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The Influence of Logistic Service Quality on Customer Satisfaction: The Moderating Role of Environmental Friendliness

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Abstract
Purpose: This study aimed to investigate how key dimensions of logistics service quality, including timeliness, reliability, condition of goods upon delivery, flexibility, and responsiveness, affect customer satisfaction. This study also examines the moderating role of environmental friendliness in the relationship between logistics service quality and customer satisfaction.
Methodology: This study adopted a quantitative approach and used purposive sampling to select 153 respondents who were active users of e-commerce platforms in Jabodetabek. Data were analyzed using partial least squares structural equation modeling (PLS-SEM) via SmartPLS 4.
Results: The results show that timeliness, reliability, and condition of goods significantly influence customer satisfaction, whereas flexibility and responsiveness do not. Environmental friendliness moderates only the effect of the condition of goods; other moderating effects are not significant.
Conclusions: Although sustainable practices are becoming increasingly important, logistics service quality remains the primary driver of customer satisfaction. Environmental friendliness has a limited moderating role, underscoring the continued relevance of core service quality.
Limitations: This study is limited to e-commerce consumers in Jabodetabek, and an incomplete measurement of environmental friendliness restricts the generalizability of the findings.
Contributions: This research contributes to logistics management practitioners and academics in logistics operations management, particularly within Indonesia's e-commerce industry.

Keywords: *Customer Satisfaction, Environmental Friendlines, Logistic Service Quality*

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1. Introduction

Based on data from Indonesia's Ministry of Trade, e-commerce penetration in Indonesia has grown steadily, from 21.56% in 2023, and is projected to reach 34.84% by 2029. The number of e-commerce users is also on the rise, with projections estimating 79.85 million users by 2025. According to the 2023 Indonesian E-Commerce Consumer Behavior Report, e-commerce users are predominantly concentrated in West Java, DKI Jakarta, and Banten, collectively accounting for 67% of total users nationwide. This is consistent with the data from Markplus, Inc. Indonesia, which indicates that 84.2% of respondents in the Greater Jakarta area (Jabodetabek) prefer shopping on e-commerce platforms. The rapid growth of e-commerce distribution channels in Indonesia has driven substantial transformations

in the logistics sector (Febransyah & Goni, 2022). Logistics service quality is widely regarded as a key predictor of consumer satisfaction (A. Gupta, Singh, MathiyazhagUnnandiandi, & D(di, 2023).

Logistics Service Quality (LSQ) plays a critical role in enhancing consumer satisfaction, particularly in Indonesia's e-commerce sector, which relies heavily on delivery speed and reliability. A study found that dimensions such as timeliness, order condition, and operational information sharing significantly improved consumer satisfaction (Pramudita & Guslan, 2025). This also support that Shopee Xpress logistics quality is positively associated with user satisfaction across Indonesia (Harlan, Tarigan, Riadi, & Sitompul, 2025). Simultaneously, Indonesia's logistics industry is increasingly expected to adopt environmentally friendly principles, in line with Presidential Regulation No. 61 of 2011 on the National Action Plan for Greenhouse Gas Emission Reduction. In the e-commerce context, the adoption of environmentally friendly practices not only has the potential to reduce environmental impact but may also enhance consumers' positive perceptions of corporate social and environmental responsibility.

Nevertheless, awareness of environmental friendliness remains limited among logistics companies in Indonesia (Winata and Ellitan 2023). A survey by Illuminate Asia further revealed that seven out of ten consumers in Indonesia consider sustainability when choosing products. This concern was echoed by Akbar Djohan, Chairman of the Indonesian Logistics and Forwarders Association (ALFI), who noted that while several companies have begun adopting green technologies in their logistics operations, the green logistics ecosystem remains suboptimal. Based on the background outlined above, this study aims to examine the effect of Logistics Service Quality on customer satisfaction, with Environmental Friendliness as a moderating variable in the e-commerce industry within the Jabodetabek region. This study distinguishes itself from prior research by emphasizing the interplay between logistics service quality, customer satisfaction, and environmental friendliness, a relationship that remains underexplored in the context of Indonesian e-commerce.

2. Literature Review and Hypothesis Development

2.1 Logistic Service Quality (LSQ)

Logistics Service Quality (LSQ) encompasses multiple dimensions, including timeliness, service reliability, condition of goods upon arrival, and flexibility in meeting customer demands (Mentzer et al., 2001). The LSQ represents a combination of outcome and process dimensions, covering timeliness, order accuracy, order condition, information quality, and responsiveness (Giovanis & Tsoukatos, 2013). High logistics service quality enhances customer satisfaction by ensuring that goods arrive on time, in good condition, and in accordance with customer orders, thereby creating a positive shopping experience (Rao, Goldsby, Griffis, & Iyengar, 2011).

More recent literature emphasizes that LSQ has evolved beyond mere operational efficiency to become a strategic element that shapes the customer experience within digital ecosystems (Kembro & Norrman, 2021). Furthermore, research indicates that improvements in logistics service quality affect not only customer satisfaction but also perceived value and brand image (Klaus and Maklan, 2013). Service quality positively affects customer satisfaction, particularly when the service delivered meets or exceeds customer expectations (Anggetha & Albari, 2024). Siregar, Ravenska, Fitriani, and Tindaon (2025) further explain that service quality not only directly affects satisfaction but may also influence it indirectly through enhanced perceived value. Lestari, Isnurhadi, and Maulana (2025) add that service quality plays an important role in improving customer satisfaction, which in turn mediates its effect on user loyalty.

In the context of Indonesia's e-commerce industry, high-quality logistics services are critical in addressing complex distribution challenges and the growing consumer demand for delivery speed and reliability (Harlan et al., 2025). This also implies that good service quality tends to increase customer satisfaction among a company's customers (Chairunnisah, Maulana, & Shihab, 2024). Recent studies have found that the increasing complexity of e-commerce has led customers to evaluate LSQ based not only on delivery speed and accuracy but also on information transparency, real-time tracking capabilities, and service flexibility (Esper et al., 2020).

2.2 Customer Satisfaction

Customer satisfaction refers to the feeling of pleasure or disappointment that arises from a comparison between the perceived performance of a product or service and prior expectations (Kotler, Keller, Manceau, & Hemonnet-Goujot, 2019). It is also understood as the level of feeling resulting from a customer's evaluation of the product or service received relative to their prior expectations (Giovanis & Tsoukatos, 2013). Marcos and Coelho (2022) explain that in the context of digital services, customer satisfaction is regarded as an evaluative outcome that plays a central role in shaping loyalty, repurchase intention, and word-of-mouth recommendations. Furthermore, according to the American Marketing Association (AMA), customer satisfaction occurs when a customer's needs or desires are met or exceeded. Marcos and Coelho (2022) further argue that service quality directly influences perceived value and satisfaction, which in turn drives loyalty and word-of-mouth promotion.

In digital services, factors such as efficiency, ease of use, and website reliability also contribute significantly to customer satisfaction (Raza, Umer, Qureshi, & Dahri, 2020). Recent studies in the Indonesian e-commerce context emphasize that high logistics service quality significantly enhances customer satisfaction, particularly through order accuracy, delivery reliability, and a consistent user experience (Yulihapsari, Indrawan, Simarmata, & Zainal, 2025). Additionally, other studies have indicated that customer satisfaction serves as a key mediator linking e-service quality to positive reviews and purchase decisions (Tiffany & Singagerda, 2025). This is further supported by Yulihapsari et al. (2025), who found that customer satisfaction emerges from a combination of logistics operational performance and the overall user experience in online shopping.

2.3 Environmental Friendliness

Environmental friendliness mencakup aspek yang dapat meningkatkan kepercayaan hijau (green trust) konsumen melalui kepuasan hijau (green satisfaction) dan persepsi kualitas hijau (green perceived quality) (Chen, Lin, & Weng, 2015). It refers to organizational practices such as recycling and energy and water conservation that directly produce positive impacts or reduce negative effects on the environment (Dolnicar 2020). Furthermore, consumers are willing to purchase environmentally friendly products because they have a genuine need for and commitment to environmental sustainability, which drives their consumption decisions (Chen et al., 2015).

Research conducted in the context of green bed-and-breakfast establishments in Taiwan demonstrated that environmental friendliness directly contributes to green experiential satisfaction and subsequently strengthens customer loyalty (Wu, Cheng, Chen, & Hong, 2018). More recent research found that in food delivery services, consumer perceptions of the environmental friendliness of food packaging enhanced trust and satisfaction, which in turn encouraged supportive behavior and repeat visits (Ting & Ahn, 2025). Consumers who value environmental sustainability tend to prefer products or services from companies that actively promote such commitments (Nuraini, Muzakir, Ponirin, & Buntuang, 2025).

Yu et al. (2017) confirmed that green practices, such as energy and water management and guest education, directly contribute to guest satisfaction in the hospitality industry. Environmentally friendly practices in the supply chain also play an important role in minimizing environmental impact while potentially enhancing a company's competitiveness in an increasingly environmentally conscious market (Akbar, Santosa, & Darasih, 2025). Users who perceive a company's commitment to environmentally friendly practices report higher levels of satisfaction, which is further influenced by an eco-friendly user experience (Mamakou, Cohen, & Manolopoulos, 2024).

2.4 Research Model Development

Environmental friendliness encompasses aspects that can enhance consumers' green trust through green satisfaction and perceived green quality. Studi oleh Kuo, Wu, and Deng (2009) demonstrated that in the e-commerce context, delivery timeliness significantly influences customer satisfaction levels, as customers expect to receive products within the promised timeframe. This is supported by further research showing that timeliness in logistics services positively contributes to perceptions of company reliability and professionalism, ultimately enhancing customer satisfaction and loyalty potential

(Hameed, Nadeem, Azeem, Aljumah, & Adeyemi, 2018). However, literature from the past decade asserts that in the context of modern e-commerce, timeliness has shifted from being a competitive advantage to a minimum service standard, such that its influence on customer satisfaction depends heavily on the consistency of promise fulfillment and the alignment between customer expectations and actual experiences (Esper et al., 2020).

H_1: There is a positive effect of timeliness on customer satisfaction

Kuo et al. (2009) found that timeliness has a significant positive influence on customer satisfaction in the context of technology-based services, as customers value services delivered within the promised timeframe. Esper et al. (2020) assert that in the increasingly complex e-commerce context, timeliness is no longer merely a competitive advantage but has become a minimum service standard, whereby its influence on customer satisfaction depends heavily on the consistency of delivery fulfillment and the alignment between customer expectations and actual service experience.

H_2: There is a positive effect of reliability on customer satisfaction

Research in the logistics service context confirms that reliability has a significant positive influence on customer satisfaction, as customers value services that are dependable and consistent (Hameed et al., 2018).

H_3: There is a positive effect of the condition of goods upon arrival on customer satisfaction

Swafford, Ghosh, and Murthy (2006) demonstrated that flexibility in the supply chain positively influences customer satisfaction, as companies can provide products or services with variations in type, delivery time, and quantity that align with customer needs. In the context of modern logistics services, flexibility is no longer understood solely as an internal organizational capability but as a mechanism directly experienced by customers through the ease of adjusting delivery schedules, service options, and responsiveness to changing needs, all of which significantly influence customer satisfaction (Esper et al., 2020).

H_4: There is a positive effect of flexibility on customer satisfaction

Responsiveness reflects a company's commitment to delivering proactive and supportive services, making customers feel valued and effectively assisted. Kuo et al. (2009) found that responsiveness significantly influences customer satisfaction in technology-based services, as prompt responses reduce uncertainty and enhance customer trust. Furthermore, Hameed et al. (2018) revealed that responsiveness in logistics and delivery services improves customer perceptions of professionalism and service quality, ultimately strengthening customer satisfaction and loyalty.

H_5: There is a positive effect of responsiveness on customer satisfaction

Chen and Chang (2013) demonstrated that environmental friendliness contributes to increased customer trust and loyalty by reinforcing the added value of service aspect, such as timeliness. Furthermore, Chen et al. (2015) revealed that environmentally conscious consumers place greater value on services that are not only timely but also attentive to environmental impact, suggesting that environmental friendliness can strengthen the effect of service timeliness on customer satisfaction. Environmental friendliness signals corporate value and responsibility, reinforcing customers' positive perceptions of timeliness. Thus, on-time delivery has a greater impact on customer satisfaction when the service is environmentally friendly (Chen et al., 2015).

H_6: Environmental friendliness moderates the relationship between timeliness and customer satisfaction

Chen et al. (2015) indicated that environmental friendliness not only directly enhances customer satisfaction but also strengthens the positive effect of reliability on satisfaction, particularly among consumers with high environmental awareness. Chen and Chang (2013)suggestts that commitment to green values can increase customer trust in service consistency, thereby reinforcing the relationship between reliability and customer satisfaction. When companies integrate environmentally friendly practices into their operations, such as using eco-friendly materials, recyclable packaging, and

ecologically efficient delivery processes, the customer-perceived value of the service is further enhanced.

H_7: Environmental friendliness moderates the relationship between reliability and customer satisfaction

Environmentally friendly practices, such as the use of recyclable packaging, waste reduction, and low-emission delivery, not only preserve the physical condition of products but also enhance customers' perceived value of the service (Chen & Chang, 2013). Chen et al. (2015) indicated that environmentally conscious customers tend to be more satisfied when received goods are not only in good condition but also delivered with sustainability considerations in mind. Other studies have also revealed that the integration of green marketing strategies, including product and service adjustments responsive to customer demands, significantly enhances consumer satisfaction (A. Gupta et al., 2023).

H_8: Environmental friendliness moderates the relationship between the condition of goods upon arrival and customer satisfaction

Chen et al. (2015) demonstrated that environmentally conscious customersvaluen companies that are flexible and responsivetog their needsando implement environmentally friendly practices in their operations. Furthermore, Chen and Chang (2013) affirmed that integrating green values into corporate strategy enhances customer perceptions of service quality, thereby strengthening the effect of flexibility on customer satisfaction. Zhu, Sarkis, and Lai (2013) highlighted that flexible green supply chain management practices enable companies to better respond to customer needs while maintaining sustainability, which ultimately enhances customer satisfaction. Lee and Klassen (2008) also found that operational flexibility supported by environmental capabilities drives improvements in service quality and customer satisfaction, particularly in small and medium-sized enterprises that adopt sustainability principles.

H_9: Environmental friendliness moderates the relationship between flexibility and customer satisfaction

Chen et al. (2015) found that environmentally conscious customers place greater value on a company's responsiveness when it is accompanied by environmentally friendly practices, such as the use of eco-friendly materials or sustainable delivery processes. Chen and Chang (2013) demonstrated that integrating green values into service delivery strengthens customer perceptions of quality and trust, positively impacting customer satisfaction. Companies that are both responsive and committed to environmental standards can build a positive image that enhances customer loyalty and satisfaction (Delmas & Pekovic, 2013). Moreover, green marketing strategies that are responsive to consumer needs can increase loyalty and customer satisfaction, as consumers feel valued while also caring about environmental impact (A. Gupta et al., 2023).

H_{10}: Environmental friendliness moderates the relationship between responsiveness and customer satisfaction

3. Research Method

This study employs a quantitative approach with a survey method to analyze the relationships among variables related to logistics service quality, environmental friendliness, and customer satisfaction in e-commerce. The study population consisted of residents of the Jabodetabek region aged 17 years and above who were consumers and users of e-commerce applications for online shopping activities. The sampling technique used was purposive sampling, with respondent criteria including domicile in Jabodetabek, a minimum age of 17 years, and having made at least one purchase through an e-commerce platform within the past six months. Sample size determination follows the recommendation of Hair, Hult, Sarstedt, and Ringle (2022), which suggests five to ten times the number of research indicators. With 26 indicators, the minimum required sample size was 135 respondents. This study collected data from 153 respondents, which was considered sufficient.

The research instrument consisted of a Likert scale questionnaire ranging from 1 to 5, where 1 indicated strongly disagree and 5 indicated strongly agree. The questionnaire was administered via Google Forms and distributed online through various social media channels, including Instagram and WhatsApp, to

reach a broader range of respondents. Prior to the analysis, all responses were examined to ensure completeness and consistency. Only fully completed responses that showed no indication of response bias, such as consistently extreme answer patterns, were included in the further analysis. The questionnaire items were developed based on theoretical indicators from the variables of Logistics Service Quality, Environmental Friendliness, and Customer Satisfaction, adapted from prior research, and adjusted to the Indonesian e-commerce context.

Data analysis was conducted using Partial Least Squares structural equation modeling (PLS-SEM) through SmartPLS 4, selected for its ability to accommodate models with high complexity, moderately sized samples, and data that do not fully meet normality assumptions. At the outer model stage, convergent validity was assessed using outer loading values and Average Variance Extracted (AVE), while discriminant validity was evaluated using the Heterotrait-Monotrait Ratio (HTMT). Construct reliability was examined using Composite Reliability (CR) and Cronbach's alpha to ensure the internal consistency of each indicator. Subsequently, inner model evaluation was conducted by assessing the R^2 values, predictive relevance (Q^2 where applicable), and the strength of relationships among constructs through path coefficients. Hypothesis testing was performed using the bootstrapping method with an adequate number of resamplings, generating t-statistics and p-values to determine the significance of the relationships among variables in the structural model. This procedure provides an empirical basis for assessing whether the hypothesized relationships are supported by data.

4. Results and Discussion

4.1 Respondent Description

A total of 153 respondents participated in this study, comprising 85 males (54%) and 71 females (46%). The age distribution spanned from 17 years to above 45 years, with varied educational backgrounds ranging from senior high school to postgraduate level (Master's degree). A detailed description of the respondents is presented in Table 1.

Table 1. Respondent demographics

Demographic Information		Total	Percentage (%)
Gender	Male	85	54
	Female	71	46
Age	17 - 25 years	12	8
	26 - 35 years	122	78
	36 - 45 years	20	13
	> 45 years	2	1
Education	Senior High School	7	4
	Diploma	5	3
	Bachelor’s Degree	124	79
	Master’s Degree	20	13
Monthly Shopping Frequency on E-commerce	<3	66	42
	3-5	42	27
	> 5	48	31

4.2 Validity Test Results

Validity testing in this study aimed to evaluate the adequacy and accuracy of the research instrument used to measure primary data. Validity testing was conducted on 26 indicator items representing the variables of Condition of Goods Upon Arrival, Customer Satisfaction, Environmental Friendliness, Flexibility, Reliability, Responsiveness, and Timeliness. The results of the Loading Factor for Convergent Validity testing indicate that the majority of indicators across each construct demonstrate loading factor values above 0.70, reflecting strong convergent validity. Two indicators, ENF4 (0.626) and TIM4 (0.683), still met the minimum loading factor threshold of 0.60. The detailed results of the Loading Factor for Convergent Validity testing are presented in Table 2 below:

Table 2. Loading factor results for convergent validity testing

Instrument	CGA	CSF	ENF	FLX	REL	RSP	TIM	ENF x TIM	ENF x RSP	ENF x FLX	ENF x CGA	ENF x REL	Mark
CGA1	0.874												Valid
CGA2	0.875												Valid
CGA3	0.817												Valid
CGA4	0.725												Valid
CSF1		0.845											Valid
CSF2		0.887											Valid
CSF3		0.759											Valid
ENF1			0.912										Valid
ENF2			0.947										Valid
ENF3			0.913										Valid
ENF4			0.626										Valid
FLX1				0.861									Valid
FLX2				0.751									Valid
FLX3				0.887									Valid
REL1					0.770								Valid
REL2					0.831								Valid
REL3					0.765								Valid
REL4					0.746								Valid
RSP1						0.837							Valid
RSP2						0.859							Valid
RSP3						0.867							Valid
RSP4						0.891							Valid
TIM1							0.859						Valid
TIM2							0.888						Valid
TIM3							0.799						Valid
TIM4							0.683						Valid
ENF x TIM								1,000					Valid
ENF x RSP									1,000				Valid
ENF x FLX										1,000			Valid
ENF x CGA											1,000		Valid

ENF x REL												1,000	Valid

Based on the Average Variance Extracted (AVE) test results, all variables in this study met the convergent validity criterion required in Structural Equation Modeling (SEM) analysis, namely an AVE value greater than 0.50. The highest AVE value was obtained for the Responsiveness variable (0.746), followed by Environmental Friendliness (0.738) and Customer Satisfaction (0.692), indicating that the indicators of these three variables can optimally explain construct variance. The Reliability variable recorded the lowest AVE value at 0.606, yet remained above the established threshold and can therefore still be considered valid.

Table 3. Average Variance Extracted (AVE) results

Variables	Average variance extracted (AVE)	Status
Condition of Goods Upon Arrival	0.681	Valid
Customer Satisfaction	0.692	Valid
Environmental Friendliness	0.738	Valid
Flexibility	0.697	Valid
Reliability	0.606	Valid
Responsiveness	0.746	Valid
Timeliness	0.658	Valid

The discriminant validity evaluation results using the Fornell-Larcker criterion indicate that all constructs in the model demonstrate square root Average Variance Extracted (AVE) values that are higher than their correlations with other constructs in the corresponding rows and columns. For instance, the square root AVE value for the Condition of Goods Upon Arrival construct (0.825) was higher than its correlations with other constructs, such as Customer Satisfaction (0.669) and Reliability (0.608). A similar pattern was observed across other constructs, including Environmental Friendliness (0.859), Flexibility (0.835), and Responsiveness (0.864), all of which exhibited square root AVE values greater than their inter-construct correlations, confirming discriminant validity.

4.3. Reliability Test Results

The test results indicated that all variables had Cronbach's alpha values above 0.70 and were therefore considered reliable. A more detailed overview is presented in Table 4.

Table 4. Result of cronbach's alpha

Variables	Cronbach's alpha	Result
Condition of Goods Upon Arrival	0.841	Reliabel
Customer Satisfaction	0.778	Reliabel
Environmental Friendliness	0.875	Reliabel
Flexibility	0.781	Reliabel
Reliability	0.783	Reliabel
Responsiveness	0.886	Reliabel
Timeliness	0.824	Reliabel

4.4. Inner Model R Square (R^2)

The R^2 (R Square) value indicates the overall predictive capability of the research model, particularly in explaining the variation in the dependent variable under study. The higher the R-squared value, the greater the proportion of variance in the dependent variable that can be explained by the independent variables in the model. The R-squared values obtained in this study are listed in Table 5.

Table 5. R Square (R^2) test results

Variables Dependen	R-square	R-square adjusted
Customer Satisfaction	0.689	0.665

Based on the analysis results, the R Square value of 0.689 for Customer Satisfaction indicates that 68.9% of the variation in this study can be explained by the independent variables. The remaining 31.1% was influenced by other factors outside the model, suggesting that the relationship between the independent variables and customer satisfaction was considerably strong. Meanwhile, the adjusted R Square value of 0.665 indicates that after accounting for the number of predictors in the model, 66.5% of the variability in Customer Satisfaction remains significantly explained. Therefore, the model demonstrates strong predictive capability and can be considered reliable in explaining the factors that influence customer satisfaction.

4.5. Discussion

This section focuses on the analysis of the direct effect testing results among the research variables obtained through the bootstrapping procedure. The test results are presented in Table 6, which contains path coefficient values, t-statistics, and p-values to evaluate the significance of each independent variable's influence on the dependent variable.

Table 6. Bootstrapping results for direct effects

Route Efficiency	Original sample (O)	T statistics (|O/STDEV|)	P values	Descriptions
Condition of Goods Upon Arrival -> Customer Satisfaction	0.274	3,389	0.000	Supported
Flexibility -> Customer Satisfaction	0.097	1,110	0.134	Not Supported
Reliability -> Customer Satisfaction	0.354	3,870	0.000	Supported
Responsiveness -> Customer Satisfaction	0.120	1,430	0.076	Not Supported
Timeliness -> Customer Satisfaction	0.165	1,822	0.034	Supported
Environmental Friendliness x Reliability -> Customer Satisfaction	0.029	0.291	0.386	Not Supported
Environmental Friendliness x Flexibility -> Customer Satisfaction	0.030	0.365	0.358	Not Supported
Environmental Friendliness x Responsiveness -> Customer Satisfaction	0.019	0.191	0.424	Not Supported
Environmental Friendliness x Condition of Goods Upon Arrival -> Customer Satisfaction	-0.142	1,830	0.034	Supported
Environmental Friendliness x Timeliness -> Customer Satisfaction	0.019	0.219	0.413	Not Supported

The results of this study indicate a significant positive influence of timeliness on customer satisfaction, with a coefficient of 0.165, t-statistic of 1.822, and p-value of 0.034 (<0.005). This finding suggests that punctuality in service delivery, such as shipment or request handling, contributes meaningfully to customer satisfaction. This result is consistent with Hameed et al. (201), who affirmed that timeliness in logistics and goods delivery services positively contributes to customers' perceptions of a company's reliability and professionalism, thereby enhancing customer satisfaction and loyalty. This is further corroborated by Kuo et al. (2009), who found that in the context of technology-based services, timeliness has a significant positive influence on customer satisfaction, as customers value reliable and consistent services.

These findings align with the research context of urban areas characterized by high service demand and increasingly elevated customer expectations regarding delivery speed and punctuality. A separate study on SiCepat Ekspres delivery services in Johar Baru and Jakarta also found that delivery timeliness accounted for 72.3% of customer satisfaction across all variables, indicating a strong influence at the urban level (Pradini 2023).

H_1: There is a positive influence of timeliness on customer satisfaction

The results of this study indicate a coefficient of 0.354, a t-statistic of 3.870, and a p-value of 0.000, signifying a significant relationship between reliability and customer satisfaction. This affirms that service reliability, including consistency in fulfilling service commitments, is a fundamental aspect of customer satisfaction. Hameed et al. (2018) similarly assert that reliability in logistics services substantially contributes to customer satisfaction by enhancing perceptions of professionalism and trustworthiness. Kuo et al. (2009), in the context of technology-based services, found that reliability exerts a significant positive influence on customer satisfaction, as customers value services that are dependable and consistent.

The findings of this study demonstrate that reliability is reflected in the consistency of on-time delivery, accuracy of tracking information, and ability to fulfill service commitments, all of which are particularly relevant in dynamic urban environments. Customers in urban settings expect certainty and precision in all aspects of service. This is supported by a separate study conducted in Malang, which found that technical reliability in logistics management serves as a primary determinant of customer satisfaction in urban areas (Restuputri, Indriani, & Masudin, 2021).

H_2: There is a positive influence of reliability on customer satisfaction

The Condition of Good Upon Arrival (goods received in good condition) yielded a path coefficient of 0.274, a t-statistic of 3.389, and a p-value of 0.000, indicating a significant positive relationship with customer satisfaction. The p-value, which falls well below the significance threshold of 0.05, and the t-statistic exceeding 1.96, suggest that the physical condition of goods upon arrival is an important determinant of customer satisfaction. Studies have also shown that the physical condition of received products directly affects customer satisfaction, as damaged or nonconforming goods can lead to disappointment and diminished customer loyalty (Huang, Wang, Tseng, & Wang, 2011).

In addition, Hameed et al. (2018) affirmed that the delivery of products arriving in perfect condition is an indicator of reliability and service quality that significantly contributes to customer satisfaction in the context of logistics services. Customer survey results in urban areas reveal that goods received in damaged or defective conditions represent one of the primary complaints that lower customer satisfaction scores. Conversely, goods received according to expectations enhance customer satisfaction with service providers. This is consistent with other research indicating that damaged parcels constitute one of the principal issues in urban delivery, experienced by 20% of respondents, and that good parcel condition directly contributes to perceptions of service quality and overall satisfaction (Prastyantoro, Putro, Yudoko, & Dirgahayani, 2022).

H_3: There is a positive correlation between the Good Upon Arrival condition and customer satisfaction

The results of this study indicate a coefficient of 0.097, a t-statistic of 1.110, and a p-value of 0.134, demonstrating that the influence of Flexibility on Customer Satisfaction is not statistically significant. This implies that although flexibility in service delivery may provide added value, within the context of this model, it is not sufficiently strong or consistent in explaining the variation in customer satisfaction. Saad, Elgazzar, and Kac (2024) revealed that organizational flexibility does not significantly affect customer satisfaction ($\beta = -0.195$, $p > 0.05$). Sorkun, Yumurtacı Hüseyinoğlu, and Börühan (2020) similarly affirmed that flexibility does not always have a direct effect on customer satisfaction across various retail cases.

The findings of this study suggest that the logistics delivery of e-commerce packages in urban environments indicates that efforts to enhance flexibility, such as adjustments to service schedules or product variety, have yet to generate a meaningful impact on customers' perceptions of satisfaction.

This is because customers tend to prioritize other aspects, such as timeliness and service reliability, over the ability of a service to adapt. Choi, Chung, and Young (2019) also support this view, finding in their study of e-commerce logistics service flexibility in major cities and its impact on customer satisfaction that flexibility must be tailored to the characteristics of urban customers to have a significant effect.

H4: There is a positive influence of the Condition of Good Upon Arrival on customer satisfaction

The influence of Responsiveness on Customer Satisfaction yields a positive coefficient of 0.120; however, it is not significant at the 5% level (p = 0.076). Although the directional tendency of the influence supports the theoretical hypothesis that prompt and responsive service can enhance satisfaction, the level of confidence is insufficient to conclude a significant relationship. This may indicate variability in customers' perceptions of service speed or the influence of interactions with other factors. This is further explained by Ladhari (2009), who noted that not all SERVQUAL dimensions, including responsiveness, exert a significant influence on customer satisfaction.

Responsiveness does not always have a significant partial effect on customer satisfaction, particularly in the absence of accurate and personalized service support (Sugiarto & Octaviana, 2021). In urban environments such as Jabodetabek, service responsiveness is assessed not only based on response time but also on the capacity of the system to provide accurate and relevant solutions. Therefore, responsiveness needs to be integrated with other logistic service quality approaches to play a significant role in enhancing customer satisfaction.

H5: There is a positive influence of responsiveness on customer satisfaction

The results of this study indicate that the interaction between Environmental Friendliness and Timeliness does not significantly influence customer satisfaction, with a coefficient of 0.019, a t-statistic of 0.219, and a p-value of 0.413. This implies that sustainability in the delivery process or service timeframe is not yet regarded by customers as an important factor that directly impacts customer satisfaction. Robinot and Giannelloni (2010) suggest that although environmental friendliness is well received, its interaction with timeliness does not provide significant added value to customer satisfaction.

Delivery operations in urban areas that serve as the research setting indicate that customers are more sensitive to the timeliness dimension in a narrow sense, limited to delivery speed and punctuality, and have not yet directly associated it with sustainability principles, such as low-emission delivery or plastic packaging reduction. Although timeliness remains a directly influential factor in customer expectations, service sustainability has not yet been perceived as an element that reinforces or enriches punctuality. This highlights the gap between the environmentally friendly practices adopted by companies and customers' perceptions of the added value of such practices within the context of service timeliness.

H6: Environmental friendliness moderates the relationship between the influence of timeliness on customer satisfaction

The interaction between Environmental Friendliness and Reliability does not significantly influence Customer Satisfaction, with a coefficient of 0.029, a t-statistic of 0.291, and a p-value of 0.386. This indicates that the combined effect of environmental concern and service reliability does not contribute meaningfully to improving customer satisfaction within this model. Ladhari (2009) found that certain service quality dimensions, such as reliability, do not always exert a significant influence on customer satisfaction when other factors, such as emotional aspects and environmental attributes, are more dominant. The findings of this study further reveal that in urban areas such as Jabodetabek, characterized by high mobility and pragmatic customer expectations, the reliability dimension is still evaluated in purely functional terms, without considering the added value derived from sustainable practices. Ladhari (2009) affirms that the reliability dimension does not always significantly influence customer satisfaction when emotional factors or other attributes, such as environmental image and value, become more dominant in shaping customer perceptions.

H7: Environmental friendliness moderates the relationship between reliability and customer satisfaction

The results of this study indicate a p-value of 0.034, demonstrating that environmental friendliness enhances the positive influence of the Condition of Good Upon Arrival on customer satisfaction. Chen et al. (2015) indicated that customers with high environmental awareness tend to be more satisfied when goods received are not only in good condition but also delivered with sustainability considerations in mind. This is further supported by the finding that the integration of green marketing strategies, including product and service adjustments that are responsive to customer demand, significantly enhances consumer satisfaction (V. V. Gupta, 2020). In urban areas such as Jabodetabek, where awareness of sustainability issues is growing, customers evaluate not only the physical quality of goods but also the distribution process in terms of minimal environmental impact. Prastyantoro et al. (2022) affirmed that customers in major cities tend to be more satisfied when deliveries are carried out efficiently and with minimal environmental impact, such as through the use of electric vehicles or recyclable packaging.

H_8: Environmental friendliness moderates the relationship between the Condition of Good Upon Arrival and customer satisfaction

The results of this study indicate a coefficient of 0.030, a p-value of 0.358, and a t-statistic of 0.365, demonstrating that the interaction between Environmental Friendliness and Flexibility is not significant in influencing customer satisfaction. Chen and Chang (2013) found that perceptions of greenwashing and green trust influence consumer satisfaction; however, the interaction between certain green dimensions and other variables, such as service flexibility, does not yield a significant interactive effect on customer satisfaction. Choi et al. (2019) similarly found that environmental friendliness (green service quality) and delivery flexibility each exert a positive influence on satisfaction independently, but the interaction between the two was not significant. This study further reveals that customers in urban areas such as Jabodetabek tend to evaluate flexibility in service delivery, such as delivery time options or variations in requests, as an aspect separate from environmental sustainability. A study by Prastyantoro et al. (2022) in the context of e-commerce distribution in metropolitan cities indicates that although companies have implemented sustainable performance indicators, customers continue to base their satisfaction on convenience and speed rather than on environmental impact.

H_9: Environmental friendliness moderates the relationship between flexibility and customer satisfaction

The test results indicate that the interaction between Environmental Friendliness and Responsiveness is not significant with respect to Customer Satisfaction, with a coefficient of 0.019, t-statistic of 0.191, and p-value of 0.424. This indicates that service speed delivered sustainably has not yet been considered sufficiently relevant by customers as a factor that directly enhances their satisfaction. Kim and Hall (2020) reveal that environmental friendliness and responsiveness each positively influence satisfaction independently; however, the interaction analysis between the two does not demonstrate a significant effect on customer satisfaction. The findings of this study reveal that the interaction between Environmental Friendliness and Responsiveness does not have a significant impact, suggesting that sustainability in responsive service delivery has not yet been regarded as a value-adding factor by customers.

This may also be interpreted as indicating that customers in the urban Jabodetabek area prioritize other service aspects, such as timeliness and reliability, over sustainability efforts implemented in conjunction with responsiveness in e-commerce logistics services. These results are consistent with the findings that, although sustainability is receiving increasing attention, customers in urban areas still tend to evaluate services based on convenience and practicality rather than environmental considerations (Dolnicar, 2020). Accordingly, companies are encouraged to enhance education and communication regarding the integration of sustainability into service processes so that customers may better understand and appreciate the contribution of environmental friendliness to the overall service experience (Akbar et al., 2025).

H_{10}: Environmental friendliness moderates the relationship between responsiveness and customer satisfaction

5. Conclusions

5.1 Conclusion

The findings of this study indicate that customer satisfaction in logistics and distribution services is predominantly influenced by fundamental operational performance, particularly delivery timeliness, service reliability, and the physical condition of goods upon receipt of the goods. Conversely, flexibility and responsiveness did not yield statistically significant contributions, suggesting that customers tend to evaluate service quality based on the consistency of operational standard achievement and certainty of service outcomes. Furthermore, environmental friendliness only moderates the relationship between the condition of goods upon arrival and customer satisfaction, indicating that environmental sustainability can reinforce the influence of physical product quality on satisfaction.

This suggests that although environmentally friendly practices are becoming increasingly important, traditional operational factors remain the primary determinants of customer satisfaction, while the moderating role of sustainability across other variables warrants further exploration in future research. In terms of implications, the findings of this study affirm the necessity for companies to concentrate their managerial efforts on strengthening core operational capabilities, accompanied by the systematic integration of sustainability initiatives designed to support product quality control and delivery process reliability. Theoretically, this study confirms that the role of sustainability in the context of customer satisfaction is contextual in nature and serves to reinforce operational factors, thereby opening avenues for further research to examine the conditions and contexts under which sustainability variables play a more dominant role in shaping customer satisfaction.

5.3 Research Limitation

This study has limitations in the availability of literature pertaining to consumer behavior within a single e-commerce industry and users in the Jabodetabek region, thereby reducing the generalizability of the findings to other contexts. Furthermore, environmental friendliness measurement has yet to encompass all dimensions of sustainability.

5.2 Suggestions and Directions for Future Research

Future research is recommended to broaden the context and develop the model to examine additional operational and sustainability variables more comprehensively in shaping customer satisfaction. Future research should consider experimental designs to test causality more rigorously or employ a cross-sectional approach with a more diverse sample to enhance the generalizability of the research findings.

References

Akbar, A., Santosa, W., & Darasih, R. (2025). The Influence of Green Supply Chain Management Practices on Customers and Suppliers on Product Quality and Production Costs. *Golden Ratio of Data in Summary, 5*(1), 111-118. doi:https://doi.org/10.52970/grdis.v5i1.898

Anggetha, D. A., & Albari, A. (2024). Pengaruh Kualitas Layanan dan Citra Merek terhadap Kepuasan Pelanggan dan Niat Pembelian Sewa Kost di Singgahsini Mamikos. *Jurnal Akuntansi, Keuangan, dan Manajemen, 5*(4), 543-551. doi:https://doi.org/10.35912/jakman.v5i4.3473

Chairunnisah, F. W., Maulana, A., & Shihab, M. S. (2024). Pengaruh Harga yang Dipersepsikan, Kualitas Layanan, dan Citra Perusahaan terhadap Loyalitas Pelanggan: Studi Kasus di PT. Evergreen Shipping Agency Indonesia Palembang. *Jurnal Akuntansi, Keuangan, dan Manajemen, 6*(1), 117-133. doi:https://doi.org/10.35912/jakman.v6i1.3662

Chen, Y.-S., & Chang, C.-H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of business ethics, 114*(3), 489-500. doi:https://doi.org/10.1007/s10551-012-1360-0

Chen, Y.-S., Lin, C.-Y., & Weng, C.-S. (2015). The influence of environmental friendliness on green trust: The mediation effects of green satisfaction and green perceived quality. *Sustainability, 7*(8), 10135-10152. doi:https://doi.org/10.3390/su70810135

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. doi:https://doi.org/10.3390/su11205626

Delmas, M. A., & Pekovic, S. (2013). Environmental standards and labor productivity: Understanding the mechanisms that sustain sustainability. *Journal of Organizational Behavior, 34*(2), 230-252.
Dolnicar, S. (2020). Designing for more environmentally friendly tourism. *Annals of Tourism Research, 84*, 102933. doi:https://doi.org/10.1016/j.annals.2020.102933
Esper, T. L., Castillo, V. E., Ren, K., Sodero, A., Wan, X., Croxton, K. L., . . . Goldsby, T. J. (2020). Everything old is new again: the age of consumer-centric supply chain management. *Journal of Business Logistics, 41*(4), 286-293. doi:https://doi.org/10.1111/jbl.12267
Febransyah, A., & Camelia Goni, J. I. (2022). Measuring the supply chain competitiveness of e-commerce industry in Indonesia. *Competitiveness Review: An International Business Journal, 32*(2), 250-275. doi:https://doi.org/10.1108/CR-05-2020-0059
Giovanis, A. N., & Tsoukatos, E. (2013). On the relationships between logistics service deliverables, customer satisfaction and loyalty in industrial supply chains. *Journal for International Business and Entrepreneurship Development, 7*(1), 63-80. doi:https://doi.org/10.1504/JIBED.2013.052132
Gupta, A., Singh, R. K., Mathiyazhagan, K., Suri, P. K., & Dwivedi, Y. K. (2023). Exploring relationships between service quality dimensions and customers satisfaction: empirical study in context to Indian logistics service providers. *The international Journal of logistics management, 34*(6), 1858-1889. doi:https://doi.org/10.1108/IJLM-02-2022-0084
Gupta, V. (2020). Enhancing green product purchase behavior: the role of green satisfaction and green loyalty. *International Journal on Customer Relations, 8*(1), 11-20.
Hair, J. F., Hult, G. T. M., Sarstedt, M., & Ringle, C. M. (2022). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (pp. 587-632): Los Angeles: Sage Publication.
Hameed, W.-U., Nadeem, S., Azeem, M., Aljumah, A. I., & Adeyemi, R. A. (2018). Determinants of e-logistic customer satisfaction: A mediating role of information and communication technology (ICT). *International Journal of Supply Chain Management (IJSCM), 7*(1), 105-111.
Harlan, F. B., Tarigan, Y., Riadi, S., & Sitompul, A. M. (2025). Analysis of e-commerce logistic service quality on customer satisfaction, loyalty, and brand image in Indonesia. *International Review of Management and Marketing, 15*(1), 118-127. doi:https://doi.org/10.32479/irmm.17503
Huang, P.-Y., Wang, C.-C., Tseng, Y.-Y., & Wang, R.-J. (2011). The impact of brand equity on customer's purchase intention–Taking perceived value as a moderating variable. *Journal of Information and Optimization Sciences, 32*(3), 657-672. doi:https://doi.org/10.1080/02522667.2011.10700078
Kembro, J. H., & Norrman, A. (2021). Which future path to pick? A contingency approach to omnichannel warehouse configuration. *International Journal of Physical Distribution & Logistics Management, 51*(1), 48-75. doi:https://doi.org/10.1108/IJPDLM-08-2019-0264
Kim, M. J., & Hall, C. M. (2020). Can sustainable restaurant practices enhance customer loyalty? The roles of value theory and environmental concerns. *Journal of Hospitality and Tourism Management, 43*, 127-138. doi:https://doi.org/10.1016/j.jhtm.2020.03.004
Klaus, P. P., & Maklan, S. (2013). Towards a better measure of customer experience. *International journal of market research, 55*(2), 227-246. doi:https://doi.org/10.2501/IJMR-2013-021
Kotler, P., Keller, K., Manceau, D., & Hemonnet-Goujot, A. (2019). *Marketing Management (16e édition)*: Pearson.
Kuo, Y.-F., Wu, C.-M., & Deng, W.-J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in human behavior, 25*(4), 887-896. doi:https://doi.org/10.1016/j.chb.2009.03.003
Ladhari, R. (2009). Service quality, emotional satisfaction, and behavioural intentions: A study in the hotel industry. *Managing Service Quality: An International Journal, 19*(3), 308-331. doi:https://doi.org/10.1108/09604520910955320
Lee, S. Y., & Klassen, R. D. (2008). Drivers and enablers that foster environmental management capabilities in small-and medium-sized suppliers in supply chains. *Production and Operations management, 17*(6), 573-586. doi:https://doi.org/10.3401/poms.1080.0063
Lestari, W. F., Isnurhadi, I., & Maulana, A. (2025). Pengaruh Kualitas Sistem Kualitas Layanan dan Pemasaran Relasional terhadap Loyalitas Pengguna BSB Mobile pada Bank Sumsel Babel Syariah Palembang dengan Kepuasan Pengguna sebagai Variabel Intervening. *Jurnal*

Akuntansi, Keuangan, dan Manajemen, 6(1), 295-314. doi:https://doi.org/10.35912/jakman.v6i1.4217

Mamakou, X. J., Cohen, S., & Manolopoulos, D. (2024). Post-implementation evaluation of enterprise resource planning (ERP) systems: an internal auditors' perspective. *Journal of Systems and Information Technology, 26*(3), 363-394. doi:https://doi.org/10.1108/JSIT-11-2023-0264

Marcos, A. M. B. d. F., & Coelho, A. F. d. M. (2022). Service quality, customer satisfaction and customer value: holistic determinants of loyalty and word-of-mouth in services. *The TQM Journal, 34*(5), 957-978. doi:https://doi.org/10.1108/TQM-10-2020-0236

Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. *Journal of Business Logistics, 22*(2), 1-25.

Nuraini, I., Muzakir, M., Ponirin, P., & Buntuang, P. C. D. (2025). Pengaruh Green Marketing dan Citra Merek terhadap Pembelian Ulang melalui Kepuasan Konsumen sebagai Variabel Intervening pada Produk Torufarm Palu. *Studi Akuntansi, Keuangan, dan Manajemen, 4*(2), 419-433. doi:https://doi.org/10.35912/sakman.v4i2.3969

Pradini, J. (2023). The Influence of Service Quality and Timeliness of Delivery on Customer Satisfaction at the Sicepat Express Delivery Service in Johar Baru, Central Jakarta. *Logistica : Journal of Logistic and Transportation, 1*(1), 67-101. doi:https://doi.org/10.61978/logistica.v1i1.156

Pramudita, A. S., & Guslan, D. (2025). The Impact of Logistics Service Quality on Consumer Satisfaction in E-Commerce Distribution Channels in Indonesia. *The Journal of Distribution Science, 23*(2), 109-118. doi:https://doi.org/10.15722/jds.23.02.202502.109

Prastyantoro, R., Putro, H. P. H., Yudoko, G., & Dirgahayani, P. (2022). E-commerce parcel distribution in urban areas with sustainable performance indicators. *Sustainability, 14*(23), 16-29. doi:https://doi.org/10.3390/su142316229

Rao, S., Goldsby, T. J., Griffis, S. E., & Iyengar, D. (2011). Electronic logistics service quality (e-LSQ): its impact on the customer's purchase satisfaction and retention. *Journal of Business Logistics, 32*(2), 167-179. doi:https://doi.org/10.1111/j.2158-1592.2011.01014.x

Raza, S. A., Umer, A., Qureshi, M. A., & Dahri, A. S. (2020). Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model. *The TQM Journal, 32*(6), 1443-1466. doi:https://doi.org/10.1108/TQM-02-2020-0019

Restuputri, D. P., Indriani, T. R., & Masudin, I. (2021). The effect of logistic service quality on customer satisfaction and loyalty using kansei engineering during the COVID-19 pandemic. *Cogent Business & Management, 8*(1), 1906492. doi:https://doi.org/10.1080/23311975.2021.1906492

Robinot, E., & Giannelloni, J. L. (2010). Do hotels'"green" attributes contribute to customer satisfaction? *Journal of Services Marketing, 24*(2), 157-169. doi:https://doi.org/10.1108/08876041011031127

Saad, N. A., Elgazzar, S., & Kac, S. M. (2024). Investigating the impact of supply chain management practices on customer satisfaction through flexibility and technology adoption: Empirical evidence. *Business Strategy & Development, 7*(1), e326. doi:https://doi.org/10.1002/bsd2.326

Siregar, I. N. L., Ravenska, N., Fitriani, L., & Tindaon, S. S. (2025). Peran Kualitas Layanan dan Harapan Pelanggan terhadap Kepuasan melalui Nilai yang Dirasakan. *Jurnal Akuntansi, Keuangan, dan Manajemen, 6*(4), 1137-1152. doi:https://doi.org/10.35912/jakman.v6i4.4898

Sorkun, M. F., Yumurtacı Hüseyinoğlu, I. Ö., & Börühan, G. (2020). Omni-channel capability and customer satisfaction: mediating roles of flexibility and operational logistics service quality. *International Journal of Retail & Distribution Management, 48*(6), 629-648. doi:https://doi.org/10.1108/IJRDM-07-2019-0235

Sugiarto, S., & Octaviana, V. (2021). Service quality (SERVQUAL) dimensions on customer satisfaction: Empirical evidence from bank study. *Golden Ratio of Marketing and Applied Psychology of Business, 1*(2), 93-106. doi:https://doi.org/10.52970/grmapb.v1i2.103

Swafford, P. M., Ghosh, S., & Murthy, N. (2006). The antecedents of supply chain agility of a firm: scale development and model testing. *Journal of Operations management, 24*(2), 170-188. doi:https://doi.org/10.1016/j.jom.2005.05.002

Tiffany, M., & Singagerda, F. S. (2025). Faktor Customer Review dan E-Service Quality terhadap Keputusan Pembelian Shopee. *Jurnal Akuntansi, Keuangan, dan Manajemen, 6*(2), 497-508. doi:https://doi.org/10.35912/jakman.v6i2.3981

Ting, L., & Ahn, J. (2025). How the environmental friendliness of food delivery packages shapes sustainable customer behavior. *Social Responsibility Journal, 21*(4), 809-825. doi:https://doi.org/10.1108/SRJ-01-2024-0031

Winata, M., & Ellitan, L. (2023). Penerapan Green Logistics dalam Bisnis Logistik Indonesia. *Jurnal Cendekia Ilmiah, 3*(1), 236-244. doi:https://doi.org/10.56799/jceki.v3i1.2538

Wu, H.-C., Cheng, C.-C., Chen, Y.-C., & Hong, W. (2018). Towards green experiential loyalty: driving from experiential quality, green relationship quality, environmental friendliness, green support and green desire. *International Journal of Contemporary Hospitality Management, 30*(3), 1374-1397. doi:https://doi.org/10.1108/IJCHM-10-2016-0596

Yu, Y., Li, X., & Jai, T.-M. (2017). The impact of green experience on customer satisfaction: Evidence from TripAdvisor. *International Journal of Contemporary Hospitality Management, 29*(5), 1340-1361. doi:https://doi.org/10.1108/IJCHM-07-2015-0371

Yulihapsari, I. U., Indrawan, R., Simarmata, J., & Zainal, M. (2025). The Role of E-Service Quality and Price Perception: Key to Increasing Loyalty through Consumer Satisfaction. *Jurnal Akuntansi, Keuangan, dan Manajemen, 6*(2), 543-554. doi:https://doi.org/10.35912/jakman.v6i2.3941

Zhu, Q., Sarkis, J., & Lai, K.-h. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *Journal of Purchasing and Supply Management, 19*(2), 106-117. doi:https://doi.org/10.1016/j.pursup.2012.12.001