

# Analysis of Warteg's Customer Satisfaction Levels on the Use of Food Delivery Services

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'Warung Tegal' or shortened as warteg is a street food stall that serves home-cooking Javanese food. It is commonly located in a crowded area and well-known for its affordable yet filling meal. During this pandemic, food delivery services are one of the strategies that warteg culinary entrepreneurs can use in maintaining their business. The quality of services provided by warteg can affect customer satisfaction, therefore this study was conducted to analyze the level of customer satisfaction warteg with the services provided so that they can find out which services need to be maintained and improved to provide maximum satisfaction to customers. Data processing is done using the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) methods with the Minitab19 application. The research results show that the level of customer satisfaction of warteg is 91% with the highest level of satisfaction in the cleanliness of the food served and the highest level of importance is in the completeness of the menu found in the food delivery service application. Services that need to be focused on improvement are the suitability of food prices, promos and discounts, speed of warteg service processes, as well as warteg responses to customer complaints and needs.

## Keywords

Service quality, customer satisfaction, Customer Satisfaction Index (CSI), and Importance Performance Analysis (IPA)

## 1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) are some of the sectors that have an important role in the economy in Indonesia. MSMEs have 61,07% of contribution to Indonesia's Gross Domestic Product (GDP). The number of business units in MSMEs is around 99% with a total workforce of 97%. The COVID-19 pandemic has a huge impact on the MSMEs which affects the Indonesian economy in various sectors, because MSMEs businesses are daily and rely on direct interaction. Trading activities in the community are also decreasing due to the implementation of social distancing that aims to reduce the spread of the Coronavirus. One of the MSMEs that was affected during this pandemic is the warteg culinary business. According to the head of the Warteg Nusantara Community (Kowantara), Mukroni, the turnover of warteg entrepreneurs especially in Jakarta has decreased by 50%.

One of the strategies that warteg entrepreneurs can take to maintain the turnover is by implementing an online sales system using food delivery services such as GoFood or GrabFood applications. The use of food delivery services can help the warteg entrepreneurs that do not have a fleet to do delivery or human resources to carry out delivery activities. Food delivery services can also help warteg to expand their market share as well as improving the quality of the warteg by providing good service and also the application can be used easily, so customers can order and use the delivery service anytime and anywhere.

Service quality is something that greatly affects the satisfied customer. Service quality can be the main incentive for customers to buy a product or use the services of a company. This research was conducted to determine the level of warteg's customer satisfaction on the use of food delivery services by using the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) methods to process the data.

## 1.1 Objectives

This research was conducted to help warteg entrepreneurs to find out the services that customer wants or needs while using food delivery services. This research is expected to provide output that can be useful for warteg entrepreneurs to be able to improve or maintain the quality of services provided, so the warteg can increase customer satisfaction which can create customer trust and loyalty, especially in this pandemic.

## 2. Literature Review

Service quality has become an important topic in view of its significant relationship to profit, cost saving and market share. Service quality is difficult to measure due to its characteristics include intangibility, heterogeneity and inseparability. Definitions of service quality hold that this is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (Al-Damen 2017). Service quality is the result of an assessment given by customers on the difference between expectations and the perceived reality of the services provided by service providers, either in part or as a whole (Al Rasyid 2017).

Service quality consists of three dimensions: physical facilities, staff and materials. It also divided into two aspects: functional quality and technical quality. A similar approach argued that service quality includes three dimensions: functional quality, environment and technical quality. Another approach confirmed that service quality has five dimensions namely: assurance, reliability, empathy, tangibility and responsiveness (Al-Ababneh 2017). The explanation of the five dimensions of service quality is as follows (Aptaguna and Pitaloka 2016):

- a. Tangibles, including physical appearance and equipment.
- b. Reliability, namely the ability to provide services that promised accurately and satisfactorily.
- c. Responsiveness, namely the response or alertness of employees in help customers and provide fast and responsive service.
- d. Assurance, this dimension includes a knowledge and skills possessed by officers in serving consumers.
- e. Empathy, including the ease of doing relationships, good communication, personal attention, and understanding needs customer.

One of the most-cited definitions of service quality is the one relating to the comparison that customers make between their expectations and perceptions of service experience, so if customer's perception is higher than customer's expectation, the perceived quality by the customer will higher, and vice versa. The primary characteristic of service quality is its commitment to measure how delivery service level matches customers' expectations, which contribute to customers' satisfaction (Mestrovic 2017). According to Sigit and Soliha (2017), if the services provided are by expectations or even exceed expectations, the customer will be satisfied. Satisfied customers will then return to using the products or services offered, and will provide a good experience for other customers, so they can expand their market share.

Customer satisfaction is one of the most important concepts in the field of marketing studies today (Hammoud 2018). Customer satisfaction is characterized as an estimation that decides how pleased buyers or customer are with an organization's items (products), administrations, and capacities (Ali et al. 2021). Customer satisfaction can be determined as a person's feeling of pleasure or displeasure as a result of comparing this product published performance in relation to its expectations (Kotler 2000). Generally customer retention can be defines a mirror image of customer defection or churn and as a maintenance continuous trading relationship with customers over the long term (Dastane and Fazlin 2017). Customer satisfaction with a product or service, is actually something that is difficult to obtain if the company does not really understand what customers expect (Surahman et al. 2020)

Customer loyalty data, including reviews and appraisals, can enable an organization to decide how to best improve or changes its items and administrations. Satisfaction is very significant issue to company's product which it measure the level of expectation between company's product and customer expectation. Customer satisfaction will affect company and product as well, because happier customer with product quality and service means more products and more profit (Ali et al. 2021). There are various definitions of customer loyalty, and one of those refers to the behavior developed by the customer, which is called repurchase behavior, thereby accounting for all the experiences that customers have encountered throughout the usage of the products and services from providers (Fida et al. 2020).

Customer loyalty is an important element of the company, the success of the company's profitability is influenced by customers with the highest loyalty. Loyal customers are more attractive to companies because they tend to be less price sensitive and tend to repurchase company products (Sandada and Matibiri 2016).

### 3. Methods

The population of this research is food delivery service users who have made transactions in the warteg culinary business, hence the population in this research is infinite because the population size is unknown. The determination of the sample size was carried out using the theory of Hair et al. (2007) which states that the number of samples can be calculated by multiplying the number of indicators by 5-10. This research has 14 indicators, then the sample size is around 70-140 respondents, and the target sample size in this research is 105 respondents.

The sampling method in this research is a nonprobability sampling method using purposive sampling. The data was collected by distributing questionnaires online by using social media. Completion of the research questionnaire was also carried out online, using the Google form. The scale used in data collection in this research is a 4-point Likert scale with the assessment criteria attached to Table 1.

Table 1. Questionnaire Rating Scale

Importance Questionnaire	Satisfaction Level Questionnaire
1: Very Unimportant	1: Very Dissatisfied
2: Unimportant	2: Dissatisfied
3: Important	3: Satisfied
4: Very Important	4: Very Satisfied

#### 3.1 Data analysis

The validity and reliability testing of the questionnaire data results was carried out using the Minitab19 application. The validity test is carried out by comparing the total correlation matrix value with the two tails correlation table, if the total correlation matrix value is bigger than the r-value of the two tails correlation table, the questionnaire data can be stated valid, while the reliability test is carried out by comparing the total value of Cronbach's Alpha with the Cronbach's Alpha value for each indicators, if the Cronbach's Alpha value for each indicator is smaller than the total Cronbach's Alpha value, the questionnaire data can be stated reliable.

This research used the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) method for data analysis. The Customer Satisfaction Index (CSI) method is used to determine the overall level of customer satisfaction by looking at the level of importance of the product/service attributes. The value of CSI can be determined by the following steps (Handriati et al. 2015):

1. Calculate the Mean Importance Score (MIS) of each attribute obtained from the average importance of each respondent using equation (1).

$$MIS_i = \frac{\sum_{i=1}^n Y_i}{n} \quad (1)$$

Where:

$MIS$  = Mean Importance Score

$Y_i$  = Importance level score by using Likert scale

$n$  = Number of respondents

2. Calculate the Weight Factors (WF) of each attribute which is the percentage of the MIS value of each attribute to the total MIS using equation (2).

$$WF_i = \frac{MIS_i}{\sum_{i=1}^n MIS_i} \times 100\% \quad (2)$$

Where:

$WF_i$  = Weight Factors for the question i

$MIS_i$  = Mean Importance Score for the question i

3. Calculate the Mean Satisfaction Score (MSS) of each attribute obtained from the average satisfaction of each respondent using equation (3).

$$MSS_i = \frac{\sum_{i=1}^n X_i}{n} \quad (3)$$

Where:

$MSS$  = Mean Satisfaction Score

$X_i$  = Satisfaction level score by using Likert scale

$n$  = Number of respondents

4. Calculate the Weight Score (WS) of each attribute which is the multiplication of WF and MSS using equation (4).

$$WS_i = WF_i \times MSS_i \quad (4)$$

Where:

$WS$  = Weight Score

$WF$  = Weight Factors

$MSS$  = Mean Satisfaction Score

5. Calculate *Customer Satisfaction Index* (CSI) using equation (5).

$$CSI = \frac{\sum_{i=1}^n WS_i}{HS} \times 100\% \quad (5)$$

Where:

$CSI$  = Customer Satisfaction Index

$WS$  = Weight Score

$HS$  = Maximum Likert Scale

The level of overall customer satisfaction can be seen through the satisfaction level criteria attached to Table 2.

Table 2. Criteria for Customer Satisfaction Index

No.	Index Value (%)	CSI Criteria
1	$X \leq 64\%$	Very poor
2	$64\% < X \leq 71\%$	Poor
3	$71\% < X \leq 77\%$	Cause for concern
4	$77\% < X \leq 80\%$	Borderline
5	$80\% < X \leq 84\%$	Good
6	$84\% < X \leq 87\%$	Very good
7	$X > 87\%$	Excellent

Note: X = Value Customer Satisfaction Index

The Importance Performance Analysis (IPA) method is used to measure the correlation between customer perceptions and the priority of improving the quality of the products/services offered or it can be referred to as a quadrant analysis (Dirgantara and Sambodo 2015).

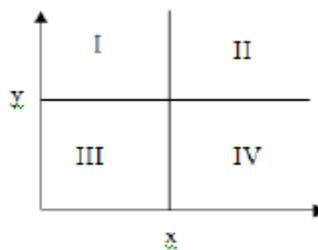


Figure 1. The Importance Performance Analysis Quadrant

Data analysis using the IPA method was carried out using the Minitab19 application and produced a Scatterplot graph which was divided into four quadrants as shown in Figure 1. The explanation of each quadrant as follows (Dirgantara and Sambodo 2015):

- a. Quadrant I (Concentrate here)  
This quadrant contains factors that are considered very important by customers, so the management needs to give more resources and attention to the factors contained in this quadrant.
- b. Quadrant II (Keep up the good work)  
This quadrant contains factors that are considered important and expected as factors that support customer satisfaction. Therefore, the management needs to ensure that the performance that has been done can continue to maintain customer satisfaction that has been achieved.
- c. Quadrant III (Low priority)  
This quadrant contains factors that have a lower priority level compared to other factors, so the management does not need to prioritize the factors contained in this quadrant.
- d. Quadrant IV (Possible overkill)  
This quadrant contains factors that are considered not very important, so the management can allocate the factors contained in this quadrant to other factors that need more priority in improvement.

#### 4. Data Collection

Data collection in this research was carried out using a questionnaire. The type of question used in this questionnaire is a closed question where the respondent is asked to choose the answer that has been provided. The questions listed on the research questionnaire can be grouped according to the dimensions of service quality which consists of five dimensions, there are tangibles, reliability, responsiveness, assurance, and empathy. Each indicator contained in each dimension has a code attached in Table 3.

Table 3. Questionnaire Indicators

Dimensions	Indicator	Code
<i>Tangibles</i>	Completeness of the menu in the application	T1
	Food descriptions on the menu	T2
	Menu display on the application	T3
	Packaging for serving food	T4
<i>Reliability</i>	Suitability of food prices	RL1
	Promos and discounts	RL2
	Order accuracy	RL3
<i>Responsiveness</i>	Information about menu stock availability in the application	RS1
	Service process speed	RS2
	Response speed in handling complaints	RS3
<i>Assurance</i>	Food hygiene	A1
	The condition of the freshness of food	A2
	Health assurance for workers	A3
<i>Empathy</i>	Response to customer complaints and needs	E1

The results of data collection through questionnaires that have been distributed get 125 respondents, but only 105 respondents who meet the criteria for further processing. The characteristics of the respondents obtained as follows:

- a. Based on gender, most respondents were women with a percentage of 69.5% or 73 people, while male respondents were 32 people (30.5%).
- b. Based on age, the most respondents were between 17-25 years with a percentage of 75.2% or 79 people, while those over 35 were 14 people (13.3%), under 17 were 8 people (7.6%), and between 26-35 years as many as 4 people (3.8%).
- c. Based on occupation, most respondents were students with a percentage of 82.9% or 87 people, while as many as 8 people (7.6%) were private employees, as many as 6 people (5.7%) were entrepreneurs and as many as 4 people (3.8%) as civil servants.

- d. Based on the use of food delivery services, as many as 83.8% of respondents often use GoFood in placing food orders, as many as 54.3% of respondents use GrabFood, and 1% of respondents use *ojek* when ordering food. In this questionnaire, respondents can choose more than one food delivery service.

## 5. Results and Discussion

### 5.1 Validity Test of Satisfaction and Importance Levels

Data validity testing was carried out to determine whether each research indicator contained in the questionnaire was valid as a data collection tool. The data validity test is divided into two parameters, namely, the data is stated valid with validity above 95% if the total correlation matrix value is bigger than the r table value of 0.1918 and the data can be stated valid with validity above 99% if the total correlation matrix value is bigger than the r table value of 0.2504. The results of the validity test of satisfaction and importance level that have been carried out using the Minitab19 application are attached in Table 4.

Table 4. Validity Test of Satisfaction and Importance Level

Attribute	Satisfaction Level	Level of Importance
T1	0.315	0.654
T2	0.499	0.721
T3	0.531	0.707
T4	0.612	0.655
RL1	0.5	0.511
RL2	0.423	0.575
RL3	0.598	0.659
RS1	0.424	0.711
RS2	0.606	0.612
RS3	0.663	0.793
A1	0.467	0.67
A2	0.338	0.736
A3	0.471	0.742
E1	0.678	0.709

Based on the results of the total correlation matrix obtained, the value of each indicator is bigger than the value of the r table with indicator validity above 99%, so it can be concluded that each indicator of the level of satisfaction and importance are valid and have validity above 99%.

### 5.2 Satisfaction and Importance Level Reliability Test

Data reliability testing was conducted to determine whether each research indicator contained in the questionnaire was reliable by looking at the answers given by the respondent. The data reliability test can be done by comparing the total value of Cronbach's Alpha with the Cronbach's Alpha value for each indicator obtained based on the processing carried out with the Minitab19 application. If the Cronbach's Alpha indicator value is smaller than the total value of Cronbach's Alpha, then the research indicator is stated reliable. However, if the Cronbach's Alpha value of the indicator is bigger than the total value of Cronbach's Alpha, it is stated unreliable. The results for the reliability test of the level of satisfaction and importance that have been carried out using the Minitab19 application attached in Table 5.

Table 5. Satisfaction and Importance Level Reliability Test

Attribute	Satisfaction Level	Level of Importance
T1	0.7259	0.7509
T2	0.7138	0.7414
T3	0.7105	0.7429
T4	0.706	0.748
RL1	0.7157	0.7537

RL2	0.7182	0.7493
RL3	0.7128	0.7475
RS1	0.7232	0.7437
RS2	0.7057	0.7508
RS3	0.7035	0.7417
A1	0.7231	0.7451
A2	0.7266	0.7417
A3	0.7154	0.7398
E1	0.7021	0.7441

Based on the results of the data processing obtained, the total value of Cronbach's Alpha for the satisfaction level is 0.7297 and each indicator of the level of satisfaction had a smaller Cronbach's Alpha value, while the total value of Cronbach's Alpha for the importance level is 0.7616 and each indicator of the level of importance had a smaller Cronbach's Alpha value, so it can be concluded that each indicator of the satisfaction and importance level are stated reliable.

### 5.3 Customer Satisfaction Index

The research data that has been obtained from distributing questionnaires are processed using the Customer Satisfaction Index (CSI) method. The CSI calculation is attached in Table 6.

Table 6 Calculation of Customer Satisfaction Index

	X	Y	MIS	MSS	WF	WS	CSI
T1	405	358	3.41	3.86	7%	0.29	91%
T2	382	332	3.16	3.64	7%	0.25	
T3	367	334	3.18	3.50	7%	0.24	
T4	349	332	3.16	3.32	7%	0.23	
RL1	383	369	3.51	3.65	8%	0.28	
RL2	365	362	3.45	3.48	8%	0.26	
RL3	400	363	3.46	3.81	8%	0.29	
RS1	408	342	3.26	3.89	7%	0.28	
RS2	360	357	3.40	3.43	7%	0.25	
RS3	373	339	3.23	3.55	7%	0.25	
A1	411	337	3.21	3.91	7%	0.27	
A2	411	337	3.21	3.91	7%	0.27	
A3	385	315	3.00	3.67	7%	0.24	
E1	379	347	3.30	3.61	7%	0.26	

Based on the calculations that have been done, the level of customer satisfaction of the warteg culinary business with the services provided is 91%, which indicates that the warteg culinary business customers who use the food delivery service are very satisfied with the services provided. Specifically, the highest level of satisfaction that is owned by respondents is the food hygiene of warteg, it can be seen from the results of the questionnaire which shows that respondents with the characteristics male and female gender, aged 17-25 years and over 35 years, and with the job of private employees, entrepreneurs, and students tend to choose the category very satisfied with these indicators.

Meanwhile, respondents with the characteristics male and female gender, aged 17-25 years, 26-35 years and more than 35 years, and with the job of entrepreneurs and students stated that the menu completeness listed on the food delivery service application has a high level of high importance.

### 5.4 Importance Performance Analysis

The research data that has been obtained from distributing questionnaires are processed using the Importance Performance Analysis (IPA) method to determine the actions that warteg should take for each indicator to increase

the satisfaction of warteg customers that using food delivery services. Data processing is done by making a Scatterplot graph using the Minitab19 application. The processing results obtained are attached in Figure 2.

Based on the IPA Scatterplot graph obtained, you can see the position of each indicator in the IPA matrix where each quadrant has a different explanation so that it can help the warteg in determining the actions that need to be taken on each indicator. The first quadrant shows that the indicators contained in this quadrant have a high level of importance, but the level of satisfaction is low. The indicators contained in the first quadrant are the suitability of food prices obtained, promos and price discounts, speed of warteg service processes, as well as warteg's response to customer complaints and needs. Warteg should pay more attention to these four indicators to improve customer satisfaction.

The second quadrant is a quadrant that shows indicators that have a high level of importance and satisfaction by customers. The indicators in the second quadrant include the completeness of the menu in the food delivery service application and the accuracy of orders obtained by customers. Both indicators are factors that can support customer satisfaction, therefore the warteg can maintain the performance of these indicators.

The third quadrant shows that the indicators contained in this quadrant have a low level of importance and satisfaction. The indicators contained in the third quadrant include a description of the food on the menu, the appearance of food on the application, the packaging for serving food for warteg, and the speed of response in handling complaints. These four indicators are considered not too important by the customer so that they do not need to be a priority for improvement.

The fourth quadrant shows that the indicators contained in this quadrant have a low level of importance, but a high level of customer satisfaction. The indicators in the fourth quadrant are information on the availability of menu stock in the application, the cleanliness of warteg food, the freshness of warteg food, and health assurance for warteg workers. The four indicators are considered to have exceeded customer expectations, therefore the warteg can focus more on other priority indicators.

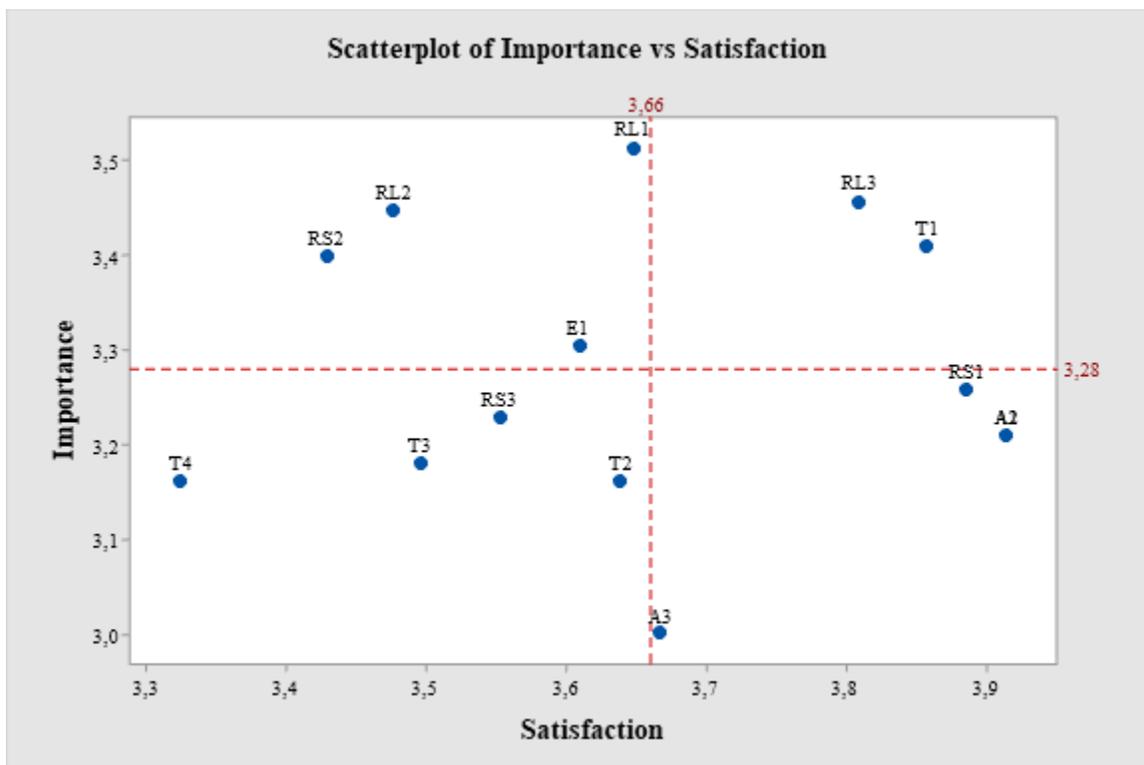


Figure 2. Importance and Satisfaction Scatterplot Graph

## 6. Conclusion

Data collection in this research was carried out by distributing questionnaires online to food delivery service users who have made transactions in the warteg culinary business. The distributed questionnaires got 105 respondents who meet the criteria for further processing.

Data processing that carried out using the customer satisfaction index method, which states that the level of customer satisfaction of the warteg culinary business that uses food delivery services in placing orders is 91%, which indicates that the services provided by the warteg are good and meet customer expectations with the highest level of satisfaction in the cleanliness of the warteg food served and a high level of importance in the completeness of the menu listed on the application.

Meanwhile, data processing that carried out using the importance-performance analysis method, which states that warteg culinary entrepreneurs need to pay attention and focus on improving indicators that have a high level of importance to customers, but have low levels of satisfaction such as suitability of food prices obtained, promos and price discounts, speed of warteg service processes, as well as warteg's response to customer complaints and needs to improve customer satisfaction warteg.

The suggestion that can be given regarding this research is that although the level of customer satisfaction of warteg in using food delivery services obtained is already high at 91%, there are still some customers who feel that the services provided by warteg are still not optimal in meeting customer expectations. Therefore, warteg culinary entrepreneurs need to make improvements and pay more attention to services that have not met customer expectations, and warteg culinary entrepreneurs should also check regularly about the level of warteg customer satisfaction to find out whether the improvements made can increase satisfaction. customers or even decreased.

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## Biography

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