

Enhancing Passenger Satisfaction Through Service Quality: The Strategic Role of Baggage Handling

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ABSTRACT

Intense competition within the low-cost carrier (LCC) industry has shifted the strategic focus from price superiority towards enhancing service quality and passenger satisfaction. This study aims to analyze the strategic role of the operational process of baggage handling in shaping passenger satisfaction by examining the mediating role of Service Quality. Employing a quantitative approach with the Partial Least Squares Structural Equation Modeling (PLS-SEM) method, data were collected via a questionnaire from 100 respondents, who were predominantly young passengers (under 25 years old) and university students. The findings indicate that Baggage Handling has a direct, positive, and significant influence on both Service Quality and Customer Satisfaction. Furthermore, Service Quality is also proven to have a positive and significant effect on Customer Satisfaction. The most critical finding is the confirmation of the partial mediating role of Service Quality in the relationship between Baggage Handling and Customer Satisfaction. This result implies that baggage handling possesses a dual role: as a component in shaping service quality perceptions and as a direct driver of satisfaction. For LCC managers, this finding underscores the importance of managing baggage handling as a strategic service touchpoint, with practical implications including investment in automated baggage systems, real-time tracking technology, and staff training programs to effectively enhance passenger satisfaction and competitive advantage.

Keywords: Baggage Handling; Service Quality; Passenger Satisfaction.

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INTRODUCTION

The global air transportation industry has undergone a fundamental transformation since the emergence of the low-cost carrier (LCC) business model. This model, initially focused on providing the lowest possible fares, successfully democratized air travel and opened new markets. However, with an increasing number of players and intense competition, a strategy solely reliant on price superiority has proven insufficient to ensure long-term success. Researchers and industry practitioners now agree that the competitive landscape has shifted. To survive and thrive, LCCs must begin to invest in building stronger customer relationships. Consequently, the strategic focus has shifted towards enhancing service quality and creating customer satisfaction as key differentiators in a crowded market.

That enhancing service quality has become a primary component of business strategy to achieve consumer satisfaction (Klophaus et al., 2021). They found that service quality is a significant predictor of customer satisfaction. This supports the argument that service quality is the new focus in LCC competition.

Passenger perceptions of service quality are shaped not only by the in-flight cabin experience but are also significantly influenced by the series of operational processes they

undergo on the ground (ground handling services). These processes, ranging from check-in and security screening to baggage reclaim, constitute crucial "moments of truth" (Jayakumar & Dwivedi, 2023). Failure or inefficiency at any of these process points can significantly undermine the entire travel experience. Research indicates that passenger perceptions of quality have traditionally been strongly linked to process efficiency, short waiting times, and the positive attitude of service staff in processing areas. A case of an Indonesian airport demonstrated that focusing on passenger expectations and needs on the ground can reduce the gap between expectations and reality, leading to passenger satisfaction with the airport's service quality (Praja et al., 2023). This affirms the importance of on-ground operational processes.

Among the various on-ground processes, baggage handling holds a unique and critical role. This process represents one of the final interactions a passenger has with the service provider and carries a high emotional weight. Long waiting times in the baggage reclaim area can lead to dissatisfaction and lower the overall perception of service quality. Furthermore, the speed and accuracy of baggage delivery have been identified as critical measures of passenger satisfaction. A failure in this process—such as delayed, damaged, or lost baggage—is a form of service failure that can erase all prior positive experiences.

A case study at Yogyakarta International Airport found that constraints in the baggage distribution process, such as congestion or staff shortages, directly impact passenger satisfaction concerning service time (Ulfah et al., 2020). Furthermore, older but fundamental research explicitly states that baggage access time is a critical indicator for both passenger satisfaction and service provider performance evaluation (Setiawan et al., 2020). They also emphasize that baggage handling is a primary influence on passenger flow and airport processes for both departures and arrivals.

Previous research in the aviation industry has primarily focused on broad service quality dimensions without examining specific operational processes. Studies by Daulay et al. (2024) investigated general service quality factors in Indonesian LCCs but did not explore the role of individual touchpoints like baggage handling. Similarly, research by Hidayati et al. (2021) examined passenger satisfaction in transportation services but focused on overall service perceptions rather than operational antecedents. International studies have shown mixed results regarding the relative importance of different service touchpoints, with most research treating baggage handling as one component within broader ground service categories rather than as a distinct strategic variable.

Although numerous studies have confirmed the general relationship between service quality and customer satisfaction in the aviation industry, a deeper understanding of the specific operational antecedents that shape these quality perceptions remains a gap in the literature, particularly within the LCC context (Daulay et al., 2024). Many studies tend to measure service quality as a general concept without dissecting the key underlying processes. Specifically, the dual role of baggage handling—as both a formative component of service quality perception and a direct driver of satisfaction—has not been extensively explored within an integrated model.

The research problem in this study centers on the gap between theoretical understanding and practical application of how specific operational processes influence passenger satisfaction in the LCC industry. While previous studies have established general relationships between service quality and satisfaction, there remains limited understanding of how individual

operational touchpoints, particularly baggage handling, contribute to overall passenger experience and satisfaction.

The urgency of this research is driven by the intensifying competition in the LCC market, where differentiation through price alone is no longer sustainable. Airlines need evidence-based insights into which operational processes provide the greatest return on investment in terms of customer satisfaction. Baggage handling represents a critical yet under-researched area that occurs at the end of the passenger journey, potentially having disproportionate impact on overall satisfaction. The research gap specifically lies in understanding the dual role of baggage handling—as both a formative component of service quality perception and a direct driver of satisfaction—which has not been extensively explored within an integrated model using mediation analysis.

The novelty of this research lies in its integrated approach to examining baggage handling as both a direct and indirect influencer of passenger satisfaction through service quality mediation. Unlike previous studies that treat baggage handling as merely one component of ground services, this research positions it as a strategic variable with dual pathways to satisfaction. This approach provides new theoretical insights into the mechanisms through which operational touchpoints influence customer perceptions and behaviors.

Therefore, this research aims to fill this gap. This study will comprehensively analyze how the operational variable of baggage handling influences customer satisfaction, not only directly but also indirectly through its role in shaping perceptions of service quality (Shaw et al., 2021). Consequently, this research will provide more granular and actionable insights for LCC and airport managers seeking to enhance passenger satisfaction through operational excellence. Thus, the objective of this study is to analyze the influence of baggage handling in enhancing passenger satisfaction as mediated by passenger service at international airports (Park et al., 2020; Setiawan et al., 2020).

The benefits of this research include providing strategic guidance for LCC managers on resource allocation priorities, offering evidence-based recommendations for operational improvements, and contributing to the theoretical understanding of service quality formation in the aviation industry. The practical implications extend to airport authorities, ground handling companies, and aviation consultants seeking to optimize passenger experience through targeted operational enhancements.

METHOD

This research employed a quantitative approach, collecting numerical data via a questionnaire and analyzing it statistically. The study was explanatory, aiming to test cause-and-effect relationships among the variables of baggage handling, service quality, and passenger satisfaction at international airports. Primary data were gathered from international airport passengers. Respondents answered statements through a Google Form, with responses measured on a five-point Likert scale. Each indicator was tested for validity and reliability.

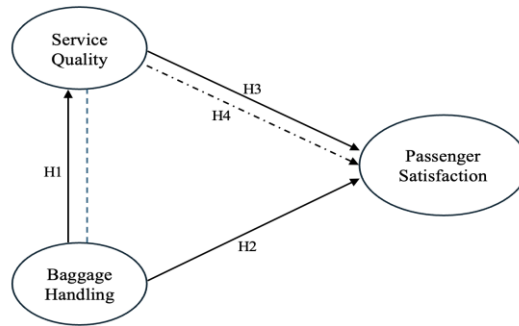


Figure 1. Research Model

The research method used in this study was Partial Least Squares Structural Equation Modeling (PLS-SEM) (Hair Jr et al., 2017). Data processing was conducted using SmartPLS 4 software. The outputs consisted of the results from the PLS-Algorithm, Bootstrapping, and Blindfolding calculations (Ghozali, 2016; Hair, 2021).

RESULTS AND DISCUSSION

Demographic Profile of Respondents

In this study, the questionnaires collected amounted to a total of 100 respondents. The characteristics of the research respondents consist of gender, age, final education, occupation, flight frequency within the last year, as well as the respondent's city of residence. The demographic profile of the respondents who completed the research questionnaire can be seen in Table-1.

Table 1. Demographic Profile of Respondents

Profile	%
Gender:	
Man	49%
Female	51%
Grand Total	100%
Age (year):	
< 25	80%
25 - 35	8%
36 - 45	8%
> 45	4%
Grand Total	100%
Education:	
High School	56%
Diploma	3%
Bachelor's Degree	37%
Master's Degree	4%
Grand Total	100%
Occupation:	
College Student	73%
Private Sector Employee	14%
Public Sector Employee	2%

Profile	%
Entrepreneur	11%
Grand Total	100%
Flights Frequency (in the last year):	
> 12 kali	2%
1-2 kali	73%
3-5 kali	20%
6-8 kali	5%
Grand Total	100%
Residence:	
Aceh	1%
Bekasi	15%
Bogor	4%
Boyolali	1%
Depok	3%
Jakarta	57%
Luar negeri	1%
Medan	2%
Papua	1%
surabaya	1%
Tangerang	14%
Grand Total	100%

Based on Gender, the composition of respondents consists of 49% male and 51% female. This indicates that the gender distribution in this research sample can be considered highly balanced. The difference between the number of male and female respondents is minimal, thus it can be assumed that the perceptions studied will not be significantly biased toward either gender (Table-1).

Based on Age, the results show that an absolute majority of respondents, 80%, fall within the under-25 age group. The other age groups (25-35, 36-45, >45) represent much smaller and relatively equal proportions. The research sample is predominantly composed of a young demographic, likely to represent Generation Z and young Millennials. This is a prominent characteristic that will significantly influence the research findings. The perceptions, expectations, and behaviors of this age group toward services may differ substantially from those of older age groups (Table-1).

Based on Final Education, the data indicates that respondents are dominated by high school graduates (56%), followed by bachelor's degree holders (37%). The educational background of the respondents is quite concentrated at these two levels. The high percentage of high school graduates is highly consistent with the findings on age and occupation to be discussed next (Table-1).

Based on Occupation, the results show that most respondents are College Students (73%). This finding, showing a 73% dominance of students, aligns closely with the age data (80% < 25 years old) and education data (many high school graduates currently pursuing undergraduate studies). This confirms that the research sample has a very specific profile (Table-1).

Based on Flight Frequency, most respondents, 73%, have flown 1-2 times in the last year. Only a small fraction (27%) flew more than three times. Most respondents in this study are infrequent flyers. They are not business travelers or routine travelers. This is important because infrequent flyers may have different levels of expectations and price sensitivity compared to frequent flyers.

Based on Domicile, the respondents' residences are highly concentrated in the regions of Jakarta (57%), Bekasi (15%), and Tangerang (14%). In total, 86% of the respondents originate from these three major cities in the Jabodetabek (Greater Jakarta) area. This indicates that the research sample is geographically very homogeneous. Their perceptions are likely shaped by experiences at the primary airports in that region, such as Soekarno-Hatta International Airport (Table-1).

Based on the description above, it can be concluded that the typical respondent is a young man or woman (under 25), who is a university student with a final education of high school or is currently pursuing a bachelor's degree. This respondent is an infrequent flyer (1-2 times a year) and resides in the Jakarta metropolitan area (Jabodetabek). The findings of this study can be generalized with high confidence to populations with similar characteristics (students, young, infrequent flyers, residing in Jabodetabek). However, caution should be exercised when generalizing these findings to all types of airport passengers in Indonesia (e.g., middle-aged, frequent business travelers). This can be noted as one of the limitations of this study (E. Smith et al., 2023; Lin, 2021).

Descriptive and Normality Statistics Test

The research data indicates that respondents consistently provided positive or agreeable ratings for all items presented. Based on the Skewness and Kurtosis values, many of which fall outside the range of -1 to +1, it can be concluded that the research data are not normally distributed. The test results showing non-normal data, in fact, reinforce the decision that this study can proceed to the subsequent analysis (Table-2).

Table 2. Descriptive and Normality Statistics

Construct	Item	Mean	Std	Excess kurtosis	Skewness
BH	BH1	4.03	0.7804	0.4387	-0.6938
	BH2	3.86	0.7749	0.2093	-0.5349
	BH3	4.05	0.7263	1.3975	-0.8725
	BH4	4.04	0.7473	0.9785	-0.7958
	BH5	4.08	0.6735	2.0638	-0.8952
Ser	Ser1	3.94	0.7459	2.8463	-1.2223
	Ser2	3.95	0.7124	2.6067	-0.9373
	Ser3	4.12	0.6969	1.7252	-0.8897
	Ser4	3.91	0.8258	0.0280	-0.5863
	Ser5	4.09	0.6495	1.0523	-0.5359
Sat	Sat1	3.95	0.8047	1.8487	-1.0771
	Sat2	3.87	0.8081	0.0908	-0.5638
	Sat3	4.07	0.6965	0.9080	-0.6377
	Sat4	4.14	0.6484	1.1884	-0.5934

Construct	Item	Mean	Std	Excess kurtosis	Skewness
	Sat5	4.06	0.7324	3.1876	-1.1805

Outer loading Test & Construct Reliability and Validity

Table-3 shows that all indicators in this study are strong reflectors of their respective constructs, thus fulfilling the first condition for convergent validity¹. The Average Variance Extracted (AVE) values are convincingly above the 0.50 threshold, which provides strong evidence that convergent validity for all constructs in this research model has been met². All constructs demonstrate good reliability based on Cronbach’s Alpha criterion³. The Composite Reliability values are also well above the 0.70 threshold, indicating that all three sets of indicators possess very high and robust internal consistency⁴.

Table 3. Outer loading & Construct Reliability and Validity

Construct	Item	Outer loading	Cronbach's alpha	rho_a	rho_c	AVE
BH	BH1	0.8020	0.8703	0.8713	0.9059	0.6583
	BH2	0.8203				
	BH3	0.8236				
	BH4	0.8108				
	BH5	0.7997				
Ser	Ser1	0.7182	0.8370	0.8387	0.8849	0.6063
	Ser2	0.7715				
	Ser3	0.8121				
	Ser4	0.7847				
	Ser5	0.8030				
Sat	Sat1	0.8555	0.8856	0.8887	0.9164	0.6874
	Sat2	0.8475				
	Sat3	0.8660				
	Sat4	0.7536				
	Sat5	0.8177				

Thus, the evaluation of the measurement model (outer model) indicates excellent results and meets all required criteria. Convergent validity is proven to be strong, with all outer loading values exceeding 0.708 and the AVE values for each construct well above 0.50. Furthermore, internal consistency reliability is also demonstrated to be very high, with all Cronbach's Alpha and Composite Reliability (rho_c) values surpassing the 0.70 threshold. Therefore, it can be concluded that the measurement instrument used in this study is both valid and reliable.

Heterotrait-Monotrait Ratio Test

As presented in Table 4, the HTMT value between Sat and BH is well below the strict threshold of 0.85. This indicates that the Sat and BH constructs are empirically distinct from one another, and thus, the discriminant validity between them is very well established.

Table 4. Discriminant Validity: Heterotrait-Monotrait Ratio (HTMT)

Construct	BH	Sat	Ser
BH			
Sat	0.7625		
Ser	0.8136	0.7964	

The HTMT value for Ser and BH is also convincingly below the 0.85 threshold. This demonstrates that the Ser and BH constructs are two distinct concepts within this research model. Discriminant validity is therefore established. The HTMT value for Ser and Sat (0.7964) represents the most crucial test, as theoretically, Ser and Sat are two very closely related concepts. The resulting value of 0.7964 is an excellent finding. This value is below the strict 0.85 threshold, which provides strong evidence that although these two variables are related, the research instrument (questionnaire) is capable of clearly discriminating between them.

This research provides strong empirical evidence that discriminant validity for all constructs in the research model has been established. This confirms that each variable (BH, Ser, and Sat) successfully measures a unique and distinct concept, thus making the measurement model suitable for progression to the structural model analysis stage.

Collinearity Statistics: Variance Inflation Factor (VIF) Test

In Table-5, a VIF value of 1.0000 indicates a complete absence of multicollinearity. This is an ideal and fully expected result, as the issue of multicollinearity only arises when two or more predictor variables are highly correlated while predicting a single dependent variable.

The value of 1.9481 is well below the critical threshold of 5, and also beneath the ideal threshold of 3. This is a very strong indication that no excessive correlation exists between the BH and Ser variables within the context of this research model.

Table 5. Collinearity Statistics: Variance Inflation Factor

	Sat	Ser
BH	1.9481	1
Sat		
Ser	1.9481	

The results of the collinearity diagnostics using the Variance Inflation Factor (VIF) indicate that all VIF values for each predictor variable in the model are below the recommended threshold of 5. The highest VIF value observed is 1.9481. Therefore, it can be concluded that this structural model is free from serious multicollinearity issues.

Hypotheses Testing

Table 6. Hypothesis Test

Hypothesis	Path	Std. Beta	Std. Error	t value	p value	Bias	Confidence interval		Remarks
							2.50%	97.50%	
H1	BH -> Sat	0.3811	0.1414	2.6954	0.0071	-0.0022	0.1241	0.6737	Accepted
H2	BH -> Ser	0.6976	0.0791	8.8182	0.0000	0.0072	0.5127	0.8233	Accepted
H3	Ser -> Sat	0.4221	0.1360	3.1040	0.0019	0.0056	0.1642	0.6891	Accepted
H4	BH -> Ser -> Sat	0.2944	0.1059	2.7815	0.0054	0.0078	0.1198	0.5282	Accepted

Note: p-value ≤ 0.05 dan t-value ≥ 1.96

H1: Direct influence of baggage handling on passenger satisfaction

There is a direct, positive, and statistically significant influence of baggage handling on customer satisfaction. This means that an improvement in the quality of baggage handling can directly increase customer satisfaction, regardless of their perception of the overall service quality (Table 6). Thus, H1 is accepted. The finding that baggage handling has a direct, positive, and significant impact on customer satisfaction is one of the important results of this study. It implies that the passenger's experience during baggage handling can directly create feelings of satisfaction or dissatisfaction, without necessarily going through an evaluation of the general service quality (Yuan, Yang, Feng, Rasouli, Ruan, et al., 2021).

The indicators of reliability and accuracy are the primary drivers of this effect. When a passenger's baggage arrives intact and without being switched, the airline's core promise is directly fulfilled, creating an instant feeling of relief that translates into satisfaction. Conversely, if baggage is delayed or damaged, feelings of anxiety and frustration arise, which directly lower satisfaction (Fakfare et al., 2021). The indicators of speed and process efficiency as well as convenience and fluency of the process directly reduce the "psychological burden" of waiting (Felder et al., 2022). A fast and smooth process eliminates anxiety, boredom, and frustration. This seamless experience is directly perceived as a satisfying one by the passengers. The quality of staff and information also plays a role in directly shaping passenger satisfaction at the baggage service touchpoint.

Therefore, the direct influence of baggage handling on satisfaction can be explained as the passenger's evaluative response to a crucial process at the end of their journey. Success at this stage provides a sense of relief and fulfills a core promise, which directly creates satisfaction—a finding consistent with previous research in the aviation industry (J. Zhang et al., 2022).

H2: Direct influence of baggage handling on service quality

The research results show a direct, positive, and highly significant influence of baggage handling on service quality (Table 6); thus, this research hypothesis is accepted. The baggage handling experience is a highly dominant component in shaping customer perceptions of airport service quality (Yuan, Yang, Feng, Rasouli, Li, et al., 2021).

Passenger perceptions of ground services explicitly include baggage delivery, check-in, and boarding. Previous studies have found that the quality of these operational processes is a primary shaper of passenger perceptions of the airline's service before they board the aircraft (Antwi et al., 2021). This directly supports the research finding that baggage handling

performance is a strong predictor of service quality. Furthermore, the concept of functional service quality, measured by the efficiency of processes such as baggage handling and check-in, has been demonstrated to have a significant influence on passenger evaluations. This supports the research premise that a concrete operational process like baggage handling is a core component of the broader service quality construct (Font et al., 2021; Sukwadi et al., 2021).

H3: Direct influence of service quality on passenger satisfaction.

Table-6 shows a direct, positive, and significant influence of service quality on passenger satisfaction. This result confirms the classic theory in service management that a high perception of service quality leads to higher customer satisfaction (Ge et al., 2021). Therefore, this research hypothesis is accepted.

Research on low-cost carriers (LCCs) empirically confirms the unidirectional relationship between service quality and passenger satisfaction, finding that the perception of quality is the primary driver of satisfaction (Hidayati et al., 2021). Studies on the influence of both airport and airline service quality have found each to have a significant impact on passenger satisfaction at Soekarno-Hatta Airport, reinforcing the validity of this relationship within the Indonesian aviation context. Similarly, findings indicate that passengers are satisfied with the service quality provided by Citilink airline further strengthen the direct link between these two variables (Ruminda et al., 2019; Sahabuddin et al., 2021).

Thus, the argument for this direct influence is robust: service quality is the cumulative assessment of an airline's performance. This positive assessment directly fulfills passenger expectations, a mechanism that has been theoretically proposed and empirically proven by various studies to be the primary cause of passenger satisfaction (Indriyati et al., 2022).

H4: The Influence of Baggage Handling on Passenger Satisfaction through Service Quality.

Table-6 indicates a significant mediation effect. Thus, baggage handling not only influences passenger satisfaction directly but also significantly affects it indirectly through an enhanced perception of service quality (Ali & Dzandu, 2023). The test results show that hypothesis H4 is accepted.

Research on satisfaction as a mediating variable between service quality and loyalty provides a strong methodological justification for the current research model. It demonstrates that a hierarchical relationship, where one variable intermediates the effect of another, is a valid and proven approach in aviation research (Pitaloka & Hapsoro, 2020). The service quality variable has both direct and indirect influences on the outcome. An operational variable such as baggage handling affects the outcome variable through customer service evaluation variables like satisfaction.

Therefore, this study shows that the significant mediation of the influence of baggage handling on passenger satisfaction by service quality is not only theoretically logical but also highly consistent with empirical findings in various international service studies, including those in the aviation industry (Lugosi et al., 2023).

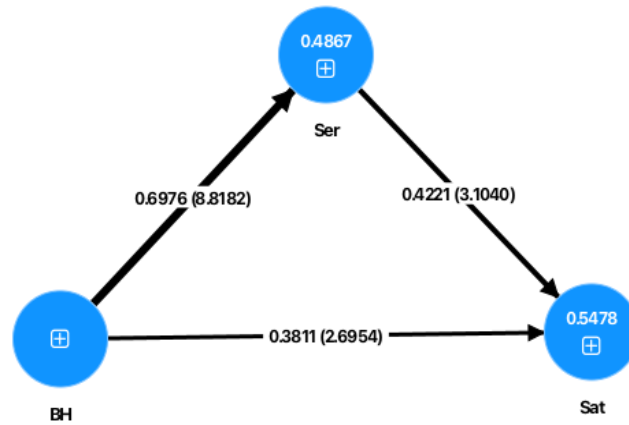


Figure 2. Structural Inner Model

R-square adjusted and f-square Test

Based on the R-square adjusted results (Table 7), this research model possesses moderate predictive power for both of its endogenous variables. This result, particularly for the final dependent variable (customer satisfaction) which reached above 0.50 (53.85%), is generally considered excellent and satisfactory in social science and management research. This study indicates that the variables used, namely baggage handling and service quality, are relevant and significant predictors in explaining passenger satisfaction (Daulay et al., 2024; Lee et al., 2022).

Table 7. R-square adjusted Test

	R-square adjusted	Remark (Chin, 1998)
Sat	0.5385	Moderate
Ser	0.4814	Moderate

The f-square analysis (Table-8) indicates that baggage handling is a very strong predictor variable, exerting a large effect on service quality. Furthermore, both service quality and baggage handling (directly) each possess a substantively significant medium effect on customer satisfaction.

Table 8. f-square Test

	Sat	Ser
BH	0.1648	0.9481
Ser	0.2022	

Q-square Value

The results of the Blindfolding procedure indicate that this research model has excellent predictive relevance (Table-9). The first endogenous variable (likely Service Quality) exhibits a medium level of predictive relevance ($Q^2 = 0.2878$), while the second endogenous variable (likely Customer Satisfaction) demonstrates a large level of predictive relevance ($Q^2 = 0.3622$). Since all Q^2 values for the endogenous variables are substantially greater than zero, the predictive validity of this model is confirmed (Dike et al., 2024).

Table 9. Blindfolding Test

	$Q^2 (=1-SSE/SSO)$
BH	0
Sat	0.3622
Ser	0.2878

This result from the Blindfolding calculation is an excellent outcome for this study. It provides strong empirical evidence that the constructed research model does not merely "fit" the research sample data but also possesses capabilities for generalization and prediction.

CONCLUSION

This study found that baggage handling has a direct, positive, and highly significant impact on service quality, making it the most dominant factor shaping passengers' overall perceptions. Service quality, in turn, directly and significantly influences customer satisfaction, with baggage handling also exerting a direct effect on satisfaction, indicating partial mediation. These results suggest that airports and LCCs should consider baggage handling a strategic priority by enhancing its efficiency, reliability, and technology—especially to meet the needs of young, infrequent flyers who prioritize functional services. However, the findings are limited by the specific sample and a model accounting for only a moderate share of satisfaction variance. Future research should conduct comparative studies across different contexts, incorporate additional variables such as price perception, and employ qualitative approaches to better understand the emotional factors underlying baggage handling's direct influence on passenger satisfaction.

REFERENCES

- Airport Handling Manual (AHM), The International Air Transport Association (IATA) (2024).
- Ali, N., & Dzandu, M. D. (2023). A paradigm shift for medical health care to focus on a service-value approach to achieve greater patient satisfaction. *Journal of Health Organization and Management*, 37(2), 133–157. <https://doi.org/10.1108/JHOM-06-2022-0180>
- Antwi, C. O., Ren, J., Owusu-Ansah, W., Mensah, H. K., & Aboagye, M. O. (2021). Airport self-service technologies, passenger self-concept, and behavior: An attributional view. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063134>
- Daulay, R., Hafni, R., Nasution, S. M. A., & Nasution, M. I. (2024). Determinants affecting trust, satisfaction, and loyalty: A case study of low-cost airlines in Indonesia. *Innovative Marketing*, 20(1), 101–112. [https://doi.org/10.21511/im.20\(1\).2024.09](https://doi.org/10.21511/im.20(1).2024.09)
- Dike, S. E., Davis, Z., Abrahams, A., Anjomshoae, A., & Ractham, P. (2024). Evaluation of passengers' expectations and satisfaction in the airline industry: an empirical performance analysis of online reviews. *Benchmarking: An International Journal*, 31(2), 611–639. <https://doi.org/10.1108/BIJ-09-2021-0563>
- E. Smith, W., Kimbu, A. N., de Jong, A., & Cohen, S. (2023). Gendered Instagram representations in the aviation industry. *Journal of Sustainable Tourism*, 31(3), 639–663. <https://doi.org/10.1080/09669582.2021.1932933>
- Fakfare, P., Wattanacharoensil, W., & Graham, A. (2021). Exploring multi-quality attributes of airports and the asymmetric effects on air traveller satisfaction: The case of Thai International Airports. *Research in Transportation Business and Management*, 41. <https://doi.org/10.1016/j.rtbm.2021.100648>

- Felder, J., Amann, E., Anderson, I., Stohl, J., & Billinger-Finke, M. (2022). Psychometric properties of the English version of the Audio Processor Satisfaction Questionnaire (APSQ). *PLoS ONE*, 17(9 September). <https://doi.org/10.1371/journal.pone.0273390>
- Font, X., English, R., Gkritzali, A., & Tian, W. S. (2021). Value co-creation in sustainable tourism: A service-dominant logic approach. *Tourism Management*, 82. <https://doi.org/10.1016/j.tourman.2020.104200>
- Ge, Y., Yuan, Q., Wang, Y., & Park, K. (2021). The structural relationship among perceived service quality, perceived value, and customer satisfaction-focused on starbucks reserve coffee shops in Shanghai, China. *Sustainability (Switzerland)*, 13(15). <https://doi.org/10.3390/su13158633>
- Ghozali, I. (2016). *Desain Penelitian Kuantitatif dan Kualitatif untuk Akuntansi, Bisnis, dan Ilmu Sosial Lainnya*. Yoga Pratama, Semarang.
- Hair, J. F. (2021). Next-generation prediction metrics for composite-based PLS-SEM. *Industrial Management and Data Systems*, 121(1), 5–11. <https://doi.org/10.1108/IMDS-08-2020-0505>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (Second Edition)*. Sage Publications, Inc.
- Hidayati, N., Hidayat, M., Ruminda, M., Agusinta, L., & Ricardianto, P. (2021). Loyalitas Dan Kepuasan Penumpang pada Mass Rapid Transit. *Jurnal Manajemen Transportasi & Logistik (JMTRANSLOG)*, 08(03), 235–246.
- Hollensen, S., Kotler, P., & Opresnik, M. O. (2022). Metaverse – the new marketing universe. *Journal of Business Strategy*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/JBS-01-2022-0014>
- Indriyati, I., Ruminda Sitorus, M., & Tarina, F. (2022). Pengaruh Brand Image dan E-Service Quality Terhadap Keputusan Pembelian Melalui Kepuasan Konsumen Online Travel Agent Tiket.Com. *Jurnal Manajemen Bisnis Transportasi Dan Logistik*, 8(1). <https://journal.itltrisakti.ac.id/index.php/jmtbtl>
- Jayakumar, T., & Dwivedi, V. (2023). IndiGo Airlines in India: managing “moments of truth.” *Emerald Emerging Markets Case Studies*, 13(2), 1–11. <https://doi.org/10.1108/EEMCS-03-2023-0080>
- Jin, Y., Guo, W., & Zhang, Y. (2020). A time-aware dynamic service quality prediction approach for services. *Tsinghua Science and Technology*, 25(2), 227–238. <https://doi.org/10.26599/TST.2019.9010007>
- Klophaus, R., Merkert, R., & Lordan, O. (2021). Mesh network as a competitive advantage for European LCCs: An alternative topology to hub-and-spoke for selling online connections. *Transport Policy*. <https://www.sciencedirect.com/science/article/pii/S0967070X21001074>
- Lee, C.-K., Jung, E.-K., Kang, S.-E., Petrick, J. F., & Park, Y.-N. (2022). Impact of perception of COVID-19 on NPI, job satisfaction, and customer orientation: Highlighting three types of NPIs for the airline industry. *Journal of Air Transport Management*, 100. <https://doi.org/10.1016/j.jairtraman.2022.102191>

- Lin, L. (2021). Control and consent in the connected age: The work of contractors on transnational online education platforms. *Socio-Economic Review*, 19(4), 1291–1313. <https://doi.org/10.1093/ser/mwab007>
- Lugosi, P., O'Brien, C., Olya, H., Pink, R. C., & Lavender, V. (2023). Evaluating impacts of the physical servicescape on satisfaction in cancer care waiting experiences. *International Journal of Hospitality Management*, 112. <https://doi.org/10.1016/j.ijhm.2022.103386>
- Ngo, T., Mai, S., Siguaw, J., & Jory, S. (2023). The contribution of managerial ability on customer satisfaction: an empirical investigation. *Journal of Strategic Marketing*, 31(2), 343–369. <https://doi.org/10.1080/0965254X.2021.1904436>
- Parasuraman, A. (2010). Service productivity, quality and innovation: Implications for service-design practice and research. *International Journal of Quality and Service Sciences*, 2(3), 277–286. <https://doi.org/10.1108/17566691011090026>
- Park, S., Lee, J.-S., & Nicolau, J. L. (2020). Understanding the dynamics of the quality of airline service attributes: Satisfiers and dissatisfiers. *Tourism Management*, 81. <https://doi.org/10.1016/j.tourman.2020.104163>
- Pitaloka, L. K., & Hapsoro, B. B. (2020). Analyzing universities service quality to student satisfaction; academic and non-academic analyses. *International Journal of Higher Education*, 19(1), 126–132. <https://doi.org/10.5430/ijhe.v9n1p126>
- Praja, A. K. A., Septiawan, R. A., Syah, T. Y. R., Sari, E. M., Dewi, M. P., Katijan, P. S., Cionita, T., & Lai, Y. L. (2023). Sustainable Development Strategy of Low-Cost Airlines: Empirical Evidence for Indonesia Based on Analysis of Passenger Loyalty. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15032093>
- Purohit, H., Castillo, C., & Pandey, R. (2020). Ranking and grouping social media requests for emergency services using serviceability model. *Social Network Analysis and Mining*, 10(1). <https://doi.org/10.1007/s13278-020-0633-3>
- Rayansa, W. R., Setiawan, E. B., Ruminda, M., Ricardianto, P., Wardhana, A., & Adi, E. N. (2022). The Implementation of Customs-Excise Information System and Automation Application in Logistic Companies at Soekarno-Hatta Airport, Indonesia. *International Journal of Scientific Engineering and Science*, 6(10), 28–35. <http://ijses.com/wp-content/uploads/2022/11/64-IJSES-V6N10.pdf>
- Ruminda, M. (2022). Sistem Informasi Kualitas Jasa. In A. Sudirman (Ed.), *Service Marketing: Pendekatan Teori dan Praktik (I, Vol. 1, pp. 183–198)*. Media Sains Indonesia.
- Ruminda, M., Manoppo, S. S., Warsito, T., Irenita, N., & Ayutia, Y. (2019). Strategic Formulation to Improve the Ticket Sales (Study Case at P . T . Citilink Indonesia , HLP – YIA Routes). *Advances in Transportation and Logistics Research*, 663–671. <https://proceedings.itltrisakti.ac.id/index.php/ATLR/article/view/222/254>
- Sahabuddin, M., Tan, Q., Hossain, I., Alam, M. S., & Nekomahmud, M. (2021). Tourist environmentally responsible behavior and satisfaction; study on the world's longest natural sea beach, cox's bazar, bangladesh. *Sustainability (Switzerland)*, 13(16). <https://doi.org/10.3390/su13169383>
- Setiawan, E. B., Wati, S., Wardana, A., & Ikhsan, R. B. (2020). Building trust through customer satisfaction in the airline industry in Indonesia: Service quality and price fairness contribution. *Management Science Letters*, 10(5), 1095–1102. <https://doi.org/10.5267/j.msl.2019.10.033>

- Shaw, M., Tiernan, S., O'Connell, J. F., Warnock-Smith, D., & Efthymiou, M. (2021). Third party ancillary revenues in the airline sector: An exploratory study. *Journal of Air Transport Management*, 90. <https://doi.org/10.1016/j.jairtraman.2020.101936>
- Simarmata, J., Ruminda, M., Yuliantini, & Arubusman, D. A. (2019). The Effect of Price on Applying Paid Baggage Towards Passenger Purchase Decision: Case Study of Lion Air Domestic Routes. *TEM Journal*, 8(3), 945–950. <https://doi.org/10.18421/TEM83-36>
- Standard Ground Handling Agreement (SGHA) - Annex A - Section 4, IATA (International Air Transport Association) (2024).
- Sugiyono. (2018). *Metode Penelitian Manajemen*. In Alfabeta (6th ed.). Alfabeta.
- Sukwadi, R., Susanto, A., & Liang, Y.-C. (2021). Airline service quality evaluation for Indonesian low-cost carriers based on extenics innovation theory. *Archives of Transport*, 58(2), 7–20. <https://doi.org/10.5604/01.3001.0014.8794>
- Tjiptono, F. (2019). *Pemasaran Jasa: Prinsip, Penerapan, dan Penelitian - Edisi Terbaru* (A. Diana, Ed.; 1st ed.). CV. Andi Offset.
- Ulfah, R., Simarmata, J., Keke, Y., & ... (2020). The Influence Of Service Quality And Customer Satisfaction Through Customer Loyalty (Study Case Lionair Airline, Indonesia). *Advances in ...* <https://proceedings.itltrisakti.ac.id/index.php/ATLR/article/view/340>
- Wang, Y., Xiang, Y., Hu, H., Lao, K. W., Tong, J., & Jiang, Y. (2023). Service-quality based pricing approach for charging electric vehicles in smart energy communities. *Journal of Cleaner Production*, 420. <https://doi.org/10.1016/j.jclepro.2023.138416>
- Yuan, Y., Yang, M., Feng, T., Rasouli, S., Li, D., & Ruan, X. (2021). Heterogeneity in passenger satisfaction with air-rail integration services: Results of a finite mixture partial least squares model. *Transportation Research Part A: Policy and Practice*, 147, 133–158. <https://doi.org/10.1016/j.tra.2021.03.003>
- Yuan, Y., Yang, M., Feng, T., Rasouli, S., Ruan, X., Wang, X., & Li, Y. (2021). Analyzing heterogeneity in passenger satisfaction, loyalty, and complaints with air-rail integrated services. *Transportation Research Part D: Transport and Environment*, 97. <https://doi.org/10.1016/j.trd.2021.102950>
- Zhang, F., Seshadri, K., Pattupogula, V. P. D., Badrinath, C., & Liu, S. (2023). Visitors' satisfaction towards indoor environmental quality in Australian hotels and serviced apartments. *Building and Environment*, 244. <https://doi.org/10.1016/j.buildenv.2023.110819>
- Zhang, J., Yang, M., Ji, J., Feng, T., Yuan, Y., Chen, E., & Wang, L. (2022). Customizing the promotion strategies of integrated air-bus service based on passenger satisfaction. *Transportation Research Part D: Transport and Environment*, 109. <https://doi.org/10.1016/j.trd.2022.103385>