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Mitigating Customer Churn in E-Commerce using SERVQUAL Model

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Abstract: Merchant churn poses a significant challenge in the e-commerce sector, where service quality plays an important role in merchant retention. This research is presented to investigate the key factors driving merchant churn in e-commerce logistics, focusing on Noori's Air Waybill (AWB) service. Using the SERVQUAL model, this research assesses five key core service quality dimensions—reliability, responsiveness, assurance, empathy, and tangibles—to determine their impact on merchant satisfaction and retention. Qualitative research was used, employing structured surveys and thematic analysis. Data gathered from 395 merchants, who either maintained or ceased their use of the AWB service, indicated that service reliability and customer support are the primary factors contributing to churn. The outcomes of this research show that Nori's system assurance, which reflects confidence in service quality, shows the most significant performance gap of +1.06, indicating a clear difference between merchant expectations (pre-service) and the actual service performance (post-service). Moreover, tangible service, consisting of tracking systems, displayed a moderate gap of +0.29, which has an influence on overall merchant satisfaction. The regression analysis has further validated that service reliability ($p = 0.010$) stands out as the most critical predictor of merchant churn, while customer support ($p = 0.067$) and clarity of information ($p = 0.069$) also emerged as significant contributors. To our surprise, the factor of cost satisfaction did not influence the churn with ($p = 0.318$), stating that merchants tend to pick the quality of service as a priority over the service price. The study outcomes indicate that improving service reliability, enhancing responsiveness customer support, and optimizing logistics efficiency can lead to a considerable decrease in churn rates. Important recommendations are as follows: to focus on enhancing the tracking system, improving Merchant care responsiveness, and implementing service enhancements to better meet our valuable merchant expectations.

Keywords: AWB, E-commerce Logistics, SERVQUAL Model, Merchant Retention, Service Quality Dimensions

I. INTRODUCTION

Noori is a major e-commerce platform in Saudi Arabia, designed to facilitate comfortable and user-friendly online store management solutions for businesses. Established in 2016, NOORI provides a no-code e-commerce infrastructure to enable entrepreneurs, small businesses and enterprises to create your online store without the need for technical expertise. The company has greatly expanded its services by integrating the payment gateway, logistics solutions and advanced analytics, adapting the digital commerce operation. Today, Noori stands as one of the major e-commerce ambitions in the Gulf Cooperation Council (GCC) region, supporting thousands of traders in various industries.

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Founding and Early Growth (2016 – 2018) Individual Predictor Analysis

Noori was founded with the objective of addressing the major challenges faced by small and medium -sized enterprises (SMEs), including platform complexity, high operating costs, and lack of localized digital solutions. To facilitate ease of access, Noori introduced several innovative features, including pre-designed store templates to streamline the setup process, a multi-currency system for international transactions and an Arabic-friendly interface catering for local traders. Additionally, the platform widely integrated the major payment gateway in the Middle East, increasing its access and purpose. By 2018, Noori had obtained adequate traction in the Saudi Arabia market, enabling businesses to transition with minimal effort in digital commerce from traditional retail.

Impact of COVID-19 (2020)

In 2020, the Covid-19 epidemic worked as a catalyst for digital change, forcing many businesses to move towards online operation. During this period, Noori adopted his platform and saw a significant increase in new traders. To address the developments of businesses and consumers, the company introduced several enrichrs aimed at improving operating efficiency and customer experience. In these, the implementation of contactless payment solutions to ensure safety and convenience, integration of advanced digital marketing tools to assist businesses in reaching widespread audiences, and deployment of AI-driven customer engagement systems to increase customer retention strategies. By the end of 2020, Noori strengthened its position as a preferred e-commerce platform in Saudi Arabia, playing an important role in supporting businesses during an important phase of digital infection.

Recent Developments (2024 – 2025)

Acquisition of Advertisement Company & Launch of Noori Ads (2025)

In February 2025, Noori acquired the advertising company, a Saudi-based digital advertising platform, and re-designed it as Noori advertisements. The purpose of this strategic acquisition is to increase the digital marketing capabilities available to the traders on the Noori platform, providing them with more effective equipment for customer outreach and engagement. The newly launched Noori advertisements introduce many key features designed to customize online advertising performance, including AI-operated advertising targeting, fully integrated automatic campaign management, and real-time performance tracking to assess advertising effectiveness to increase the conversion rates. Taking advantage of these capabilities, Noori advertisements are expected to change the way the traders perform digital marketing strategies, allowing online advertisements to be more accessible and consequences.

II. LITERATURE REVIEW

The literature review examines key themes relevant to merchant behavior in e-commerce logistics, with a particular focus on integrated platforms such as the Air Waybill (AWB) service. This section explores studies on merchant flow in logistics services, theories related to e-commerce logistics and merchant churn, and service quality models that influence merchant satisfaction. The SERVQUAL model is analyzed to explain merchant satisfaction and dissatisfaction within integrated logistics ecosystems.

E-commerce Logistics

E-commerce logistics play a vital role in ensuring the success of online retail operations. Logistics service providers (LSPs) facilitate timely and reliable deliveries, directly impacting on

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customer satisfaction and retention. As online commerce expands, businesses increasingly demand logistics solutions that are efficient, scalable, and cost-effective. Despite the growing significance of logistics in e-commerce, research remains limited regarding its impact on customer loyalty, particularly from the perspective of retailers rather than end consumers [1].

Platforms such as Noori, which integrate logistics services within their e-commerce ecosystems, rely on seamless shipping options to maintain merchant loyalty. However, service failures, including delivery delays, inadequate customer support, and fluctuating costs—can contribute to merchant dissatisfaction and eventual churn. The AIRWAYBILL service has faced challenges in meeting merchant's expectations, leading to a decline in its adoption. Understanding the role of logistics service quality in merchant retention is therefore critical for improving integrated logistics offerings.

Customer Churn in E-Commerce

Customer churn, defined as the rate at which customers discontinue using a service, is a significant concern for e-commerce platforms. While churn has been extensively studied in industries such as telecommunications, financial services, and software-as-a-service (SaaS), less attention has been given to churn in the e-commerce logistics sector. Research indicates that service failures—such as delivery inconsistencies, high shipping costs, and inadequate customer support—are key factors driving churn.

In the e-commerce logistics ecosystem, churn occurs at both the consumer (end-user) level and the merchant (service provider) level. For logistics platforms like Noori, the loss of merchants directly affects revenue streams and long-term sustainability. Issues such as unreliable transportation, increasing operational costs, and insufficient support mechanisms have been identified as primary reasons merchants discontinue the use of AWB services. Given the integral role of logistics in e-commerce success, mitigating merchant churn requires a strategic focus on service reliability, cost efficiency, and customer engagement [2].

The SERVQUAL Model

The SERVQUAL model is another key framework used to evaluate service quality. Parasuraman, Zeithaml, and Berry (1988) developed five dimensions of service quality: reliability, assurance, tangibles, empathy, and responsiveness. For Noori's AIRWAYBILL service, reliability and responsiveness are particularly significant for driving merchant satisfaction and retention. Issues such as shipping delays, poor tracking systems, and slow customer support responses can increase dissatisfaction and churn. This study applies the SERVQUAL model to assess the impact of these service quality factors on merchant behaviour [3,4]

Customer Satisfaction and Retention

Customer satisfaction is one of the primary factors influencing customer loyalty in service-oriented companies., satisfaction in e-commerce is closely tied to logistics services that offer competitive prices, reliability, and effective customer support. Their research highlights that cost control and reliable service delivery are critical for maintaining customer loyalty. Similarly, Gen Z customers in the e-commerce industry value logistics services that are both reliable and accessible. If customers perceive services as offering poor value due to high costs, unreliable delivery times, or inadequate customer support, they are more likely to stop using the service [5]

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Customer Churn in E-Commerce Logistics

Customer churn in e-commerce logistics is a growing concern, as it directly impacts merchants' and service providers' sales and retention rates. While prior studies have largely focused on logistics performance and its influence on customer satisfaction and sales, fewer studies have directly analysed churn within e-commerce logistics. Deshpande and Pendem (2021) highlight that logistics service quality—measured through delivery time and logistics ratings—plays a crucial role in customer purchase behaviour and sales performance on e-commerce platforms. Their research, based on an extensive dataset from Alibaba's Tmall and Cainiao logistics network, demonstrates that even minor delays in delivery can significantly lower logistics ratings, which in turn decreases customer retention and purchase probability. For instance, their findings suggest that customers, regardless of explicit delivery promises, tend to have an internal expectation that packages should arrive within two days. If deliveries take longer, customers are more likely to leave negative ratings, which can lead to churn over time. Furthermore, a reduction in delivery time from three days to two days can increase third-party sellers' daily sales by approximately 13.3%.The study also underscores the challenge of balancing faster delivery with higher operational costs. Companies like Amazon and Alibaba have heavily invested in logistics infrastructure to meet consumer demand for speed, but the financial sustainability of such investments remains a concern. In summary, logistics performance, particularly delivery reliability, is a critical factor in e-commerce churn. Service failures—such as longer-than-expected delivery times—lead to lower customer satisfaction and ultimately increase churn rates among both end-users and third-party merchants relying on logistics platforms.[6]

Enhance customer satisfaction in E-Commerce Logistics

Customer churn, defined as the rate at which customers discontinue their business relationships with a company, presents a significant challenge in e-commerce, particularly in logistics services. While previous research has extensively analyzed churn in industries such as telecommunications, banking, and software-as-a-service (SaaS), there remains a critical need to examine how logistics performance affects churn within e-commerce businesses. Given the growing reliance on efficient supply chain management in digital commerce, logistics providers must ensure seamless service delivery to maintain customer satisfaction and reduce attrition rates.

A study conducted by Azrai Bin Azahar (2015) investigated the role of e-commerce in enhancing customer satisfaction at JBSB ASMADEE, a Malaysian trading company specializing in food and beverage distribution. The research revealed that inefficient logistics operations—such as manual order processing, the absence of computerized tracking systems, and delays in fulfillment—led to errors and increased customer dissatisfaction. These logistical inefficiencies contributed to higher churn rates, as customers in the digital marketplace increasingly expect accurate, transparent, and timely deliveries.

The study identified several major factors affecting customers' satisfaction in e-commerce logistics, including product availability, website functionality, customer service and distribution performance. The availability of the product plays an important role in meeting the consumer's demand, ensuring that high demand items remain in stock. Additionally, the functionality of the website should provide comfortable user experience with safe transactions to facilitate smooth purchase procedures. Customer service efficiency, especially in addressing complaints and ensuring quick communication, significantly affects retention rates. Most importantly, delivery performance is a fundamental factor in customers' satisfaction, as delayed shipments or missed deadlines often lead to frustration and service abandonment.

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The findings of the study have been emphasized that integrating e-commerce solutions-such as automated order processing, inventory management systems and real-time tracking can reduce trekking-cute, can increase service quality, and strengthen customer retention. These results align with extensive research on e-commerce logistics, which outlines the direct relationship between logistics performance and customer satisfaction. By adopting logistics disabled and digital innovations, companies such as JBSB ASMADEE can reduce churning, promote customers' loyalty, and improve overall business performance. The implications of this study extend to platforms such as Nuri, where the quality of logistics is an important determinant of merchant retention, underlining the need for continuous improvement in logistics management to maintain competitive benefits in the e-commerce field[7].

Customer Churn in E-Commerce Logistics: Lessons from Hotel Service Quality Analysis

Customer churn, defined as the rate at which customers discontinue their use of a service, remains a significant challenge in service industries, including e-commerce logistics. One of the key frameworks for understanding service quality gaps and their impact on customer dissatisfaction and churn is the AHP-SERVQUAL model. This model, as applied in the Algerian hotel industry by Kheddache and Djadli (2025), provides valuable insights into the discrepancies between service providers' perceptions and customer expectations, highlighting how these gaps contribute to churn.

The study conducted by Kheddache and Djadli (2025) assessed the service quality interval by comparing managerial beliefs about service performance with real customer expectations in five SERVQUAL dimensions. Competition, which belongs to physical infrastructure and features, was underestimated by hotel managers, while customers put more emphasis on service accountability. Referring to reliability, stability and dependence of service distribution, it emerged as a major concern with significant gaps between customers' expectations and actual service performance. Accountability, or ability to quickly address customers' needs, found the most important factor for customers, yet it was often evaluated by management [8].

Applying These Findings to E-Commerce Logistics

While the study by Kheddache and Djadli (2025) focused on the hotel industry, its findings have strong applicability to e-commerce logistics, where similar service quality gaps contribute to customer churn. The parallels between these industries highlight the importance of aligning service quality with customer expectations to enhance satisfaction and retention.

A major similarity is in trekking and visibility, which corresponds to the touching dimension of the SERVQUAL model. Logistics providers often invest in infrastructure, such as warehouses and distribution fleet, but can ignore the importance of real time tracking systems. The way hotel guests give importance to modern facilities, but prioritize responsible service, e-commerce customers have a high premium on shipment visibility and real-time position updates. Distribution reliability is another important factor; Spontaneous and predicted service like hotel guests is expected, e-commerce customers expect error-free delivery. Any discrepancies at the time of delivery or in order supply can cause dissatisfaction and final churning.

Customer aid accountability plays the same role in both industries. Inadequate or delayed reactions to delivery issues can significantly affect customers' satisfaction, such as slow service reaction time in hotels negatively affecting guest experiences. In addition, assurances are required in logistics services, aligning safety and transparency with dimensions. Customers require confidence in protecting their shipments and proper handling, similarly hotel guests require confidence in the safety and quality of their housing.

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Finally, personalized service and flexibility reflect sympathetic dimensions, increasing customer experience in both areas. In logistics, flexible delivery options offer, customized shipping solutions, and sewn customer support can improve and reduce churning, such as individual service increases the guest retention of the hotel [8].

Measuring Student Satisfaction in Sigher Learning Institutions in Tanzania

The SERVQUAL model is widely recognized as a framework for assessing service quality across industries, including education, banking, and healthcare. This model evaluates service quality based on five dimensions: tangibility, reliability, responsiveness, assurance, and empathy.

Research findings indicate that assurances and tangibles often exceed customers' expectations, which contribute positively to satisfaction. However, reliability and sympathy often show negative or marginal intervals, suggesting discrepancies in service distribution. Recent studies have proposed amendments to the omniscient model by incorporating transparency and confidence in the form of additional service quality determinants [9]

Given these insights, scholars suggest that trust and digital transparency should be integrated into the SERVQUAL framework to reflect modern service expectations. Future research should continue refining the model by examining emerging digital service quality factors, social trust, and institutional transparency in various sectors [10]

III. RESEARCH METHODOLOGY

Research Design

This study employs a qualitative research approach to investigate the factors contributing to merchant attrition in Noori's AIRWAYBILL service. The research focuses on assessing service quality dimensions that influence merchant retention and satisfaction, utilizing the SERVQUAL model as the primary analytical framework. By gathering qualitative insights, the study aims to provide a comprehensive understanding of how service quality perceptions impact merchants' decisions to continue or discontinue using the AIRWAYBILL service.

To catch detailed approaches from traders, the study will conduct a structured survey targeted business, who have actively used or discontinued Nuri's AIRWAYBILL service in the last one year. The survey will detect the experiences of traders with the logistics services of Noori, especially in relation to five sewerage dimensions: reliability, assurance, touching, sympathy and accountability. The main inquiry will focus on the following aspects:

- **Reliability**: The extent to which Noori minimizes shipment delays and consistently adheres to delivery schedules.
- **Assurance**: The level of trust merchants have in the expertise and professionalism of Noori's customer support representatives.
- **Tangibles**: The quality and availability of physical logistics components, including shipping infrastructure, packaging materials, and tracking systems.
- **Empathy**: Noori's ability to understand and accommodate the specific needs of merchants.
- **Responsiveness**: The speed and effectiveness of addressing merchant concerns, resolving disputes, and providing timely communication.

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The responses collected will be analyzed using regression analysis to examine the relationship between the SERVQUAL service quality dimensions and the likelihood of merchant churn. This statistical approach will help identify which factors have the most significant impact on retention. Additionally, correlation analysis will be employed to determine the strength of associations between different service dimensions and dissatisfaction levels.

Population and Sampling

The survey received 395 valid responses, exceeding the recommended minimum sample size of 384 (calculated based on a 95% confidence level and a 5% margin of error). This sample size ensures statistical reliability and generalizability of the findings. Furthermore, finite population correction and power analysis confirm that the collected data is sufficient for robust statistical analysis. Given these considerations, the sample is deemed appropriate for this study.

Sample Size selection

Cochran's Formula for Sample Size Estimation (Survey-Based)

Cochran's formula is used to determine the appropriate sample size for a population when estimating a proportion.

$$N=\frac{Z^2.p.(1-p)}{E^2}$$

Given Values:

- **Z** = 1.96 (Z-score for 95% confidence level)
- **p** = 0.5 (Proportion estimate, used for maximum variability)
- **E** = 0.05 (Margin of error)

Calculation**:**

$$n=\frac{(1.96)^2 X\ 0.5\ X(1-0.5)}{(0.05)^2}$$

$$n=\frac{3.8416\ X\ 0.25}{0.0025}$$

n= 384.16

Final Sample Size (Rounded Up):

n=385

This result shows that a minimum of **385 respondents** is required to maintain statistical validity for the survey.

Data Collection Methods

Qualitative Data Collection: Merchants who have reduced or stopped using the AIRWAYBILL service will be the subject of the Survey. By probing deeper into their experiences with the service, this survey hopes to provide a more thorough understanding of the SERVQUAL characteristics that influenced their discontent. The study will utilize thematic analysis to detect recurrent patterns and themes associated with problems in the quality of services. Sample Selection: To ensure representation across a range of business sizes and industries, a stratified random sample of merchants will be selected. This methodology ensures a range of responses and improves the research findings' generalizability.

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Data Analysis Methods

- Descriptive statistics will summarize overall trends in merchant perceptions.
- Regression analysis will determine which SERVQUAL dimensions are most strongly associated with customer churn.
- correlation analysis will extract key drivers of dissatisfaction from survey responses.

Hypotheses Testing

Based on the problem statement, the hypotheses are as follows:

- H1: The high shipping cost is considered the major contributor to the relatively high merchant churning within the Noori AIRWAYBILL service. It is a result of the judgment made by the merchant, who perceives service quality as incongruent with the cost of shipping.
- H2: Poor service reliability in terms of delayed shipment, or insufficient tracking information, is a factor that triggers merchant churning.
- H3: Poor customer support results in higher merchant churn on Noori's AIRWAYBILL service.

IV. RESULTS AND DISCUSSION

SERVQUAL Model Analysis

SERVQUAL Gap Analysis

The SERVQUAL gap is calculated as:

SERVQUAL Gap = Expectation (Before Service) −Performance (After Service)

A negative gap indicates that perceived service exceeded expectations, while a positive gap suggests that expectations were not met

Table 1: Service Quality Expectation vs. Performance Analysis: Identifying Gaps in Key Dimensions

Dimension	Expectation (Before Service)	Performance (After Service)	Performance (After Service)	Interpretation
Reliability	3.6987	3.7038	3.7038	Customers rated reliability slightly better than expected.
Responsiveness	3.7316	3.6861	3.6861	Small gap, indicating responsiveness is slightly below expectations.
Assurance	3.7038	2.6456	2.6456	Largest gap—merchants feel service assurance is significantly below expectations.
Empathy	3.4532	3.4582	3.4582	No major issues with empathy.
Tangibles	3.1089	2.8152	2.8152	Moderate gap—merchants find tangible aspects (e.g., tracking systems, packaging) below

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				expectations.

Table 1 presents a comparative analysis of service quality based on merchant expectations before taking the service and actual performance after taking the service. It evaluates five important dimensions which are: **Reliability, Responsiveness**, **Assurance**, **Empathy**, and **Tangibles**. **Reliability**

- **Reliability**: Merchant rated reliability slightly higher than their expectations.
- **Responsiveness**: There is a small gap, indicating that responsiveness is slightly below merchants' expectations.
- **Assurance**: This shows the largest gap, indicating that merchants believe the assurance provided is significantly below their expectations.
- **Empathy**: No major gap, as expectations and performance results are closely aligned, which indicates that their expectation is almost met.
- **Tangibles**: A moderate gap, meaning aspects like tracking systems and packaging are rated below merchants' expectations4.2 Regression Analysis

The regression model evaluates the extent to which **SERVQUAL dimensions** influence merchant churn. The model's fit statistics are shown in **Table 2**.

Table 2: Regression Analysis

Metric	Value	Interpretation
Multiple R	0.210	Weak correlation between predictors and churn.
R-Squared	0.044	The model explains 4.4% of churn variability.
Adjusted R^2	0.029	Confirms low explanatory power.
Standard Error	0.450	The standard deviation of residuals.
F-Statistic	2.99	The model is statistically significant.
Significance F	0.007	At least one predictor significantly impacts churn.

Table 2 presents key regression model performance metrics, assessing the explanatory power and statistical significance of the model in predicting churn. The interpretation of each metric provides insights into the model's validity and reliability. The key findings from the regression analysis provide insights into the model's ability to predict customer churn. The Multiple R value of 0.210 represents the correlation coefficient between the observed and predicted values of churn. This indicates a weak correlation, suggesting that the independent variables have limited predictive power when it comes to explaining churn behavior.

Figure 1 presents a comparison between R-Squared (R^2) and Adjusted R-Squared, which are key indicators of model fit in regression analysis. These metrics assess how well the independent variables explain the variation in the dependent variable. The R-Squared value (0.044 or 4.4%) indicates that the predictors explain only a small portion of the variance in the dependent variable, highlighting the model's weak explanatory power. The Adjusted R-Squared (0.029 or 2.9%) is slightly lower, reflecting a penalty for non-contributing predictors. This decline suggests that some variables may not add meaningful value to the model.

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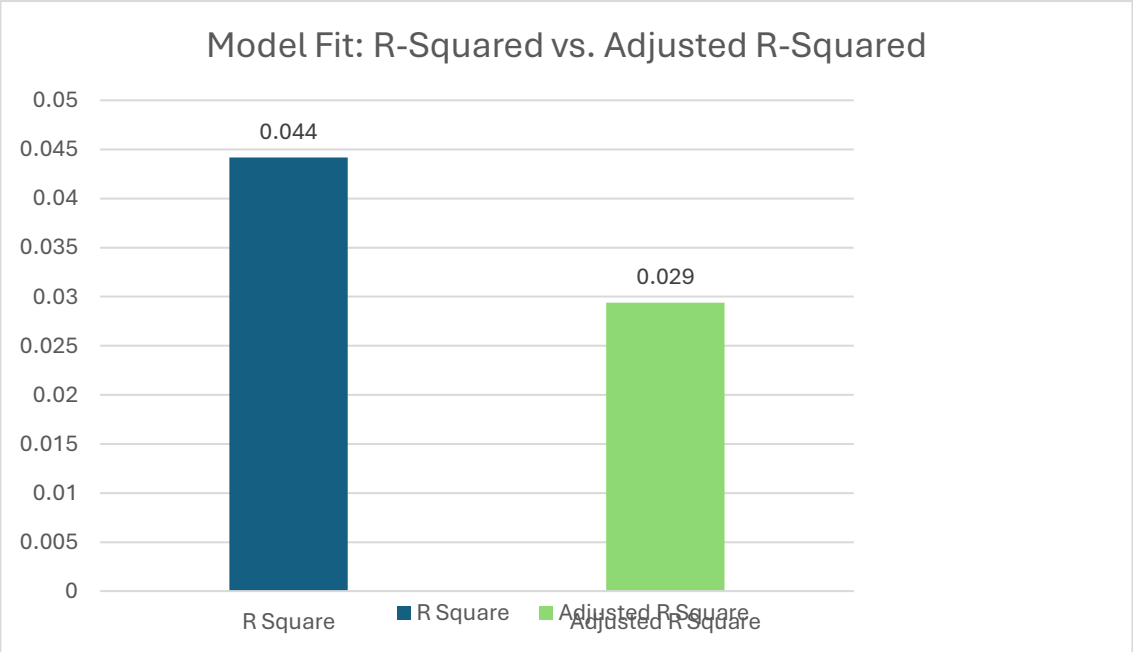

Figure 1 :Model Fit: R-Squared vs. Adjusted R-Squared:

Individual Predictor Analysis

The detailed breakdown of regression coefficients and their impact on churn is shown in **Table 3**.

Table 3 Regression coefficients Breakdown

Predictor	Coefficient (β)	P-Value	Interpretation
Intercept	-0.027	0.863	No significant effect.
Cost Satisfaction	0.0207	0.318	Not statistically significant.
Service Reliability	0.0659	0.010	Significant. Poor reliability increases churn.
Customer Support	-0.3203	0.067	Almost significant. Better support reduces churn.
Tracking Accuracy	-0.0301	0.147	Not significant.
Response Time	0.0293	0.206	Not significant.
Clarity of Information	0.3259	0.069	Nearly significant. Unclear information increases churn.

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Table 3 presents the **regression results** for various predictors, including their **coefficients (β values), p-values, and interpretations** regarding their significance in explaining the dependent variable. These results provide insights into the impact of each predictor. The regression analysis provides key insights into the impact of various predictors on the dependent variable. The intercept, with a coefficient of -0.027 and a p-value of 0.863, is not statistically significant. This suggests that when all predictors are set to zero, the dependent variable does not exhibit a meaningful baseline effect, indicating that other factors play a more prominent role in determining the outcome.

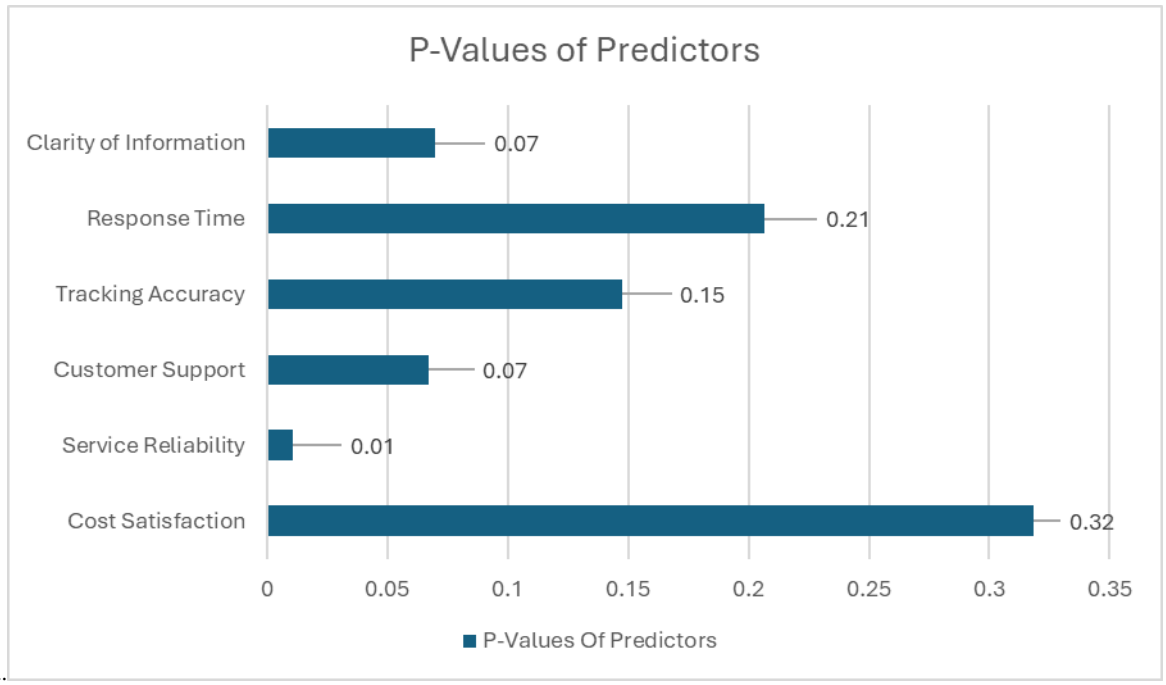

Figure 2: P-Values Of Predictors

Figure 2 illustrates the **p-values of various predictors** in a statistical analysis, assessing their significance in relation to the dependent variable. The p-values indicate the likelihood that the observed relationships between these predictors and the outcome variable occurred by chance. In statistical inference, a **p-value below 0.05** is typically considered statistically significant, suggesting strong evidence against the null hypothesis.

Among the predictors analyzed:

- Service Reliability exhibits the lowest p-value (0.01), indicating a highly significant relationship with the dependent variable.
- Clarity of Information and Customer Support both have p-values of 0.07, which are slightly above the conventional significance threshold (0.05). These predictors may still be considered marginally significant.
- Tracking Accuracy has a p-value of 0.15, suggesting a weaker association with the dependent variable.
- Response Time presents a higher p-value of 0.21, indicating a non-significant relationship.
- Cost Satisfaction shows the highest p-value (0.32), suggesting it has the least impact among the predictors.

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Hypothesis Testing

Table 4: Hypothesis Testing

Hypothesis	Result	Conclusion
H1: High shipping costs lead to merchant churn.	Rejected	Cost satisfaction is not a strong predictor.
H2: Poor service reliability increases churn.	Accepted	Statistically significant at p = 0.010.
H3: Poor customer support increases churn.	Partially Accepted	Near-significant but needs more data.

Table 4 presents the results of hypothesis testing regarding factors influencing customer churn in merchant services, particularly in the logistics sector. The study tested three hypotheses to determine the significance of key service-related factors.

Correlation Analysis

A correlation analysis has been conducted to examine the relationship between service quality dimensions and merchant churn. The correlation coefficients (r) and their interpretations are summarized in Table 5.

Table 5: Correlation Analysis

Factor 1	Factor 2	Correlation Coefficient (r)	Interpretation
Customer Support	Clarity of Information	0.99	Extremely Strong Positive Correlation
Service Reliability	Customer Support	0.55	Strong Positive Correlation
Tracking Accuracy	Clarity of Information	0.56	Strong Positive Correlation
Cost Satisfaction	Tracking Accuracy	0.42	Moderate Positive Correlation
Service Reliability	Tracking Accuracy	0.41	Moderate Positive Correlation

Table 5 illustrates the correlation analysis between key service factors and their interrelationships. A strong correlation (r = 0.99) exists between customer support and clarity of information, indicating that merchants who experience poor support often also struggle with unclear information. This suggests that deficiencies in customer service contribute to confusion and dissatisfaction regarding service details. Additionally, a moderate correlation (r = 0.55) between service reliability and customer support implies that unreliable services negatively impact the perceived quality of customer assistance. When services fail to meet expectations, support teams may face increased complaints, leading to frustration among merchants. Similarly, tracking accuracy is correlated with clarity of information (r = 0.56), meaning that when tracking systems provide inaccurate updates, merchants perceive a lack of transparency.

Discussion

The outcomes of the study shed the light into an important role of service reliability and customer support in mitigating customer churn in E-commerce logistics with applying the main model of this study which is SERVQUAL model, the research point out gabs between the expectation and the real

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service been provided to merchant , to particular in the assurance (+1.06) and tangibles (+0.29) .Service reliability shown to be main predictor to churn with (p=0.0010) and the cost shown to be insignificant with (p=0.318) as the regression stated. The implications in the company AWB services are to be enhanced in different aspects as to Enhance transparency and tracking of the shipments , to strengthen responsiveness and customer support ,as well as focusing on the efficiency of logistics rather than service cost reduction since merchants tend to choose the quality of the service over the cost of the service

V. CONCLUSION AND RECOMMENDATIONS

Conclusion

This study has provided an in-depth analysis of merchant churn in e-commerce logistics, with a specific focus on Noori's Air Waybill (AWB) service. By utilizing the SERVQUAL model, the research assessed five core service quality dimensions—reliability, responsiveness, assurance, empathy, and tangibles—to determine their impact on merchant satisfaction and retention. The findings highlight that service reliability is the most significant predictor of merchant churn, confirming that inconsistencies in delivery schedules and logistics failures lead to a decline in merchant trust and service discontinuation. Customer support and clarity of information were also found to be influential, indicating that merchants require responsive and transparent service experience. Surprisingly, cost satisfaction did not emerge as a significant factor, suggesting that merchants prioritize service quality overpricing when making retention decisions.

The regression analysis reinforced these findings, demonstrating that improving service quality, particularly in reliability and responsiveness, can effectively reduce churn rates. Additionally, correlation findings indicated strong relationships between service reliability, customer support, and perceived transparency, further validating the necessity of holistic service improvements. These insights contribute to the existing literature by addressing an underexplored area of e-commerce logistics and providing practical, data-driven solutions for reducing merchant churn. Given the increasing competition in the e-commerce sector, platforms like Noori must focus on enhancing their logistics and service quality strategies to ensure long-term merchant retention and business sustainability.

Recommendations

- Reducing delays And improving logistics coordination
- Strengthening Customer Support: Ai Integration And Efficient Service Response
- Improving Information Clarity And Transparency
- Investing In Tangible Service Improvements: Upgrading Tracking And Logistics Infrastructure
- Optimizing Service Assurance Strategies For Greater Merchant Confidence
- Implementing Proactive Merchant Retention Strategies
- Continuous Monitoring, Feedback Integration, And Service

Conflict of interest: The author declares that there is no conflict of interest.

Ethical statement: The author declares that he followed the ethical responsibilities.

REFERENCES

[1] Xianglian, Chen & Hua, Lin. (2013). Research on e-Commerce Logistics System Informationization in Chain. Procedia - Social and Behavioral Sciences. 96. 10.1016/j.sbspro.2013.08.095.

[2] Khare, Pranav & Arora, Sahil. (2024). Predicting Customer Churn in SaaS Products using Machine Learning.

[3] Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

[4]Akıl, Siber & Ungan, Mustafa. (2022). E-Commerce Logistics Service Quality: Customer Satisfaction and Loyalty. Journal of Electronic Commerce in Organizations. 20. 1-19. 10.4018/JECO.292473.

[5] Kiet Hong Vo Tuan Truong, Tri Minh Nguyen, Tuyen Thi Kim Tran, Ngan Tran Thuy Pham, Huong Thi Bich Nguyen, & Minh Thi Ngoc Do. (2023). Influences of E-Logistics Service Quality On Gen-Z Customer Satisfaction and Loyalty in Mekong Delta, Vietnam. Kurdish Studies, 11(2), 3226–3244. Retrieved from https://kurdishstudies.net/menu-script/index.php/KS/article/view/909

[6] Deshpande, V., & Pendem, P. K. (2020). Logistics performance, ratings, and its impact on customer purchasing behavior and sales in e-commerce platforms. *SSRN Electronic Journal*.

[7] Azrai, A. (2015). A study of implementation of e-commerce to improve customer satisfaction at JBSB Asmadee Company.

[8] Kheddache, F., & Djadli, S. (2025). Proposed AHP-SERVQUAL model for hotel service quality management: Evidence from Algeria. *JPM - Journal of Perspectives in Management, 9*. https://doi.org/10.51359/2594-8040.2025.264674

[9] Bwachele, V., Chong, Y.-L., & Krishnapillai, G. (2023). Perceived service quality and student satisfaction in higher learning institutions in Tanzania. *Humanities and Social Sciences Communications, 10*. https://doi.org/10.1057/s41599-023-01913-6

[10] Raza, Syed Ali & Ali, Muhammad. (2015). Service Quality Perception and Customer Satisfaction in Islamic Banks of Pakistan: The Modified SERVQUAL Model. Total Quality Management and Business Excellence. 10.1080/14783363.2015.1100517.

[11] Jahromi, A. T., Stakhovych, S., & Ewing, M. T. (2014). Customer churn models: A comparative study on attribute selection techniques and classification methods. *Journal of Strategic Marketing, 22*(4), 315–330.

[12] Cho, J., Ozment, J., & Sink, H. (2008). Logistics capability, logistics outsourcing, and firm performance in an e-commerce market. *International Journal of Physical Distribution & Logistics Management, 38*(4), 336–359. https://doi.org/10.1108/09600030810882825

[13] Do, A. D., Ta, V. L., Bui, P. T., Do, N. T., Dong, Q. T., & Lam, H. T. (2023). The impact of the quality of logistics services in e-commerce on the satisfaction and loyalty of Generation Z customers. *Sustainability, 15*(21), 15294.

[14] Grando, A., & Gosso, M. (2001). Electronic commerce and logistics planning: An underrated relationship. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.292559

[15] Çelik, K. (2021). The effect of e-service quality and after-sales e-service quality on e-satisfaction. *Business & Management Studies: An International Journal, 9*, 1137–1155. https://doi.org/10.15295/bmij.v9i3.1898

[16] Morganti, E., Dablanc, L., & Fortin, F. (2014). Final deliveries for online shopping: The deployment of pickup point networks in urban and suburban areas. *Research in Transportation Business & Management, 11*(1), 23–31.

[17] Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research, 17*(4), 460–469.

[18] Rashid, A., & Rasheed, D. (2024). Logistics service quality and product satisfaction in e-commerce. *SAGE Open, 14*(1), 1–10. https://doi.org/10.1177/21582440231224250

[19] Sachdev, S., & Verma, H. (2004). Relative importance of service quality dimensions: A multisectoral study. *Journal of Service Research, 4*.

[20] Trikha, P., Goswami, J., Kumari, I., Yadav, T., Singh, A., & Pandey, L. (2025). *E-commerce and consumers: An analysis*. https://doi.org/10.13140/RG.2.2.19100.19843

[21] Yanfang, Q., & Chen, L. (2017). Research on e-commerce user churn prediction based on logistic regression. *Proceedings of the International Conference on Information Technology and Network Engineering*, 87–91. https://doi.org/10.1109/ITNEC.2017.8284914

[22] Aqabneh, M. (2025). The influence of customer perceived value, satisfaction, and trust on loyalty among e-shoppers in Palestine's e-commerce platforms. *Journal of Management World*, *2025*, 546–557. https://doi.org/10.53935/jomw.v2024i4.734

[23] Akıl, Siber & Ungan, Mustafa. (2022). E-Commerce Logistics Service Quality: Customer Satisfaction and Loyalty. Journal of Electronic Commerce in Organizations. 20. 1-19. 10.4018/JECO.292473.

