Consumer satisfaction with halal hub MSME services: evidence from Sumenep regency, Indonesia

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Abstract

Purpose – The research aims to identify business actors' satisfaction with services and analyze the attributes influencing service quality at the halal hub MSME Sumenep. **Method** – The quantitative research involves 60 respondents, selected using purposive sampling with criteria who had received assistance from the halal hub MSME Sumenep. The data source used is primary data collected through structured questionnaires distributed directly to respondents. The methods used for the analysis are the CSI (customer satisfaction index) and IPA (importance performance analysis). **Findings** – The CSI analysis results indicate that business actors were very satisfied. Meanwhile, the results of the IPA analysis in quadrant I show three priority improvement attributes: completing administration on time, being ready to serve at any time during working hours and helping obtain certification. The IPA matrix also revealed attributes in Quadrant II that should be maintained due to their strong performance and perceived importance. In contrast, attributes in Quadrants III and IV represent lower strategic priority. Enhanced satisfaction is expected to foster user loyalty and generate positive word-of-mouth among other MSMEs. MSME satisfaction will make the business ask for services from halal hub again and even recommend these services to other MSMEs. **Implications** – Theoretically, these findings support the notion that service quality is shaped by users' perceptions of both performance and the importance of service attributes. Empirically, the study provides practical insights into halal support institutions in designing service improvements that align with business actors' expectations.
Keywords: business actors, CSI, halal institution, IPA, service quality.

Introduction

MSMEs are one of Indonesia's most important economic sectors, significantly encouraging economic growth and community welfare. According to the Central Statistics Agency (CSA), in 2023, Indonesia will have 42 million MSME units (CSA 2023). MSMEs function as employment providers, helping to absorb labor in various sectors. It also plays a role in increasing income (Prasetyo 2020). Increasing consumer awareness regarding product quality and adherence to halal principles has recently challenged MSME actors to comply with halal standards in their products and services. Understanding the implementation of halal certification and assurance is essential to grasp the dynamics of the halal industry (Ahmad et al. 2017). In response, the Indonesian government enacted Law No. 33 of 2014 on halal product assurance, mandating halal certification as outlined in Article 4, which states that halal certification for products is mandatory (Abdul and Khokhar 2023). Three leading institutions play a role in the halal certification process: the Indonesian Ulema Council (IUC),

the Halal Product Assurance Agency (HPAA), and the Halal Inspection Agency (HIA) (Jayanto et al. 2024). While MUI acts as a halal certification body tasked, HPAA collaborates with the HIA to conduct product audits, HPAA collaborates with the IUC through the halal fatwa Session to issue a decision on the determination of halal products, and HIA is responsible for inspecting the materials, production process, and the company's Halal Assurance System (HAS) (Syahr et al. 2024).

Despite regulatory support, many MSMEs struggle to obtain halal certification due to high costs, limited and uneven certification quotas, complicated administrative processes, and a lack of education or outreach from government bodies (Darmalaksana 2023; Suriyani, Karjoko, and Handayani 2024). MSMEs also face this challenge in Sumenep Regency, where only 115 MSMEs applied for halal certification in 2024, falling short of the target set by the Cooperative Office. The MSME halal hub in Sumenep, which is engaged in the service sector, was established on May 20, 2022, to address these gaps. Its mission is to develop local halal products and help them compete in domestic and global markets. The institution provides support services such as branding, packaging, and certification assistance, and offers seven stages of MSME development supported by financing and logistics. These stages include database collection, product classification, training, branding, certification, local digitalization, and global market expansion.

Feedback from MSMEs indicates that halal hub plays an important role in easing certification processes and enhancing business readiness. Therefore, the performance of halal hub's services is a critical determinant of MSME satisfaction. Service accessibility, training quality, and economic benefit directly affect user experience. High-quality services are closely linked to stronger consumer relationships and business success (Li et al. 2021; Lin, Lin, and Wang 2021). One of the important thing's companies need to pay attention to in increasing customer satisfaction is the quality of service provided. Therefore, consumer satisfaction is the company's primary focus because it can provide benefits and build a positive image for the company (R. U. Khan et al. 2022; Machado et al. 2022). This aligns with the research results Hallencreutz and Parmler (2021), which found that when companies pay attention to good service quality, it can increase consumer satisfaction. Ultimately, it also helps build a positive brand image and increase consumer loyalty.

The halal hub MSMEs Sumenep, established as a local initiative, plays a vital role in helping business actors overcome these barriers through training, certification assistance, and business development services. Evaluating the satisfaction of MSMEs with the services provided by the halal hub is crucial for ensuring its programs' continuous improvement and effectiveness. Understanding which service attributes most influence user satisfaction can help the institution focus its resources strategically to meet the needs of business actors. Furthermore, measuring MSME satisfaction improves service performance, encourages broader halal certification adoption, and supports local entrepreneurs' economic empowerment.

A person's level of satisfaction with a product or service can change over time. Their needs, wants, and expectations are also not permanently fixed, so consumer satisfaction levels can fluctuate depending on the internal and external factors that affect them (Kotler and Keller 2009). Given that MSME satisfaction drives trust and loyalty, it is important to evaluate service quality based on various dimensions such as tangibles, reliability, responsiveness, assurance, and empathy. Previous research by Widagdo et al. (2024) has emphasized that quality assessment is an important element in measuring consumer preferences that refer to their expectations, needs, and desires for various aspects of services provided by tutoring institutions, including facilities, teaching methods, interaction with teaching staff, and so on.

However, the difference between this research and the research of Widagdo et al. (2024) is that this study focuses on the quality of service at MSMEs halal hub because few

studies have focused on the role of independent halal institutions in supporting certification efforts. Research conducted by Khan and Haleem (2016); Hewege and Perera (2020); Wildan, Nasir, and Zulpawati (2024) has addressed broader halal certification impacts. However, the performance and satisfaction regarding grassroots halal support NGOs like halal hub Sumenep remain underexplored. Noor and Noordin (2016) have not examined the government's performance in the halal certification market. To the researcher's knowledge, no existing study has used a combined CSI and IPA approach to evaluate MSME satisfaction and identify priority areas for service improvement in the context of a halal support hub. Moreover, halal hub not only assists the process of achieving halal certification for MSMEs in Sumenep but also helps realize a synergistic ecosystem to accelerate the development of Halal-oriented local superior products towards regional and global markets. Therefore, consumer preferences can help institutions assess whether the attributes of the services offered align with the expectations of business actors. This study aims to identify and measure the satisfaction of business actors with halal hub MSME services and analyze attributes that significantly affect the quality of halal hub Sumenep MSME services.

This study contributes to service quality literature in the context of grassroots halal institutions and provides empirical insights for improving the performance of similar initiatives across Indonesia. It contributes to the growing body of literature on service quality and customer satisfaction, particularly in the context of halal certification services delivered by grassroots institutions like halal hub Sumenep. While existing research often focuses on policy or national-level institutions, this study highlights the local perspective and lived experiences of MSMEs navigating halal certification processes. This study also offers concrete insights into improving the quality and impact of support services provided by halal hub. Identifying key satisfaction attributes allows service providers to allocate their resources more efficiently, boost MSME participation in certification efforts, and strengthen the overall halal ecosystem in the region. Moreover, enhanced satisfaction is expected to drive trust, loyalty, and positive word-of-mouth, contributing to the broader goal of positioning Indonesia as a leading halal economy.

Literature review

Expectation confirmation theory (ECT)

Expectation confirmation theory (ECT) is a theory used to explain consumer satisfaction with a product or service (Oliver 1980). ECT explains the consumer's initial expectations, actual perceptions of a product or service, and the level of confirmation of consumer expectations (Shukla, Mishra, and Dwivedi 2024). These three things shape consumer satisfaction and intention to make repeated (sustainable) use (Mamun et al. 2020). Based on Oliver (1980), the evaluation process in ECT includes four components: expectations, perceived performance, confirmation, and satisfaction. ECT is adopted to understand post-consumption consumer behavior in various businesses, whether in evaluating digital services, e-commerce, public services, or product use (Nurdin 2023; Sinha and Singh 2023).

Service quality theory (SERVQUAL theory)

SERVQUAL theory or service quality model measures service quality based on the gap between customer expectations and their perceptions of service performance (Shi and Shang 2020). Five service quality dimensions in SERVQUAL (Parasuraman, Zeithaml, and Berry 1988; Park, Yi, and Lee 2021). Tangibles include the appearance of physical facilities, equipment, personnel, and communication materials, Reliability consists of the ability of service providers to deliver promised services accurately and reliably, Responsiveness

includes the willingness and ability of service staff to help customers and provide services quickly and appropriately, Assurance includes the knowledge, courtesy, and ability of employees to instill trust and confidence in customers, and Empathy includes the company's ability to understand, pay attention, and provide personal attention to each customer.

Customer satisfaction

Customer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the estimated product performance (results) against the expected performance (or results) (Untu and Tielung 2021). If performance is below expectations, consumers are not satisfied. If performance meets expectations, consumers are satisfied. If the performance exceeds expectations, the consumer is delighted/happy. Delighted consumers will usually remain loyal for longer, buy again when the company introduces new products and updates old products, talk good things about the company and its products to others, and are not too price sensitive (Setiono and Hidayat 2022). On the other hand, if consumers are disappointed, it can harm the company by reducing the number of consumers. It will reduce profits because consumers are no longer interested in using a company's services or products. One of the determined factors in customer satisfaction is the quality of service. Namely, customers will feel satisfied if they get good service or follow what is expected. For companies engaged in services, optimal performance in service quality is a strategy implemented by the company to meet customer expectations for the services received, to attract consumers, and to gain consumer trust (Hasan, Siam, and Haque 2023).

Performance

Performance has an important role in a business or organization because it shows the level of effectiveness of the organization. The performance also reflects how well managers manage the organization and its human resources and is a measure of management's success in achieving organizational goals (Guest 2017). Performance is the execution of tasks by individuals, according to their authority and responsibilities, in a company to achieve organizational goals. The importance of performance assessment also needs to be considered for MSMEs. Over time, MSMEs must adjust and adapt to the halal concept itself by having to have a halal certificate because MSMEs play a role in developing superior areas to accelerate economic recovery, support priority programs, and encourage the development of various sectors and potentials (Sindhwani et al. 2023; Hurdawaty and Tukiran 2024).

Quality of service

Service quality is a consumer's assessment based on comparing the services they receive (*perceived service*) and the service they expect (*expected service*) (Roy, S., and Bhatia 2019). Service quality is used to evaluate consumer satisfaction and is important in managing service requests (Rebualos et al. 2024). The quality of service will significantly influence consumer satisfaction. Consumer satisfaction is the level of feeling consumers feel after using a product or service, which appears as the result of comparing the performance obtained from the product or service with what they expect (Devi and Yasa 2021). Customer satisfaction involves providing the best service and making the right decisions regarding the services, company brand, and facilities (Fierro et al. 2021). Not only that, according to Zygiaris et al. (2022), there are five dimensions of service quality, namely *Tangible* or physical evidence, *Reliability* or reliability, *Responsiveness* or response, *Insurance* or warranty, and *Empathy*. These five dimensions of service quality will assist the company in achieving its expected goals (Ali et al. 2021).

Customer service index (CSI)

Methods that can be used to measure consumer satisfaction include CSI (*customer service index*), an index used to calculate the overall level of consumer satisfaction. This assessment considers the level of importance and satisfaction of the various attributes of the product or service being evaluated (Yahya, Pratama, and Farahdiansari 2023). The results of the CSI measurement can be used as a basis for developing management plans and goals to improve the quality of service to consumers in the future (Suharyati, Utami, and Supriadi 2023).

Importance performance analysis (IPA)

IPA (*Importance Performance Analysis*) functions to prioritize the evaluation and improvement of attributes. In the science method, the average level of importance and performance is calculated to determine the position of the IPA matrix's midpoint (X, Y). The midpoint of the significance and performance assessment scale is usually used to determine the dimensional position on the Cartesian diagram (Băban and Băban 2024). In the science method, there is a Cartesian diagram that is divided into four quadrants, namely: Quadrant I, which shows high expectations but low satisfaction, so that the variables in this quadrant need to be improved; Quadrant II, where expectations and satisfaction are both high so that the variables in this quadrant need to be maintained; Quadrant III, describes expectations and satisfaction are both low so that the variables in this quadrant need to be considered because the benefits are small; and Quadrant IV, indicating low expectations but high satisfaction so the variables in this quadrant need to be balanced (Vidyanto et al. 2023).

Method

This research was conducted at the halal hub UMKM Institution in Sumenep Regency. The research locations were selected considering that the UMKM halal hub Institution is the only independent institution with an NGO concept that can assist MSMEs in halal certification. This research was conducted from September to December 2024. This research includes quantitative descriptive research. The data was collected through questionnaires distributed to respondents in Google Forms. Halal hub activities assist MSMEs in obtaining halal certificates and facilitate seminars and workshops on preparations for halal-certified MSMEs. Halal hub does not have data on the total population of MSMEs participating in seminars and workshops. The data owned is data on MSMEs that are assisted in obtaining halal certification so that the sample used in this study was a purposive sampling technique that involved examining the entire population with a particular set of characteristics of 60 MSME respondents, with the criteria that these MSMEs are businesses that the halal hub MSME institution assists in making business identification numbers, home industry food, halal certification, and food and drug supervisory agency number.

The validity test determines whether a questionnaire is valid or invalid (Holtom et al. 2022). The questionnaire is valid if the questions reveal what is to be measured. The validity test compares the value of the r-value (correlated item-total correlations) with the r-table (Radeswandri et al. 2021). The question is valid if r-value> r-table and a positive value. Meanwhile, the reliability test is carried out to ensure that the questionnaire results can be trusted if the research is repeated (Kennedy 2022). A questionnaire is considered reliable if it can produce consistent answers over time. Making the decision, the instrument is said to be trustworthy if the Cronbach Alpha reliability coefficient is > 0.70 (Kennedy 2022). If this coefficient is <0.70, revising or eliminating items with low reliability is recommended.

Descriptive analysis in this study aims to describe the geographic and demographic aspects obtained based on the results of interviews and information obtained from respondents. In addition, descriptive analysis is also used to describe the five dimensions of

variables owned by UMKM halal hub in measuring customer satisfaction. This indicator will also be used to analyze the performance and customer satisfaction of UMKM halal hub. Questionnaires are designed based on the dimensions of CSI and IPA using a Likert scale of 1-5, where scale 1 is very dissatisfied, scale 2 is dissatisfied, scale 3 is moderately satisfied, scale 4 is satisfied, and scale 5 is very satisfied.

Table 1 measurement indicators

Indicators	Code	Items
Tangibles	Y1	Cleanliness of floors and work areas from garbage or dust
	Y2	Neatness of the arrangement of the place in terms of table and chair arrangement
	Y3	Neatness and aesthetics of the interior design of halal hub MSMEs
	Y4	Employees appear uniform in the use of their clothing and attributes
	Y5	Employees remain neat even though they work for a long time
	Y6	The office is equipped with adequate technology for operations
Reliability	Y7	Employees explain information in detail and easy to understand
	Y8	Employees understand halal regulations, processes and standards
	Y9	Employees double-check the data to make sure there are no errors
	Y10	Employees complete MSME administration on time
Responsiveness	Y11	Employees submit complaints, suggestions well
	Y12	Employees use input from business actors to improve services
	Y13	Employees are ready to serve even if there is no prior notice
	Y14	Employees are willing to provide in-depth consultation for MSMEs
Assurance	Y15	Employees can explain each stage clearly to MSMEs
	Y16	Employees understand their duties in their fields
	Y17	The institution's parking area is spacious and equipped with CCTV
Empathy	Y18	Employees can help business actors until they obtain certification
	Y19	Employees are always friendly, polite, and respectful of business actors
	Y20	Employees are patient if there are business actors who do not understand
	Y21	Employees continue to assist business actors who are still confused
	Y22	Employees provide the same service without discrimination

Source: Hill and Alexander (2017)

Customer satisfaction index (CSI)

Customer satisfaction index (CSI) is a method used to measure the overall level of consumer satisfaction with the use of services by evaluating the level of importance of each product or service attribute (Helia, Abdurrahman, and Rahmillah 2018). Based on research by Dudziak, Stoma, and Zając (2022), the CSI stage is: (a) Calculating the mean importance score (MIS), the average value of the importance assessment of an attribute, and (b) Calculating the mean satisfaction score (MSS), the average value of the satisfaction level for each attribute.

$$\text{MIS} = \frac{(\sum_{i}^{n} - 1\, Yi)}{n} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

$$\text{MSS} = \frac{(\sum_{i}^{n} - 1\, Xi)}{n} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Yi is the importance value of the i-th Y attribute, Xi is the i-th performance value, n is the number of respondents, and i is the performance value of the i-th attribute.
Calculating the weighting factor (WF).

$$\text{Wf} = \frac{MISi}{\sum_{i}^{p} - 1\, MISi} \times 100\%$$

MISi is the total average of the i-th importance and $\sum_{i}^{p} - 1\ MISi$ the total average of the i-th attribute.

Calculating weight score (WS) or weighted score.

$$\text{Wsi = Wfi x MSS} \quad .... \quad (3)$$

WFi is the i-th weighted factor value, while MSS is the average value of the satisfaction level.

Calculating the total weight (WT)

$$\text{WT} = \sum_{i-1}^{p}\ \text{WS} \quad .... \quad (5)$$

$\sum_{i-1}^{p}$ WS is the total average importance of attributes-i to p

Determining the Customer Satisfaction Index

$$\text{CSI} = \frac{WT}{HS} \text{ x } 100\%$$

Weight total (WT) is the total weight, and the highest scale (*HS*) is the maximum scale to be used.

Table 2 CSI scoring criteria

CSI value	Description
0.81 – 1.00	Very satisfied
0.66 – 0.80	Satisfied
0.51 – 0.65	Satisfied enough
0.35 – 0.50	Less satisfied
0.00 – 0.34	Not satisfied

Source: Dudziak, Stoma, and Zając (2022)

Important performance analysis (IPA)

This analytical tool finds the relationship between performance and importance levels. Performance and importance ratings are calculated by adding the consumer scores, then visualized in a Cartesian diagram. The level of conformity is obtained from the comparison between the satisfaction score and the attribute conformity score. In this level of conformity, there is a point (X, Y) where point X represents the average score of the satisfaction level of all variables (Reality). In contrast, point Y illustrates the average score of the importance level of all variables contributing to consumer satisfaction (Expectations). The formula for measuring the level of conformity is as follows (Agyekum et al. 2023):

$$\text{Tki} = \frac{Xi}{Yi}\ X\ 100\%$$

Description:

Tki = Conformity level

Xi = Attribute satisfaction assessment score

Yi = Attribute importance assessment score

TKi is the respondent's level of conformity, where Xi represents the value of the level of satisfaction, and Yi shows the value of the level of importance. The level of conformity determines the priority of attributes that need to be improved because it affects the level of consumer satisfaction.

The Cartesian diagram is the result of output from SPSS software, which is divided into four quadrants, with limits based on the average importance and satisfaction scores. This Cartesian diagram is divided by two lines that intersect perpendicularly at a point (X, Y) (Wyród-Wróbel and Biesok 2017). The formula for calculating it there are (Arani and Moghadasi 2024):

$$\text{x} = \frac{\sum xi}{n} \qquad \text{y} = \frac{\sum yi}{n}$$

Description:

x = Average score of satisfaction level

y = Average score of importance level
n = Number of respondent data
xi = Satisfaction level score
yi = Importance level score

Table 3 IPA Cartesian diagram

Main improvement priorities QUADRANT 1	Maintain priorities QUADRANT II
Low priorities QUADRANT III	Excessive QUADRANT IV

Source: Koneru (2017)

The calculation results of the X and Y values will be used to determine the position of the dimensions on the Cartesian diagram, which consists of a) Quadrant I, which contains indicators considered important by consumers but whose performance has not met expectations. Indicators in this quadrant are a top priority because the level of consumer interest is high. However, performance is rated low; b) Quadrant II indicators are considered important by consumers, and their performance is in line with expectations, resulting in a relatively high level of satisfaction; and c) Quadrant III indicators are considered less important. The performance of the attributes is considered non-existent, and d) Quadrant IV indicators that are considered unimportant by consumers, and their performance is considered excessive. The plot on the Cartesian diagram was drawn using SPSS.

Results and discussion

Respondent overview

This research was conducted for all MSMEs assisted by the halal hub MSME institution, namely as many as 60 respondents; all these MSMEs assisted in making business identification numbers, home industry food, halal certification, and food and drug supervisory agency number, and training such as packaging training, product branding, and others. Therefore, it is important to group the respondents used as a sample in this study. The following is the profile of the respondents contained in Table 4.

Table 4 respondent overview

Characteristics	Grouping	Amount
Gender	Man	18
	Woman	42
Age	20 - 30 years	8
	31 - 40 years	16
	41 - 60 years	35
	> 61 years	1
Length of business	< 5 years	24
	6 – 20 years	31
	21 – 35 years	5
	> 36 years	0
Assisted in manufacturing	Business identification numbers	25
	Home industry food	12
	Halal certificate	13
	Food and drug supervisory agency number	10

Source: primary data (processed, 2024)

Validity and reliability test

Based on validity and reliability tests with *software* SPSS, the r-table's value at the significance level of 0.05 is 0.2542. Table 5 shows that all service attributes provided to respondents are declared valid because the r-stat value is > r-table (0.2542). This follows the statement of Taherdoost (2016), which stated that the questionnaire was considered valid if the results of the test were more significant than the r-table (r-value > r-table). Table 6 shows that the value of Cronbach's alpha is more significant than 0.7, so the perception and expectation attributes can be considered reliable. This is the statement of Ginting et al. (2023) in their research, which states that if the value of the Cronbach Alpha coefficient exceeds 0.70, the question is considered reliable, and the variable is declared reliable. The results of the validity and reliability calculations for each service quality attribute are presented in Table 5 and 6.

Table 5 validity results

Attribute code	R-value interests	R-value satisfaction	Information
Y1	0.814	0.536	Valid
Y2	0.726	0.489	Valid
Y3	0.814	0.333	Valid
Y4	0.782	0.409	Valid
Y5	0.831	0.545	Valid
Y6	0.451	0.272	Valid
Y7	0.700	0.636	Valid
Y8	0.575	0.460	Valid
Y9	0.684	0.391	Valid
Y10	0.728	0.449	Valid
Y11	0.845	0.508	Valid
Y12	0.672	0.543	Valid
Y13	0.742	0.451	Valid
Y14	0.725	0.611	Valid
Y15	0.647	0.478	Valid
Y16	0.659	0.491	Valid
Y17	0.821	0.440	Valid
Y18	0.673	0.530	Valid
Y19	0.725	0.565	Valid
Y20	0.706	0.591	Valid
Y21	0.546	0.666	Valid
Y22	0.731	0.581	Valid

Source: primary data (processed, 2024)

Table 6 reliability results

Variables	N of items	Cronbach's alpha	Information
Interests	22	0.959	Reliable
Satisfaction	22	0.890	Reliable

Source: primary data (processed, 2024)

Based on Table 6, measurements with high reliability can provide consistent and reliable results. The reliability test results showed that the Cronbach alpha value was more significant than 0.7 and almost close to one, so the questionnaire was declared reliable. In the reliability test of the expected level, a value of 0.959 > 0.70 was obtained, while for the performance/reality level, the reliability value was 0.890 > 0.70.

Customer satisfaction index

Based on Table 7, the *customer satisfaction index* (CSI) value for halal hub MSME services is 88%, with a scale range of 0.81% – 1.00% of the very satisfied category. This value shows that business actors are very satisfied with the level of performance and the importance of service attributes provided by halal hub MSMEs because, based on the CSI analysis that has been carried out on average, the value of *Mean Satisfaction Score* (MSS) is higher than the value mean importance score (MIS). This is in line with the research of Warnis et al. (2024); Yusniarti (2024), which shows that in the results of the HPAA survey, the level of satisfaction of MSME business actors as a whole is included in the category of very satisfied with halal product process assistance services, with a CSI value 88.51% which is in the scale range of 81% to 100%. So, there is a need to defend service quality so that business actors remain satisfied with the services provided.

Table 7 CSI calculation on halal hub MSME service attributes

Attribute code	PUT	MSS	WF	WS
Y1	3.767	4.417	4.121	18.201
Y2	3.750	4.217	4.103	17.300
Y3	3.733	4.017	4.085	16.407
Y4	4.033	4.367	4.413	19.269
Y5	3.867	4.217	4.230	17.839
Y6	4.400	4.583	4.814	22.064
Y7	4.267	4.433	4.668	20.695
Y8	4.433	4.533	4.850	21.989
Y9	4.450	4.517	4.869	21.990
Y10	4.250	4.267	4.650	19.840
Y11	3.967	4.383	4.340	19.023
Y12	4.200	4.483	4.595	20.602
Y13	4.267	4.367	4.668	20.384
Y14	4.367	4.550	4.778	21.738
Y15	4.400	4.583	4.814	22.064
Y16	4.300	4.600	4.705	21.641
Y17	3.933	4.150	4.303	17.859
Y18	4.183	4.367	4.577	19.986
Y19	4.183	4.583	4.577	20.978
Y20	4.233	4.567	4.632	21.151
Y21	4.283	4.417	4.686	20.698
Y22	4.133	4.450	4.522	20.124
Total	91.400	97.067		
WT				441.843
CSI				88.369

Source: primary data (processed, 2024)

Importance performance analysis (IPA)

Based on Table 8, the calculation of the level of conformity aims to measure the satisfaction of service recipients with the institution's performance, as well as assess the extent to which the halal hub MSME institution understands the needs of consumers in the services provided. The average level of conformity value was obtained in the range of 100.392% to 117.257%. Attributes that have a Tki value of 100,392% are Y10 attributes (employees complete MSME administration on time), and attributes that have a Tki value of 117,257%, namely Y1 (cleanliness of floors and work areas from garbage or dust).

Table 8 shows that the level of satisfaction of business actors showed a value of 4.412, and the level of importance showed a value of 4.155. The average of these values serves as the X and Y axes, which are used as the midpoint on the Cartesian diagram to determine the

boundaries of the quadrant region. This limit will help determine the level of performance and importance of each halal hub MSME service attribute. The average of these values is then used to map the importance performance matrix (IPA), which consists of four quadrants, namely the main priority of improvement in Quadrant I, maintaining performance in Quadrant II, low priority in Quadrant III, and exceeding expectations in Quadrant IV (see Figure 1).

Table 8 Calculation of conformity level and average level of satisfaction and importance

Attribute code	Total amount		Tki	Average	
	Xi	Yi		Xi (Satisfaction level)	Yi (Importance Level)
Y1	265	226	117.257	4.417	3.767
Y2	253	225	112.444	4.217	3.750
Y3	241	224	107.589	4.017	3.733
Y4	262	242	108.264	4.367	4.033
Y5	253	232	109.052	4.217	3.867
Y6	275	264	104.167	4.583	4.400
Y7	266	256	103.906	4.433	4.267
Y8	272	266	102.256	4.533	4.433
Y9	271	267	101.498	4.517	4.450
Y10	256	255	100.392	4.267	4.250
Y11	263	238	110.504	4.383	3.967
Y12	269	252	106.746	4.483	4.200
Y13	262	256	102.344	4.367	4.267
Y14	273	262	104.198	4.550	4.367
Y15	275	264	104.167	4.583	4.400
Y16	276	258	106.977	4.600	4.300
Y17	249	236	105.508	4.150	3.933
Y18	262	251	104.382	4.367	4.183
Y19	275	251	109.562	4.583	4.183
Y20	274	254	107.874	4.567	4.233
Y21	265	257	103.113	4.417	4.283
Y22	267	248	107.661	4.450	4.133
Average				4.412	4.155

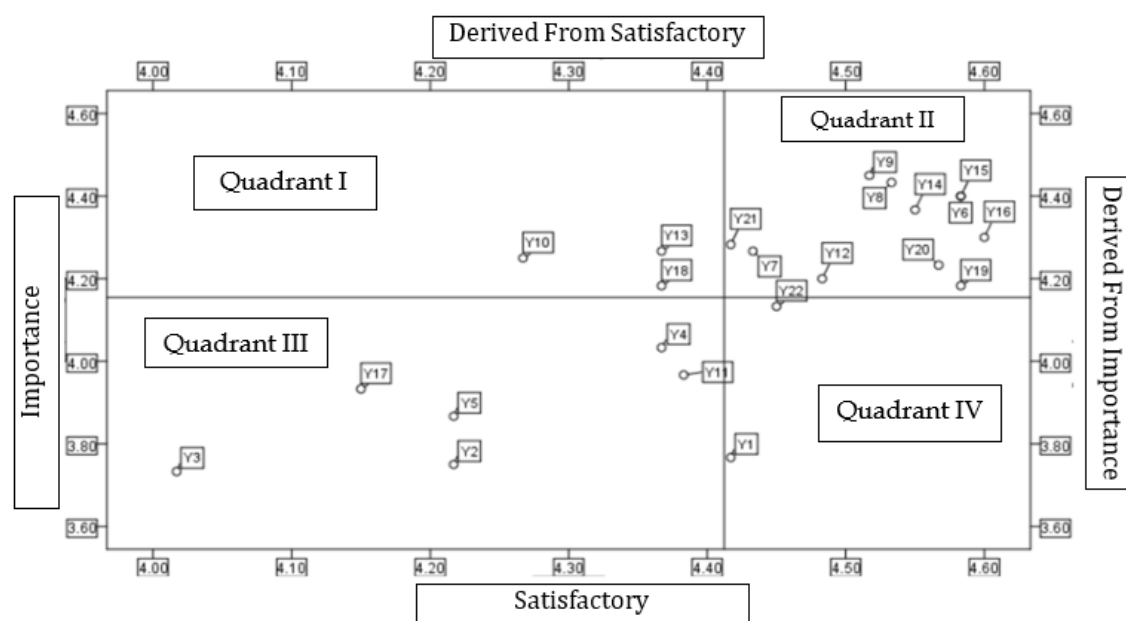Source: primary data (processed, 2024)

Figure 1 Cartesian diagram of halal hub MSME services
Source: primary data (processed, 2024)

Figure 1 shows that Quadrant I contains important consumer indicators, but their performance has not met expectations. The indicators in this quadrant are the top priority because the level of consumer interest is high, but the performance is considered low. This quadrant is filled by three attributes, namely Y10 (employees complete MSME administration on time), Y13 (employees are ready to serve even though there is no prior notice), and Y18 (employees can help businesses to obtain certification). Quadrant II indicators are considered important by consumers, and their performance is in line with expectations, resulting in a relatively high level of satisfaction. This quadrant is filled by most of the attributes including Y6 (the office is equipped with adequate technology for operations), Y7 (employees explain information in detail and are easy to understand), Y8 (employees understand halal regulations, processes and standards), Y9 (employees double-check data to ensure there are no errors), Y12 (employees use input from businesses to improve services), Y14 (employees are willing to provide in-depth consultations to MSMEs), Y15 (employees can explain each stage clearly to MSMEs), Y16 (employees understand the duties in their fields), Y19 (employees are always friendly, polite, and respectful of businesses), Y20 (employees are patient if there are businesses that do not understand), and Y21 (employees continue to assist businesses that are still confused). Quadrant III indicators are considered less important, and the performance of these attributes is considered non-existent. This quadrant is filled by Y2 (neatness of the place arrangement in terms of table and chair arrangement), Y3 (neatness and aesthetics of the interior design of UMKM halal hub), Y4 (employees look uniform in the use of clothes and attributes), Y5 (employees still look neat even though they work for a long time), Y11 (employees convey complaints, suggestions well), and Y17 (the institution's parking lot is spacious and equipped with CCTV). Finally, Quadrant IV indicates that consumers do not consider it important, and their performance is excessive. The attributes in this quadrant are Y1 (cleanliness of floors and work areas from garbage or dust) and Y22 (employees provide the same service without discrimination).

Discussions

According to the data on the characteristics of respondents assisted by halal hub MSMEs, most business owners assisted by halal hub MSMEs are primarily women. This is because women run their businesses, adjusting their mothers and household managers roles. In addition, they are aware of financial independence to help the family economy. This is in line with the research of Koneru (2017) that many women choose to enter the business world for various reasons, such as the desire to prove their abilities as a form of achievement, help the family economy, feel bored with their previous job, or fill the role of housewife. The motivation that encourages women to be entrepreneurs includes seeing business opportunities, earning additional income, achieving financial independence, and having greater flexibility and control over their lives. However, male business actors also play a role in running these MSMEs.

Based on age, most of the business owners assisted by this institution are between 41 and 60. Most business actors assisted by halal hub MSMEs generally have enough thinking and experience to run a business and tend to be able to take risks in managing their business at the age of 41 to 60 years. Following the statement of Noh et al. (2015), 41-60 is classified as a productive age; this age tends to have more enthusiasm than the non-productive age in running a business. The productive age has excellent potential to increase its role in various activities carried out by business actors.

The length of business of MSMEs assisted by halal hub MSMEs is quite varied, for the length of business that is most assisted, namely from 6 to 20 years by 51.67% (31 MSMEs), business less than 5 years by 40% (24 MSMEs), business duration of 21 to 35 years by 8.33% (5 MSMEs) and business duration of more than 36 years by 0% (0 MSMEs). This is because in carrying out its duties, this institution is not only focused on MSMEs that have been running

for a long time but also helps MSMEs that are still relatively new and need support to develop in business. In helping MSMEs, this institution can provide various forms of guidance in making business identification numbers, home industry food, halal certification, and food and drug supervisory agency numbers. 41.67% (25 MSMEs) were assisted in making business identification numbers, and 20% (12 MSMEs) were assisted in making home industry food. As many as 21.67% (13 MSMEs) were assisted in making halal certificates. As many as 16.67% (10 MSMEs) were assisted in obtaining food and drug supervisory agency numbers. This shows that this institution helps MSMEs in the fundamental aspects of legality and supports business actors in meeting specific standards that improve the quality and competitiveness of their products in the market.

Based on the mean importance score (MIS) value, which is the average value of importance in each attribute based on all Halal Hub MSME services, it shows that the attribute that has the highest MIS value is Y9 (employees recheck the data so that there are no errors) of 4,450. This attribute is considered important because it ensures that the data is returned. Hence, there are no errors, and it is hoped that it can avoid rejection due to incorrect data input and that business actors can speed up the verification process. Meanwhile, the lowest value *of the* MIS is the Y3 attribute (neatness and aesthetics of halal hub MSMEs interior design), with a value of 3,733. This is because, according to business actors, interior design aesthetics do not have much effect on them. This is because they need to focus on the functionality, process efficiency, and clarity of services provided by halal hub MSMEs.

The mean satisfaction score (MSS) is the average value of the level of satisfaction of business actors with each service attribute at the halal hub MSME institution. The highest MSS is Y16 (employees understand their duties in their respective fields) of 4,600. This is because when business actors consult to carry out halal certification, register for home industry food, or take part in training organized by this institution, the employees in charge of the field are very proficient in the questions asked by business actors or the stages of the process that will be carried out in the certification process. Meanwhile, the lowest MSS value is at Y3 (neatness and aesthetics of the interior design of MSMEs halal hub) with a value of 4,017 because, according to business actors, the interior design of this institution is less aesthetic, so there is a need for improvements in the neatness and aesthetics of the interior design of MSMEs halal hub so that the satisfaction of business actors can increase by using meaningful but straightforward interior decorations, such as a touch of local culture, small ornamental plants, or inspirational halal-themed quotes as well as providing Instagram-able angles so that business actors are interested in sharing their experiences when visiting this institution on social media. In addition, the attribute on Y17 (Institutional parking area is large and equipped with CCTV) also has the lowest score on the satisfaction value of business actors, which is 4,150. This is because, according to business actors, the parking area in this institution does not have shade for motorcycles, so it is necessary to install a canopy to protect from the heat so that business actors feel more comfortable parking vehicles. The total weight (WT) value was obtained through the sum of the weight score (WS) values, with the calculation results showing that the WT value reached 441,843. From the results of the WT calculation, the CSI value calculation was 88,369.

The courtesies diagram contains three attributes in quadrant I; the attributes in quadrant I are considered important by consumers, but their performance has not met their expectations, so the halal hub MSMEs are expected to be able to improve their performance to provide satisfaction to business actors. The indicators in this quadrant must be enhanced to meet business actors' expectations. According to Noh et al. (2015), buyers consider several attributes very important in quadrant I, but their performance is still unsatisfactory. The attributes contained in quadrant I are Y10 (employees complete MSME administration on time), Y13 (employees are ready to serve even though there is no prior notice), and Y18

(employees can help business actors until they obtain certification). Based on ECT, this indicates a negative disconfirmation, where businesses' expectations are higher than the reality of the services they receive. Therefore, these attributes require special attention to improve their performance so as not to reduce overall customer satisfaction in the future.

This result is in line with previous research by Giyanti et al. (2021), which found that the completeness and speed of halal certification administration services greatly affect the satisfaction of MSME players. However, research by Fauzi et al. (2024) shows different results, that business actors emphasize the clarity of procedural information more than service speed. This indicates that perceptions of satisfaction are highly dependent on user profiles and stages of business development, where in the context of this study, most business actors are at a productive age (41-60 years) and have been running a business for a long time, so they are more demanding on time efficiency and tangible results from the service process.

Y10 is the administration completed on time, which can be satisfying for business actors who carry out certification at the halal hub MSME institution because it can make it easier to accelerate their business development. This attribute is still considered inefficient by business actors, so there needs to be further explanation to business actors regarding how long the administrative process can be completed. Y13 can give business actors confidence that they can rely on this institution if they need assistance related to certification, even though there has been no previous appointment with it. However, according to several assessments from business actors, sometimes employees are not allowed to enter the office, so business actors must return the next day. Therefore, it is necessary to have a backup employee who is on standby and can be called when an employee has a sudden permit. In addition, this institution can provide online appointment services or a digital queue system to ensure employees are available before coming to the office. Y18 is important to improve their performance because it will also affect the satisfaction of business actors, so they do not need to be confused about whether they will do business certification because this institution will assist them until they get certified. Suggestions for improvement can be made so that this attribute is based on the wishes of consumers; namely, employees can be specially trained in certification procedures and certification steps in digital and print form so that business actors have easily accessible references. So, these attributes need to be improved to meet the needs and increase the satisfaction of business actors.

The Cartesian diagram in quadrant II shows that the importance and performance of attributes follow consumer expectations so that the characteristics of this product can continue to be maintained and used as an advantage for the services to be provided. This follows the statement of Yahya, Pratama, and Farahdiansari (2023) that the attributes in this quadrant are considered important. They are a supporting factor for consumer satisfaction, so management is responsible for maintaining the performance that has been achieved to remain optimal. Based on expectation confirmation theory (ECT), this level of satisfaction occurs because there is confirmation and even positive disconfirmation between the initial expectations of business actors and the actual performance of halal hub services. In this context, attributes that have high performance and are important to users, such as Y6 (technological sophistication), Y7 (ease of information), Y8 (employee competence), and Y16 (employee understanding of their duties), have consistently been able to meet the expectations of business actors. This supports the basic principle of ECT, which states that customer satisfaction depends on how much the service can meet or exceed previous customer expectations (Oliver 1980).

Meanwhile, from the perspective of service quality theory (SQT) introduced by Parasuraman, Zeithaml, and Berry (1988), high-quality service is reflected by five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Some attributes such as Y14 (advanced consultation), Y15 (structured explanation), and Y20 (employee

patience) show powerful aspects of assurance and empathy and show that halal hub MSMEs not only focus on procedural efficiency but also on the emotional aspects and comfort of the service relationship, which are important factors in SQT. The existence of Y6 as adequate technology makes it very easy for business actors to get services, especially related to product packaging training, because they can directly practice using the machine. The assessment results show that business actors consider this attribute to have performance that meets their expectations and is considered important so that business actors feel satisfied. Therefore, the institution needs to maintain performance in this attribute.

Y7 related to information makes it easy for business actors to take care of certification because the information submitted is straightforward to understand. The halal hub MSME institution needs to maintain the performance of this attribute because not all business actors can find out about certification information due to the age of the business actors, who tend not to be able to access information through the internet, so they need an explanation from employees. On Y8, business actors have a sense of security accompanied by competent personnel because their employees understand halal regulations and standards. Business actors do not need to worry about the important data they provide because it is used only for certification. On Y9, ensuring that there are no data errors is very important for maintaining the trust of business actors. So, it is necessary to maintain performance in this attribute. On Y12, the response to the input of business actors shows that the halal hub MSME institution is open to improvement and cares about the complaints of business actors. So, it is necessary to defend the quality of service in this attribute so that business actors are comfortable with the services provided. On Y14, further consultation with business actors who are still experiencing confusion is beneficial because it can be more of an added value for this institution, and business actors can solve their problems. The assessment results show that business actors assess that this attribute has performance that meets their expectations and is considered important to satisfy business actors.

Meanwhile, in Y15, structured explanations make business actors feel guided and understand every step they must take. Based on the assessment carried out, business actors are satisfied with the performance of employees, so they need to be maintained. On Y16, employees' understanding of the responsibilities of each field can make performance more effective and provide optimal services to business actors. This attribute is felt to follow consumer desires, so it needs to be maintained. On Y19, the presence of a friendly and polite attitude from employees can create a positive atmosphere and increase the comfort of business actors in working with this institution. Business actors feel that employees have a friendly and polite attitude, so attributes need to be maintained in their performance. Next, on Y20, employees' patience in dealing with business actors shows empathy for this institution. This attribute needs to be maintained in its performance because it meets the expectations of business actors. Last, on Y21, the existence of assistance until business actors understand the certification process can create a positive image for this institution. Based on the assessment of business actors, halal hub MSME employees are beneficial if they are still confused. So, there needs to be a quality defense for this attribute. All service attributes in quadrant II must be maintained in performance because they are very much in line with the wishes of business actors, and the performance they get is above expectations.

In the Cartesian diagram of the III quadrant, attributes are considered less important, and attribute performance is considered superior. This is based on Jabnoun and Khalifah's statement (2015) that quadrant III describes attributes considered less important by respondents, even though the level of expectations and performance is quite good. The characteristics in this quadrant are not a priority or a significant need of consumers because their influence on them is relatively small. This reinforces the argument in SQT that not all tangible dimensions significantly influence satisfaction, especially when users prioritize the

reliability and responsiveness dimensions. The neatness of the place arrangement in terms of table and chair arrangement (Y2) is considered less important, and its performance is considered poor by consumers because, based on the respondents' answers in the interview, the place arrangement does not have much effect. After all, what they want is related to the services of this institution in helping with certification.

The neatness and aesthetics of halal hub MSME interior design (Y3) are considered not too important by business actors because, according to them, the neatness and aesthetics of the design at this institution are still relatively good; the building is still new, so the halal hub MSME institution can allocate for attributes that are more prioritized in quadrant I. On Y4, business actors do not consider it too important because they can find halal hub MSME employees with the ID Card they use. On Y5, business actors do not consider this attribute too important because, based on interviews, they focus more on speed and friendliness of service than on the employees' appearance during work.

Employees submit complaints and suggestions well (Y11), which is significantly related to handling complaints, but some business actors rarely give complaints to this institution, which is considered unimportant. Also, spacious parking and CCTV (Y17) are seen as additional facilities by some business actors that may not have a direct impact. In addition, the presence of CCTV in the parking area makes business actors feel safe. The attributes in quadrant III are considered less important and have suboptimal performance from the perspective of business actors. This is likely because these attributes are not considered to impact their main experience directly, so the attention of business actors is more focused on attributes that have a more significant influence on the satisfaction or primary needs of business actors.

In the Cartesian diagram in quadrant IV, consumers consider attributes unimportant, and their performance is excessive. According to Jabnoun and Khalifah (2015), this follows the statement that attributes considered less important by consumers tend to have performance that is overestimated compared to their level of importance. The attributes contained in this quadrant are Y1. Based on the analysis, this attribute shows good performance in satisfying consumers. However, these attributes are considered less important by consumers because the main reason for visiting this institution is that they need help in the certification process of their business. Suppose the performance of the cleanliness attributes of floors and work areas of waste decreases in the future. In that case, consumers are likely to be able to accept them because these attributes are not considered a top priority by them. Despite its excellent performance, business actors consider this attribute less important (Y22). This happens because most business actors do not pay much attention to equality in service if their primary needs have been met.

The CSI measurement, if associated with the results of the IPA measurement, shows the result of the CSI calculation of 88%, which is supported by factors in quadrants II and IV. The attributes' performance in quadrants II and IV must be maintained so that the CSI value does not decrease. The results of the CSI that have not reached the maximum number of 100% are less than 12% caused by factors in the attributes in quadrant I and quadrant III, which still need to be improved by the halal hub MSME institution and can be improved immediately.

Conclusions

Based on research conducted using the customer satisfaction index (CSI) method, this value is obtained in the category of very satisfied, indicating that the overall service quality of halal hub MSMEs in Sumenep has met the expectations of business actors and should be maintained. However, there needs to be improvements in the neatness and aesthetics of the interior design of halal hub MSMEs, which can be achieved by incorporating a touch of local culture and ornamental plants as well as providing Instagram-able angles so that business

actors are interested in sharing their experiences when visiting this institution on social media. Furthermore, installing a canopy in the parking area is suggested to increase convenience for users. Based on the importance-performance analysis (IPA) method, there are three attributes in quadrant I that need to be a priority for improvement, namely Y10 (employees complete MSME administration on time), Y13 (employees are ready to serve even though there is no prior notice) and Y18 (employees can help business actors until they obtain certification). Beyond the priority attributes identified in Quadrant I, the IPA matrix also revealed attributes in Quadrant II that should be maintained due to their strong performance and perceived importance. Attributes in Quadrants III and IV represent lower strategic priority. However, they offer insights into potential areas for efficiency improvement, such as reallocating resources from overemphasized features to those more valued by users. Specific improvements recommended include providing more apparent timelines for administrative procedures, deploying backup personnel with a digital queue system, and equipping staff with training and step-by-step certification guides in both digital and print formats.

Theoretically, this research contributes to the literature on service quality and customer satisfaction by applying the expectation confirmation theory (ECT) and the SERVQUAL model within the context of a non-governmental halal facilitation institution. While previous studies often focus on government or commercial service providers, this research offers new insight into how tangible and intangible service attributes affect satisfaction in a unique setting involving halal-oriented MSME support. Practically, the results of this study provide strategic guidance for halal hub MSMEs in improving their service delivery to better meet user expectations. By prioritizing areas of low performance and high importance, institutions can enhance their credibility, build stronger relationships with MSMEs, and support the broader halal certification movement. These improvements benefit local development and serve as a best practice model for similar institutions across Indonesia aiming to support the halal industry.

Despite its contributions, the study has limitations, such as the limited research sample, and the study examines satisfaction only from the MSME perspective without incorporating internal staff or management insights. Moreover, the data is cross-sectional, capturing perceptions at a single point in time, and does not assess the impact of changes or interventions over a longer duration. Future research should consider expanding the sample size to include other regions for broader generalizability. Additionally, incorporating the perspectives of institutional staff and management would provide a more comprehensive understanding of internal service delivery challenges. Longitudinal studies could help track changes in satisfaction over time, especially before and after service improvements. Furthermore, future studies could explore the sustainability of halal hub institutions by analyzing economic, social, environmental, technical, and institutional dimensions. This approach will help assess their long-term viability and strengthen their role as strategic partners in accelerating halal certification and promoting globally competitive local halal products.

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