

# Analysis of Service Quality Implementation Using Quality Function Deployment Method

Ida Ayu Laksmi Purnamyastuti<sup>1</sup>, Putu Yudi Setiawan<sup>2</sup>

<sup>1,2</sup>Faculty of Economics and Business, Udayana University, Bali, Indonesia

---

**Abstract:** Service quality is important for companies engaged in services to be able to achieve customer satisfaction. This study aims to determine customer requirements, technical requirements, and the application of the Quality Function Deployment method using the House of Quality matrix in an effort to improve service quality. The sample used in this study were 50 people who were determined through the purposive sampling method. The analytical tool used is the House of Quality. The results of this study indicate that the delivery of service quality for Refresh Foot Reflexology & Massage has not been maximized and Refresh Foot Reflexology & Massage has not been able to fulfill customer desires or needs properly, seen from the average value of importance level which is greater than the average value of the company's performance. There are 20 service indicators that become customer requirements and 16 technical requirements, in a competitive assessment Refresh Foot Reflexology & Massage is superior to its competitors in terms of the number of good ratings (G) obtained by each company, but Refresh Foot Reflexology & Massage still have to make improvements to the service indicators that receive a moderate rating (F).

**Keywords:** Service Quality, Customer Satisfaction, House of Quality.

---

## I. INTRODUCTION

Today's business competition is very competitive. The service industry is no less in the face of competitive business competition. The service industry is an industry that carries out economic activities and produces products that provide added value that is intangible (Arjangga et al., 2017). The service industry is currently a very large economic sector and is growing very rapidly. The service industry contributes to improving the community's economy so that community welfare can be achieved. The service industry that offers services or services to consumers certainly wants to provide output that is in accordance with their expectations. One of the keys to the success of any business is the quality it offers. If consumers feel that the quality offered is able to meet their expectations through products and services at a rational price level, the company will earn profits from satisfied consumers. (Pratiwi & Jatra).

Quality has become a critical issue in today's modern competition, and it has become the responsibility of middle managers. Service quality is the level of excellence expected and control over the level of excellence to meet the level of customer satisfaction. Quality and service are two important factors, therefore organizations must pay more attention to these two things to match customer expectations. Usually good quality will provide satisfaction and followed by customer loyalty to the product in question. Service to customers is one of the main factors to improve the quality of the service industry. Therefore, awareness is needed to know the quality of services that have been and will be provided to understand who the customers are as well as consumer assessments and expectations of the service facilities provided. (Singgih & Ardhiyani, 2010).

Service quality is assessed from the extent to which the services provided can meet expectations or in other words, customer perceptions of service quality are obtained from a comparison between expectations before the service is obtained with the actual expectations of the perceived service. Seeing the demands of customers who want quality service, the company must be able to provide superior service by customer expectations. In addition, it is hoped that there will be a continuous improvement process on the company's performance so that the quality and output of the company will be better from time to time. Thus, it is not easy for service provider companies to find out whether the services provided to customers have met customer satisfaction or even cannot satisfy customer needs at all. One of the tools to identify

consumer needs is QFD (Quality Function Deployment). QFD can translate what customers need enabling a company to prioritize customer needs. QFD is a comprehensive quality system that systematically connects customer needs to various business and organizational functions, such as marketing, design, quality, production, manufacturing, sales in achieving company goals. (Khanna & Arya, 2015). If the QFD methodology is implemented in a manufacturing related process, then it is sorted in the manufacturing category. Conversely, if QFD is applied to a service-related process, then it is listed under the service category. The final classification is based on whether QFD is used in design and development or improvement activities (Erdil & Arani, 2019)

QFD uses a matrix, namely House of Quality (HOQ) which can translate customer desires called Voice of Customer (VOC) into processes to produce products or services as desired by involving all organizational functions. HOQ is a matrix in the form of a house that connects the desires of the customer (what) and how a product will be designed and produced to meet the customer's wishes (how). With the HOQ matrix, the company can convert the voice of the customer directly to the technical characteristics or technical specifications of the resulting plan.

Spa & Reflexology is one of the business businesses in the service industry sector that provides reflexology services in addition, this business is growing rapidly because it is a business that contributes to Bali tourism. Reflexology has also become one of the necessities for a healthy lifestyle for the community. Both men and women want to maintain their health, so they can choose reflexology as an alternative to health. Reflexology is not only for treatment but also to support a healthy lifestyle for the community at an affordable cost. That is, a healthy lifestyle is one of the efforts that can be made to continue to enjoy excellent health while providing relaxation for consumers. People who like reflexology certainly want services according to their expectations, such as service skills, the comfort of the place, friendliness of service, and affordable prices.

Henuk et al., (2014), Suhendar (2014), Vorasaiharit & Thawesaengskulthai (2016), Rezeki et al., (2018), Erdil & Arani, (2019) demonstrated that using the QFD method has the potential to assess and prioritize areas of improvement, and convert them into measurable process or product requirements. As a result of the difference between expectations and perceptions, service quality gaps are revealed in all dimensions of service quality, then the House of Quality is designed to improve and improve service quality. Based on this, the quality of service for reflexology service businesses, especially Refresh Foot Reflexology & Massage to gain trust and loyalty from customers, in improving this is one way that can be used by implementing Quality Function Deployment (QFD) using the House of Quality matrix (HOQ). By implementing QFD, it is expected to avoid differences in perception with what is provided by the company and what the customer wants (Customer Requirements). Based on the background that has been described, this research takes the title: Analysis of Service Quality Implementation using the Quality Function Deployment Method on Refresh Foot Reflexology and Massage in Badung Regency.

## **II. RESEARCH METHODS**

The research design used in this study is a quantitative descriptive approach to determine what service attributes are considered important by consumers and are included in consumer requirements, and to find out how the relationship between consumer requirements and the technical needs of Refresh Foot Reflexology & Massage. The population in this study were all customers who had taken treatment at Refresh Foot Reflexology and Massage counted since the start of this study whose number could not be determined. The number of samples taken in this study were 50 people. The number of samples is still considered feasible because the size of the feasibility of the sample in descriptive research ranges from 30-500 samples. The sampling technique used is non-probability sampling technique, using the purposive sampling method, namely selecting samples with certain criteria so that they are relevant to the research design. The criteria for respondents in this study are respondents who are currently or have had treatment at least twice in the past year at Refresh Foot Reflexology and Massage. The data collection methods used in this study were observation, interviews and questionnaires

## **III. RESULTS AND DISCUSSION**

The next step in the preparation of the HOQ is to determine the relationship between the two requirements in the interrelationships matrix. This section combines each customer requirement (what) and technical requirement (how), the relationship matrix shows the contribution level and relationship of technical actions for each customer requirement (Bulut et al., 2016).

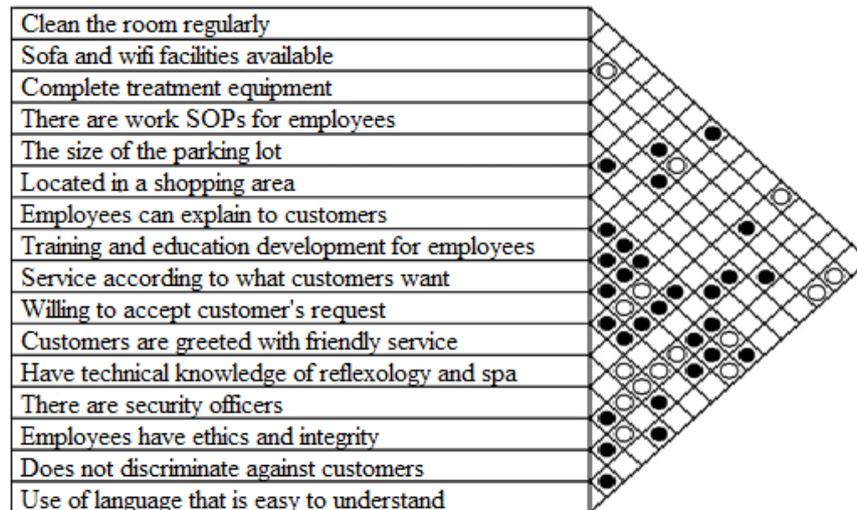


Figure 1: House of Quality

There are 49 relationships between matrices, there are 34 very high relationships between matrices, and as many as 15 moderate relationships between matrices, while the rest have no relationship.

A competitive assessment of individual customer requirements is a way of determining whether customer requirements have been met and identifying which customer requirements need more attention in future designs. A customer competitive assessment also includes an assessment of where the organization stands in comparison to its closest competitors within the constraints of customer requirements. The customer's competitive assessment occupies the right-hand column of the relationship matrix between customer requirements and technical requirements. Competitive assessment of customers using a Likert scale.

Table 1: Competitive Rating

No		Company A	Company B
1	Providing a Clean Service Room	G	G
2	There is a comfortable waiting room	F	G
3	Availability of oil in accordance with the treatment desired by the customer	G	F
4	The appearance of employees is neat and clean	G	F
5	Available parking	F	F
6	Strategic location	G	G
7	Employees are reliable in dealing with problems	F	F
8	Provide the right service	F	G
9	Complete the service on time	G	G
10	Delivering services correctly and clearly	F	F
11	Readiness in responding to customer requests	G	G
12	Readiness to provide fast and good service	G	F
13	Able to handle customer complaints	F	F
14	Give discounts for members	G	G
15	Guaranteed service as desired by customers	F	F
16	Employees have skills	G	F
17	Ensure safety for every customer	F	F
18	Friendly employees	G	G
19	Employees don't discriminate against customers	G	F
20	Employees are able to communicate well	G	G

(G = Good, F = Fair, P = Poor)

Table 1 shows that Refresh Foot Reflexology and Massage received a Good rating (G) of 12 indicators and a Medium rating (F) of 8 indicators, while its competitors received a Good rating (G) of 9 indicators and a Medium rating (F) of 11 indicators. The target value of each customer's requirements, the indicator provides a clean service room that does not need repair, because the company always cleans the room both before and after serving customers. Refresh Foot

Reflexology and Massage will maintain a comfortable waiting room, the availability of oil that customers want, neat and clean appearance of employees, parking lots, strategic locations, ensuring security for every customer, employees serving in a friendly manner, and employees serving non-discriminatory. In addition, customer requirements that are deemed necessary for improvement in the future are delivering services correctly and clearly, readiness to respond to customer requests, providing discounted prices for members, guaranteeing services as desired by customers, employees having skills. Customer requirements that are considered to need improvement to be better than competitors are reliable employees in handling problems, providing appropriate services, completing services on time, being alert to provide fast and good service, being able to handle customer complaints, and employees being able to communicate well. Refresh Foot Reflexology and Massage needs improvement to be better than its competitors in terms of reliable employees in handling problems, providing the right service, completing services on time, providing prompt and good service, being able to handle customer complaints, and employees being able to communicate well Basically, the technical requirements in Refresh Foot Reflexology and Massage are in accordance with the Standard Operating Procedures (SOP) set by the management of Refresh Foot Reflexology and Massage, but in practice there are several degrees of difficulty that differ from one another. When compared to its competitors, Refresh Foot Reflexology and Massage gets 8 indicators that are rated with F or moderate, namely the availability of a comfortable waiting room, available parking, reliable employees in handling problems, providing the right service, delivering services correctly and clearly when take initial action, be able to handle customer complaints, guarantee services as desired by customers, and ensure security for each customer, and the remaining 12 indicators get a G, while its competitor, Reborn Spa, gets an F rating on 11 indicators and the rest gets a G rating

#### **IV. CONCLUSION**

The most important indicator according to customers is that Refresh Foot Reflexology and Massage employees can handle customer complaints and an indicator that is not too important according to customers is that Refresh Foot Reflexology and Massage employees deliver services correctly and clearly when taking initial actions. Indicators that have not been met by the company's performance according to customers are Refresh Foot Reflexology and Massage employees can be relied on in dealing with problems, while indicators that can be met well by the company's performance are Refresh Foot Reflexology and Massage providing a clean service room. Based on the absolute weight of customer requirements, customer requirements that need to be prioritized are being able to handle customer complaints and provide appropriate services. As for technical requirements, based on absolute and relative weights of technical requirements, things that need improvement are training and education development for employees, and employees can provide explanations to customers. Based on the results of the research obtained, on the performance of Refresh Foot Reflexology and Massage, it shows that the reliability dimension gets the lowest score seen in the company's performance and the level of customer importance compared to other dimensions, then Refresh Foot Reflexology and Massage is expected to provide periodic employee evaluation and training in handle customer complaints regarding massage and service, friendliness, appearance to maintain customer trust in the company. Companies also need to pay attention and provide direction for employees to always deliver services before taking action so that customers know what actions or treatments are given. Further research would be better if adding other variables besides the service quality dimension that can support the company in improving its service quality. . By using the same variables and technical analysis, the scope of the research can be expanded by conducting research on reflexology and other spa companies.

#### **REFERENCES**

- [1] Arjangga, A., Suhendra, A., & Tiara, A. (2017). Perancangan Peningkatan Kualitas Pelayanan Pada Biro Jasa Perjalanan Umrah PT. XYZ Dengan Menggunakan Metode QFD (Quality Function Deployment). EProceedings of Engineering, 4(3), 4445–4453.
- [2] Bulut, E., Duru, O., & Huang, S. T. (2016). Total Quality Management & Business Excellence A multidimensional QFD design for the service quality assessment of Kansai International Airport . Total Quality Management, 3363(May), 1. <https://doi.org/10.1080/14783363.2016.1174058>
- [3] Erdil, N. O., & Arani, O. M. (2019). Quality function deployment: more than a design tool. International Journal of Quality and Service Sciences, 11(2), 142–166. <https://doi.org/10.1108/IJQSS-02-2018-0008>
- [4] Henuk, Y. G., Santoso, C. H., Kristanti, M., Perhotelan, M., & Petra, U. K. (2014). Quality function deployment. Hospitality and Service Management Petra Publications, 02(1), 15–30.

- [5] Khanna, S., & Arya, V. (2015). Study of Quality Function Deployment ( QFD ) in Service Industry. *Hospitality and Service Management*, 1(10), 1.
- [6] Pratiwi, A. . S. I. R., & Jatra, I. M. (2014). Kepuasan Tamu Yang Menginap Di The Oasis Boutique Beach Resort And Spa Tanjung Benoa. *E-Jurnal Manajemen*, 3(6), 1653–1666.
- [7] Rezeki, R., Purba, H. H., & Aisyah, S. (2018). Design Development Strategy with Quality Function Deployment Approach : A Case Study in E-Commerce Industry. *Hospitality and Service Management*, 1(1), 73–78.
- [8] Singgih, M. L., & Ardhiyani, N. (2010). Integrating SERVQUAL with KANO into Quality Function Deployment (QFD) for Better Quality of Services Case Study: PT Pos Indonesia, Branch Office of Sidoarjo. *INFORMS Service Science Conference*, 1(July), 419–425.
- [9] Suhendar, E. (2014). Penerapan Metode Quality Function Deployment (QFD) Dalam Upaya Peningkatan Kualitas Pelayanan Akademik. *Faktor Exacta*, 7(4), 372–386.
- [10] Vorasaiharit, N., & Thawesaengkulthai, N. (2016). Integration of SERVQUAL model with Quality Function Deployment to enhance library's service quality. *Hospitality and Service Management*, 1(1), 1. <https://doi.org/10.15242/ie.e0116003>