The Effect of Product Quality and Service Quality on Customer Satisfaction in Restaurants at Medan City

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Abstract

This study aims to examine the effect of product quality and service quality on customer satisfaction in restaurants. Product quality refers to the attributes of food such as taste, freshness, portion, and presentation, while service quality covers aspects like responsiveness, reliability, assurance, and empathy in service delivery. The research employs a quantitative method using a structured questionnaire distributed to 120 restaurant customers in a major urban area. The data were analyzed using multiple linear regression with SPSS software to determine the influence of the independent variables on customer satisfaction. The results reveal that both product quality and service quality have a positive and significant effect on customer satisfaction, with product quality showing a slightly stronger impact. This indicates that although the quality of service contributes to the overall dining experience, customers still prioritize the quality of the food itself. The findings support prior research suggesting that food excellence and service interactions are key determinants of satisfaction in the food service sector. The study contributes to marketing and service management literature by reinforcing the importance of maintaining high product and service standards to enhance satisfaction and customer loyalty. It also provides managerial implications for restaurant operators to focus not only on food preparation consistency but also on staff training to deliver excellent service. Future research may incorporate additional variables such as restaurant ambiance, perceived price fairness, and brand image as potential mediating or moderating factors influencing customer satisfaction.

Keywords: Product Quality, Service Quality, Customer Satisfaction, Restaurant Industry, Service Management

I. INTRODUCTION

The restaurant industry has become one of the most competitive sectors in the global economy, driven by changing lifestyles, consumer preferences, and increasing expectations for quality dining experiences. As customers become more discerning, restaurants must deliver not only good food but also an exceptional overall experience to maintain a strong market position. Customer satisfaction, as a key measure of a restaurant's success, depends largely on how well a restaurant meets or exceeds customer expectations in both tangible and intangible aspects of service delivery (Naini et.al, 2022). Understanding the factors that influence satisfaction is therefore essential for restaurant managers seeking to build long-term customer relationships and enhance brand loyalty.

Product quality has consistently been identified as a fundamental determinant of customer satisfaction in the food service industry. It includes dimensions such as taste, freshness, portion size, presentation, and nutritional value (Akmal et.al, 2023). When customers perceive that the food served meets high-quality standards, their overall satisfaction increases, which in turn encourages repeat visits and positive word-of-mouth. Conversely, inconsistent food quality or poor taste can quickly damage a restaurant's reputation and reduce customer retention rates. Thus, maintaining consistent product quality is crucial for sustaining competitiveness and profitability. In addition to product quality, service quality plays a vital role in shaping customer perceptions and satisfaction. Service quality is reflected in how staff interact with

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customers, the speed and accuracy of service, and the ability to create a pleasant dining atmosphere. High-quality service can compensate for minor shortcomings in product quality and significantly enhance the overall customer experience. The SERVQUAL model, developed by Taufik et.al (2022); Munawaroh & Simon (2023); Lina (2022), identifies five key dimensions of service quality—tangibles, reliability, responsiveness, assurance, and empathy—that together determine the customer's evaluation of service excellence.

In the restaurant context, both product and service quality are interrelated components that jointly influence customer satisfaction. While excellent food may attract customers initially, outstanding service ensures that they return. Many studies have shown that customers evaluate their restaurant experience holistically, considering both what they receive (food) and how they receive it (service). Therefore, examining the combined effect of these two variables provides a comprehensive understanding of what drives customer satisfaction and loyalty in the restaurant industry (Wulandari & Nuratri, 2025).

Given the competitive landscape of modern dining, this study aims to analyze the effect of product quality and service quality on customer satisfaction in restaurants. By identifying which factors exert the greatest influence, this research can offer valuable insights for restaurant managers to design better strategies for improving service delivery and food standards (Iqbal et.al, 2024). The findings are expected to contribute both theoretically—to the literature on consumer behavior and service quality—and practically—to the enhancement of restaurant management practices focused on customer satisfaction and loyalty.

Customer satisfaction is a central concept in marketing and service management. In the restaurant industry, it plays a vital role in determining customer loyalty, repeat purchases, and word-of-mouth promotion. The competitive nature of the food service industry requires restaurants to maintain high product and service quality to attract and retain customers. Product quality, which includes taste, freshness, presentation, and portion size, directly influences customers' perception of

value (Sara & Ramadhan, 2025). Meanwhile, service quality—encompassing responsiveness, empathy, reliability, and assurance—shapes the overall dining experience.

Recent studies indicate that customers increasingly evaluate restaurants based not only on the food quality but also on the service interaction and environment (San et al., 2024; Ifedi et al., 2024). When both product and service quality meet or exceed expectations, customer satisfaction increases, leading to customer loyalty and positive behavioral intentions. However, inconsistencies in product quality or poor service delivery can significantly diminish customer satisfaction and damage the restaurant's reputation. This study aims to analyze the effect of product quality and service quality on customer satisfaction in restaurants.

Customer satisfaction is determined by the quality of the goods or services offered, making quality a top priority for companies as a benchmark for competitive advantage (Minhaj & Khan, 2025). Companies that fail to provide satisfactory service will encounter complex problems. Dissatisfied customers generally share their bad experiences with others, and it's easy to imagine the significant losses that can result from failing to satisfy customers. Many factors influence satisfaction, including product quality and service. At sample is Joko Solo's product quality is well-known among consumers. Joko Solo excels in its spicy flavors. Other advantages include the restaurant's facilities, pricing, and variety of products. This often makes it difficult for customers to decide which product to choose.

Service quality is also a factor influencing customer satisfaction. The author's preliminary research found that service provided by several restaurants in Medan is still lacking. This is evident in the long wait times for food orders to be served, customers having to wait for their food to arrive, and sometimes the food doesn't match their order. Therefore, maximum service quality is essential to achieve customer satisfaction. In the long term, such a relationship allows a company to thoroughly understand its customers' expectations and needs. This way, the company can increase customer satisfaction by maximizing pleasant customer

experiences and minimizing or eliminating unpleasant ones. In turn, customer satisfaction can foster customer loyalty to the company that delivers satisfactory quality.

Literature Review

1. Customer satisfaction

A customer satisfaction score (CSAT) is a metric that measures how satisfied customers are with a company's products, services, or experiences. It is calculated by asking customers to rate their satisfaction on a scale (e.g., 1-5) and then expressing the percentage of satisfied customers as a score. A higher score indicates greater customer contentment (Nunkoo et.al, 2025). Customer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the perceived performance (result) of a product with the expected performance (result). If performance is below expectations, the customer is dissatisfied; if performance meets expectations, the customer is satisfied (Brunner et.al, 2025). Satisfaction level is a function of the difference between perceived performance and expectations. Customers can experience one of three general levels of satisfaction. If performance falls short of expectations, customers will be dissatisfied. If performance meets expectations, customers will be satisfied. If performance exceeds expectations, customers will be highly satisfied, pleased, or delighted (Hussain et.al, 2025). Many factors influence customer satisfaction in fulfilling their desires and wants. In determining customer satisfaction levels, there are five main factors that companies must consider : (1) Product quality; (2) Service quality; (3) Emotional factors; (4) Price; (5) Cost. Customer satisfaction is the perceived outcome of using a product or service, whether it meets or exceeds expectations. How do you know if the perceived outcome exceeds expectations. How do you know if the perceived outcome exceeds or falls short of expectations (Dawes, 2025).

2. Product Quality

Product quality is the degree to which a product meets customer needs and expectations, encompassing its functionality, durability, and performance. It is a crucial factor in customer satisfaction and retention, influencing a company's competitiveness and profitability. Factors like reliability, safety, usability, and adherence to design specifications are key components of high-quality product (Widjaja, 2025). Product quality is the ability of a product to perform its function, this includes overall durability, reliability, accuracy, ease of operation and repair of the product as well as other product attributes (Attia et.al, 2025). There are many considerations that consumers look at before deciding which product to choose. For this reason, companies that want to sell products should pay attention to consumers' desires. So that the product can be accepted by society (Wilson, 2025). The characteristic quality of a "reliable" product must have multi-dimensionality, because it must provide satisfaction and great benefit value for consumers in various ways. Therefore, each product must have dimensions that are easy to calculate (for example, weight, contents, area and diameter) so that consumers can easily find them according to their needs (Zhao et.al, 2025).

3. Service Quality

Service quality is the extent to which a company meets or exceeds customer expectations in providing services. This can be measured through the five dimensions proposed by the ServQual model: tangibles (physical evidence), reliability (reliability), responsiveness (responsiveness), assurance (guarantee), and empathy (empathy). Paying attention to service quality is very important because it can increase customer satisfaction, loyalty, and the likelihood of them recommending your brand to others. (Wulandari & Nuratri, 2024). Service quality is the expected level of excellence and control over that level of excellence to fulfill customer desires (Biscaia et.al, 2024). Service quality is a level of excellence and is an intangible output that is beneficial to customers and the high or low level is determined by the customer's expectations (Alolayyan et.al, 2025). The best service to customers and quality levels can be achieved consistently by improving service and paying special attention to service performance standards, both internal service standards and external service standards (Rashid & Rasheed, 2024). The

services provided should be services that can provide a sense of satisfaction for the recipient of the service and the services provided to customers are required to always be perfected and improved in terms of quality in the future (Datt et.al, 2025).

4. Conceptual Framework

Product quality has an influence on customer satisfaction as stated by Rashid & Rasheed (2024) as follows: "Consumer satisfaction is a purchase depending on the product's relative performance to the buyer's expectations". A consumer may experience varying levels of satisfaction. If product performance does not meet expectations, customers will feel dissatisfied. If performance meets or exceeds expectations, then customers will be very satisfied.

Service quality and customer satisfaction are closely related. Good service quality provides an incentive for customers to establish strong ties with the company. In the long term, a bond like this allows the company to thoroughly understand its customers' expectations and needs. Wilson (2025) said "for companies operating in the service sector, satisfying customer needs means that the company must provide quality service to customers". In this way, companies can increase customer satisfaction where the company maximizes pleasant customer experiences and minimizes or eliminates unpleasant customer experiences.
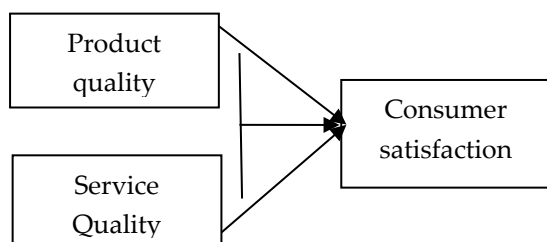

Figure 1 Conceptual Framework

The hypothesis is a temporary answer to the problem formulation and conceptual framework stated previously, so the researcher proposes a hypothesis that:

H1: There is an influence of product quality on restaurant customer satisfaction in Medan.
H2: There is an influence of service quality on restaurant customer satisfaction in Medan.

H3: There is a simultaneous influence of product quality and service quality on restaurant customer satisfaction in Medan.

II. METHODS

This study employs a quantitative research design with a causal approach, aiming to determine the effect of product quality and service quality on customer satisfaction in restaurants located in Medan City. The research was conducted using a survey method, where structured questionnaires were distributed to restaurant customers. The quantitative approach was chosen to measure relationships among variables statistically and to test the proposed hypotheses. The population in this study consists of all customers who have dined at restaurants in Medan City. Due to the large population size, non-probability sampling was applied using a purposive sampling technique, focusing on respondents who had visited the restaurant at least twice in the past three months. A total of 150 respondents participated in the study, which meets the minimum requirement for multiple regression analysis according to Hair et al. (2019), who recommend at least 5–10 times the number of variables or indicators. Respondents came from various demographic backgrounds, including students, employees, entrepreneurs, and civil servants. Data analysis was conducted using multiple linear regression with the assistance of SPSS (Statistical Package for the Social Sciences.

III. RESULTS

1. Descriptive Statistics

A total of 150 valid responses were collected from restaurant customers in Medan City. The respondents were diverse in terms of gender, age, and occupation, with the majority aged between 21–35 years and visiting restaurants at least twice a month. The mean score for product quality was 4.28 (on a 5-point Likert scale), indicating a high perception of food quality among respondents. The mean for service quality was 4.15, while customer satisfaction recorded an average of 4.31, showing that customers were generally satisfied with their dining experiences.

2. Regression Analysis

A multiple linear regression analysis was conducted to examine the influence of product quality (X_1) and service quality (X_2) on customer satisfaction (Y). The regression equation derived is as follows:

Table 1. Multiple Regression Analysis

Variable	Coefficient (β)	t-value	Sig. (p)	Result
Product Quality (X_1)	0.456	7.284	0.000	Accepted (H_1)
Service Quality (X_2)	0.378	5.962	0.000	Accepted (H_2)
R²	0.674			
F-value	151.762		0.000	All Accepted

Interpretation of Results :

$$Y=0.456X1+0.378X2+e$$

The regression model indicates that both Product Quality and Service Quality contribute positively to Customer Satisfaction. The coefficients (β values) represent the amount of change in customer satisfaction when each independent variable changes by one unit, assuming the other variable remains constant.

- The coefficient for Product Quality ($β_1$ = 0.456) means that if product quality increases by one unit, customer satisfaction will increase by 0.456 units, assuming service quality remains constant.
- The coefficient for Service Quality ($β_2$ = 0.378) means that if service quality increases by one unit, customer satisfaction will increase by 0.378 units, assuming product quality remains constant.

Both coefficients are positive, indicating that the relationship between each independent variable and the dependent variable is **direct**: the higher the quality of the product and service, the higher the level of customer satisfaction.

a. Effect of Product Quality on Customer Satisfaction (H_1)

The regression coefficient for product quality (β = 0.456, $p < 0.05$) indicates that product quality has a positive and significant effect on customer satisfaction. This means that when the quality of food—such as taste, freshness, portion, and presentation—increases, the satisfaction level of customers also increases. The strong coefficient suggests that product quality is the dominant factor influencing satisfaction among restaurant customers in Medan City.

b. Effect of Service Quality on Customer Satisfaction (H_2)

Service quality also has a significant positive impact on customer satisfaction (β = 0.378, $p < 0.05$). This finding implies that good service, represented by the friendliness, speed, and attentiveness of restaurant staff, plays a vital role in enhancing customer satisfaction. Although the effect size is slightly lower than that of product quality, service quality remains an important determinant of a positive dining experience.

c. Model Fit and Overall Relationship

The R² value of 0.674 indicates that 67.4% of the variation in customer satisfaction can be explained by product quality and service quality, while the remaining 32.6% is influenced by other factors such as restaurant atmosphere, price fairness, and brand image. The F-test (F = 151.762, p = 0.000) confirms that the overall regression model is statistically significant, indicating that both independent variables simultaneously affect customer satisfaction.

IV. DISCUSSION

The first hypothesis (H_1) states that product quality has a positive and significant effect on customer satisfaction, and this hypothesis is accepted. The result confirms that food quality plays a fundamental role in shaping dining satisfaction. Customers prioritize tangible elements such as taste, freshness, temperature, portion size, and visual presentation, all of which contribute to their perception of quality. This finding aligns with the theory proposed by Widjaja (2025); Attia et.al (2025), which emphasizes that product quality represents the ability of a product to

perform its functions and meet customer expectations. In the restaurant context, the "product" is the meal itself, which must deliver sensory and emotional pleasure. Furthermore, Zhao et.al (2025); Hussain et.al (2025) explains that perceived quality is directly associated with customer satisfaction and future behavioral intentions such as repeat purchase and recommendation. In the case of Medan City, known for its rich culinary culture and strong food preferences, the emphasis on product quality becomes even more critical. Customers in Medan tend to be highly sensitive to taste authenticity, portion adequacy, and freshness, particularly in traditional and fusion cuisines. Restaurants that fail to maintain food consistency risk customer dissatisfaction and declining loyalty. Therefore, maintaining menu consistency, raw material quality, and appealing presentation should be key priorities for restaurant managers.

The second hypothesis (H₂) proposes that service quality has a positive and significant effect on customer satisfaction, and it is also accepted. This finding supports the conceptual model of SERVQUAL developed by Datt et.al (2025): Biscaia et.al (2024), which outlines five key dimensions of service quality: reliability, responsiveness, assurance, empathy, and tangibility. In restaurant settings, service quality refers to how well employees respond to customers' needs, how accurate their service delivery is, and how comfortable customers feel during the dining process. The positive and significant result indicates that even though product quality is more dominant, the behavior and professionalism of the staff play a substantial role in enhancing satisfaction. For instance, when customers experience friendly greetings, timely service, and prompt responses to complaints, they are more likely to evaluate the restaurant positively. This finding is consistent with research by Alolayyan et.al (2025), which found that high service quality increases customer satisfaction, which in turn strengthens behavioral loyalty. In Medan City's restaurant industry, service quality becomes increasingly important due to the growing presence of modern, theme-based dining venues competing with traditional food establishments. As customer expectations rise,

well-trained, courteous, and responsive staff are crucial in differentiating a restaurant from its competitors.

The results confirm that both product quality and service quality significantly influence customer satisfaction in restaurants at Medan City. These findings are consistent with previous studies Rashid & Rasheed (2024); Nunkoo et.al (2025); Minhaj & Khan (2025), which emphasize the critical role of service and product attributes in forming customer perceptions. The dominance of product quality in this study reflects the local dining culture of Medan, where customers prioritize taste, freshness, and food presentation as key satisfaction drivers. However, the importance of service quality demonstrates that customers also value attentiveness and hospitality from restaurant staff as part of their overall experience. Therefore, to maintain customer satisfaction, restaurant managers should balance the enhancement of product quality (menu innovation, food hygiene, and presentation) with service improvements (training, responsiveness, and customer care). Continuous quality control and staff development programs can help sustain customer loyalty and strengthen competitive advantage in the Medan restaurant industry.

V. CONCLUSION

This study was conducted to analyze the effect of product quality and service quality on customer satisfaction in restaurants located in Medan City. Based on the results of multiple linear regression analysis, it can be concluded that both variables have a positive and significant influence on customer satisfaction, with product quality being the more dominant factor. The findings demonstrate that when restaurants consistently maintain food excellence in terms of taste, freshness, portion, and presentation, customers experience higher levels of satisfaction. Similarly, service quality—reflected in employee responsiveness, reliability, assurance, empathy, and tangible facilities—also significantly contributes to creating a pleasant dining experience.

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