

Physical and Digital Service Quality for Sustainable Customer Satisfaction in Lapo Tuak: Evidence from South Sumatra

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ABSTRACT

This study investigates the dual impact of online and offline service quality on customer satisfaction at Lapo Tuak, a traditional Batak eatery that integrates physical and digital services. Utilizing purposive sampling, data were collected from 150 respondents through structured questionnaires and analyzed using Smart PLS for structural equation modeling. The findings demonstrate that both E-Service Quality and Service Quality significantly enhance customer satisfaction, emphasizing their critical roles in fostering loyalty and repeat business. While offline interactions remain essential for building trust, the growing significance of convenient digital services, such as smooth ordering and timely delivery, cannot be overlooked. Therefore, Lapo Tuak should focus on enhancing its digital platforms while maintaining strong offline service to improve customer experiences. From a marketing perspective, promoting the ease and reliability of online delivery alongside exceptional offline service can strengthen customer loyalty and broaden the business's digital presence. This research contributes valuable insights for SMEs in the culinary sector, highlighting the importance of service quality in achieving long-term sustainability in an increasingly competitive market.

Keywords: *service quality; e-service quality; digital transformation; customer satisfaction; Lapo Batak*

INTRODUCTION

In recent years, sustainable development has become a critical issue for businesses, including traditional food establishments like Lapo Tuak. As small and medium enterprises (SMEs) adapt to evolving consumer preferences and market dynamics, integrating sustainable practices is essential for their long-term viability (Hariandja et al., 2014; Y. W. Seo & Chae, 2016). Lapo Tuak, as a traditional Batak food and beverage establishment, faces unique challenges and opportunities in this regard (Saguy, 2022). Incorporating sustainability into its operations—such as using locally sourced ingredients, minimizing waste, and adopting eco-friendly packaging—aligns with the broader goals of responsible consumption and production, as outlined in the United Nations Sustainable Development Goals (SDGs) (Del-Aguila-Arcenales et al., 2022, 2023; Sreenivasan & Suresh, 2023).

Moreover, digital transformation in Lapo Tuak offers a pathway to sustainability by optimizing resource use, streamlining operations, and reducing environmental footprints (Plekhanov et al., 2023; Ulas, 2019; Vial, 2019). For instance, e-wallet payments can help cut down on paper receipts (Subaramaniam et al., 2020; Uduji et al., 2019), and virtual marketing reduces the need for printed advertisements (Allal-Chérif et al., 2024; Yu et al., 2023). As the industry shifts towards sustainability, Lapo Tuak has the opportunity to enhance its competitive edge by blending traditional hospitality with sustainable business practices (Isensee et al., 2020; Klewitz & Hansen, 2014), thereby contributing to both cultural preservation and environmental stewardship (Gaganis et al., 2019; Isensee et al., 2020; Miladi, 2014). Embracing innovation in both offline and online services (Chenavaz, 2022; Panja & Mondal, 2023; Wan et al., 2023) while maintaining sustainable principles (Neslin, 2022; Ratchford, 2022) will ensure the long-term success of Lapo Tuak in an increasingly eco-conscious marketplace (Gould, 2019; Shankar et al., 2022).

The rapid advancement of digital technology has reshaped how businesses operate, including the micro, small, and medium enterprises (MSMEs) sector (Clemente-Almendros et al., 2024; Jiang et al., 2023). Numerous studies emphasize the critical role of digitalization (Bouwman et al., 2019; Isensee et al., 2020; Ojha et al., 2023) in driving growth, competitiveness (Adomako et al., 2023; Khan et al., 2022; Zastempowski & Cyfert, 2023), and sustainability (Hsu et al., 2017; Neri et al., 2021; Siegel et al., 2019) for MSMEs. Digital transformation helps MSMEs streamline operations, reach broader markets, and offer enhanced customer experiences, all of which contribute to improved business performance. (Bouwman et al., 2019; Denicolai et al., 2021) In the context of Indonesia, digitalization is considered one of the key drivers for MSMEs to survive and thrive in a competitive landscape (Hamdani & Wirawan, 2012; Irjayanti & Azis, 2012; Raya et al., 2021).

However, despite the potential benefits, many MSMEs, particularly traditional businesses like Lapo Batak (Batak food restaurants), face challenges in fully adopting digital solutions (Saguy & Sirotinskaya, 2014). This resistance to digitalization often stems from limited resources, lack of digital literacy, or a preference for traditional, offline interactions (Qian et al., 2022; Ratchford, 2022; K. Seo & Roh, 2025; Wan et al., 2023). In light of these barriers, it becomes increasingly important for MSMEs to not only embrace digital tools such as online ordering systems, e-wallets, and virtual communication but also to innovate their service offerings to remain relevant in the market (Bala Subrahmanya, 2015; Zheng & Callaghan, 2018).

In addition to digitalization, innovation is another vital component of success for MSMEs (Mushtaq et al., 2022; Ramdani et al., 2022). Research shows that innovation in product, process, and customer experience can significantly enhance the competitiveness and sustainability of MSMEs (Cantele & Cassia, 2020; Le & Ikram, 2022). For Lapo Batak businesses, introducing new ways of engaging with customers through both digital and offline channels, improving service quality, and enhancing brand reputation are key strategies for building customer loyalty.

Lapo Tuak is more than just a traditional Batak eatery; it represents a vibrant social hub where culture, food, and community intersect. Originating from the Batak regions of North Sumatra, this unique establishment offers traditional Batak dishes alongside tuak, a locally brewed alcoholic drink (Naibaho, 2023; Simatupang & Tampake, 2024). Beyond its culinary offerings, Lapo Tuak serves as a gathering space for discussions, debates, and social interactions (Sinaga et al., 2024). Patrons exchange stories, ideas, and engage in playful activities like chess and singing, creating a strong sense of community (Samosir & Amal, 2016).

In addition to its cultural significance, Lapo Tuak also falls under the category of Micro, Small, and Medium Enterprises (MSMEs), a key sector in Indonesia's economy (Ahdia, 2023; Annisa, 2023; Clara et al., 2024). MSMEs play a strategic role in creating jobs and improving societal welfare. The Indonesian government has shown its commitment to empowering MSMEs through regulations like Government Regulation No. 7 of 2021 and Minister of Cooperatives and Small and Medium Enterprises Regulation No. 2 of 2021, aimed at simplifying investments and clarifying the rights and obligations of MSME actors.

With the rise of the digital age, many Lapo Tuak businesses have adopted online marketing strategies to expand their reach and increase brand awareness. This includes collaborating with online platforms and presenting the store online, launching effective digital marketing campaigns, and leveraging social media platforms (Satrio et al., 2023). The convenience of online shopping, which many customers have embraced for its efficiency, security, and competitive pricing (Akturk, 2022; Clara, 2023), has made this shift essential for business survival (Clara et al., 2024; Dabbous et al., 2023).

Customer satisfaction is the overall evaluation of a service experience based on expectations and actual service performance (Ali et al., 2022; Clara, 2023; Fakfare, 2021; Prasetyo et al., 2021). Customer satisfaction is a critical indicator of business success, reflecting how well a product or service meets or exceeds customer expectations (Prasetyo et al., 2021; Ryu & Han, 2010). It represents the emotional response customers experience after comparing a product's performance with their expectations (Fakfare, 2021). Satisfaction occurs when consumers feel their needs have been fulfilled, resulting in a positive post-purchase evaluation. Scholars have identified three primary indicators of customer satisfaction: alignment with expectations, the intention to return, and the willingness to recommend the product or service (Ali et al., 2022; Azhar et al., 2021; El-Adly, 2019; Juwaini et al., 2022). These factors are central to customer loyalty and long-term business success (Cotarelo et al., 2021; Jung et al., 2021).

Physical service quality pertains to the tangible and intangible aspects of in-person service encounters, including the physical environment, service provider responsiveness, and interaction quality (Ghotbabadi et al., 2015; Kaul, 2007; Ryu & Han, 2010; J. Zhao et al., 2024). Service quality, particularly in offline settings, plays a major role in shaping customer perceptions. Service quality significantly impacts customer satisfaction, with high-quality service leading to better customer experiences (Bell, 2020; Hermes, 2020; Parasuraman et al., 2005; W. Zhao, 2020). Businesses must deliver services that exceed customer expectations to foster satisfaction and loyalty (Flacandji, 2022; Piotrowicz, 2018; Zhang et al., 2023). In this regard, the SERVQUAL model provides a valuable tool for measuring service quality by comparing customer expectations to their actual experiences. Offline service quality is crucial for businesses that rely on face-to-face interactions, as it directly influences customer perceptions and satisfaction. Parasuraman (1994) highlights five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Ghotbabadi et al., 2015; Kaul, 2007; J. Zhao et al., 2024). Tangibles encompass the physical appearance of facilities and employees, shaping customers' impressions of professionalism (Essardi et al., 2022). Reliability ensures the business consistently delivers on its promises. Responsiveness demonstrates the company's commitment to addressing customer needs promptly. Assurance builds trust through knowledgeable and courteous staff, while empathy emphasizes the value of personalized attention, fostering stronger customer

relationships. Continuous improvement in service quality is essential for maintaining customer satisfaction in any business sector (Abd-El-Salam et al., 2013; Ali et al., 2022; Juwaini et al., 2022; Konuk, 2019; Prentice et al., 2019; Thaichon et al., 2014; Ulum & Muchtar, 2018).

Digital service quality refers to the overall effectiveness of an online platform in delivering services to customers, ensuring ease of use, reliability, responsiveness, and security (Cheng et al., 2021; Lee, 2020; Li & Suomi, 2009; Parasuraman et al., 2005; Swaid & Wigand, 2009). It includes factors such as website functionality, mobile app usability, online transaction security, and customer support in digital channels (Parasuraman et al., 2005). With advancements in technology, service quality has evolved into e-service quality, an extension of traditional service quality that accounts for the growing role of digital platforms (Azhar et al., 2021; Faddila et al., 2022; Juwaini et al., 2022; Li & Suomi, 2009; Swaid & Wigand, 2009). As online services become more prevalent, e-service quality has emerged as a vital component for businesses that offer both physical and digital services. The e-ServQual framework, developed to measure service quality in the online context, assesses critical aspects such as the usability of digital platforms, the accuracy and clarity of information provided to customers, the reliability of service delivery, the responsiveness of the business in addressing customer concerns, and the assurance of trust and security in transactions (Faddila et al., 2022; Juwaini et al., 2022; Li & Suomi, 2009; Swaid & Wigand, 2009). These dimensions of e-service quality are crucial for businesses, where online services complement traditional, offline operations (Neslin, 2022; Ratchford, 2022; Sikos, 2019).

In the context of Lapo Tuak businesses, which combine physical and digital services, the development of e-service quality reflects the need to adapt to changing consumer behaviors. While offline service quality, encompassing factors like responsiveness, reliability, and empathy, remains crucial for in-person interactions, the rise of online delivery platforms has added a new layer of complexity to customer satisfaction. Efficient online services, such as seamless ordering and prompt delivery, enhance customer convenience and can lead to higher levels of satisfaction. However, given the standardized nature of the offerings at Lapo Tuak, personalization, a key dimension in some e-service quality frameworks, is less relevant, as the products themselves are not subject to customization.

The integration of both online and offline service quality is critical to ensuring overall customer satisfaction. While the physical service experience builds trust and loyalty, the online experience offers convenience and ease, which are increasingly important in today's digital economy. For Lapo Tuak businesses, this means that enhancing both online and offline service quality will be essential in meeting customer expectations and sustaining long-term success. From a marketing perspective, businesses should focus on promoting the reliability and ease of their online services while maintaining high standards of offline interactions to strengthen customer relationships and expand their digital reach.

This study aims to explore the impact of both online and offline service quality on customer satisfaction in Lapo Batak, highlighting the importance of digitalization and innovation in maintaining customer trust and fostering business growth. By examining the service quality in both contexts, this research seeks to provide insights into how Lapo Batak can effectively balance their traditional offline roots with the increasing demand for digital services.

Based on the literature background provided, the following hypotheses can be formulated:

Hypothesis 1 (H1): E-Service Quality has a positive impact on Customer Satisfaction at Lapo Tuak.

This hypothesis is grounded in the understanding that as businesses increasingly incorporate digital platforms, the quality of these online services (including usability, reliability, and responsiveness) plays a crucial role in shaping customer perceptions and satisfaction.

Hypothesis 2 (H2): Service Quality has a positive impact on Customer Satisfaction at Lapo Tuak.

This hypothesis emphasizes the importance of offline service quality, highlighting that factors such as reliability, empathy, and assurance significantly contribute to customer satisfaction, which is essential for building loyalty and ensuring long-term success in a traditional dining setting like Lapo Tuak (Figure 1).

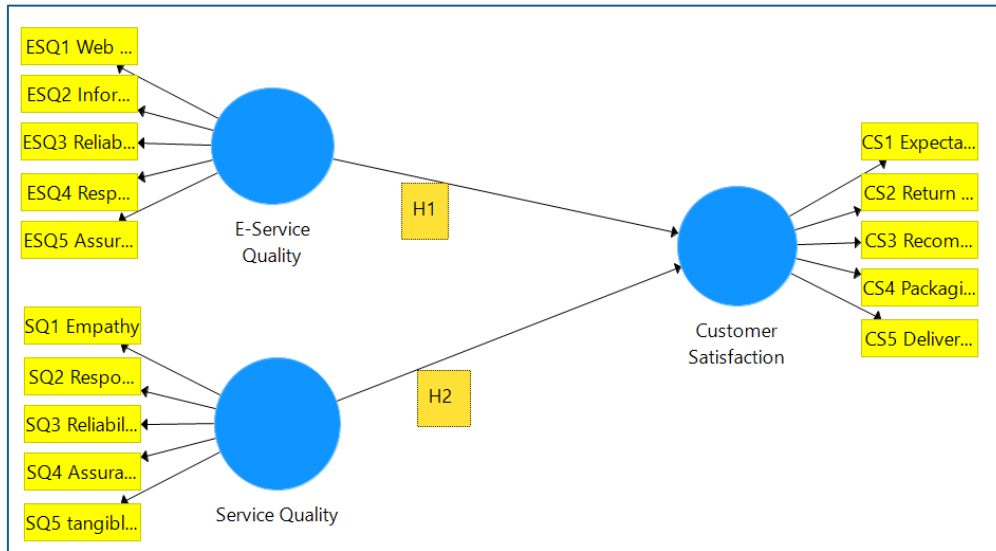


Figure 1 Conceptual Framework

METHODS

This research employed a descriptive quantitative approach, focusing specifically on Lapo Tuak in South Sumatra. This selection was motivated by the unique Batak culture from North Sumatra, which presents a distinctive market segment with significant potential for expansion through digital marketing channels. The study included 10 Lapo Tuak, identified from data provided by the South Sumatra Provincial Office of Cooperatives and SMEs, ensuring the inclusion of active and operational establishments.

Customer samples were randomly selected from each Lapo Tuak to ensure diverse representation. From each establishment, 15 customers—both dine-in and online buyers—were selected until a total of 150 respondents completed the survey. The sample size of 150 respondents was determined to meet the minimum requirement of at least 10 times the number of indicators in this study, which consisted of 15 indicators.

Data were collected through survey questionnaires designed to measure perceptions of physical and digital service quality, as well as customer satisfaction. The questionnaires were distributed both in-person at the establishments and via online platforms such as Google Forms, ensuring accessibility and convenience for respondents across various channels. The survey items were developed based on validated scales from prior studies, with necessary adaptations to align with the research context.

This study utilizes a structured questionnaire to measure Digital Service Quality, Physical Service Quality, and Customer Satisfaction. All items were adapted from validated scales in previous research (Cheng et al., 2021; Lee, 2020; Li & Suomi, 2009; Parasuraman et al., 2005; Swaid & Wigand, 2009) and measured using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). A

detailed breakdown of the measurement items can be seen in (Table 6). Digital Service Quality was measured based on the dimensions of ease of use, reliability, responsiveness, and security. The following items were used: The Lapo Tuak's online platform (e.g., website, social media, or app) is easy to navigate; Online transactions (e.g., reservations or payments) in this Lapo Tuak are secure; and The Lapo Tuak responds quickly to inquiries or complaints via digital channels. Physical Service Quality was assessed through dimensions such as tangibility, responsiveness, and reliability. The following items were included: The cleanliness and physical condition of this Lapo Tuak meet my expectations; The staff provides prompt and courteous service; and The ambiance of this Lapo Tuak enhances my dining experience. Customer Satisfaction was measured based on the overall evaluation of the customer experience. Sample items included: I am satisfied with the overall service provided by this Lapo Tuak; The service experience met my expectations; and I would recommend this Lapo Tuak to others based on my experience.

This survey adhered to the principles of marketing research ethics, ensuring respondent confidentiality and respecting the privacy of both the respondents and the Lapo Tuak establishments. All participants were informed of the purpose of the research and assured that their responses would be kept anonymous and used solely for academic purposes.

Structural Equation Modeling (SEM) using SmartPLS was then applied to summarize and analyze the data. Confirmatory factor analysis (CFA) was first conducted to assess the outer model, ensuring the validity and reliability of the measurement model. Following this, inner model analysis was performed to examine the relationships between physical and digital service quality and their impact on customer satisfaction. This method allowed for testing the measurement model's reliability and validity, as well as evaluating the structural model's path coefficients, R-squared values, and overall model fit. The replicable procedures ensure that future researchers can reproduce the study under similar conditions, contributing to the body of knowledge on customer satisfaction and sustainable competitive advantage in culturally unique market segments.

RESULT AND DISCUSSION

Outer Model

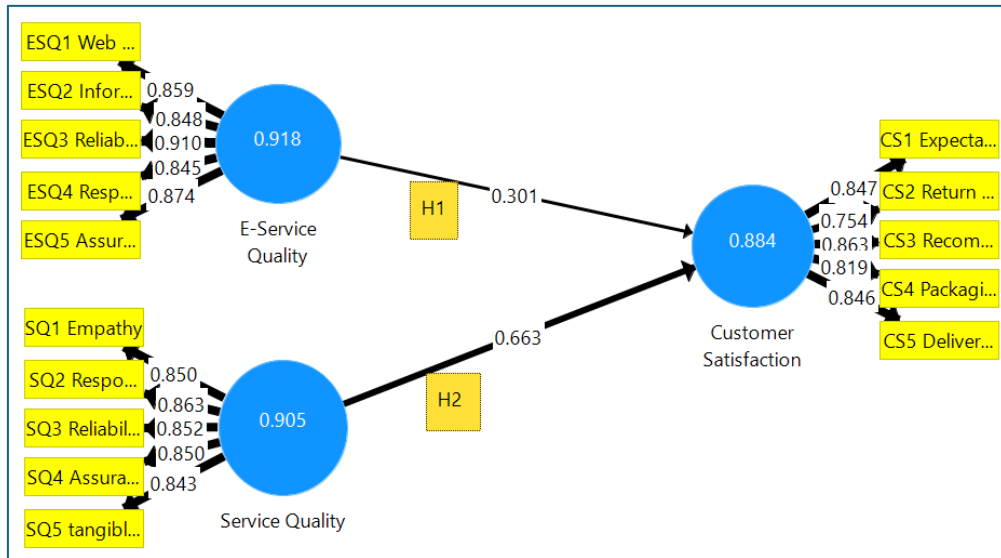
The loading factors for each variable indicate strong and significant relationships within the constructs (Table 1). According to Hair et al. (2019), the standard loading factor in Confirmatory Factor Analysis (CFA) is 0.70 or higher (Hair et al., 2019). For E-Service Quality, all indicators—Website Usability (0.859), Information Quality (0.848), Reliability (0.910), Responsiveness (0.845), and Assurance (0.874)—show high loadings, reflecting their strong contribution to the construct. Similarly, for Service Quality, Empathy (0.850), Responsiveness (0.863), Reliability (0.852), Assurance (0.850), and Tangibles (0.843) all have high loading factors, indicating strong associations with the overall service quality. Finally, for Customer Satisfaction, Expectation Fulfillment (0.847), Recommendation Willingness (0.863), Packaging Appeal (0.819), and Delivery Accuracy (0.846) demonstrate high loadings, while Return Intention (0.754) is slightly lower but still significant. Overall, the model shows robust relationships across all variables, with all t-statistics and p-values confirming significance ($p < 0.001$).

Table 1. Outer Loading

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics ((O/STDEV)) | P Values |
|---|----------------------------|------------------------|-----------------------------------|---------------------------------|-----------------|
| ESQ1 Web Site Usability <- E-Service Quality | 0.859 | 0.857 | 0.033 | 26.014 | 0.000 |
| ESQ2 Information Quality <- E-Service Quality | 0.848 | 0.848 | 0.031 | 27.273 | 0.000 |
| ESQ3 Reliability <- E-Service Quality | 0.910 | 0.906 | 0.023 | 40.378 | 0.000 |
| ESQ4 Responsiveness <- E-Service Quality | 0.845 | 0.845 | 0.039 | 21.670 | 0.000 |
| ESQ5 Assurance <- E-Service Quality | 0.874 | 0.869 | 0.041 | 21.505 | 0.000 |
| SQ1 Empathy <- Service Quality | 0.850 | 0.845 | 0.037 | 23.256 | 0.000 |
| SQ2 Responsiveness <- Service Quality | 0.863 | 0.856 | 0.040 | 21.650 | 0.000 |
| SQ3 Reliability <- Service Quality | 0.852 | 0.847 | 0.042 | 20.093 | 0.000 |
| SQ4 Assurance <- Service Quality | 0.850 | 0.842 | 0.047 | 18.280 | 0.000 |
| SQ5 tangibles <- Service Quality | 0.843 | 0.837 | 0.056 | 15.141 | 0.000 |
| CS1 Expectation Fulfillment <- Customer Satisfaction | 0.847 | 0.842 | 0.041 | 20.635 | 0.000 |
| CS2 Return Intention <- Customer Satisfaction | 0.754 | 0.741 | 0.089 | 8.497 | 0.000 |
| CS3 Recommendation Willingness <- Customer Satisfaction | 0.863 | 0.855 | 0.039 | 22.133 | 0.000 |
| CS4 Packaging Appeal <- Customer Satisfaction | 0.819 | 0.815 | 0.046 | 17.887 | 0.000 |
| CS5 Delivery Accuracy <- Customer Satisfaction | 0.846 | 0.843 | 0.044 | 19.083 | 0.000 |

Source: 2024 processed original data

E-Service Quality has a strong and statistically significant positive impact on all its dimensions (“Website Usability, Information Quality, Reliability, Responsiveness, and Assurance”). This suggests that improving e-service quality will enhance these factors in an online service context. Service Quality also has a strong positive effect on its respective dimensions (“Empathy, Responsiveness, Reliability, Assurance, and Tangibles”), all with significant p-values. Customer Satisfaction is significantly influenced by its components (“Expectation Fulfillment to Delivery Accuracy”), indicating that customer satisfaction is strongly predicted by these satisfaction measures (Figure 2).



Source: 2024 processed original data
 Figure 1 Loading Factor Outer Model and Path Coefficient Inner Model

Inner Model

The model demonstrates a reasonably good fit based on key indices (Table 2). The SRMR (Standardized Root Mean Square Residual) of 0.067 indicates an acceptable fit, as values below 0.08 suggest minimal discrepancy between observed and predicted correlations (Hair et al., 2019). Both Unweighted Least Squares Discrepancy (d_{ULS}) (0.537) and Geodesic Distance (d_G) (0.476) reflect moderate fit, with lower values generally preferred but lacking specific thresholds for interpretation. The Chi-Square value (256.724) points to some deviation, though large samples tend to inflate this metric. Finally, the NFI (Normed Fit Index) of 0.811, while slightly below the optimal threshold of 0.90, still suggests a reasonably acceptable model. Overall, the model shows satisfactory fit, though some refinement may enhance it further.

Table 2. Goodness of Fit Test

| | Saturated Model | Estimated Model |
|-------------------|-----------------|-----------------|
| SRMR | 0.067 | 0.067 |
| d_ULS | 0.537 | 0.537 |
| d_G | 0.476 | 0.476 |
| Chi-Square | 256.724 | 256.724 |
| NFI | 0.811 | 0.811 |

Source: 2024 processed original data

The R Square value of 0.833 indicates that 83.3% of the variance in Customer Satisfaction is explained by the independent variables in the model. This suggests a strong explanatory power, meaning the predictors effectively account for a significant portion of customer satisfaction. The R Square Adjusted value of 0.830, which adjusts for the number of predictors, is only slightly lower, reinforcing the model's robustness and indicating that the inclusion of additional variables does not lead to overfitting. Overall, these values reflect a highly reliable and predictive model (Table 3).

Table 3. Coefficient of Determination (R Square)

| | R Square | R Square Adjusted |
|------------------------------|----------|-------------------|
| Customer Satisfaction | 0.833 | 0.830 |

Source: 2024 processed original data

The path analysis results show that both E-Service Quality and Service Quality have significant positive effects on Customer Satisfaction. For E-Service Quality, the unstandardized coefficient (B = 0.301) is significant (p = 0.000, t = 3.585), supporting H1 with a positive relationship. Service Quality has a stronger impact, with a higher coefficient (B = 0.663, p = 0.000, t = 9.017), supporting H2. The VIF value of 2.354 for both paths indicate no multicollinearity concerns. In conclusion, both hypotheses are supported, with Service Quality having a more substantial effect on Customer Satisfaction (Table 4).

Table 4. Path Analysis of Inner Model

| Model | Unstandardized Coefficients | | t | Sig .. | Collinearity Statistics VIF | Hypothesis Tested | + /- | Conclusion |
|--|-----------------------------|------------|-------|--------|-----------------------------|-------------------|------|------------|
| | B | Std. Error | | | | | | |
| E-Service Quality -> Customer Satisfaction | 0.301 | 0.084 | 3.585 | 0.000 | 2.354 | H1 | + | Supported |
| Service Quality -> Customer Satisfaction | 0.663 | 0.074 | 9.017 | 0.000 | 2.354 | H2 | + | Supported |

Source: 2024 processed original data

The f^2 values indicate the effect size of each predictor on the dependent variable (Hair et al., 2019), Customer Satisfaction (Table 5). An f^2 of 0.230 for E-Service Quality suggests a medium effect, meaning that e-service quality has a moderate impact on customer satisfaction. In contrast, the f^2 of 1.121 for Service Quality indicates a large effect, showing that traditional service quality plays a significantly stronger role in influencing customer satisfaction. These results suggest that while both factors are important, Service Quality has a more substantial impact on customer satisfaction at Lapo Tuak.

Table 5. f^2 values

| f^2 values | Customer Satisfaction |
|-----------------------|-----------------------|
| Customer Satisfaction | |
| E-Service Quality | 0.230 |
| Service Quality | 1.121 |

Source: 2024 processed original data

The analysis of the constructs shows strong reliability and validity for E-Service Quality, Service Quality, and Customer Satisfaction (Table 6). For E-Service Quality, the Cronbach's Alpha is 0.918, and the Composite Reliability is 0.938, indicating high internal consistency. The AVE of 0.753 shows strong convergent validity. All item loadings are above 0.8, with the highest being 0.910 for Reliability. Similarly, Service Quality exhibit excellent reliability with a Cronbach's Alpha of 0.905, Composite Reliability of 0.930, and an AVE of 0.725, confirming good convergent validity. All loadings are strong, with Responsiveness scoring the highest at 0.863. For Customer Satisfaction, the Cronbach's Alpha is 0.884, and the Composite Reliability is 0.915, indicating reliable measurement. The AVE of 0.684 shows acceptable convergent validity, with Recommendation Willingness having the highest loading at 0.863. Overall, all constructs demonstrate strong reliability, convergent validity, and well-measured variables, supporting the robustness of the model.

The Variance Inflation Factor (VIF) analysis reveals varying levels of multicollinearity among the variables in the model (Hair et al., 2019). Generally, a VIF below 5 suggests minimal concern, while

values approaching this threshold may indicate potential issues. Among the e-service quality indicators, Reliability (4.101) and Assurance (3.916) are noteworthy, as they are the highest and close to the threshold, signaling possible multicollinearity concerns. Other indicators such as Web Site Usability (3.016), Information Quality (2.559), and Responsiveness (2.427) also demonstrate moderate levels. Conversely, service quality indicators like Empathy (2.606) and Responsiveness (2.770) exhibit acceptable VIF values, indicating minimal multicollinearity. Customer satisfaction indicators range from 1.986 to 2.817, all showing low VIF values. Overall, while most VIF values are within acceptable limits, the e-service quality indicators warrant attention to enhance the robustness of the model's findings regarding customer satisfaction at Lapo Tuak.

The results of this study carry significant marketing implications for Lapo Tuak, particularly as it positions itself not only as an SME but also as a potential culinary tourism destination. With its unique offerings and traditional cultural value, Lapo Tuak can leverage high levels of Customer Satisfaction—driven by both E-Service Quality and Service Quality—to attract both local customers and tourists seeking authentic culinary experiences. The strong link between service quality and customer satisfaction highlights the importance of maintaining consistent (J. Zhao et al., 2024), high-quality service standards (Chaerudin & Syafarudin, 2021), which are essential for building a strong reputation (Kusumaradya et al., 2021) and fostering positive word-of-mouth (Büyükdağ, 2021), both crucial for attracting culinary tourists.

However, as consumer preferences continue to evolve, particularly in response to technological advancements (Bagheri et al., 2019; Daveik et al., 2021) and shifting lifestyle trends, Lapo Tuak's management must remain agile (Nowotarski & Paslawski, 2015). The rise of digital platforms and the growing demand for convenient, online interactions emphasize the need to continuously enhance E-Service Quality (Battistella et al., 2023). As consumers increasingly prefer seamless online ordering and transaction processes, ensuring the usability of online platforms, reliability in delivery, and responsiveness to customer inquiries is critical for meeting these changing expectations (Chang, 2022; Watanabe et al., 2021). This adaptation will not only satisfy the needs of local customers but also cater to tech-savvy tourists looking for efficient service when exploring culinary experiences.

Table 5. Extracted Components and Corresponding Loadings of Measured Variables

| Construct/ Variable and Measured Scale | Component Loading Coefficient | Outer VIF Values | Number of Measured Variables | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---|-------------------------------|------------------|------------------------------|------------------|--------------|-----------------------|----------------------------------|
| E-Service Quality | | | 5 | 0.918 | 0.919 | 0.938 | 0.753 |
| ESQ1 Website Usability - Making purchases from Lapo online is easy | 0.859 | 3.016 | | | | | |
| ESQ2 Information Quality -The information provided during online transactions is clear | 0.848 | 2.559 | | | | | |
| ESQ3 Reliability- Ordering Lapo via online platforms or apps is always simple and instant | 0.910 | 4.101 | | | | | |
| ESQ4 Responsiveness- The seller's responsiveness to complaints and issues is quick | 0.845 | 2.427 | | | | | |
| ESQ5 Assurance- The menu offered through the app matches what is delivered | 0.874 | 3.916 | | | | | |
| Service Quality | | | 5 | 0.905 | 0.905 | 0.930 | 0.725 |
| SQ1 Empathy- Employees serve customers with friendliness and professionalism | 0.850 | 2.606 | | | | | |
| SQ2 Responsiveness- They respond appropriately to visitors' needs | 0.863 | 2.770 | | | | | |
| SQ3 Reliability- Complaints are handled effectively | 0.852 | 2.447 | | | | | |
| SQ4 Assurance- Security and comfort meet expectations | 0.850 | 2.448 | | | | | |
| SQ5 Tangible- Employees show attention to Lapo visitors | 0.843 | 2.344 | | | | | |
| Customer Satisfaction | | | 5 | 0.884 | 0.889 | 0.915 | 0.684 |
| CS1 Expectation Fulfillment- The service received at Lapo Batak meets expectations | 0.847 | 2.291 | | | | | |
| CS2 Return Intention- I am interested in returning to Lapo Batak. | 0.754 | 1.986 | | | | | |

| Construct/ Variable and Measured Scale | Component Loading Coefficient | Outer Values | VIF | Number of Measured Variables | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---|-------------------------------|--------------|-----|------------------------------|------------------|-------|-----------------------|----------------------------------|
| CS3 Recommendation Willingness- I am willing to recommend Lapo Batak to my friends or relatives | 0.863 | 2.817 | | | | | | |
| CS4 Packaging Appeal- The packaging is attractive and clean, as expected | 0.819 | 2.419 | | | | | | |
| CS5 Delivery Accuracy- The food delivery matches the images provided | 0.846 | 2.567 | | | | | | |

Source: 2024 processed original data

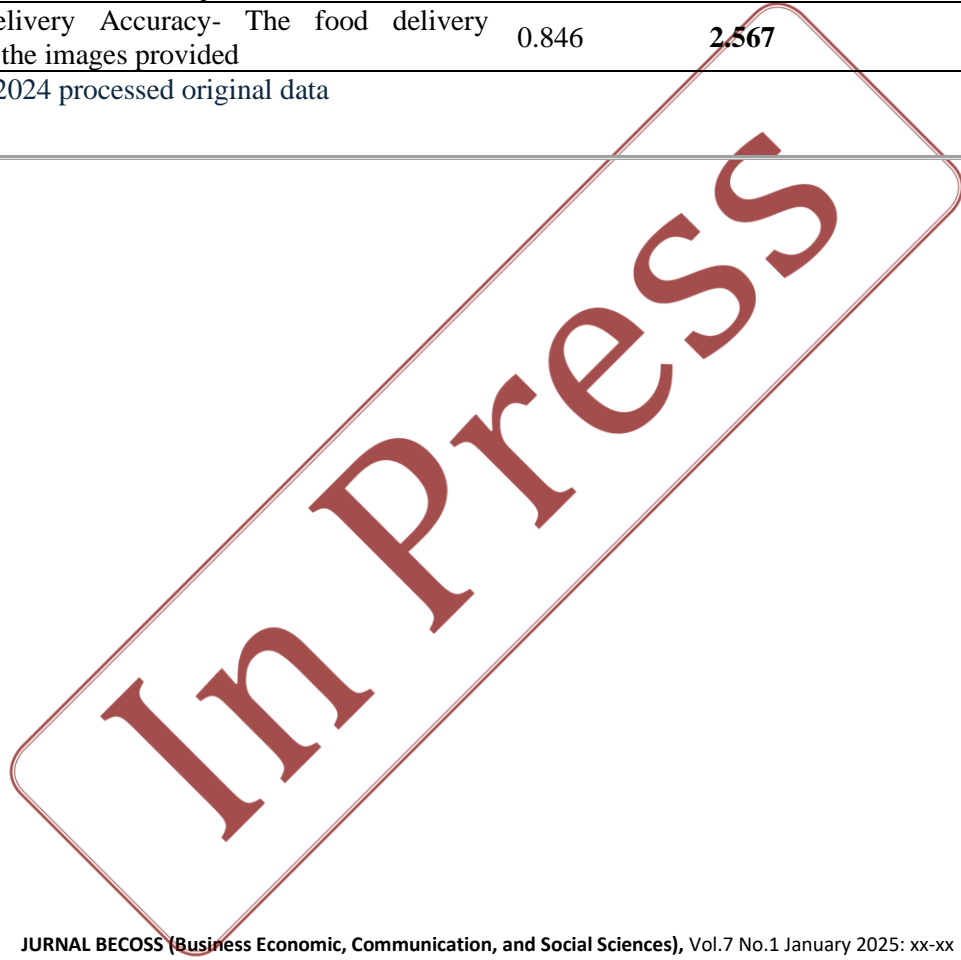


Table 7. Demographic Characteristics of Respondents

| Demographic Characteristics | Category | Frequency (n) | Percentage (%) |
|---|-------------------------|---------------|----------------|
| Age Group | 17-25 years | 64 | 42.7% |
| | 26-35 years | 28 | 18.7% |
| | 36-45 years | 23 | 15.3% |
| | 46-55 years | 20 | 13.3% |
| | > 55 years | 15 | 10.0% |
| Gender | Male | 69 | 46.0% |
| | Female | 81 | 54.0% |
| Occupation Status | Student | 62 | 41.3% |
| | Private-sector Employee | 35 | 23.3% |
| | Entrepreneur | 27 | 18.0% |
| | Civil Servant | 15 | 10.0% |
| | Housewife | 13 | 8.7% |
| | Other | 8 | 5.3% |
| Shopping Frequency in the Last Three Months | 2-3 times | 96 | 64.0% |
| | 4-5 times | 36 | 24.0% |
| | More than 5 times | 18 | 12.0% |

Source: 2024 processed original data

Analysis of Respondent Characteristics

The demographic profile of the respondents provides valuable insights into the customer base of Lapo Tuak and their consumption patterns (Table 7).

Age Distribution

The majority of respondents (42.7%) fall within the 17-25 years age group, indicating that Lapo Tuak is particularly popular among younger consumers, possibly due to its affordability, social appeal, or unique cultural experience. The 26-35 years group represents 18.7%, followed by 36-45 years (15.3%), suggesting a gradual decline in patronage as age increases. Notably, only 10.0% of respondents are above 55 years, highlighting that older demographics are less likely to frequent Lapo Tuak, possibly due to health concerns or changing lifestyle preferences.

Gender Composition

The sample consists of a slightly higher proportion of female respondents (54.0%) compared to males (46.0%), suggesting that Lapo Tuak is frequented by both genders, with a slight inclination toward female customers. This could indicate shifting trends in the traditionally male-dominated consumption of tuak (palm wine), or that the establishment offers an inclusive and welcoming environment for women.

Occupational Background

A significant proportion of respondents are students (41.3%), reinforcing the finding that Lapo Tuak is highly favored by younger individuals, possibly due to its affordability and social aspects. Private-sector employees (23.3%) and entrepreneurs (18.0%) also form a notable segment of customers, indicating that working professionals frequent Lapo Tuak for leisure or networking. The presence of civil servants (10.0%) and housewives (8.7%) suggests some level of diversity in customer backgrounds, though these groups constitute a smaller portion of the total respondents. The "Other" category represents 5.3% of the respondents.

category (5.3%) may include retirees or informal workers, further reflecting the varied nature of the customer base.

Shopping Frequency

Consumption patterns reveal that the majority of respondents (64.0%) visit Lapo Tuak 2-3 times within three months, suggesting that occasional patronage is the norm. Meanwhile, 24.0% of respondents visit 4-5 times, and a smaller but notable 12.0% are frequent visitors, purchasing more than 5 times within the same period. This indicates a loyal customer base that returns regularly, potentially due to satisfaction with the service quality, product offerings, or the cultural significance of Lapo Tuak.

The findings highlight that Lapo Tuak primarily attracts a younger audience, particularly students and working professionals, with a relatively balanced gender composition. While occasional visits dominate consumer behavior, a dedicated group of frequent patrons exists, indicating strong customer retention. Understanding these demographic insights can help Lapo Tuak optimize its offerings, refine marketing strategies, and enhance service quality to sustain long-term customer satisfaction.

Moreover, Lapo Tuak's uniqueness as a culinary destination (Naibaho, 2023; Samosir & Amal, 2016; Simatupang & Tampake, 2024) presents a valuable opportunity for strategic marketing initiatives. Promoting its traditional roots, local cuisine, and the cultural experience it offers can position Lapo Tuak as a destination for food tourism. However, this requires balancing the appeal of tradition with the modern demands of consumers. While maintaining the authenticity of the Lapo Tuak experience is key, the management must also consider evolving consumer preferences, such as a desire for healthier food options, sustainable practices, and a combination of offline and online service interactions.

In summary, the findings suggest that by aligning high Customer Satisfaction with strategic marketing efforts, Lapo Tuak can capitalize on its potential as a culinary tourism destination. Simultaneously, the business must stay attuned to changing consumer preferences, ensuring it adapts both its service delivery and product offerings to sustain customer loyalty and business growth in a competitive marketplace.

CONCLUSION

This study provides empirical evidence on the impact of both Digital (E-Service Quality) and Physical (Service Quality) service dimensions on Customer Satisfaction in Lapo Tuak. The findings confirm that both Hypothesis 1 (H1) and Hypothesis 2 (H2) are supported, indicating that E-Service Quality and Service Quality significantly influence Customer Satisfaction. These results highlight the necessity for Lapo Tuak to maintain high service standards across both digital and physical interactions to enhance customer experiences and satisfaction.

From a strategic perspective, this study underscores the importance of digitalization and innovation in ensuring customer trust and business sustainability. While traditional service quality remains crucial, the increasing demand for digital services suggests that Lapo Tuak must effectively balance its offline heritage with modern digital engagement strategies. By leveraging both physical and digital service excellence, Lapo Tuak can strengthen its market position not only as an SME but also as a culinary tourism destination.

Moreover, the results suggest that consistent high-quality service fosters a strong reputation and positive word-of-mouth, which are key drivers for attracting both local and international visitors. This study provides valuable insights for Lapo Tuak owners, policymakers, and tourism stakeholders on

how to integrate service quality enhancements with digital transformation efforts to sustain business growth in an increasingly competitive market.

Future research could explore additional factors such as perceived value, cultural authenticity, and customer loyalty, which may further influence the long-term sustainability of Lapo Tuak businesses.

Limitations

This study is limited by its focus on specific service quality dimensions in the context of Lapo Tuak as an SME. The research may not fully account for external factors such as economic conditions or competitive dynamics that could impact customer behavior and satisfaction. Additionally, the study was conducted in a localized setting, which may limit the generalizability of the findings to other regions or business types.

Suggestions for Future Research

Future research could explore a broader range of variables, including consumer preferences for healthy food options or environmental sustainability practices, which are becoming increasingly important in today's market. Comparative studies on different traditional food businesses or across regions could also provide more insight into how local culture and consumer trends affect customer satisfaction in the culinary tourism sector.

Recommendations for Lapo Tuak

For Lapo Tuak, embracing digital transformation while maintaining its cultural identity is essential. Enhancing online services, improving responsiveness, and addressing customer feedback efficiently will help ensure business sustainability. Moreover, actively promoting Lapo Tuak as a culinary tourism destination can attract more customers, both locally and internationally. However, staying attuned to shifting consumer preferences and incorporating elements such as sustainability and healthier menu options will be crucial in securing its position in an evolving market.

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