

Service Quality on Madura Roadside Stall Based on Servqual Model

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Abstract

Purpose: This research aims to measure customer service satisfaction at Madura roadside stall on Klaten Indonesia and Kuala Lumpur Malaysia by testing the gap between service quality expectations and customer perceptions of the quality of service

Research Methodology: The model test includes quantitative testing of a sample of 100 Madura roadside stall customers in Klaten, Indonesia, and Kuala Lumpur, Malaysia. The sampling technique was carried out using purposive sampling during the 2 months of activities. Quantitative tests carried out in the research include testing the validity and reliability of the questionnaire and quantitative tests confirming the SERVQUAL model.

Results: The research show that all dimensions in the Servqual test including physical evidence, responsiveness, reliability, assurance and empathy all still have a negative gap value with an average value of - 57.27 points

Conclusions: This study's results on the five dimensions have not satisfied customers. The physical evidence of the quantitative test had the largest gap value of – 75.50 points.

Limitations: This research has limitations as the object of observation is only two Madura roadside stalls at Klaten and Kuala Lumpur through customer perceptions and satisfaction, so the model cannot be generalized more widely.

Contributions: This study provides context-specific evidence of SERVQUAL gaps in micro-retail settings and identifies priority areas for service improvement. The Madura roadside stall in Klaten and Kuala Lumpur must prioritize improvements to improve service quality in the largest negative value dimension, followed by improvements in the next negative order to increase consumer satisfaction.

Keywords: *Commerce Services, Madura Roadside Stall, Service Performance*

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1. Introduction

The early 21st century in Indonesia and Malaysia was still heavily characterized by timeless traditional businesses that required change. Within the small business sector, a group of actors known

as "Crackers" has emerged. They are microentrepreneurs who serve as both agents and devotees of change. True 'Crackers' never stop 'pedaling' forward. They are individuals driven by change and simultaneously the economic heroes of the grassroots micro-and-small business sector. This group, exemplified by entrepreneurs such as Warung Madura, strives to make individual lives more meaningful in the future ([Irhamisyah & Fahrurrozi, 2024](#)).

One prominent example of "Crackers" in Indonesia and Malaysia is the Warung Madura microentrepreneur. These stalls are found in every major city, small town, and rural village across the Indonesian archipelago. A widely known proverb among the Madurese people states, "Wherever the earth is stepped upon, there a Warung Madura stands." This uniqueness stems from the collective work ethic and "*gotong royong*" (mutual cooperation) approach to capital among Madurese entrepreneurs: their distinct display of products and specific spatial layout serve as key attractions, distinguishing Warung Madura from other traditional stalls ([Zein, Prabowo, & Aryani, 2025](#)). Beyond product presentation, the availability of mini gas stations (Pertamina) is a major draw for customers, offering convenience that is easily found at these locations ([Setiawan & Lufina, 2024](#)).

Strategic product placement, designed to make the stall appear bustling, is a specific tactic used by Madurese operators to attract consumer interest) ([Zein et al., 2025](#)). The Warung Madura network spans Sumatra, Java, Bali, Sulawesi, Kalimantan, and Kuala Lumpur. These entrepreneurs are formally organized through the Indonesian Warung Madura Association (IWAMI), which, as of 2020, recorded over 30,000 member stalls in Jakarta ([Setiawan & Lufina, 2024](#)). Warung Madura are generally managed by families or relatives from the same village. The management of these stalls adheres closely to democratic Madurese philosophies, such as the slogans "*berat sama dipikul, ringan sama dijinjing*" (sharing burdens and joys together) and "*nyare engon*" (seeking a livelihood) ([Zein et al., 2025](#)). However, empirical data on the sustainability of service quality are lacking.

The financial management of Warung Madura is particularly interesting in the Indonesian context because it implements transparency through a profit-sharing system. Profits are typically distributed every 100 working days in the company. Under this profit-sharing model, performance indices are measured using a point system that encourages employees to excel. This motivates the staff to maximize turnover and ensure customer returns. This system fosters a sense of psychological ownership among employees toward the business ([Nurbaiti, Hadiningrat & Hasan, 2025](#)). Consequently, this profit-sharing model allows Warung Madura to offer prices that are relatively lower than those of similar retail stalls ([Poernamasari, 2023](#)).

The relationship between capital owners and management in the Warung Madura concept is more of a partnership, as they do not receive a fixed salary but rather a share of the net profit. Profits are distributed between investors and management/staff only after deducting 2.5% for *Zakat* (alms) for the poor. Employee income is strictly measured using this point system ([Zain et al., 2025](#)). The contribution of this research is reframed as follows: empirical evidence, operational priority of Warung Madura, micro-retail competitiveness against modern retail giants, and educational applications such as Total Quality Management and retail business. To evaluate the service quality of Warung Madura, customer satisfaction must be measured. This activity is essential because of the public perception that the prices offered by Warung Madura are relatively lower than those of modern retailers in Indonesia, such as Alfamart and Indomaret. Based on the phenomenal gap mentioned above, the primary research question is formulated as follows:

RQ1: Does the retail service of Warung Madura on Jl. KH Dewantara, Klaten and Kuala Lumpur fail to satisfy customers?

2. Literature Review

2.1 Business Sustainability and Customer Satisfaction

According to stakeholder theory, micro-business organizations have obligations not only to a single stakeholder but also to a broader group of stakeholders ([Widodo, 2025](#)). This theory requires a reciprocal relationship based on mutual trust and benefit between the organization and its stakeholders. Such relationships play a vital role in the long-term success of microbusinesses. Given

that the relationship between an entrepreneur and their customers is crucial, as customers are the primary source of business revenue, they represent one of the most significant stakeholders ([Widodo, 2025](#)).

According to [Nuryanto, Basrowi, Quraysin, and Pratiwi \(2024\)](#), stakeholders who engage directly with micro-businesses gain relational experience and knowledge of the organization, which subsequently forms a primary reputation. Meanwhile, stakeholders who do not interact directly with the organization still maintain a representation of the business's reputation. However, this is a secondary reputation based on secondary information, such as what is heard from the media or other sources. Based on this premise, given their high level of interaction with the entrepreneurial entity, customers possess significant potential to influence the opinions of others regarding the organization's reputation through word of mouth and mouse ([Nuryanto et al., 2024](#)).

Based on the above description, it is crucial to examine the concept of business reputation from the customer's perspective ([Nuranti, Rahayu, Ansori, Shofro, Tibarojya, & Nugroho, 2024](#)). Furthermore, several researchers recommend analyzing business reputation through the lens of customers, who represent one of the most critical stakeholders for business organizations ([Mu & Zhang, 2021](#)). Customer-based business reputation is defined as the customer's overall evaluation of products, services, communication activities, and interactions with the business entity ([Nuranti et al., 2024](#)).

Business reputation from a customer perspective consists of five dimensions ([Nuranti et al., 2024](#)), such as customer orientation, which refers to the customer's perception of the business's willingness to allocate resources to satisfy their needs, the good employer, the customer's perception of how the business treats its employees and the expectation that the company possesses competent staff, the reliable and financially strong company, the customer's perception regarding the competence, solidity, and profitability of the company, as well as their expectation that the company manages its financial resources responsibly, the product and service quality, the customer's perception of the quality, innovation, value, and reliability of the company's products, and the social and environmental responsibility, the customer's belief that the business entity plays a positive role in society and its environment.

Customer satisfaction is a state in which the needs, desires, and expectations of the customer are met by the service provider. A service is considered satisfactory if it fulfills these criteria. Several factors are considered by customers when evaluating the service quality of a grocery stall, including the timeliness of product availability, trustworthiness, technical ability in arranging store displays, and pricing that is commensurate with the goods and services provided. Based on these factors, Warung Madura customers can assess their level of satisfaction with the specific services provided, as well as their level of trust in the provider's capabilities ([Sangalang & Fampo, 2024](#)).

Conducted a study on retail businesses, suggesting that the SERVQUAL model is a viable framework for application ([Nuranti et al., 2024](#)). According to [Layarda and Achmadi \(2024\)](#), the Kano model is also appropriately applied to the service quality of Warung Madura, as it significantly influences the purchase intention. The loyalty dimension is the most critical factor in the service quality of Warung Madura. Several influential dimensions include physical evidence (tangibles) and behavior. Furthermore, four other variables relevant to the service sector include attitude, competence, reliability, and convenience ([Villanueva, Alejandro, & Ga-an, 2023](#)). Customer satisfaction remains the most vital element for attracting and maintaining customer loyalty, particularly in the grocery retail service sector ([Ennew, Binks, & Chiplin, 2015](#)). Generally, this study aims to develop a service quality model for ultra-micro businesses in Indonesia's unique retail service sector as a strategy to achieve competitive advantage for ultra-micro entrepreneurs. Additionally, it aims to create a textbook model for entrepreneurship education based on service quality and satisfaction.

Several benefits can be derived from this research. For scientific knowledge, the SERVQUAL-based service quality model can provide empirical evidence of the importance of factors affecting customer satisfaction. Methodologically, through an antecedent approach based on customer satisfaction, this study provides a clear and comprehensive overview of Warung Madura customer satisfaction based on

Servqual quality, specifically the influence of the five main Servqual indicators. These problem-based findings can be taught as mandatory courses for undergraduate students, including Entrepreneurship, Retail Business, and Total Quality Management (TQM).

Services are various actions or performances offered by one party to another that are essentially intangible and do not result in ownership. A service product may or may not be linked to a physical product. According to [Kotler and Keller \(2023\)](#), services possess four primary characteristics: Intangibility: Services are not physical. To reduce uncertainty, buyers look for signs or evidence of high service quality. Customers often evaluate service quality based on observable cues, including the physical environment, employees, service equipment, communication materials, symbols, references from others, and price perceptions. Services are characterized by several distinctive attributes, including intangibility, where customers infer service quality from tangible indicators due to the inability to directly observe or evaluate the service before consumption; inseparability, where service production and consumption occur simultaneously within specific conditions; variability, where service outcomes may differ depending on the provider, time, and location of delivery; and perishability, where services cannot be stored or inventoried. However, perishability does not become a significant challenge when service demand remains stable and organizational capacity can consistently meet customer needs.

Research related to measuring customer satisfaction from services received, measuring the degree of satisfaction, and analyzing various gaps as the difference between expected service and perceived service was pioneered by [Parasuraman, Berry, and Zeithaml \(1991\)](#). Parasuraman developed the SERVQUAL model into five dimensions, such as Tangibles is physical evidence such as stall layout, merchandise display, and cleanliness, Reliability is the ability to perform the promised service dependably and accurately, Responsiveness is the willingness to help customers and provide prompt service, Assurance is the staff knowledge, courtesy, and the ability to inspire trust, and Empathy is the provision of caring, individualized attention to customers. When applied to traditional grocery stall services, these aspects include

Tangibles emphasize the quality of the physical appearance of the stall, the layout of merchandise, lighting, shelving, payment software systems, and the specific paint colors that have become a signature of Warung Madura. Reliability is the ability to provide services as promised, such as fast, affordable, and efficient service, verifying whether these align with the stall's promotions. Responsiveness is the willingness to be helpful and provide customers with the best possible service promptly. Assurance is the knowledge and courtesy of the Warung Madura staff and their ability to foster trust and confidence among customers. Empathy is the genuine attention given to the customers. Employees demonstrate empathy when they understand the customer's perspective, specifically the need for certain goods or services at a particular moment ([Zein, Prabowo, & Aryani, 2025](#)).

2.2 Entrepreneurship

Entrepreneurship is a way of thinking and acting based on the ability to perceive and seize future opportunities. Only individuals who have prepared themselves in a specific field can capture an opportunity. Those capable of preparation are individuals willing to work hard and build extensive relationships ([Almahatma, Wardoyo, & Surjanti, 2025](#)). These relationships must be forged by approaching "doors" whether they are already open, half-open, or still closed. A young entrepreneur must have the courage to take action, knock on doors, and treat the "gatekeepers" as partners capable of opening them ([Maulana, Novalia, Sari, Rosa, & Yuliansyah, 2024](#)). Through these open doors, individuals gain new knowledge and opportunities for the future. The start-up entrepreneurship of the Warung Madura business will determine whether these small enterprises can survive and grow into medium-sized businesses or remain small or even face decline in the future ([Battilana, Leca, & Boxenbaum, 2009](#)).

In entrepreneurship education for students, values can be instilled through a socialization process involving various sources: family, the immediate social environment, society, educational institutions, religion, mass media, traditions, and specific peer groups. Entrepreneurship research from various

perspectives still presents gaps, with some researchers focusing primarily on social perspectives ([Battilana et al., 2009](#); [Zein, Prabowo, & Aryani, 2025](#)). Problem-Based Learning (PBL) regarding the service quality of Warung Madura is an educational approach that confronts students with practical issues or learning that begins by providing context-based solutions rooted in the real world.

One of the factors influencing the success of small businesses is the entrepreneur's ability to manage their operations ([Mustika, Hasanah, & Irfany, 2023](#)). Therefore, to ensure successful business outcomes, entrepreneurs must possess the capability to implement management functions. Entrepreneurial orientation refers to the implementation of entrepreneurship, encompassing the methods, practices, and decision-making styles used to take tangible actions in business ventures ([Almahatma et al., 2025](#)).

Regarding the cooperation networks established by microentrepreneurs, [Nuryanto, Basrowi, Quraysin, and Pratiwi \(2024\)](#) identify three essential elements for developing micro-business success, such as market-driven ideas, noting that business failure often occurs due to the lack of a potential market to absorb the offered business ideas, management skills, as many micro-businesses fail because market players lack the ability to execute business plans, and many even lack the skills to draft them, and access to capital, where many businesses fail because they do not understand how to utilize their capital or fail to secure sufficient funding during critical periods. A challenge faced by new business actors is that their products are often untested in the market. Although certain products may possess a high degree of innovation, they may suffer from low reliability. Furthermore, new entrepreneurs typically underprepare for aftersales service concepts.

Another challenge for new business units is low capital levels, specifically regarding how they compete in introducing products and services against large-scale companies with substantial capital and strong marketing networks. According to [Widodo \(2025\)](#), the necessary steps for micro-businesses include identifying customers and focusing on their needs, finding customers who recognize the product's advantages and can accept its weaknesses in terms of reliability, identifying long-term customers who can act as partners in future business development, and finding partners who possess distribution networks typically owned by established companies. One of the factors influencing the success of small businesses is the entrepreneur's ability to manage their operations ([Maulana et al., 2024](#)). Consequently, for a small business to succeed, entrepreneurs must possess the capability to implement various management functions. Entrepreneurial orientation refers to the actual practice of entrepreneurship, encompassing the methods, practices, and decision-making styles employed to take tangible actions within a business ([Almahatma et al., 2025](#)).

Regarding the cooperation networks established by micro-entrepreneurs, [Panakaje \(2024\)](#) identify three essential elements for developing micro-business success, such as market-driven ideas, noting that business failure often occurs due to the absence of a potential market to absorb the proposed business concepts, management skills, as many micro-businesses fail because entrepreneurs lack the ability to execute business plans, with a majority even lacking the skills to draft them, and access to capital, where many businesses fail because they do not understand how to utilize their existing capital or fail to secure sufficient funding during critical periods. A significant challenge faced by new business actors is that their products remain untested in the market. Although certain products may exhibit high levels of innovation, they may simultaneously suffer from low reliability. Furthermore, new entrepreneurs typically lack preparation for after-sales service concepts.

Another challenge for new business units is their low capital levels, specifically regarding how they compete in introducing products and services against large-scale corporations with substantial capital and robust marketing networks. According to [Widodo \(2025\)](#), essential steps for micro-businesses include identifying and focusing on consumer needs, finding consumers who recognize the product's advantages and can tolerate its weaknesses in terms of reliability, identifying long-term consumers who can act as partners in future business development, and securing partners who possess the distribution networks typically held by established companies.

In the context of entrepreneurship, [Boucif, Saadallah, and Mursidi \(2025\)](#) concluded that values can be instilled in individuals through socialization processes from various sources: family, the immediate social environment, society, educational institutions, religion, mass media, traditions, and specific peer groups. Intention has a deeper significance than motivation. In the early stages of theories discussing micro-entrepreneurial behavior, an individual's intention toward a specific behavior was determined by two primary factors: attitude and subjective norms. Attitude is the evaluation of a set of beliefs regarding an object. The concept of subjective norms explains the extent to which an individual desires to comply with the expectations of reference parties considered important in relation to a particular behavior. Intention is a function of attitude that manifests as behavior or can be understood as the primary likelihood of factors influencing an individual to act. Intention serves as a mediating variable with a strong influence as a motivational factor impacting individual behavior ([Astuti & Solihin, 2024](#)).

3. Methodology

3.1 Research Data Collection

This research used a survey method to gather information directly from primary respondents. According to [Sekaran & Bougie \(2016\)](#), the survey method is a research approach that draws a sample from a target population using a questionnaire instrument as the primary tool for data collection.

3.2 Data Sources

Primary data were utilized, obtained directly from the customers of Warung Madura on Jl. KH Dewantara, Klaten and Kuala Lumpur. Respondents were selected based on their sufficient understanding of the service quality of Warung Madura object being studied. Secondary data are also required for the research, consisting of data from literature sources, institutional records or archives, and other sources relevant to the study.

3.3 Data Collection Techniques

Interviews with Warung Madura customers were conducted to gain a general overview of the grocery stall from the perspective of employees and owners regarding the strategic planning implemented. In an effort to obtain primary information from customers, the researcher randomly distributed questionnaires to stall customers who had received retail services at Warung Madura Jl. KH Dewantara, Klaten and Kuala Lumpur. A Literature Study was also performed to obtain relevant supporting data that contributed to the research output.

3.4 Data Acquisition Methods

In this research activity, not every individual in the population was studied because of limitations in time, access, and cost. Therefore, a sampling method was employed through the following steps: Population: The population consisted of the entire set of units of analysis whose characteristics could be estimated. The population in this study refers to all customers of Warung Madura on Jl. KH Dewantara, Klaten and Kuala Lumpur; Sampling Technique: The respondents used in this study consist of 100 Warung Madura customers selected via purposive sampling. The criteria for respondents taken as samples in this study are adults, under the assumption that they possess adequate knowledge to evaluate the service quality provided by Warung Madura. KH Dewantara, Klaten and Kuala Lumpur, to consumers.

The research instrument was a questionnaire consisting of 15 items mapped across the five SERVQUAL dimensions. Tangibles comprise five items: the focus area's physical appearance, layout, and cleanliness. Reliability comprises three items: focus area, speed, and accuracy of promised services. Responsiveness comprises two items: staff willingness to assist and promptness of assistance. Assurance comprises two items: staff knowledge and the ability to inspire trust in patients. Empathy 3 comprises the items: personalized attention and understanding needs.

3.5 Data Analysis Methods

3.5.1 Validity and Reliability Testing

To ensure the integrity of the findings, the following statistical procedures were applied: validity procedure, reliability procedure, and data cleaning. Validity testing was conducted to measure the

extent to which the attributes and questionnaire accurately and precisely performed their function as a measurement tool. A measurement tool is considered valid if it can measure what it intends to measure. In this study, high precision in the measurement results was sought. Validity was tested using the Pearson Product-Moment method. Instrument item correction was performed using the Part-Whole Correlation method ([Sekaran & Bougie, 2016](#)).

Reliability testing was conducted to measure the extent to which the measurement tool could perform measurements consistently. A measurement tool is categorized as reliable if it yields the same data when repeated on different objects or at different times. Reliability testing was performed using the Hoyt Method and facilitated by SPSS 21.

3.5.2 Service Quality Confirmation Test

The confirmation of service quality for Warung Madura in Klaten and Kuala Lumpur was conducted using the 5th Servqual Gap through the Weighted ServQual method as can be seen in Formula 1 ([Cronin & Taylor, 1992](#)).

$$I_{kj} = (P_{ij} - E_{ij}) \quad (1)$$

Where:

I_{kj} = confirmation of object j

I_{kj0} = confirmation of dissatisfied Madura stall customers

I_{kj1} = confirmation of satisfied Madura stall customers

P_{ij} = performance of attribute i of object j

E_{ij} = expectations from attribute i of object j

3.5.3 Ethical Safeguard

The research adhered to ethical standards for human participation, consent, privacy, and transparency. Participation was voluntary, and the identity of the 100 respondents remained confidential and was used only for the purpose of primary data quantification. Respondents were informed that the data would be used to identify priority areas for service improvement for micro-retailers.

4. Results and Discussions

4.1 Pre-Survey and Questionnaire Reliability Test

To ensure optimal research results, a pre-survey, literature review, and consultations with relevant parties were conducted to identify the attributes to be measured within the service quality dimensions. From the pre-survey results, attributes were categorized into 15 service quality question items: five items for Tangibles, three items for Reliability, two items for Responsiveness, two items for Assurance, and three items for Empathy. These five dimensions were then formulated into statements that are easily understood by the customers of Warung Madura on Jl. KH Dewantara, Klaten and Kuala Lumpur.

4.2 Respondent Characteristics

Respondent characteristics were used to analyze the participants' profiles. The research findings indicate that the majority of respondents by gender were female; thus, the active customers encountered during the research were predominantly women. Daily shopping activities at traditional grocery stalls are dominated by females. Regarding the age category, the data show that the customers are primarily within the young and productive age group. Consequently, it is concluded that for Warung Madura, improving service quality for this demographic is a primary factor to consider, especially given its location on Jl. KH Dewantara and Kuala Lumpur, which is near a university and the PT Intan Pariwara Group, Uni KL. In terms of occupation, most customers are private-sector employees. It can be concluded that for individuals in this profession, Warung Madura is an ideal

shopping choice due to its proximity to the PT Intan Pariwara Group, Widya Dharma University and Uni KL

4.3 Quantitative Model Testing

The sincerity and seriousness of respondents in answering questions are the essence of the survey method objective. The validity of the research results is heavily determined by the measurement tools used during the data collection process. If the data obtained are invalid or inaccurate, the research results will fail to describe the actual situation. Therefore, validity and reliability tests are necessary.

4.4 Validity Testing

A measurement scale is considered valid if it measures what it is intended to measure. For example, a non-parametric nominal scale is used to measure nominal variables, not parametric interval variables. To calculate the validity of the questionnaire, a correlation technique was used by comparing the score values against a distribution table. The quantification of the 15 validity-tested questions is presented in Table 1.

Table 1. Item validity test

Item	Rxy	R-table	Status
E1	0.537	0.374	Valid
E2	0.658	0.374	Valid
E3	0.587	0.374	Valid
E4	0.566	0.374	Valid
E5	0.551	0.374	Valid
E6	0.677	0.374	Valid
E7	0.680	0.374	Valid
E8	0.688	0.374	Valid
E9	0.537	0.374	Valid
E10	0.676	0.374	Valid
E11	0.554	0.374	Valid
E12	0.586	0.374	Valid
E13	0.763	0.374	Valid
E14	0.654	0.374	Valid
E15	0.684	0.374	Valid
P1	0.855	0.374	Valid
P2	0.768	0.374	Valid
P3	0.594	0.374	Valid
P4	0.585	0.374	Valid
P5	0.484	0.374	Valid
P6	0.565	0.374	Valid
P7	0.694	0.374	Valid
P8	0.434	0.374	Valid
P9	0.415	0.374	Valid
P10	0.675	0.374	Valid
P11	0.455	0.374	Valid
P12	0.564	0.374	Valid
P13	0.453	0.374	Valid
P14	0.524	0.374	Valid
P15	0.424	0.374	Valid

Pre-Survey Validity Results In the initial phase of the research, 30 respondents' answers were tested and compared against the r-table values. It can be concluded that all items were valid.

4.5 Reliability Testing

The research results regarding reliability testing indicate that all dimensions for both factors exceeded the required Cronbach's alpha threshold of 0.8. The complete quantification of the reliability tests is presented in Table 2.

Table 2. Item reliability test

Factors	Cronbach Alpha	Requirement	Status
E1	0.881	0.800	Reliable
E2	0.815	0.800	Reliable

Table 2 shows that both dimensions passed the test and were deemed reliable. These items were suitable for use in subsequent testing stages (Sekaran & Bougie, 2016).

4.6 ServQual Model Testing

To test the level of customer satisfaction for Warung Madura in Klaten and Kuala Lumpur, the Weighted ServQual formula (Cronin & Taylor, 1992) was applied. Based on the quantitative research results, the total customer confirmation score for the service quality of Warung Madura was calculated to be -58.27. Based on primary data from 100 respondents, the maximum and minimum confirmation values were 2:

$$Ikjmax = 400 \text{ as well as } Ikjmin = -400 \quad (2)$$

The maximum confirmation value is achieved when customers are assumed to have minimum expectations regarding the service quality to be received yet experience maximum actual performance. Conversely, the minimum confirmation value is achieved when customers are assumed to have maximum expectations but experience minimum actual performance in terms of the service quality received. In the quantitative calculation of the primary data, a total customer confirmation interval of 800 was obtained for WM. This figure is divided into four scales of confirmation levels based on customer preferences: Very Dissatisfied, Dissatisfied, Satisfied, and Very Satisfied. By dividing the total range, an interval of 200 points per category was created. Figure 1 displays the customer confirmation data regarding the service quality of Warung Madura on Jl. KH Dewantara, Klaten and Kuala Lumpur within the following interval:

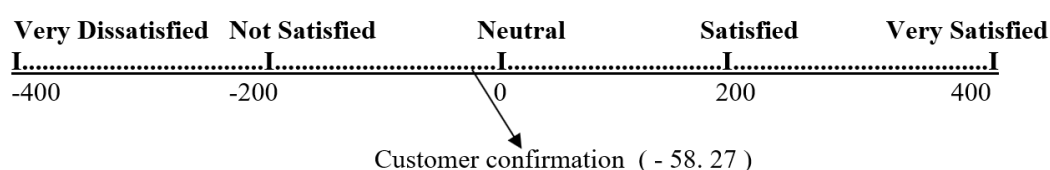


Figure 1. Warung Madura customer service quality confirmation

Based on Figure 1, it is concluded that the customer confirmation value for Warung Madura's service quality is -58.27, which falls within the interval of 0 to -200, categorized as "Dissatisfied." The minimum standard for achieving a level of service satisfaction is a confirmation value equal to or greater than zero (confirmation ≥ 0). The results of this study conclude that customer satisfaction regarding the service quality of Warung Madura in Klaten and Kuala Lumpur has not yet been achieved.

After obtaining the overall confirmation test results, the gaps for each service quality dimension, including Tangibles, Reliability, Responsiveness, Assurance, and Empathy, were analyzed. The research data show that the tangibles dimension has the largest gap at -75.50, followed by

responsiveness (−68.12), empathy (−56.36), reliability (−58.00), and finally assurance (−43.50). The tangible dimension pertains to the provision of services, as evidenced by complete physical proof. This dimension assesses whether the Warung Madura management correctly delivered services to customers regarding the physical evidence of merchandise racks, layout, product displays, stall cleanliness, tables, and shelves. There is still much to be improved in terms of stall infrastructure and facilities.

4.7 Discussion

The findings reveal a 14% gap from the maximum satisfaction threshold. The high negative gap in tangibles suggests that customers find the physical infrastructure, cleanliness, and shelving insufficient compared to modern competitors. The responsiveness gap indicates a need for faster service delivery, potentially through the adoption of digital tools such as QRIS in Indonesia to meet the needs of the local productive-age demographic.

The findings of this research are consistent with those of [Irhamisyah and Fahrurrozi \(2024\)](#), who revealed that during the pandemic, all measured service quality attributes for micro-businesses, specifically the Warung Madura enterprise, consistently yielded negative values. This is because the Warung Madura business model is still in its early startup phase. Consequently, the dimensions of learning efforts to satisfy consumers remain high within this microbusiness. Thus, it is essential to continuously enhance operational practices regarding competitive advantage learning in the future ([Irhamisyah & Fahrurrozi, 2024](#)).

The impact of future competition for micro-businesses continues to present increasingly open challenges for researchers and practitioners. In the future, these enterprises will compete with established modern retail businesses supported by sophisticated financing systems and highly skilled human resources. The emergence of new business entities, such as the KDMP (Koperasi Desa Merah Putih) in Indonesia, will become potential new competitors. Consequently, business practices aimed at continuously improving service quality to ensure customer satisfaction such as implementing modern payment models like QRIS ([Widjanarko, 2025](#)), Internet ([Rodriguez, Medina, Lirios, Sanchez, & Diaz, 2024](#)), capacity building ([Jali, Roddin, Hisham, & Ayob, 2026](#)), social ([Al-Ajlouni and Saad, 2024](#)), environmental ([Scartozzi, et al. 2024](#)) knowledge sharing ([Sharma et al. 2024](#)) mixed embeddedness ([Manalu et.al 2024](#)) sustainability ([Fahrurrozi et.al 2024](#)), support instrument ([Rodzinka et al, 2023](#)), utilizing marketplaces ([Ahyani & Solihin, 2025](#)) and training sessions and individual mentoring: self-awareness, emotional regulation and wise decision making skills ([Surjanti et al., 2025](#); [Nurhayati et al, 2025](#)), will be the key factors for micro-business entities in Indonesian and Malaysia to succeed in the competition.

5. Conclusions

5.1 Conclusion

Based on The discussion, the following conclusions are drawn: The standard required to achieve a minimum level of customer satisfaction is a confirmation value that is either zero or positive. The results of the customer confirmation test for Warung Madura yielded a value of −58.27. With the minimum possible confirmation value for Warung Madura services set at −400 and the maximum at 400, the findings indicate that the level of service quality satisfaction perceived by customers is currently −14% from the maximum satisfaction level. To reach the minimum satisfaction threshold, Warung Madura on Jl. KH Dewantara and Kuala Lumpur must close this 14% gap. In conclusion, the management of Warung Madura on Jl. KH Dewantara and Kuala Lumpur has not yet succeeded in delivering the service quality expected by its customers. Based on the quantitative testing of customer confirmation values for each dimension, management must prioritize improvements in the dimensions with the largest negative values, followed by gradual enhancements in the remaining negative indicators to reach the desired level of customer satisfaction.

5.2 Research Limitations

This research is subject to certain limitations, as it explores only a single Warung Madura located on Jl. KH Dewantara, Klaten and Kuala Lumpur over a period of three months. Consequently, the resulting model cannot be generalized to a broader context.

5.3 Suggestions and Directions for Future Research

Service Quality Enhancement: Warung Madura management must continuously strive to improve service quality. A reward system should be implemented to motivate employees to meet the high service quality demands of customers. Management is obligated to conduct periodic service-quality surveys. This is essential because customer expectations regarding service quality are constantly evolving in response to changes in the environment, time, and competitive conditions

Managerial implications: Tangibles first: Management must prioritize physical improvements, such as professionalizing merchandise displays and ensuring stall cleanliness. Second, training should focus on promptness, and technical upgrades should be implemented. Reliability and empathy: staff should maintain the partnership spirit ensure consistent service and personalized attention. Future studies should employ probability sampling across multiple locations to allow for broader generalized comparative studies between Warung Madura and modern minimarkets in Indonesian and Malaysia would further clarify the competitive drivers of customer loyalty and repurchase intention

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Author Contributions

AJSN contributed to the conceptualization, methodology, data collection analysis, and manuscript writing. AJSN also led the interpretation of the results and the overall structure of the manuscript. TT and DS were involved in data collection, literature review, and manuscript drafting. AH and AS assisted with literature review and data analysis. AFS contributed to the analysis and interpretation of the results, while UHA, DS, HH, NZAK and AS supported the research design, data collection and manuscript revisions

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