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Analysis of the Influence of Service Quality on Customer Satisfaction of ESB Application Users in the Restaurant Industry Using the Technology Acceptance Model (TAM) Method

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ABSTRACT
This study aims to analyze the influence of service quality on customer satisfaction of users of Electronic Software applications. for Business (ESB) in the restaurant industry using the Technology Acceptance Model (TAM) approach. The TAM model focuses on two main constructs , namely *perceived usefulness* (perceived usefulness) and *perceived ease of use* (perceived ease of use), which is believed to influence user attitudes in accepting technology. This study used a quantitative method by distributing questionnaires to 150 respondents who were active users of the ESB application. Data were analyzed using the Structural Equation Modeling (SEM) with the help of software SmartPLS . The results of the study indicate that service quality has a significant effect on perceived ease of use and perceived usefulness, and both variables have a positive effect on customer satisfaction. This means that the better the service quality of the ESB application, the higher the customer satisfaction in using it.

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INTRODUCTION

The development of information and communication technology has brought about major changes in various industrial sectors, including the food and beverage sector . and beverage). Amid increasing consumer demands for speed, convenience, and efficiency of service, restaurant business actors are required to continue to innovate in order to remain competitive. One form of innovation that is widely adopted is the use of digital applications in daily restaurant operations (Fitratul Aini *et al.* , 2023) . This type of application not only aims to speed up the work process, but also to provide a better experience for customers.

Electronic Software for Business (ESB) is a technology-based restaurant management application that is now widely used by food and beverage industry players in Indonesia. This application allows integrated restaurant operational management, from ordering food, arranging the kitchen, payment processes, to creating financial and inventory reports. With these features, ESB aims to help restaurant owners increase efficiency, reduce human error, and provide more professional services to customers (Fadhilah, Muzzamil and Wustari, 2024).

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However, the success of using technology such as ESB does not only depend on the sophistication of its features, but also on how the application is received and used by customers and employees. Many cases show that applications with complete features are not always optimally adopted due to lack of user understanding, confusing design, or unresponsive technical support services. Therefore, it is important to examine more deeply the factors that influence the acceptance of technology by users, especially customers (Ilmi *et al.* , 2020) .

One of the widely used approaches to understand technology acceptance is the Technology Acceptance Model (TAM) developed by Davis (1986). TAM explains that two main constructs that influence technology acceptance are *perceived usefulness* (perceived usefulness) and *perceived ease of use* (perceived ease of use). These two factors are believed to influence the attitudes, intentions, and ultimately the actual behavior of users in using a particular technology. In the context of ESB applications, perceptions of usefulness and ease of use can be early indicators of whether customers are willing to use the application in their interaction with the restaurant (Fecira and Abdullah, 2020) .

However, in practice, this perception is not formed just like that. The quality of digital services, which includes system reliability, response speed , ease of navigation, and user support, plays a major role in shaping user perceptions. When customers experience smooth, responsive, and expected service, they tend to rate the application as useful and easy to use. Conversely, if the service provided is not satisfactory, the perception of the application can be negative even though the technology is actually sophisticated.

Service quality itself can be measured through five dimensions introduced by the SERVQUAL model, namely tangibles , reliability , responsiveness , assurance , and empathy . In the context of ESB applications, tangibles include an attractive and informative application interface design. Reliability includes the accuracy of the system in recording orders and transactions (Nurdiana Nurfarida, 2021) . Responsiveness includes the speed of the application in processing orders and the response from the technical support team. Assurance relates to customer trust in the security and reliability of the system. While empathy reflects the attention given by developers to user needs and complaints (Jatra and Utami, 2015) .

Customer satisfaction is the end result of the interaction between the user and the service provided. When the application is considered capable of providing real added value, such as speeding up ordering, avoiding errors in transactions, or providing relevant menu recommendations, then customers will feel satisfied. Conversely, if the application actually complicates or adds to the burden in the ordering process, there will be a decrease in satisfaction, even the potential for losing customers (Azis, 2020) . Therefore, understanding the relationship between service quality, technology perception, and customer satisfaction is essential for the sustainability of digital innovation in the restaurant industry.

This study aims to empirically analyze the effect of service quality on perceived ease of use and perceived usefulness of ESB applications, as well as their impact on customer satisfaction. In addition, this study also aims to provide strategic recommendations to application developers and restaurant entrepreneurs so that they can develop systems that are not only technically sophisticated but also well received by end users.

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The methodology used in this study is a quantitative approach by distributing questionnaires to 150 respondents who are active customers of restaurants using the ESB application. Data analysis was carried out using the Structural Technique Equation Modeling (SEM) through SmartPLS software . This technique allows researchers to test direct and indirect relationships between research variables simultaneously.

The results of the analysis show that service quality has a significant influence on *perceived ease of use* and *perceived usefulness* . This means that the higher the quality of service perceived by customers, the more likely they are to consider the application easy to use and useful. Furthermore, both TAM constructs have been shown to significantly influence customer satisfaction. In other words, when an ESB application is considered useful and easy to use, customers will be satisfied with their experience (Permenpan 14, 2017) .

This finding is in line with several previous studies. (Kurniawan, 2013) found that in the context of mobile banking , service quality directly affects the perception of ease and usefulness. Another study by (Subowo, S.Kom., MTI, 2020) in the online food ordering system also showed that the quality of application service has a positive effect on customer satisfaction and repurchase intentions. These results confirm that service quality is a key variable in the success of technology-based systems.

Based on these findings, this study suggests that ESB application developers and restaurant industry players should not only focus on technical features, but also on user service aspects. Investment in user-friendly interfaces, responsive help systems, and regular application usage education to customers can increase customer acceptance and satisfaction. In addition, developing personalization features and monitoring user feedback in real- time can also improve overall service quality.

Thus, this study not only provides theoretical contributions in the development of TAM combined with service quality variables, but also practical contributions for the restaurant sector in designing sustainable digital service strategies. In the future, further studies can consider additional variables such as user trust, digital experience, and customer loyalty to form a more comprehensive model in understanding the success of implementing technology-based restaurant applications such as ESB .

METHODS

This research uses a quantitative approach with an explanatory research type . research), namely research that aims to explain the causal relationship between the variables studied. In this study, the analysis was carried out based on the *Technology Acceptance Model* (TAM) framework which was modified by including external variables in the form of service quality (Sugiyono, 2021) . The aim is to determine the effect of service quality on *perceived usefulness* , *perceived ease of use* , and its impact on customer satisfaction of users of technology-based restaurant management applications, namely Electronic Software for Business (ESB).

The population in this study were active users of the ESB application who had used the service in the context of restaurants, either as direct consumers or restaurant employees who process customer service through the application. The sampling technique was carried out

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using *purposive sampling* with the following criteria (Mahendra, 2018) : (1) respondents have used the ESB application for at least the past month, and (2) have direct experience in interacting with the main features of the application, such as ordering, payment, and order tracking. The number of respondents sampled in this study was 150 people, which was considered sufficient to be analyzed using the *Structural Approach Equation Modeling* (SEM) with *Partial Method Least Squares* (PLS) (Rukminingsih, 2020) .

Data collection was conducted through the distribution of online questionnaires using Google Form , which were distributed via social media and email to registered ESB application users. The measurement instrument used a 5-point Likert scale , from 1 (strongly disagree) to 5 (strongly agree). The variables studied consisted of: independent variables, namely service quality measured through five dimensions of SERVQUAL (tangibles , reliability , responsiveness , assurance , empathy); mediating variables, namely *perceived ease of use* and *perceived usefulness* according to the TAM construct ; and the dependent variable is customer satisfaction with the use of the ESB application.

The collected data was analyzed using the *Partial method Least Squares Structural Equation Modeling* (PLS-SEM) with the help of software SmartPLS 3.0. The analysis was carried out through several stages, namely: validity and reliability tests to ensure the quality of instrument measurement, outer model testing which includes convergent and discriminant validity tests, inner model testing to evaluate path coefficients . *coefficient*), determination value (R^2), and t-statistic value, as well as testing the significance of the relationship between variables to determine the direct and indirect influence between constructs in the research model that has been built.

RESULTS AND DISCUSSION

This study involved a total of 150 respondents with diverse demographic characteristics. Based on gender, 56% of respondents were female and 44% were male. In terms of age range, the majority were in the 21–30 age group at 48%, followed by 31–40 years old at 32%, and the remaining 20% were in other age groups. The length of use of the ESB application was also a concern, where 60% of respondents had used the application for more than three months, while 40% had only used it for 1–3 months. Based on user type, 70% were restaurant consumers, while the other 30% were restaurant staff who used the application to support the service process.

Validity and reliability tests show that all indicators in this study meet statistical requirements. Convergent validity is evident from the loading value. factor of all indicators that are above 0.70. In addition, the research construct has a composite value reliability above 0.80 which indicates good reliability. Average value Variance Extracted (AVE) of all constructs is also greater than 0.50, which indicates that each construct has adequate convergent validity.

The results of the structural model test (inner model) show that the R^2 value for the construct *perceived usefulness* (PU) is 0.63, which means that service quality and perceived ease of use are able to explain 63% of the variation in PU. For the construct *perceived ease of use* (PEOU), the R^2 value is 0.58, while for the customer satisfaction construct the R^2 value

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is 0.72, which shows that this model has strong explanatory power for the customer satisfaction variable.

The results of the hypothesis test confirm that there is a significant relationship between the variables studied. Service quality has a significant effect on *perceived ease of use* with a path coefficient of 0.65 and a t-statistic value of 9.23 ($p < 0.001$), as well as on *perceived usefulness* with a coefficient of 0.59 and a t-statistic of 8.11 ($p < 0.001$). Furthermore, *perceived ease of use* also has a significant influence on *perceived usefulness* with a coefficient of 0.47 and a t-statistic of 6.40 ($p < 0.001$). The influence of *perceived usefulness* towards customer satisfaction was recorded at 0.51 with a t-statistic of 7.85 ($p < 0.001$), while *perceived ease of use* has an influence of 0.34 on customer satisfaction ($t = 5.02$; $p < 0.001$). Finally, service quality is proven to have a direct effect on customer satisfaction with a coefficient of 0.43 and a t-statistic of 6.71 ($p < 0.001$). All relationships between variables in this model are declared significant (Wardana and Iriani, 2023) .

The results of this study indicate that service quality has a significant influence on the two main constructs in TAM, namely *perceived ease of use* (PEOU) and *perceived usefulness* (PU), in line with previous findings by (Hidayat and Canta, 2022) . When users find the ESB application easy to use, they tend to consider it useful in improving the restaurant experience, both as consumers and staff. Both constructs have also been shown to have a direct effect on customer satisfaction, indicating that positive perceptions of the ease and usefulness of the application can shape a satisfying experience.

Interestingly, service quality not only affects PU and PEOU, but also directly on customer satisfaction. This emphasizes the importance of system quality, support services, and user experience in shaping perceptions and satisfaction with digital applications (Nurhalima and Hadisaputro, 2022) . Practically, ESB application developers need to continuously evaluate and improve the responsiveness , reliability, and technical support of the application. Meanwhile, restaurant industry players must ensure that the use of this application truly supports customer service in a real and efficient manner.

CONCLUSION

This study analyzes the influence of service quality on customer satisfaction of users of Electronic Software applications. for Business (ESB) in the restaurant industry using the Technology Acceptance Model (TAM) approach. The results of the study on 150 respondents showed that service quality such as system reliability, ease of navigation, and technical support have a significant effect on the perception of ease of use (PEOU) and usefulness (PU) of the application. PEOU also affects PU, and both directly affect customer satisfaction. In addition, service quality also has a direct effect on satisfaction, although most of its effects are mediated by PU and PEOU. This confirms the importance of service quality in shaping the perception and satisfaction of ESB application users. Based on these findings, application developers are advised to improve usability , system stability, and responsive technical support. Restaurant industry players also need to involve users in application evaluation, optimize feature usage, and provide staff training. Further research is advised to add variables

such as user trust and loyalty and use longitudinal data. This study can be expanded to similar applications in other fields. With good management of service quality and user perception, the adoption of digital technology in the restaurant industry can run smoothly and increase customer satisfaction and loyalty sustainably.

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