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Preserving the *Angkringan* Culture in Indonesia: An Industrial Engineering Approach to Improving Micro, Small, and Medium Enterprise Service Quality

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Abstract

Background: *Angkringan*, a traditional Indonesian food stall originating in Central Java, serves as a place for dining and social interaction. However, declining visitor numbers and limited customer diversity threaten business sustainability.

Objective: This study aims to identify and prioritize service quality improvements to enhance customer satisfaction, attract diverse customer segments, and increase visitor numbers at *Angkringan* Senopati in Ambarawa, Central Java.

Methods: A mixed-methods approach was employed, integrating Soft Systems Methodology (SSM), Service Quality (SERVQUAL), and the Kano Model. SSM identified customer needs and developed a conceptual model, while SERVQUAL assessed service quality gaps and the Kano Model classified service attributes to determine improvement priorities.

Results: The findings reveal that most visitors are teenagers and young adults, indicating limited customer diversity. Several service attributes showed dissatisfaction, particularly in the tangible dimension, which recorded the largest cluster of negative service quality gaps. Priority improvements include food taste, parking facilities, employee responsiveness, dining comfort, cleanliness, air circulation, lighting quality, and furniture comfort. Addressing these deficiencies could enhance customer satisfaction and attract broader customer segments.

Conclusion: The integrated SSM–SERVQUAL–Kano approach identified nine priority service quality attributes requiring improvement. These findings provide practical recommendations for enhancing customer satisfaction, expanding customer diversity, increasing visitor numbers, and supporting the long-term sustainability of *Angkringan* Senopati.

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INTRODUCTION

Angkringan is a traditional Indonesian food-stall format closely associated with informal gatherings, social interaction, and affordable food and beverages. As many *angkringan* operate as Micro, Small, and Medium Enterprises (MSMEs), their cultural continuity is closely linked to their ability to maintain service quality, attract diverse customer segments, and achieve economic sustainability.

In Java, the culture of gathering and socializing is reflected in both modern eateries and traditional *angkringan*. Unlike conventional restaurants or cafés, *angkringan* combine affordable food services with an egalitarian social environment, making service quality and customer diversity important considerations for both business sustainability and cultural continuity.

The term *angkringan* is derived from the Javanese word *nangkring* or *angkring*, which refers to sitting and relaxing. Mbah Karso, originally from Klaten, Central Java, established an *angkringan* after moving to Surakarta, Central Java, in the 1930s. He sold fish, a traditional Central Javanese dish served with a thick sauce, along with side dishes such as soy sauce and beef. These items were sold using a traditional carrying structure made of curved bamboo poles and equipped with benches and charcoal stoves (Disparpora Kabupaten Ngawi, 2024). The bamboo carrying structure is illustrated in Figure 1. Mbah Wiryo later collaborated with Mbah Karso to introduce beverages such as coffee, ginger drinks, and tea for sale at the *angkringan*. In addition, *angkringan* offer various foods, including *nasi kucing* (small portions of rice served with simple side dishes), *sate* (skewered and grilled meat), and *tempe mendoan* (thinly sliced tempeh coated in seasoned batter and lightly fried). In 1975, the traditional selling method evolved into the use of mobile carts, as illustrated in Figure 2. The presence of *angkringan* subsequently expanded beyond Yogyakarta and Surakarta to other cities throughout Indonesia (Disparpora Kabupaten Ngawi, 2024). Some vendors also operate from permanent buildings. *Angkringan* are distinctive social spaces where people from diverse backgrounds can gather, socialize, eat, and drink at affordable prices, often spending hours conversing with one another.



Figure 1. Pikulan *angkringan*



Figure 2. Cart *angkringan*

In Indonesia, food stalls such as *angkringan* are commonly classified as Micro, Small, and Medium Enterprises (MSMEs). Across various countries, MSMEs play a significant role in supporting economic development (Mahfud, 2025). They contribute to national sustainability through economic growth (Azzahra, 2025). MSMEs also play an important role in poverty reduction, increasing Gross Domestic Product (GDP), and generating employment opportunities (Melillanca, 2023). In Indonesia, MSMEs account for approximately 97% of total employment and contribute around 50% of GDP (Hermansyah, 2025). Consequently, MSMEs have become an important target of government support and empowerment initiatives.

One *angkringan* that continues to operate today is *Angkringan* Senopati, located in Ambarawa, Central Java, as shown in Figure 3. *Angkringan* Senopati operates in a permanent building, providing it with an established business location. It is open daily from 2:00 p.m. to 11:00 p.m. As an MSME, *Angkringan* Senopati represents the type of business that the Indonesian

government seeks to support and empower. The establishment of this *angkringan* was initiated by its owner, who had access to a large plot of land with a scenic view. The owner envisioned the establishment of an *angkringan* as a way to preserve a cultural tradition that provides a space for relaxation, strengthens social solidarity, and promotes harmony within the community. Accordingly, this study aims to help *Angkringan* Senopati increase its customer base and attract a more diverse range of customer segments. In line with government empowerment initiatives, the owner also hopes to revitalize the *angkringan* by encouraging people from different community groups to gather and socialize, thereby fostering stronger social relationships.

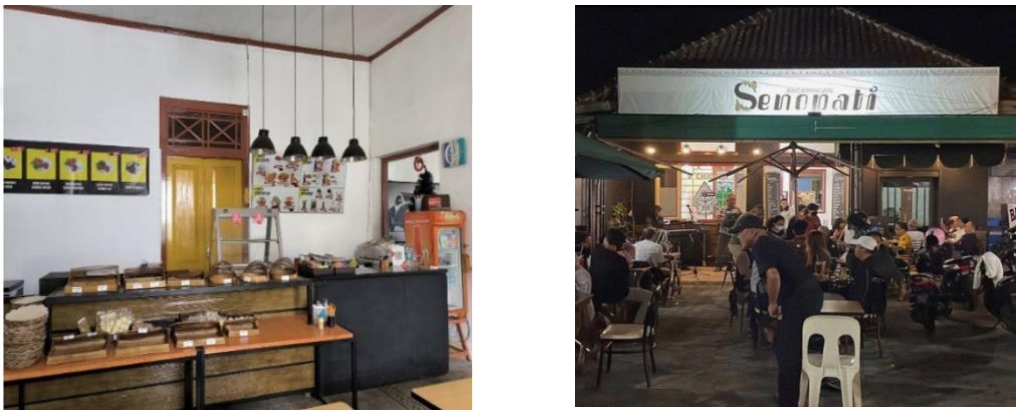


Figure 3. *Angkringan* Senopati, Ambarawa

The continued existence of *angkringan* is closely associated with the Indonesian culture of gathering and sharing meals. This tradition strengthens interpersonal relationships and social solidarity within communities, generating positive social outcomes. However, *Angkringan* Senopati currently faces two major challenges: its inability to achieve its sales revenue targets and the predominance of younger customers. The latter condition contrasts with the traditional purpose of *angkringan* as gathering places that accommodate people from diverse customer segments. These challenges contribute to suboptimal revenue generation and, if left unaddressed, may threaten the business's long-term sustainability. Therefore, this study seeks to help the owner improve revenue performance and attract a broader range of customers, thereby supporting the continued operation and sustainability of the *angkringan*.

This study employed a case study research strategy and a mixed-methods approach, integrating qualitative and quantitative methods to address the identified problems. Soft Systems Methodology (SSM) was employed as a qualitative methodological framework to structure the problem situation, model potential solutions, and explore actual conditions in the field (Hanafizadeh, 2021). SSM is particularly useful for addressing complex problems characterized by multiple perspectives and challenging situations (Checkland & Poulter, 2020). In this study, SSM was used to examine the operational conditions of the *angkringan* and identify relevant factors for assessing its service quality. Subsequently, quantitative methods were applied, including the Service Quality (SERVQUAL) model Zeithaml et al., (1990) and the Kano Model. These methods have also been applied to evaluate service quality in retail settings (Kermanshachi et al., 2022). SERVQUAL was used to measure perceived service quality by examining gaps between customer expectations and perceptions, whereas the Kano Model was used to classify service attributes according to their influence on customer satisfaction and establish improvement priorities (Dewi, 2019).

The primary objective of this study is to improve *angkringan* revenue performance and increase customer-segment diversity to support the sustainability of *angkringan* as an Indonesian cultural heritage that deserves preservation. To achieve this objective, the study integrates complementary methodological approaches. Its methodological contribution lies not in the application of mixed methods itself, but in the specific integration of SSM, SERVQUAL, and the Kano Model to connect stakeholder-defined needs with measured service-quality gaps and

prioritized improvement initiatives within the context of *angkringan*.

Numerous researchers have investigated food stalls in both domestic and international contexts. Relevant studies have examined the challenges faced by food vendors in the Philippines Romero (2024), customer satisfaction with street food in Malaysia Abd Aziz et al. (2025), the economic development of food stalls in China Ma et al. (2019), quality management in India Thangavel & MohanRaj (2023), service quality and repurchase values in South Korea Seo & Lee (2021), and Thailand Phongpheng (2021), promotional strategies and sales performance in the Philippines Campos (2024), quality perceptions in Malaysia Hanan (2021), and many more. Other studies have also explored various aspects of food-stall businesses, particularly their economic development. Overall, the existing literature primarily focuses on the challenges faced by food vendors, marketing strategies, and service or product quality, with a substantial proportion of the studies examining food-stall businesses in Asia.

Furthermore, numerous studies on *angkringan* have been conducted by Indonesian researchers, primarily focusing on three areas: service and product quality Ardiansyah (2025), strategy Setiawan & Pahlevi (2022), and marketing. These studies reflect the continued growth of *angkringan* and café businesses in Indonesia, many of which also encounter challenges related to sales performance. To facilitate more effective and targeted improvements, this study examines the service attributes expected by *angkringan* customers. Accordingly, the research gap addressed in this study does not concern the absence of previous research on *angkringan*, but rather the lack, within the cited literature, of an integrated SSM–SERVQUAL–Kano framework that connects stakeholder-based problem structuring, customer-based service-quality gap measurement, and prioritized service redesign. This integration is intended to support the study's objective of improving service quality, broadening customer participation, and strengthening business sustainability.

METHOD

As previously described, this study employed a case study research strategy to explore a street food stall (*angkringan*), namely *Angkringan* Senopati. A case study was selected because the conditions of this study aligned with the criteria for employing this research strategy. According to Yin (2014) a case study is an appropriate research strategy in three situations: (1) when the research question focuses on how or why, (2) when the researcher has little or no control over behavioral events, and (3) when the research focuses on a contemporary phenomenon. *Angkringan* Senopati is located in Ambarawa, Central Java, Indonesia. It is an individually owned *angkringan* situated on a large plot of land with scenic views. To understand the operating conditions of this *angkringan*, observations, in-depth interviews, and data collection were conducted on-site. These activities took place from April to July 2024. The respondents comprised the *angkringan* owner, workers, and customers representing various segments. Respondents were selected to capture the perspectives of the owner, workers, and customers involved in the case. This diversity of perspectives supported the triangulation of viewpoints, although it was not considered a standalone guarantee of research validity.

This study employed a mixed-methods approach. Qualitative and quantitative methods were used for different purposes, allowing the two approaches to complement each other. The research procedures are illustrated in Figure 4. The qualitative method employed was Soft Systems Methodology (SSM). SSM was initially developed as a systematic approach to addressing complex problem situations in organizational and business contexts. It has subsequently been applied as a learning and development tool to transform unstructured problem situations into more systematically understood situations (Holland & Garfield, 2016). SSM facilitates the formulation of different stakeholders' needs and the examination of their interactions, which can then be presented in a structured manner to facilitate understanding (Wu et al., 2021). In this study, SSM was used to identify the needs of each relevant stakeholder, develop the measurement instrument, and formulate improvement plans.

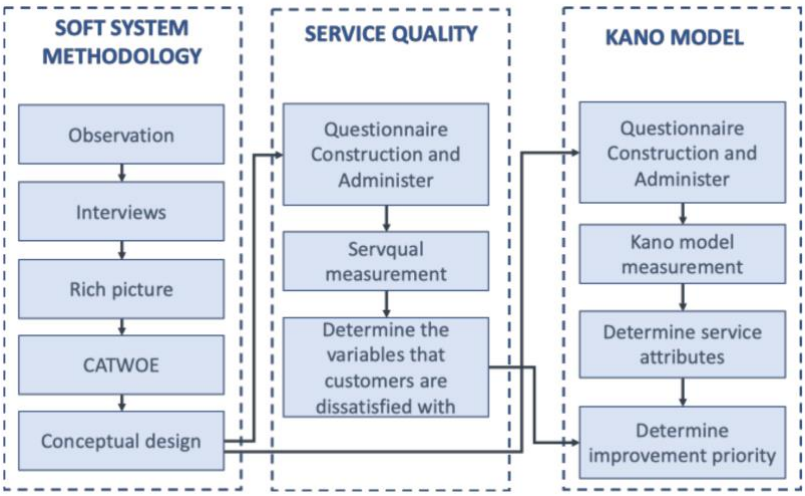


Figure 4. Research steps

In addressing the research problem, we employed SSM, which consists of seven stages Checkland & Poulter (2020) as illustrated in Figure 5. In the first stage, the problem situation and relevant stakeholders were identified. This stage drew on observations and in-depth interviews with two owners, two workers, and five customers. In the second stage, the problem situation was described using a *rich picture* to map the needs of each stakeholder. At this stage, the description captured the organizational structure, processes, relationships among stakeholders, and issues associated with the problem situation.

The *rich picture* was developed based on in-depth interviews with various stakeholders. In the third stage, the root definition was formulated by applying the CATWOE framework, which comprises Customers, Actors, Transformation, Worldview, Owner, and Environmental Constraints Checkland & Poulter (2020) This framework facilitated the systematic examination of the complex problem situation in the context of the food stall. In the fourth stage, a conceptual model of the system was developed. The fifth stage involved comparing the conceptual model with the real-world situation. In the sixth stage, adjustments were made as necessary, and the seventh and final stage involved taking action. In this study, SSM stages one through four were used to structure the problem situation, map stakeholders, formulate the root definition, and establish the conceptual foundation for the measurement instrument. Stages five through seven were not claimed as a complete implementation of SSM. Instead, the comparison with empirical customer data and the prioritization of feasible improvements were pursued through the subsequent SERVQUAL and Kano model analyses.

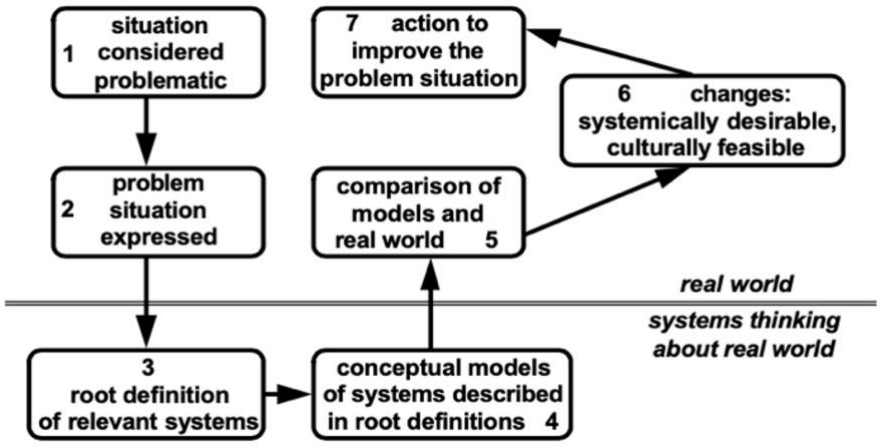


Figure 5. Soft System Methodology Sistematic (Checkland & Poulter, 2010)

Following the identification of the relevant variables and the development of the conceptual framework, quantitative methods, namely SERVQUAL and the Kano model, were employed. SERVQUAL was developed by (Zeithaml et al., 1990). SERVQUAL is used to measure service quality by examining the gap between customer expectations and perceptions and identifying potential sources of customer dissatisfaction. The SERVQUAL framework measures service quality by assessing the difference between customer expectations and perceptions across five dimensions (Zeithaml et al., 1990):

1. Reliability: The ability to perform the promised service dependably and accurately, including fulfilling commitments and meeting established standards.
2. Responsiveness: The willingness and ability to assist customers and provide prompt service.
3. Assurance: The knowledge and courtesy of employees and their ability to inspire trust and confidence among customers, including aspects of competence, credibility, and security.
4. Empathy: The provision of individualized attention to customers by demonstrating care, facilitating communication, and understanding their specific needs.
5. Tangibles: The physical facilities, equipment, personnel, and other tangible elements associated with service delivery.

The SERVQUAL questionnaire was developed based on the findings of the SSM analysis. Customers were then asked to complete a questionnaire containing variables identified through the SSM process. A total of 113 respondents completed the questionnaire; however, only 100 met the eligibility requirements and were included in the analysis. Accordingly, the processed data were based on these 100 eligible responses. The customer survey was treated as a case-based, non-probability sample. The analysis included the 100 questionnaires that passed the study's completeness and eligibility screening. However, the available source records did not preserve itemized reasons for excluding each of the 13 questionnaires; therefore, no additional exclusion categories have been inferred. Consequently, the final sample was used for descriptive SERVQUAL and Kano model analyses and was not considered statistically representative of the broader population of *angkringan* customers.

The SERVQUAL measurements were used to identify service attributes contributing to customer dissatisfaction and offering potential opportunities for improvement. Subsequently, the Kano model was employed to identify how individual service attributes influence customer satisfaction (Kano et al., 1984). The Kano model facilitates the prioritization of improvement initiatives by recognizing that customers do not necessarily evaluate products and services solely in terms of optimal quality but may also prioritize attributes that fulfill their emotional needs (Kang & Zhao, 2024). For this purpose, a questionnaire comprising functional and dysfunctional questions was administered. Functional questions describe the presence or provision of a particular service attribute, whereas dysfunctional questions describe its absence or non-provision. Responses to the functional and dysfunctional questions were paired and classified into six categories: Attractive (A), One-dimensional (O), Must-be (M), Indifferent (I), Reverse (R), and Questionable (Q). The classification matrix is presented in Table 1. Subsequently, the frequency of responses in each category was calculated. Service attributes were classified according to the distribution of responses across the six categories. The Kano evaluation rule was applied as follows: if (O + A + M) is greater than (I + R + Q), the category with the highest frequency among O, A, and M is selected. Conversely, if (O + A + M) is smaller than (I + R + Q), the category with the highest frequency among I, R, and Q is selected. If the two sums are equal, the category with the highest frequency across all six categories is selected (Kano et al., 1984).

Table 1
Kano Categorization Table

Customer Requirements	Dysfunctional question				
	1. I like it that	2. It must be	3. I am neutral	4. I can live with	5. I dislike

		way	that way		it that way	it that way
	I like it that way.	Q	A	A	A	O
	It must be that way.	R	I	I	I	M
Functional question	I am neutral.	R	I	I	I	M
	I can live with it that way.	R	R	I	Q	M
	I dislike it that way.	R	R	R	R	Q

A: Attractive, O: One-dimensional, M: Must-be, I: Indifferent, R: Reversal, Q: Questionable

RESULTS AND DISCUSSION

Results

As previously explained, the study began with observations to identify existing conditions and problems. Human participants were involved in the study as interviewees and questionnaire respondents. Although participants were asked to express their opinions and feelings about *angkringan*, informed consent was obtained before the interviews and questionnaire administration. The study found that *angkringan* are becoming less popular, with teenagers and young adults accounting for the majority of visitors, while adults show less interest in visiting these establishments. This presents a challenge because *angkringan* owners aim to preserve the cultural heritage associated with *angkringan* and make it accessible to all segments of society while also generating business profits. The second stage of SSM involved in-depth interviews with two owners, two employees, five customers, and five community members. The findings from these interviews were synthesized into a rich picture, as shown in Figure 6. The figure illustrates the needs of various stakeholders that will be addressed through the proposed improvements.

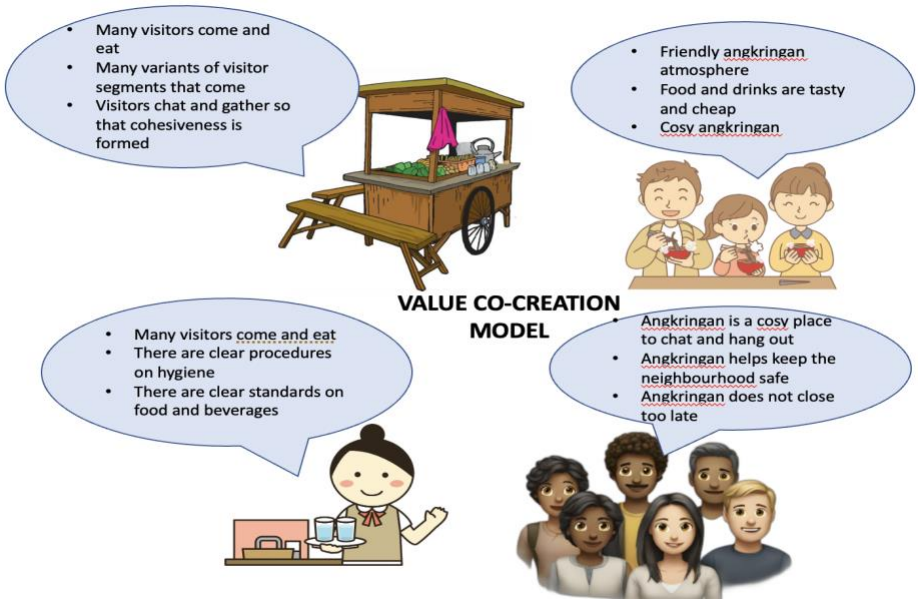


Figure 6. Rich picture *angkringan*

The third stage of SSM involved a CATWOE analysis to identify the root definition of the system. In this study, C (customer) refers to *angkringan* customers; A (actor) refers to the *angkringan* owner, employees, customers, and community members; T (transformation) refers to increasing the number of *angkringan* visitors and sales; W (worldview) refers to the perspectives and understanding of each actor, as identified through the in-depth interviews and illustrated in Figure 6; O (owner) refers to the individuals with authority over the system's

activities, namely the visitors, employees, and *angkringan* owner; and E (environmental constraints) refers to local environmental conditions, particularly the declining interest in gathering at *angkringan*.

The fourth stage focused on identifying opportunities for continuous improvement. To achieve this, a platform must be established through which each actor can collaboratively develop and implement innovations. The concept adopted in this study is shared value creation, which provides a platform for incorporating the needs and opinions of various stakeholders. In this study, the concept is applied to improving *angkringan* service quality. These improvements aim to make customers feel more comfortable when visiting and spending time at an *angkringan*.

The next stage of SSM involved comparing the conceptual model with the real-world situation. At this stage, the research proceeded using quantitative methods to obtain empirical data and evaluate the concepts developed through SSM. The SERVQUAL method and the Kano Model were employed to formulate service-quality improvements for *angkringan* and, ultimately, increase customer satisfaction. Data were collected using a questionnaire designed to measure customer expectations and perceptions. The questionnaire was administered to customers of *Angkringan* Senopati who had previously purchased food and/or beverages there. Its questions were structured around the SERVQUAL dimensions, while the variables were derived from the qualitative analysis of the in-depth interview findings.

The SERVQUAL questionnaire was used to measure customer expectations and perceptions and to provide the service-quality data for the subsequent Kano Model analysis. The study involved 100 respondents who had purchased food and/or beverages at *Angkringan* Senopati. Before administration, the questionnaire was subjected to validity and reliability testing. Validity was assessed using the Pearson product–moment correlation method, while reliability was evaluated using Cronbach's alpha. Both tests indicated that the questionnaire was valid and reliable and, therefore, suitable for use in the study.

Respondent characteristics provide context for interpreting the quantitative findings: 98% of visitors were aged 17–45, while 42% were employees and 41% were students. The main reasons for visiting were gathering with friends (44%) and eating or drinking (43%). These characteristics indicate that the current customer base is concentrated among teenagers and young adults and should be considered when interpreting the identified service-quality priorities.

The variables identified through the in-depth interviews and classified according to the SERVQUAL dimensions are presented in Table 2. For each variable, respondents were asked to rate their expectations and perceptions. The SERVQUAL score was calculated by comparing the expectation and perception scores. In this study, the overall SERVQUAL score was 0.0159. This aggregate gap, being very close to zero, indicates that overall customer perceptions and expectations were nearly balanced rather than demonstrating a substantially high level of satisfaction. Because no inferential statistical test of the expectation–perception gaps was reported, these scores are interpreted descriptively and should not be regarded as evidence of statistically significant differences. Although the overall score was positive, the variable-level SERVQUAL (Gap 5) analysis identified ten variables for which customer perceptions fell below expectations, indicating dissatisfaction. These variables were Variables 9, 10, 13, 14, 17, 22, 23, 24, 25, and 26, as shown in Table 3. Accordingly, improvement efforts will focus on these variables.

Table 2
Variables used to measure Angkringan Senopati's service quality

No.	Variables	Dimensions	Satisfaction
1	Employee knowledge of the menu being sold	Assurance	0.03
2	Politeness of employees in serving consumers	Assurance	0.02
3	Friendliness of employees in serving consumers	Assurance	0.00
4	Affordability of food and beverage prices at *Angkringan* Senopati	Assurance	0.08
5	Menu variations at *Angkringan* Senopati	Empathy	0.05
6	Variety of prices of food sold	Empathy	0.13
7	Ease of access to the location of *Angkringan* Senopati	Empathy	0.09

8	Ease of finding the place	Empathy	0.05
9	Ease of parking the vehicle	Empathy	-0.01
10	Attractiveness of *angkringan* in promoting new menus	Empathy	-0.01
11	The attractiveness of the promotional design on social media	Empathy	0.00
12	Diversity of visitor segments at *angkringan*	Empathy	0.14
13	The taste of the food sold at *Angkringan* Senopati	Reliability	-0.12
14	The taste of drinks sold at *Angkringan* Senopati	Reliability	-0.06
15	The attractiveness of the menu presentation	Reliability	0.12
16	Availability of food and drinks	Reliability	0.05
17	Responsiveness of employees in serving consumers	Responsiveness	-0.03
18	Speed of payment process	Responsiveness	0.00
19	Diversity of payment methods other than cash	Responsiveness	0.05
20	Clarity of writing on the purchase note	Responsiveness	0.01
21	Attractiveness of *angkringan* interior design	Tangible	0.07
22	Convenience of *angkringan* to be used as a gathering place	Tangible	-0.01
23	Cleanliness of *angkringan*	Tangible	-0.09
24	Air circulation in the *angkringan*	Tangible	-0.06
25	Quality of lighting in the *angkringan*	Tangible	-0.01
26	Comfort of tables and seating	Tangible	-0.04
27	Availability of wifi	Tangible	0.07

The Kano Model was subsequently used to determine improvement priorities, with the results presented in Table 3. Based on the Kano classification, the attributes classified as Attractive (A), One-dimensional (O), and Must-be (M) were considered relevant to service improvement. However, among the variables identified as unsatisfactory by customers through the SERVQUAL analysis, most were classified as One-dimensional (O), while one was classified as Indifferent (I). Therefore, the unsatisfactory variables classified as One-dimensional were selected as the primary improvement priorities. These comprised nine variables: Variables 9, 13, 14, 17, 22, 23, 24, 25, and 26. As shown in the table, the Tangibles dimension contains the largest concentration of unsatisfactory attributes (Variables 22–26), indicating that this dimension should receive particular attention during the analysis and implementation of improvements.

Table 3
Servqual and Kano result summary

Variable	Gap	A	M	O	R	Q	I	Category
1	0.03	23	11	40	0	11	16	O
2	0.02	16	20	46	0	11	8	O
3	0.00	18	18	43	0	10	12	O
4	0.08	25	13	33	1	9	20	O
5	0.05	25	8	29	1	13	25	O
6	0.13	33	6	28	1	9	24	A
7	0.09	31	14	30	0	10	16	A
8	0.05	29	12	31	0	11	18	O
9	-0.01	21	12	36	0	14	18	O
10	-0.01	26	7	28	0	11	29	I
11	0.00	32	6	29	0	12	22	A
12	0.14	27	7	22	1	10	34	I
13	-0.12	22	13	39	0	10	17	O
14	-0.06	19	14	41	0	11	16	O
15	0.12	29	7	31	0	11	23	O
16	0.05	23	11	29	2	10	26	O
17	-0.03	18	15	46	0	9	13	O
18	0.00	27	11	37	0	9	17	O
19	0.05	28	10	37	1	9	16	O

20	0.01	22	11	30	2	10	26	O
21	0.07	28	6	30	0	12	25	O
22	-0.01	27	12	44	0	10	8	O
23	-0.09	20	15	50	0	9	7	O
24	-0.06	18	20	40	0	10	13	O
25	-0.01	21	17	37	0	10	16	O
26	-0.04	17	15	44	1	10	14	O
27	0.07	21	6	38	0	10	26	O

Note: Shaded rows indicate variables rated unsatisfactory by customers (negative Servqual gap score). A = Attractive, M = Must-be, O = One-dimensional, R = Reverse, Q = Questionable, I = Indifferent.

The priority attributes for improving *angkringan* service quality, based on the SERVQUAL and Kano Model analyses, are parking arrangements, food taste, beverage taste, employee responsiveness, comfort of the *angkringan* as a gathering place, cleanliness, adequate air circulation, adequate lighting, and comfortable furniture. The following discussion examines each attribute, its underlying causes, and the proposed improvement measures.

Discussion

Based on the research conducted at *Angkringan* Senopati, the available parking area is relatively small, accommodating approximately eight cars. However, the main problem is the absence of designated parking lines to organize vehicle placement. Consequently, customers receive no clear guidance on where to park, sometimes resulting in vehicles being parked in inconvenient positions. Furthermore, the establishment does not have a dedicated parking attendant. To address this problem, designated parking lines should be installed, and, if possible, staff should assist customers with parking.

Employees who are not occupied with other tasks could provide parking assistance, or a dedicated staff member could be assigned to this responsibility. These measures are expected to improve parking arrangements and resolve the associated difficulties. The prominence of tangible service issues is consistent with the SERVQUAL framework, in which physical evidence shapes customers' evaluations of the service environment (Zeithaml et al., 1990). It is also consistent with previous research on street food, which emphasizes cleanliness and the physical service environment Abd Aziz et al. (2025), as well as research applying Kano analysis to distinguish attributes that should be prioritized for service improvement (Kermanshachi et al., 2022).

Food and beverage taste is inherently subjective and may vary among individuals. Nevertheless, according to most customers, the food and beverages offered at *Angkringan* Senopati do not fully meet their expectations. One possible explanation is the shift in the dominant customer age group, which may have resulted in differences in taste preferences. Adults may have different food preferences from younger customers. Because *Angkringan* Senopati primarily serves local residents and its customer base tends to remain relatively consistent over time, understanding their preferences is important when considering improvements to food and beverage quality.

To achieve this, *angkringan* operators should conduct customer surveys and interviews to identify specific preferences. Customers could be asked to evaluate individual menu items, indicating, for example, whether a dish is too salty, insufficiently sweet, or undercooked. Furthermore, *angkringan* operators could explore new menu options that reflect customer expectations to prevent dissatisfaction with existing offerings. Alternatively, selected menu items could be rotated periodically. Surveys and interviews should be conducted regularly to collect customer feedback and ensure that the menu remains relevant. The resulting feedback can support product development and improvements to food and beverage quality, ensuring that the offerings better reflect customer preferences.

Customers rated employee responsiveness at *Angkringan* Senopati as unsatisfactory. This is partly because many customers enter the *angkringan* without being greeted by employees and must find their own seats. Furthermore, customers sometimes have difficulty attracting employees' attention when placing food and beverage orders because employees are occupied

serving other customers or performing other tasks. To improve employee responsiveness, *angkringan* operators can implement three measures. First, they should evaluate whether the number of employees is adequate. This requires analyzing the workload and time requirements associated with each task and comparing the resulting estimates with the actual workload and time requirements. Such an analysis is also necessary to determine whether existing work methods are efficient. Based on these assessments, work methods can be improved to increase employee efficiency and service capacity.

The comparison between required and actual workloads can then be used to determine whether the existing workforce is sufficient. If the workforce is adequate, improvements should focus on work methods and operational procedures. Conversely, if the workforce is insufficient, hiring additional employees should be considered. Second, employee training should be provided, where necessary, to improve responsiveness, accelerate responses to customer needs, and facilitate adaptation to improved work practices. Training should be provided to all employees, with particular emphasis on new hires. If employees anticipate delays in providing service, they should inform customers and apologize for the inconvenience. Third, customer behavior should be examined. *Angkringan* operators need to determine whether customers frequently require assistance from employees and, if so, investigate the underlying reasons for their complaints and requests. Appropriate measures should then be considered to reduce unnecessary requests and improve service efficiency. For example, if customers frequently request sweet soy sauce, providing it at every table could reduce repeated requests and allow employees to focus on other service activities.

Comfort is an important consideration for customers when selecting a place to gather and socialize. The comfort of an *angkringan* is influenced by several factors, including cleanliness, air circulation, lighting, furniture, room temperature, interior design, and decoration. It is also affected by the social atmosphere of the establishment. Therefore, *Angkringan* Senopati needs to improve the overall customer experience by enhancing these aspects. Several measures could be implemented to achieve this objective. For example, *angkringan* operators could reconsider their interior design by soliciting customer feedback, particularly regarding the preferred design theme. Given that many customers are teenagers and young adults, their interior design preferences may have evolved over time. Periodically updating the decorative theme could create a fresh and appealing atmosphere, maintain customer interest, and reduce monotony. Other improvements should include optimizing air circulation and room temperature.

In addition to improving interior design, food stalls can enhance customer comfort by implementing a more systematic and rigorous cleaning schedule. For example, whenever customers finish their meals and leave, the tables, chairs, and floor should be cleaned immediately. A regular cleaning schedule with clearly defined intervals and responsibilities could also be established to ensure that cleanliness is consistently maintained. Air circulation should also be improved, particularly in indoor dining areas. Food stalls could install air-conditioning units or fans, as appropriate. They could also optimize window openings and ventilation arrangements based on the time of day and prevailing climatic conditions.

Lighting is another important aspect of customer comfort. Lighting requirements should be assessed by considering the necessary illumination levels, expressed in lumens or, more appropriately for evaluating the illuminated space, lux, as well as the most suitable light color temperature for gathering, socializing, and dining. Comfort can also be improved through the ergonomic design of tables and chairs. Seating should include supportive backrests, adequately cushioned surfaces, appropriately angled backrests, and sufficient seat width. Finally, food stall operators should establish a periodic furniture inspection and maintenance schedule. Repairs can be carried out in stages to distribute maintenance costs and avoid unnecessary additional expenses.

To increase customer numbers and attract more adult patrons, *Angkringan* Senopati should implement several strategies, including the following: 1) Expanding promotional activities beyond social media, which may be less frequently used by the adult demographic. Promotional initiatives could include distributing brochures, offering time-specific discounts, and introducing a "member-get-member" referral program. This approach is supported by the finding that 64% of

customers learned about the *angkringan* through friends and relatives. A referral program could encourage existing customers to invite their friends and family members, thereby expanding the customer base through word-of-mouth promotion. 2) Organizing regular events specifically tailored to adults and aligned with the interests and preferences of the local community. These events could include dance performances, *wayang* (traditional puppetry) performances, cultural discussions, and talks on current or popular topics. 3) Developing food and beverage themes that highlight traditional specialties that are popular among members of the local community. Menu offerings could also be rotated periodically to maintain customer interest and encourage repeat visits. 4) Redesigning the *angkringan* signage. An effective sign can attract potential customers and increase the establishment's visibility. The existing signage uses colors that lack visual impact and text that is too small to attract attention. A redesign could incorporate more visually appealing colors, typography, and graphic elements to improve readability and attract prospective customers.

CONCLUSION

This study aimed to improve service quality at Angkringan Senopati and encourage participation from a broader range of customer segments as a basis for business sustainability. The SERVQUAL analysis identified ten variables with negative gap scores, while the Kano analysis identified nine unsatisfactory, one-dimensional attributes as the primary improvement priorities: parking arrangements, food taste, beverage taste, employee responsiveness, comfort of the establishment as a gathering place, cleanliness, air circulation, lighting, and furniture comfort. The Tangibles dimension contained the largest cluster of priority problems. The principal contribution of this study is the integration of SSM, SERVQUAL, and the Kano Model into a systematic procedure that translates stakeholder-defined needs into measurable service-quality gaps and prioritized improvement actions.

The integration of SSM, SERVQUAL, and the Kano Model provided complementary qualitative and quantitative evidence for developing context-specific service-improvement priorities. As this research was conducted as a single-case study, its findings cannot be statistically generalized to all *angkringan*. Its contribution is primarily analytical: the integrated framework can be adapted to other *angkringan* settings, although the specific service attributes and improvement priorities may vary across establishments. Future research should examine multiple locations, different customer segments, and additional service-quality assessment methods to evaluate the transferability and broader applicability of the proposed framework.

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AUTHOR CONTRIBUTIONS STATEMENT

Christina Wirawan contributed to the research conceptualization, methodology development, research supervision, data interpretation, and manuscript review and editing. Wawan Yudiantyo contributed to the research design, implementation of Soft Systems Methodology (SSM), Service Quality (Servqual) analysis, Kano Model evaluation, and interpretation of the research findings. Nathan Immanuel Firsto contributed to data collection, field observations, questionnaire administration, data processing, statistical analysis, and preparation of the initial manuscript draft. All authors participated in discussing the findings, critically reviewing the manuscript, and approving the final version for publication.

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