

# **Customer Loyalty Assessment Framework for Quick-Service Restaurants**

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## **Abstract**

The purpose of this paper is to develop assessment framework for customer loyalty in quick-service restaurants. Building customer loyalty is a key factor in influencing repeat purchases in the designated restaurant. This framework used multi-grade fuzzy for assessment and importance performance analysis is used to identify the weaker attributes that need to be improved. The case study has been conducted in a quick-service restaurant. Based on the case-analysis promised and on-time service, attentive staff, and a range of foods are weaker attributes. This framework enables restaurant managers to identify and improve customer satisfaction, which will have a direct influence on customer loyalty.

## **Keywords**

Customer loyalty, Quick service restaurant, Perceived value, Responsiveness, Importance Performance Analysis

## **1. Introduction**

Due to the change in consumers' lifestyles and technological advancements, customers are likely to prefer quick-service restaurants in day-to-day life. In quick-service restaurants, making customers loyal to our restaurant will be an ultimate goal (Uddin, 2019) to get a regular business. We could see that customer satisfaction will be a direct result of the service they provide (Vasumathi and Subashini, 2015). We can say that, in other ways, customer satisfaction will lead to customer loyalty. Nowadays fast-food restaurants are looking for ways to improve the loyalty of their customers. Based on the responses from a similar company, we have rated the weightage of each attribute that we have mentioned. Consumers will also look for a different value in the service that the quick-service restaurant will provide. Even though there might be a lot of research papers in assessing customer satisfaction, we have identified a gap that there is a limited number of papers published in quick-service restaurants or fast-food restaurants and not many of them opted to use the multi-grade fuzzy approach for analyzing customer loyalty. This gap helps to create this model to analyze the case. The following research questions will be assessed in this paper:

RQ1: How can we measure customer loyalty in a quick-service restaurant?

RQ2: What are all the enablers, criteria, and attributes that influence customer loyalty in a quick-service restaurant?

RQ3: How are weaker attributes addressed to enhance the service quality level that leads to customer loyalty for quick-service restaurants?

## **2. Literature Review**

Customer loyalty in quick-service restaurants has been described as the customer's perception of the purchase and the behavior intention that influences the greater level of satisfaction (Uddin, 2019). In the restaurant industry, several factors need to be considered. These include customer satisfaction, the quality of food they are provided, the ambiance of the restaurant, the reliability of the service they are providing, and many more factors. According to Uddin (2019), there is no single definition for customer satisfaction; it includes many factors combined to produce an end as a satisfied customer. Dimensions such as servqual (Parasuraman et al., 1988) are used to test the level in the service industry. In restaurants, increasing the perceived value of customers will provide a pleasant experience for them, which results in customer satisfaction. This increased satisfaction will increase customer loyalty (Uddin, 2019) towards the particular industry. In our case, it is fast-food restaurants.

Customer loyalty is directly dependent upon the behavior of the customer and their attitude towards the product (Kandampully and Suhartanto, 2000). Behavior in terms relate to the frequency of dining in a particular restaurant and

attitude refers to the repurchase or going to the restaurant again and again. If we are trying to decode customer loyalty, there are many factors that need to be considered. Some of them are quality, variety, ambiance, and many more. In terms of overall meaning, customer loyalty will have a direct connection between the quality provided and the best service provided. This will lead to customer satisfaction, which will lead to customer loyalty. Some customers will have a few aspects in a restaurant, like the dining aspects and many more. In terms of fine dining restaurants, there are many factors that need to be considered, like parking facilities and many more. However, we could not generalize from a fine-dining restaurant to a quick-service restaurant. In addition to that food, menus were present in the restaurant (Mattila, 2001).

Nowadays, there are many competitive fast-food restaurants that are providing services in a competitive environment. And if any fast-food chain needs to differentiate itself from others to get customer loyalty, they need to create a strong customer relationship. The price of fast-food restaurants will also be a major aspect as a deciding factor. As you see, customers who are satisfied will be loyal to the restaurant (Carranza et al., 2018). They provided a few tangible and intangible items that they needed to consider in terms of creating customer satisfaction in a restaurant. So, we need to develop customer satisfaction based on tangible and intangible items to create customer loyalty. The ultimate objective is to get customer satisfaction from the customers who are all visiting the restaurant and convert them into customer loyalty.

In some studies, they have found a certain instrument like SERVQUAL where they can identify the multidimensional aspect of service quality in the service industry. These instruments will help many service industries to follow certain tangible and intangible items to get customer satisfaction, which in turn provides customer loyalty.

Several research papers have used the SERVQUAL dimensions to assess the service quality of a particular service industry. But very few papers are using a multi-grade fuzzy approach, which can identify the weaker attributes and stronger attributes. The SERVQUAL was criticized in a few modes where they could be seen with few attributes to be developed. This can be overcome by using another instrument like DINSERV (Kim et al., 2003). They have been used to identify the service quality in Korean casual restaurants. This is the adaptive version of the SERVQUAL, and it was made particularly to identify the service quality in restaurants.

As discussed by Namin (2017), in his paper, service quality is a major determining factor for customer satisfaction. The more satisfied customers are, the more loyal they will be to the restaurants. As a result, being in favor will increase the number of times and frequency of purchases at specific restaurants. The reason for the dissatisfied customer is that the customer gets unhappy or dissatisfied because of a few negative experiences that have happened to them in the course of the customer journey. This will also reduce their behavioral intentions towards the particular restaurants. These are a few aspects that show the behavioral, satisfaction, and loyalty aspects as a closed loop to be addressed. Creating and enhancing the relationship among the customers will help them to have a positive image of customer attitudes and behaviors. Based on the research conducted by Cardello et al. (2000) among the two groups about the attitudes and behavior they found that factors that provide information about the foods where they serve, location type will be considered as one of the signals for important consideration for improving the quality of service in the industry.

Even though there might be certain criteria that were mentioned in improving the service quality, there will be a huge difference in terms of dining restaurants and quick-service restaurants. To improve the service quality, restaurants might need to identify the customer behaviors that will help them to identify the important attributes that they can use for further improvement in their service quality. The basic SERVQUAL dimensions will help them to assess the important tangible and intangible items. But they could not be able to access the other important factors that need to be considered that will vary from many industries.

Based on the above review, many papers (Han and Ryu, 2009; Haghghi et al., 2012) highlight the importance of customer satisfaction in the restaurant industry, which will have a direct implication for customer loyalty. It was a key focus of our investigation. We chose the attributes from the reviewed research paper, identified the important attributes with the assistance of employees for the case restaurant, and identified the weaker attributes based on the analysis.

### 3. Research Methodology

#### 3.1 Multi-grade fuzzy

The multi-grade fuzzy was applied to manufacturing and service industries' assessment of lean, agile, performance, safety practice level, and supply chain management effectiveness (Vinodh and Aravindraj, 2015; Sridharan and Suresh, 2016; Ganesh and Suresh, 2016; Vinodh and Chintha, 2011; Vinodh, 2011; Vimal et al., 2015; Almutairi et al., 2019).

The study uses the multi-grade fuzzy to develop customer loyalty in quick-service restaurants. The present study begins with a literature review on quick-service restaurants and a multi-grade fuzzy assessment. The conceptual framework has been developed and shown in Table 1.

Table 1. Conceptual model of customer loyalty assessment in quick-service restaurants

Enabler	Criteria	Attributes
Ambiance and comfort (R1)	Atmosphere(R11)	Interpersonal interaction quality with the customers (R111)
		Ambiance and aesthetics of the restaurants (R112)
	Comfort (R12)	Clean dining area (R113)
		Parking availability (R121)
Seating comfort (R122)		
Food quality (R2)	Food presentation (R21)	Food Presentation and appearance (R211)
		Variety of food provided (R212)
	Food taste (R22)	Quality of food provided (R221)
		Taste of the food (R222)
		The freshness of the food servings (R223)
Correct temperature at which food is serving (R224)		
Responsiveness (R3)	Staff responses (R31)	Promised and on-time service (R311)
		Friendly staff toward the customer (R312)
		Delivering food to the customers within a short span (R313)
		Attentive staff (R314)
		Prompt service (R315)
	Staff behaviors (R32)	More responsive to the customer queries (R321)
Polite responses to the customers (R322)		
Convenient (R4)	Location (R41)	Short walking distance (R411)
		Convenient locations (R412)
		Convenient parking place closer to the restaurant (R413)
	Open hours (R42)	Convenient operating hours (R421)
		Late-hour operation (R422)
Early-hour operation (R423)		
Trust (R5)	Assurance (R51)	Safe Financial transaction (R51)
		Friendly and trustable employees (R52)
		Serving ordered food accurately (R53)
Perceived value (R6)	Price / Value (R61)	Competitive prices (R611)
		Value for money (R612)
		Special discounts (R613)
		Range of food choice (R614)
Hygiene (R7)	Physical hygiene (R71)	Clean facilities (R711)
		Clean restroom (R712)
		Clean kitchen (R713)
		Clean tables (R714)
	Employee hygiene (R72)	Employees with good hygiene (R721)

## 4. Case Study

### 4.1 Case of quick-service restaurants

This study was carried out in case-restaurant in India. It is a quick-service restaurant that started in the year 2011. It serves as a one-stop destination for serving fast food chicken dishes around the local region. It has around 25 employees. It serves the niche market in and around the city.

The customer loyalty index is mentioned as  $A$ . It is the product of the overall assessment level of ratings based on each driver ( $R$ ) and the overall weights ( $W$ ) given by the experts. The equation for the customer loyalty index is

$$I = W \times R \text{ (Anil and Suresh, 2020; Suresh et al., 2020)}$$

The assessment has been divided into ten grades since the entire customer loyalty index involves fuzzy determination.  $A = \{10, 9, 8, 7, 6, 5, 4, 3, 2, 1\}$ . 9-10 represents 'Extremely high loyalty', 8-9 represents 'Very high loyalty', 7-8 represents 'High loyalty', 6-7 represents 'Moderately high loyalty', 5-6 represents 'Moderate loyalty', 4-5 represents 'Low loyalty', 3-4 represents 'Very low loyalty', 2-3 represents 'Extremely low loyalty', 1-2 represents 'Absence of loyalty', and less than 1 represents 'None'. The attribute's ratings are collected from five experts in the case restaurant (Table 2), we used a questionnaire with a 10-point Likert scale, representing extremely high (10 points) to extremely low (1 point). For enabler, criteria, attributes weightage are collected from five experts from various restaurants using a 10-point Likert scale that represents extremely high importance (10 points) to extremely low importance (1 point).

Table 2. Weights ratings and performance ratings from experts

Ri	Rij	Rijk	R1	R2	R3	R4	R5	Wijk	Wij	W
R1	R11	R111	10	8	8	8	8	0.439	0.619	0.1076
		R112	9	9	8	9	8	0.56		
	R12	R121	9	9	9	9	9	0.4516	0.3809	
		R122	5	4	6	6	4	0.258		
		R123	6	5	6	6	7	0.2903		
R2	R21	R211	5	6	5	4	5	0.4027	0.4268	0.1615
		R212	8	8	9	8	8	0.5972		
	R22	R221	10	9	9	9	9	0.2732	0.5731	
		R222	8	9	9	9	9	0.2616		
		R223	10	9	8	9	8	0.25		
R3	R31	R311	8	6	7	7	7	0.196	0.5	0.1576
		R312	9	8	9	8	9	0.1911		
		R313	8	8	8	7	8	0.2107		
		R314	8	7	7	7	7	0.196		
		R315	7	6	9	8	8	0.2058		
	R32	R321	9	8	8	8	8	0.4875	0.5	
		R322	9	9	9	9	9	0.5125		
R4	R41	R411	5	4	4	6	6	0.3211	0.4657	0.1384
		R412	6	7	6	7	7	0.3486		
		R413	6	6	5	4	5	0.3302		
	R42	R421	7	5	8	6	6	0.3238	0.5342	
		R422	5	4	4	5	5	0.3619		
		R423	2	3	3	2	4	0.3142		
R5	R51	R511	9	8	9	8	8	0.352	1	0.1384
		R512	9	8	8	8	8	0.304		
		R513	8	8	9	9	9	0.344		
R6	R61	R611	9	9	8	9	9	0.2586	1	0.1384
		R612	9	8	8	8	9	0.2528		

		R613	8	9	8	8	8	0.2471		
		R614	7	6	8	8	8	0.2413		
R7	R71	R711	8	9	9	9	9	0.2546	0.4942	0.1576
		R712	8	9	9	9	9	0.2422		
		R713	7	6	7	8	7	0.2298		
		R714	7	8	7	8	9	0.2732		
	R72	R721	9	8	8	8	9	0.5365	0.5057	
		R722	8	7	8	9	7	0.4634		

### Primary assessment calculation

The primary calculation that has been done for the “Atmosphere(RII)” is given below.

Weights concerning to “Atmosphere” criterion is  $W_{11} = [0.439, 0.560]$

Assessment for the practice of the “Atmosphere” criterion is given below as

$$R_{11} = \begin{bmatrix} 10 & 8 & 8 & 8 & 8 \\ 9 & 9 & 8 & 9 & 8 \end{bmatrix}$$

Index concerning of “Atmosphere” criterion is given by

$$I_{11} = W_{11} \times R_{11}$$

$$I_{11} = [9.439, 8.560, 8, 8.560, 8]$$

Using the principle above the index concerning the following criteria customer loyalty assessment are obtained and given below.

$$I_{12} = [7.096, 6.548, 7.354, 7.354, 7.129]$$

### Secondary assessment calculation

The concerning enabler calculation for “Ambience and comfort (RI)” is given below as

Weights with respect to “Ambience and comfort” enabler provided as  $W_1 = [0.619, 0.380]$

Assessment for “Ambience and comfort” enabler is provided in the below matrix,

$$I_1 = \begin{bmatrix} 9.439 & 8.560 & 8.000 & 8.560 & 8.000 \\ 7.096 & 6.548 & 7.354 & 7.354 & 7.129 \end{bmatrix}$$

Index concerning of “Ambience and comfort” enabler is provided by

$$I_1 = W_1 \times R_1$$

$$I_1 = [8.546, 7.794, 7.754, 8.101, 7.668]$$

Utilizing the above principle, the index concerning the following enabler in customer loyalty assessment is obtained and given below.

$$I_2 = [8.084, 7.982, 7.922, 7.515, 7.667]$$

$$I_3 = [8.492, 7.756, 8.258, 7.954, 8.155]$$

$$I_4 = [5.158, 4.799, 5.002, 4.989, 5.479]$$

$$I_5 = [8.656, 8, 8.696, 8.344, 8.344]$$

$$I_6 = [8.270, 8.022, 8.000, 8.258, 8.511]$$

$$I_7 = [8.022, 7.784, 7.996, 8.479, 8.304]$$

### Tertiary assessment calculation

For the case firm customer loyalty assessment has been calculated as

Complete weight  $W = [0.107, 0.161, 0.157, 0.138, 0.138, 0.138, 0.157]$

$$\text{Complete assessment vector } R = \begin{bmatrix} 8.546 & 7.794 & 7.754 & 8.101 & 7.668 \\ 8.084 & 7.982 & 7.922 & 7.515 & 7.667 \\ 8.492 & 7.756 & 8.258 & 7.954 & 8.155 \\ 5.158 & 4.799 & 5.002 & 4.989 & 5.479 \\ 8.656 & 8.000 & 8.696 & 8.344 & 8.344 \\ 8.270 & 8.022 & 8.000 & 8.258 & 8.511 \\ 8.022 & 7.784 & 7.996 & 8.479 & 8.304 \end{bmatrix}$$

Customer loyalty index  $I = W \times R$

$$I = [7.888, 7.462, 7.682, 7.667, 7.752]$$

The final customer loyalty index is the average of  $I = 7.69 \in (7 \text{ to } 8)$ .  $\therefore$  ‘High loyalty’

## 4.2 Importance Performance Analysis (IPA)

IPA is used in service and manufacturing industries, it will help in implementing the attributes based on their importance and performance (Chacko et al., 2021; Vaishnavi and Suresh, 2021; Sreedharshini et al., 2021). In IPA, the axis that was used is mentioned as the x-axis, which will indicate the performance rating of the attributes, and the y-axis, which will indicate their importance (Suresh and Gopakumar, 2021). Based on the analysis, the mean of the x-axis is 7.47 and the mean of the y-axis is 7.8 as a perpendicular line, which was given in Table 3.

Table 3. IPA analysis for customer loyalty assessment in case-quick service restaurant

Importance ↑	9.6	Quadrant -I											Quadrant -II			R221		
	9.3																	
	9													R714	R511, R612, R721	R222, R611		
	8.7													R313	R212, R613	R223, R513		
	8.4												R315, R614			R711	R121, R322	
	8.1												R311, R314					
	7.8						R422					R412		R722	R321, R512	R312, R712		
	7.5												R224, R713				R112	
	7.2							R411, R413										
	6.9										R421							
	6.6	R423																
	6.3																	
	6							R211								R111		
	5.7																	
	5.4										R123							
	5.1																	
	4.8	Quadrant -IV						R122							Quadrant -III			
		2.8	3.2	3.6	4	4.4	4.8	5.2	5.6	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.2
		Performance Rating →																

**Quadrant I (concentrate here):** The attributes that are present in the quadrant need to be paid more attention to by the case-quick service restaurant’s managers to increase the customer loyalty level of their operations. The attributes are “promised and on-time service, attentive staff, and a range of food choices”.

**Quadrant II (Keep up the good work):** The attributes which are present in the quadrant need to be maintained as the same and the attributes are “Clean dining area, variety of food provided, quality of food provided, the taste of the food, the freshness of the food servings, delivering food to the customers within a short span, prompt service, polite responses to the customers, safe financial transaction, serving ordered food accurately, competitive prices, value for money, special discounts, clean facilities, clean tables, employees with good hygiene”.

**Quadrant III (Possible overkill):** The attributes which are present in this quadrant are considered of low importance but high performance (Thomas and Suresh, 2022). The performance of these attributes should be minimized. The attributes are “interpersonal interaction quality with the customers; ambiance, and aesthetics of the restaurants; friendly staff toward the customer; more responsive to the customer queries; friendly and trustable employees; clean restroom; and employees’ appearance”.

**Quadrant IV (Low priority):** The attributes which are present in this quadrant are considered of low importance and low performance (Subramanian and Suresh, 2022). The attributes are “parking availability; seating comfort; food presentation and appearance; the correct temperature at which food is served; short walking distance; convenient locations; convenient parking places closer to the restaurant; convenient operating hours; late-hour operation; early-hour operation; clean kitchen”.

## 5. Results and discussions

The final customer loyalty index rate is 7.69, which shows that the case restaurant is high in customer loyalty, but they can increase the loyalty if they focus on improving the weaker attributes given in Table 3. Based on the IPA model, restaurants need to give attention to certain practices to increase customer loyalty towards the case restaurant. Some of the attributes that are low priority, such as “parking availability, seating comfort, food presentation, correct temperature”. These are all the aspects that need a low priority in terms of the quick-service restaurant. There are some attributes that are overdone and it might decrease the efficiency of the restaurants, which were “ambiance, interpersonal interactions are some of them”. Quick service restaurants need to follow some of the same attributes. Some of them are the clean dining area, variety of food, quality of food, and taste of the food. And with a focus on attributes such as “promised on-time service, attentive staff, and range of food choice”, the quality of food provided to the customers will also play a major role in this. And the employees who are all working in the quick-service restaurant need to be more attentive in terms of taking orders and interacting with them. The variety of food provided in the restaurant will also be an important attribute that will also be considered for customer loyalty towards the restaurant.

Some of the suggestions for improving the weaker attributes were given in Table 4.

Table 4. Suggestions for weaker attributes

<b>Weaker attributes</b>	<b>Suggestions for improvement</b>
Promised and on-time service (R311)	<ul style="list-style-type: none"> <li>• The restaurant can improve the on-time service of its customers by implementing a standardized process in its operations.</li> <li>• Hiring employees to provide on-time service to the customers.</li> </ul>
Attentive staff (R314)	<ul style="list-style-type: none"> <li>• Implementing some training programs for the employees to provide support to the customers.</li> <li>• Training on soft skills to the employees to attend the customer.</li> </ul>
Range of food choice (R614)	<ul style="list-style-type: none"> <li>• Providing all the foods that were on the menu of the restaurants.</li> <li>• Introducing new varieties of dishes to the customers.</li> </ul>

These are all the above weaker attributes that need to be improved. Some of them are “promised on-time service”. This can be considered one of the major suggestions for improvement. Quick service Restaurants can implement a standardized process in their operations to improve the on-time service delivery to their customers, and this can also be considered one of the major attributes to be improved. Another thing is “attentive staff”, where employees need to be attentive in terms of customer queries in the restaurants. And this can be improved by providing some training to the employees regarding their jobs. Providing some soft skills training to the employees will also be considered a major thing to be done. Other attributes are “Range of food choice”. This can be improved by providing a variety of food choices in the restaurant in terms of competition. To stay ahead of the competition, we can regularly introduce new varieties of dishes to our customers.

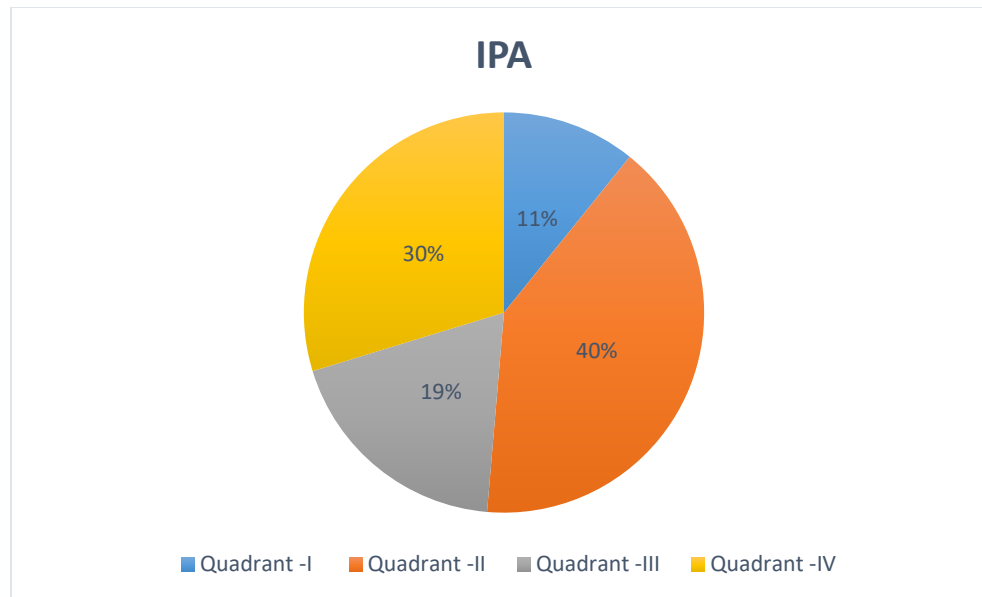


Figure 1. Graphical representation of IPA

Figure 1 shows the graphical representation of IPA. 11% of the factors in quadrant I need concentration and the management should take appropriate actions to improve it.

## 6. Practical Implication

This study has provided some practical implications for quick-service restaurants in terms of increasing customer loyalty and satisfaction. There might be a few variations in the attributes, but some of the important dimensions must be the same for all quick service restaurants. Some of the dimensions can vary depending on the geographic location, culture, and values. From the management's point of view, they need to concentrate more on the weaker attributes to improve customer loyalty.

## 7. Conclusion

The given research has assessed customer loyalty in quick-service restaurants. Our desired objective of this paper is to assess the criteria by evaluating the opinions of the experts. The above research would help many quick-service restaurant managers and management to implement it across their restaurants. And the IPA analysis will help the restaurants concentrate more on the attributes that are weaker and need more concentration. Even though this study analyzed customer loyalty, there will be some limitations to this, such as it may vary based on the geographic location and cultural aspects. We cannot be able to generalize across all customers who are all living in different countries.

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