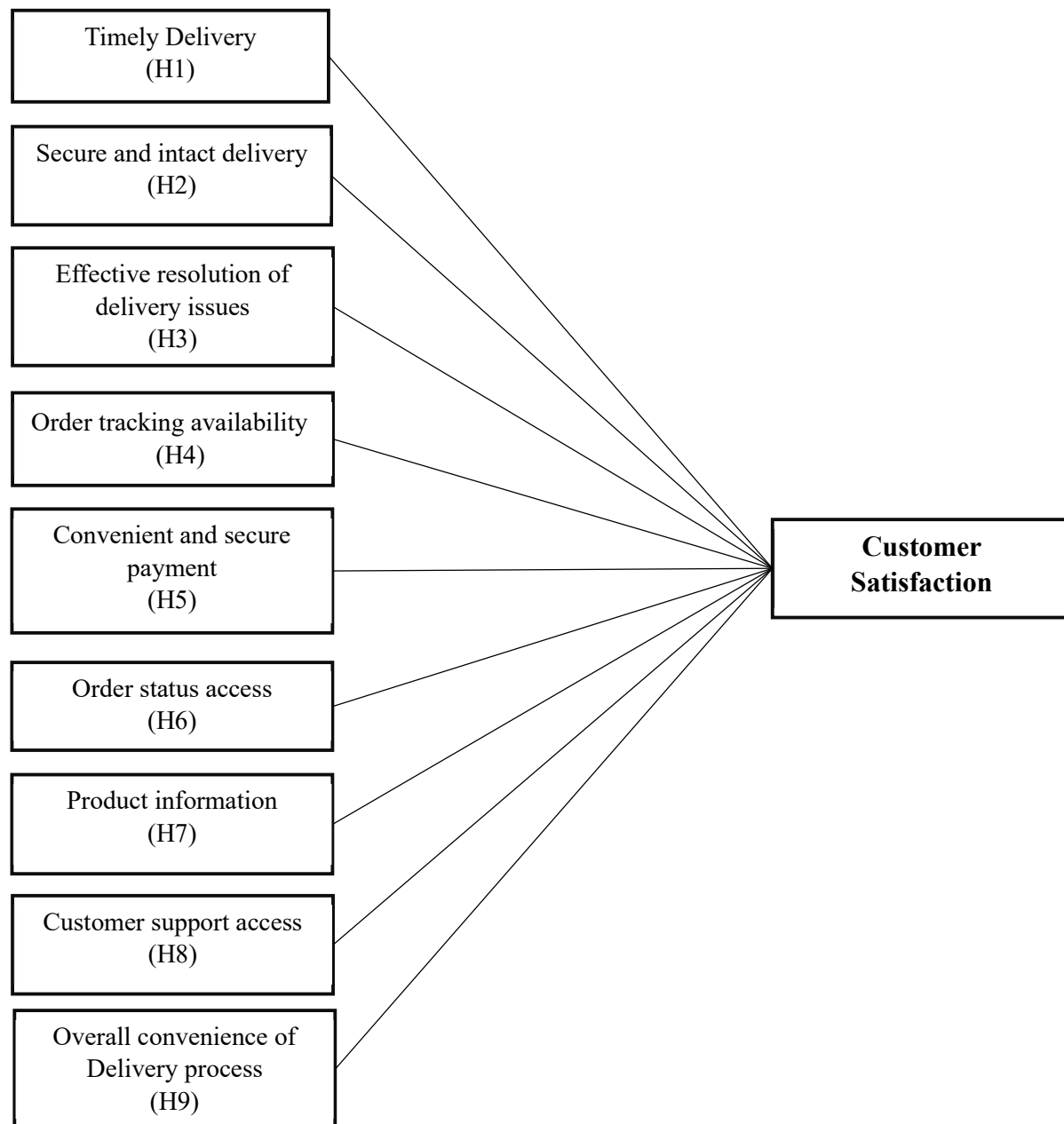
4.1 Data collection and sampling

For this study, a structured questionnaire is utilized to gather primary data for analysis. Surveys are the primary method of data collection for this study. Data is gathered from individuals of various age groups and occupations in Bangladesh. Data was collected by distributing a structured survey questionnaire online. The questionnaire was distributed using Google Forms. We gathered 430 responses from a wide range of professionals and individuals of different age groups in Bangladesh.

4.2 Data analysis

This study employed quantitative method for data analysis, relying on responses gathered from a structured questionnaire. The data was analyzed using SPSS version 27, with a particular emphasis on the demographic characteristics of the respondents and the influence of logistics on consumer satisfaction. The data was summarized and interpreted using descriptive analysis, which included measures such as frequencies, percentages, means, and standard deviations. Clear insights into the impact of logistics factors on customer satisfaction among various demographic groups in Bangladesh were obtained through this methodology.

Graphical model with hypothesis



5. DISCUSSION OF FINDINGS

This chapter presents survey data in an organized manner regarding the function and the role of logistics of online shopping on the customer satisfaction.

5.1 Data Reliability:

Table 01: Data reliability check

Cronbach's Alpha Value	Number of Variables
0.785	9

Source: SPSS 27

One of the most often used statistical methods for measuring the consistency of data is called Cronbach's Alpha. This method is used to ensure the validity and dependability of a dataset. It is well established that the lowest acceptable value is $\alpha = 0.70$. There is a greater degree of dependability and consistency in the dataset when the Cronbach's Alpha value is higher. In this particular investigation, the alpha value is 0.785, which is higher than the minimum criteria. This indicates that there is a high level of internal consistency among the items, which means that the dataset is genuine and trustworthy.

5.2 Descriptive statistics:

The number of respondents and their demographic details who took part in the survey are displayed in Table 1. The respondents in the survey came from a variety of backgrounds, including different age groups and vocations. A total of 430 legitimate participants answered 15 questions from the structured survey.

Table 02: Respondents based on their demographic characteristics

Descriptive Statistics			
		Frequency	Percent
Gender	Male	241	56.0
	Female	175	40.7
	Prefer not to say	14	3.3
Age	Less than 20	25	5.8
	21-30	262	60.9
	31-40	101	23.5
	41-50	41	9.5
	More than 50	1	0.2
Education Level (Current Study Level)	SSC	4	0.9
	HSC	22	5.1
	Graduation	287	66.7
	Masters	95	22.1
	PhD	20	4.7
	Others	2	0.5
Job Field	Student	237	55.1
	Staff/Employee	102	23.7
	Housewife	33	7.7
	Self-employed	57	13.3
	Others	1	0.2
Frequency of Monthly Online product Purchases	Not at all	30	7.0
	1-2 times	261	60.7
	3 times	58	13.5
	More than 3 times	81	18.8
	Less than 10,000	183	42.6
	10,001 - 20,000	79	18.4

Monthly Income	20,001 - 50,000	97	22.6
	50,001 - 100,000	56	13.0
	More than 1 Lakhs	15	3.5

Source: Survey Questionnaire

The respondents' demographic features indicate a heterogeneous population. Among the respondents, the male population constituted the majority, making up 56.0% of the sample. The female population accounted for 40.7%, while 3.3% chose not to reveal their gender. The age distribution of the respondents was primarily concentrated in the 21-30year age group, which accounted for 60.9% of the total. Subsequently, those between the ages of 31 and 40 accounted for 23.5% of the population, while a smaller fraction, aged 41-50 years, made up 9.5%. A minority of participants fell into the age categories of under 20 years (5.8%) or over 50 years (0.2%).

The majority of respondents (66.7%) were graduates, with a substantial number of them holding a Master's degree (22.1%) when education levels were taken into account. A small number of individuals were pursuing PhDs (4.7%), while a smaller number were either at the SSC (0.9%) or HSC (5.1%) level or identified with other educational categories (0.5%). The majority of respondents (55.1%) were students, followed by employees (23.7%), self-employed individuals (13.3%), and caretakers (7.7%). Only one respondent fell into the "other" category

In terms of the frequency of online product purchases, a significant 60.7% of respondents reported making 1-2 purchases per month, while 18.8% made more than three purchases per month through the internet. A smaller percentage of respondents made purchases three times a month (13.5%) or not at all (7.0%). Finally, the group with the lowest monthly income—less than 10,000—accounted for 42.6% of the total. The next largest group—those earning between 20,001 and 50,000—accounted for 22.6% and 10,001 to 20,000—accounted for 18.4%. A smaller proportion of respondents earned between \$50,000 and \$100,000 (13.0%) and over \$1 million (3.5%).

The frequencies and percentages of respondents about the variables related to the significance of motivating factors are displayed in the tables below.

Table 03: Timely delivery of the online order has positive influence on consumer satisfaction.

Timely delivery of the online order has positive influence on consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	2	.5
Disagree	44	10.2
Neutral	26	6.0
Agree	115	26.7
Strongly agree	243	56.5
Total	430	100%

The study shows that online order delivery time greatly affects customer happiness. 56.5% strongly agree that quick delivery improves their satisfaction, whereas 26.7% agree, emphasizing the importance of promptness in online purchase. 6.0% were neutral, and 10.2% disagreed, suggesting that factors other than delivery time may affect their pleasure more. Only 0.5% strongly disagreed, indicating little disagreement to the premise that quick delivery improves satisfaction. Since most consumers value timely delivery, online retailers must ensure it to improve customer happiness.

Table 04: Secure and intact delivery of online order enhanced consumer satisfaction.

Secure and intact delivery of online order enhanced consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	1	.2
Disagree	31	7.2
Neutral	30	7.0
Agree	130	30.2
Strongly agree	238	55.3
Total	430	100%

The study shows that safe and intact online order delivery boosts customer satisfaction. Most respondents (55.3%) believe that receiving orders safely and intact increases their pleasure. In addition, 30.2% agree, emphasizing the importance of delivery quality in online shopping. 7.0% were neutral, meaning they did not strongly agree or disagree with this element. However, 7.2% disagreed, suggesting that other factors may affect satisfaction more than

delivery security. 0.2% highly disagreed, exhibiting little dissent. These findings emphasize the need of secure and intact order delivery for online shops to sustain customer happiness.

Table 05: Effective resolution of delivery issues by customer service has positive impact on consumer satisfaction.

Effective resolution of delivery issues by customer service has positive impact on consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	1	.2
Disagree	46	10.7
Neutral	29	6.7
Agree	149	34.7
Strongly agree	205	47.7
Total	430	100%

Customer satisfaction is significantly increased by customer service delivery resolution, according to the research. 47.7% strongly believe that fast and effective delivery problem resolution improves online purchase happiness. Also, 34.7% agree, underlining the necessity of responsive customer service in resolving concerns. A smaller group, 6.7%, was neutral on this issue. 10.7% disagreed, demonstrating that satisfaction may depend on variables other than issue resolution. With 0.2% strongly disagreeing, opposition was low. These findings emphasize the importance of customer service in resolving delivery concerns to boost online retail customer happiness.

Table 06: Availability of order tracking and updates positively influence consumer satisfaction.

Availability of order tracking and updates positively influence consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	3	.7
Disagree	37	8.6
Neutral	39	9.1
Agree	134	31.2
Strongly agree	217	50.5
Total	430	100%

The data reveals that order tracking and updates boost customer happiness. 50.5% strongly agree that monitoring information and updates improve online shopping satisfaction. Another 31.2% agree, emphasizing delivery openness and real-time information. Some 9.1% were neutral, indicating no strong preference, while 8.6% disagreed, suggesting tracking availability may not be as important to them. 0.7% highly disagreed, exhibiting little opposition. Order monitoring and updates are crucial to a good online shopping experience, as most customers like being able to track their orders.

Table 07: Convenient and secure payment options has positive impact on consumer satisfaction.

Convenient and secure payment options has positive impact on consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	3	.7
Disagree	28	6.5
Neutral	30	7.0
Agree	144	33.5
Strongly agree	225	52.3
Total	430	100%

According to the study, convenient and secure payment alternatives greatly affect online buying satisfaction. 52.3% strongly believe that easy and secure payment methods improve their satisfaction, while 33.5% agree, emphasizing the importance of payment security and ease in the purchasing experience. Only 7.0% were neutral, and 6.5% disagreed, suggesting that other variables may be more significant to them. Little opposition was shown by 0.7% vehemently disagreeing. These results show that online shops must offer secure and easy payment alternatives to keep customers happy.

Table 08: Easy access to order status and delivery information has an impact on overall consumer satisfaction.

Easy access to order status and delivery information has an impact on overall consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	3	.7
Disagree	26	6.0
Neutral	24	5.6
Agree	123	28.6
Strongly agree	254	59.1
Total	430	100%

The study shows that accessible order status and delivery information greatly affects consumer happiness. Online buying is more satisfying for 59.1% of respondents who can readily check order status and delivery details. Consumers prefer transparency and accessibility, as 28.6% agree. 5.6% remained indifferent, while 6.0% disagreed, suggesting some shoppers may value other aspects of the buying experience. Insignificant opposition was 0.7% strongly disagreeing. To promote a great purchasing experience, these studies emphasize the need of easy order and delivery information availability.

Table 09: Accurate and clear product information positively affect consumer satisfaction.

Accurate and clear product information positively affect consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	6	1.4
Disagree	28	6.5
Neutral	30	7.0
Agree	129	30.0
Strongly agree	237	55.1
Total	430	100%

The analysis reveals that accurate and clear product information boosts online buying pleasure. Transparency and correctness in product descriptions are important, as 55.1% of respondents strongly believe that clear and exact product specifications contribute to their happiness and 30.0% agree. 7.0% were neutral, indicating no significant preference, and

6.5% disagreed, suggesting other variables may be more important. Only 1.4% strongly disagreed, demonstrating little dissent. These studies emphasize the necessity of extensive and accurate product information to improve online shopping customer satisfaction.

Table 10: Ease of contracting with customer support positively influence consumer satisfaction.

Ease of contracting with customer support positively influence consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	3	.7
Disagree	32	7.4
Neutral	23	5.3
Agree	143	33.3
Strongly agree	229	53.3
Total	430	100%

Customer satisfaction is strongly influenced by customer support accessibility. Strong majority (53.3%) feel that easy customer help improves online buying satisfaction. 33.3% agree, underlining the necessity of a responsive and accessible customer service. Some consumers may value other factors more than this issue, since 5.3% were neutral and 7.4% disagreed. Insignificant opposition was 0.7% strongly disagreeing. These data demonstrate that simplified customer support communication is essential for customer happiness.

Table 11: The overall convenience of the delivery process of the online shopping malls significantly contributes to consumer satisfaction.

The overall convenience of the delivery process of the online shopping malls significantly contributes to consumer satisfaction.		
Response	Frequency	Percentage (%)
Strongly disagree	1	.2
Disagree	27	6.3
Neutral	21	4.9
Agree	107	24.9
Strongly agree	274	63.7
Total	430	100%

According to the data, shipping convenience boosts customer happiness. An easy delivery method boosts online purchase satisfaction for 63.7% of respondents. Another 24.9% agree, emphasizing the significance of a seamless delivery. 4.9% were neutral, indicating no strong preference, while 6.3% disagreed, suggesting they favor other factors. Little opposition was shown by 0.2% vehemently disagreeing. These data show that shipping convenience and efficiency are essential for online purchasing customer satisfaction.

5.3 Testing Hypothesis

The one-sample t-test was employed to analyze the role of logistics in driving customer satisfaction. The one-sample t-test is employed to determine whether the mean of a single variable deviates from a predetermined constant.

Table 13: One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error
Timely delivery of the online order has positive influence on consumer satisfaction.	430	4.29	.999	.048
Secure and intact delivery of online order enhanced consumer satisfaction.	430	4.33	.908	.044
Effective resolution of delivery issues by customer service has positive impact on consumer satisfaction.	430	4.19	.980	.047
Availability of order tracking and updates positively influence consumer satisfaction.	430	4.22	.978	.047
Convenient and secure payment options has positive impact on consumer satisfaction.	430	4.30	.909	.044
Easy access to order status and delivery information has an impact on overall consumer satisfaction.	430	4.39	.894	.043
Accurate and clear product information positively affect consumer satisfaction.	430	4.31	.956	.046
Ease of contracting with customer support positively influence consumer satisfaction.	430	4.31	.923	.045
The overall convenience of the delivery process of the online shopping malls significantly contributes to consumer satisfaction.	430	4.46	.867	.042

To illustrate the mean, standard deviation, and standard error of the population's responses, Table-13 of one sample statistics is provided. The concept of a variable's fundamental tendency is conveyed by its mean value. Each variable contains 430 observations. Standard deviation provides insight into the degree to which a variable's values deviate from its mean. Five represents the maximum value, while one represents the minimal.

The empirical findings should test the following hypotheses.

- H1:** Timely delivery of the online order has a positive influence on consumer satisfaction.
- H2:** Secure and intact delivery of online orders enhanced consumer satisfaction.
- H3:** Effective resolution of delivery issues by customer service has a positive impact on consumer satisfaction.
- H4:** Availability of order tracking and updates positively influence consumer satisfaction.
- H5:** Convenient and secure payment options have a positive impact on consumer satisfaction.
- H6:** Easy access to order status and delivery information has an impact on overall consumer satisfaction.
- H7:** Accurate and clear product information positively affects consumer satisfaction.
- H8:** Ease of contracting with customer support positively influences consumer satisfaction.
- H9:** The overall convenience of the delivery process of online shopping malls significantly contributes to consumer satisfaction.

The means of the alternative hypothesis are distinct from those of the null hypothesis. The null hypothesis is rejected when the null hypothesis is not supported by a small p-value (< 0.05) and a large "t" ($> +2.0$ or < -2.0), which suggests that the means are significant. In contrast, a high p-value and a small "t" indicate that there is no significant difference in the means.

Table 14: One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
H1: Timely delivery of the online order has a positive influence on consumer satisfaction.	26.705	429	.000	1.286	1.19	1.3
H2: Secure and intact delivery of online orders enhanced consumer satisfaction.	30.443	429	.000	1.333	1.25	1.42
H3: Effective resolution of delivery issues by customer service has a positive impact on consumer satisfaction.	25.154	429	.000	1.188	1.10	1.28
H4: Availability of order tracking and updates positively influence consumer satisfaction.	25.897	429	.000	1.221	1.13	1.31
H5: Convenient and secure payment options have a positive impact on consumer satisfaction.	29.700	429	.000	1.302	1.22	1.39
H6: Easy access to order status and delivery information has an impact on overall consumer satisfaction.	32.325	429	.000	1.393	1.31	1.48
H7: Accurate and clear product information positively affects consumer satisfaction.	28.408	429	.000	1.309	1.22	1.40
H8: Ease of contracting with customer support positively influences consumer satisfaction.	29.400	429	.000	1.309	1.22	1.40
H9: The overall convenience of the delivery process of online shopping malls significantly contributes to consumer satisfaction.	34.809	429	.000	1.456	1.37	1.54

The findings from Table 14 suggest that logistics has a significant impact on customer satisfaction, as indicated by the high t-values and low p-values. The statistical significance of each logistics factor, which includes secure delivery, timely delivery, and effective issue resolution, is supported by a p-value of .000 and a t-value that greatly surpasses the test value. These factors greatly contribute to satisfaction, as indicated by the significant t-values and low p-values (less than 0.05), providing strong support for the alternative hypotheses. Enhancing customer satisfaction is crucial in logistics, as this compelling statistical evidence clearly shows. Therefore, the alternative hypothesis is implemented.

6. CONCLUSIONS

Consumer satisfaction is key to logistics management in Bangladesh's fast-growing e-commerce sector. As online purchasing grows more popular, consumer expectations for delivery reliability and efficiency have increased. This study examines the intricate relationship between logistics and customer satisfaction among Bangladeshi online users, revealing key elements that affect consumer experiences in this changing market. Logistics issues that affect customer satisfaction are the topic of our investigation. The relationship between logistics service quality and satisfaction will also be examined. Consumer behavior in response to logistical services will also be examined. The study examined how quick delivery, reliable packaging, efficient problem-solving, and order tracking affect consumer satisfaction. A rigorous one-sample t-test revealed how these logistics variables affect consumer perceptions and behaviors.

Numerous consumer satisfaction drivers were uncovered. Customer satisfaction depends on timely delivery, which has a high mean score. Quick delivery meets customer expectations and improves the buying experience, according to study. Secure packaging safeguards the product during transport. For damage prevention and consumer trust. Customers also valued order tracking and delivery resolution. These traits simplify and reassure buyers, which customers cherish. Payment security and convenience also affect customer satisfaction. This and easy order status access are important to a pleasant purchase experience, says the survey. Secure payment methods and order convenience build consumer trust. Product accuracy and prompt customer service built trust and enjoyment. People value accurate product information and rapid, efficient service. Customer satisfaction is best when the delivery process is convenient, as seen by the highest mean score. Delivery must be efficient and streamlined to keep customers happy. To achieve consumer expectations, e-commerce companies must prioritize logistics management and streamline delivery operations.

The study's results are consistent with the established theories of supply chain management and logistics. The Resource-Based View (RBV) theory, which emphasizes the strategic value of efficient logistics as a competitive advantage, affirms the significance of effective logistics

management in improving consumer satisfaction. The study's findings are also consistent with the Supply Chain Integration Theory, which underscores the necessity of consistent coordination among supply chain entities. In addition, the significance of efficient and responsive logistics practices in enhancing customer satisfaction is further emphasized by the Lean and Agile Supply Chain Management theories, which emphasize the reduction of waste and the adaptation to customer requirements.

Finally, the research offers substantial empirical evidence that logistics have a substantial influence on consumer satisfaction in the online shopping environment of Bangladesh. Convenient payment options, effective issue resolution, secure packaging, and timely delivery are critical components of improved consumer experiences, according to the results. These insights provide valuable recommendations for e-commerce businesses in Bangladesh, emphasizing the necessity of strategic logistics management to satisfy consumer expectations and foster loyalty over the long term. As the e-commerce sector continues to develop, it will be essential to address the unique logistical challenges in Bangladesh in order to ensure consumer satisfaction and achieve long-term business success. Businesses can preserve their competitive advantage in the dynamic online market, improve customer satisfaction, and improve the quality of their service by concentrating on these critical logistics factors.

It is important to acknowledge the numerous limitations of this investigation. Initially, its emphasis on a particular geographic region may restrict the extent to which the results can be applied to other regions. Secondly, the reliability of the results may be compromised by the introduction of biases and inaccuracies as a result of the reliance on self-reported data. Finally, the study's use of a cross-sectional methodology results in the collection of data at a single point in time, which may not accurately represent changes or trends over time. Future research could investigate the impact of emerging technologies in logistics on customer experiences in order to obtain a more comprehensive understanding of customer satisfaction in e-commerce. This would provide a more comprehensive perspective on this dynamic field.

7. REFERENCES

- Agatz, N. A. H., Fleischmann, M., & van Nunen, J. A. E. E. (2008). E-fulfillment and multi-channel distribution – A review. *European Journal of Operational Research*, 187(2), 339–356. <https://doi.org/10.1016/j.ejor.2007.04.024>
- Ahmed, S. (2024). An empirical study of consumers' attitudes toward using online food delivery services in Bangladesh [University of Northern British Columbia]. <https://doi.org/10.24124/2024/59451>
- Aljohani, K. (2024). The Role of Last-Mile Delivery Quality and Satisfaction in Online Retail Experience: An Empirical Analysis. *Sustainability*, 16(11), 4743. <https://doi.org/10.3390/su16114743>
- Amin, Md. R., Islam, Md. H., & Atifa Kafi. (2024). Customers' Satisfaction with E-commerce Business Through Facebook in Bangladesh: Service Receiver's Perspective. *The Seybold Report*.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287, 112934. <https://doi.org/10.1016/j.psychres.2020.112934>
- Chiu, H.-C., Hsieh, Y.-C., Roan, J., Tseng, K.-J., & Hsieh, J.-K. (2011). The challenge for multichannel services: Cross-channel free-riding behavior. *Electronic Commerce Research and Applications*, 10(2), 268–277. <https://doi.org/10.1016/j.elerap.2010.07.002>
- Choi, D., Chung, C. Y., & Young, J. (2019). Sustainable Online Shopping Logistics for Customer Satisfaction and Repeat Purchasing Behavior: Evidence from China. *Sustainability*, 11(20), 5626. <https://doi.org/10.3390/su11205626>
- Christopher, M. (2000). The Agile Supply Chain. *Industrial Marketing Management*, 29(1), 37–44. [https://doi.org/10.1016/S0019-8501\(99\)00110-8](https://doi.org/10.1016/S0019-8501(99)00110-8)
- Davis, E. R. (2006). *The Role of Logistics Service Quality in Creating Customer Loyalty*. University of Tennessee.
- Esper, T. L., Fugate, B. S., & Davis-Sramek, B. (2007). LOGISTICS LEARNING CAPABILITY: SUSTAINING THE COMPETITIVE ADVANTAGE GAINED THROUGH LOGISTICS LEVERAGE. *Journal of Business Logistics*, 28(2), 57–82. <https://doi.org/10.1002/j.2158-1592.2007.tb00058.x>

- Esper, T. L., Jensen, T. D., Turnipseed, F. L., & Burton, S. (2003). THE LAST MILE: AN EXAMINATION OF EFFECTS OF ONLINE RETAIL DELIVERY STRATEGIES ON CONSUMERS. *Journal of Business Logistics*, 24(2), 177–203. <https://doi.org/10.1002/j.2158-1592.2003.tb00051.x>
- Flynn, B. B., Huo, B., & Zhao, X. (2010). The impact of supply chain integration on performance: A contingency and configuration approach. *Journal of Operations Management*, 28(1), 58–71. <https://doi.org/10.1016/j.jom.2009.06.001>
- Grigoroudis, E., Tsitsiridi, E., & Zopounidis, C. (2013). Linking customer satisfaction, employee appraisal, and business performance: an evaluation methodology in the banking sector. *Annals of Operations Research*, 205(1), 5–27. <https://doi.org/10.1007/s10479-012-1206-2>
- Hübner, A., Holzapfel, A., & Kuhn, H. (2016). Distribution systems in omni-channel retailing. *Business Research*, 9(2), 255–296. <https://doi.org/10.1007/s40685-016-0034-7>
- Kabir, M. R., Islam, Md. A., Marniati, & Herawati. (2021). Application of Blockchain for Supply Chain Financing: Explaining the Drivers Using SEM. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 167. <https://doi.org/10.3390/joitmc7030167>
- Lin, X., Mamun, A. Al, Yang, Q., & Masukujjaman, M. (2023). Examining the effect of logistics service quality on customer satisfaction and re-use intention. *PLOS ONE*, 18(5), e0286382. <https://doi.org/10.1371/journal.pone.0286382>
- Liu, Y.-H., Lee, E.-S., & Ding, J. (2023). Logistics Service Quality in Cross-Border E-Commerce and Consumer Repurchase Intention: The Moderating Effects of Consumer Ethnocentrism and Cosmopolitanism. *경영컨설팅연구*, 23(5), 179–192.
- Onik, Md. M. H., Md. Siyamul Islam, Hasan, Md. M., & Uddin, A. (2021). SURVIVAL OF BANGLADESH ECONOMY DURING COVID-19 RECESSION WITH THE USE OF TECHNOLOGY: AN APPLICATION OF KEYNESIAN APPROACH. *American International Journal of Supply Chain Management*, 1–22. <https://doi.org/10.46545/aijscm.v2i1.311>
- Payne, A., & Frow, P. (2005). A Strategic Framework for Customer Relationship Management. *Journal of Marketing*, 69(4), 167–176. <https://doi.org/10.1509/jmkg.2005.69.4.167>
- Rao, S., Griffis, S. E., & Goldsby, T. J. (2011). Failure to deliver? Linking online order fulfillment glitches with future purchase behavior. *Journal of Operations Management*, 29(7–8), 692–703. <https://doi.org/10.1016/j.jom.2011.04.001>
- Rashid, Dr. A., & Rasheed, Dr. R. (2024). Logistics Service Quality and Product Satisfaction in E-Commerce. *SAGE Open*, 14(1). <https://doi.org/10.1177/21582440231224250>

- Saha, S. K., Zhuang, G., & Li, S. (2020). Will Consumers Pay More for Efficient Delivery? An Empirical Study of What Affects E-Customers' Satisfaction and Willingness to Pay on Online Shopping in Bangladesh. *Sustainability*, 12(3), 1121. <https://doi.org/10.3390/su12031121>
- Womack, J. P., & Jones, D. T. (1997). Lean Thinking—Banish Waste and Create Wealth in your Corporation. *Journal of the Operational Research Society*, 48(11), 1148–1148. <https://doi.org/10.1038/sj.jors.2600967>
- Xing, Y., Grant, D. B., McKinnon, A. C., & Fernie, J. (2011). The interface between retailers and logistics service providers in the online market. *European Journal of Marketing*, 45(3), 334–357. <https://doi.org/10.1108/03090561111107221>
- Yang, S., Lu, Y., Zhao, L., & Gupta, S. (2011). Empirical investigation of customers' channel extension behavior: Perceptions shift toward the online channel. *Computers in Human Behavior*, 27(5), 1688–1696. <https://doi.org/10.1016/j.chb.2011.02.007>
- Zhu, T., Lu, Y., Wang, B., & Zhao, L. (2023). Pre-purchase and post-purchase sales promotions on ecommerce platforms: the effects of promotional benefits on customer-based brand equity . *Journal of Electronic Commerce Research* , 24(2), 146–170.