

The Characteristics Of Rendang Lokan Based On House Of Quality (HOQ)

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Abstract

House of Quality (HOQ) is one of the main planning tools used in Quality Function Deployment (QFD). This study aims to improve the quality of rendang lokan products at Oswari Food MSMEs based on House of Quality (HOQ). The research method used is QFD which is arranged in the HOQ matrix. The number of initial questionnaires was 20 respondents used to determine the main questionnaire, while the number of respondents in the main questionnaire was 90 respondents. The results of the study showed that there were 10 attributes that were expected by consumers in buying rendang lokan products, namely taste, packaging, information services, product availability, price, texture, shelf life, aroma, lokan size, and color. Analysis of the level of importance of the rendang lokan attribute in the first place was taste with an average value of 4.87. Analysis of the level of consumer satisfaction of rendang lokan Oswari Food in the first place was the taste attribute with an average value of 4.35. Based on the HOQ matrix analysis, it shows that the product attributes that are a priority for improvement are packaging, information services, and price. Meanwhile, the technical parameters that are a priority for improvement are formulation and composition, raw materials of lokan, and packaging. This study also provides recommendations for improving the quality of packaging attributes, information services, and prices.

Keywords: House of Quality, Rendang Lokan, Quality Improvement.

Introduction

Traditional food is a form of culture that is characterized by regions, specific, diverse and types that describe the potential of the area. Traditional food has a look, taste, and aroma that is very well known and loved by the local community (Harsana & Triwidayati, 2020). Traditional foods are usually made based on recipes that have been established by the local community using ingredients that come from the region (Kartini *et al.*, 2024). One of the characteristics of traditional Indonesian food is the abundant use of spices. One example of a traditional food that is rich in spices is rendang.

Rendang is a traditional food that originated in West Sumatra and has been widely known both domestically and internationally. The ingredients in making rendang include onion, garlic, red chili, ginger, galangal, turmeric, pepper, star anise, lemongrass, kandis acid, bay leaves, and kaffir lime leaves. The main ingredient used in making rendang is meat (Nurmufida *et al.*, 2017). The taste of rendang is greatly influenced by the quality of the raw materials and spices used in the manufacturing process (Akbar & Gusnita, 2020). One type of rendang found in Mukomuko Regency is rendang lokan.

Mukomuko Regency has the potential for lokan-based food, so it produces many types of lokan-based foods. Rendang lokan using lokan shellfish as the main raw material, has become a popular specialty food in the area (Nur'aini & Saputra, 2018). Currently, rendang lokan is one of the commodities that tourists are interested in, as is

beef rendang or buffalo meat. One of the MSMEs that produces rendang lokan in Mukomuko Regency is Oswari *Food*.

Oswari Food was established in 2010, in 2013 Oswari *Food* officially received a SIUP with Number 503/4507/KTPST/SIUP/II/2013 from a one-stop integrated service office under the name of MSMEs Oswari *Food*. This MSME also has a halal certificate Number: 11100001100614 and has a P-IRT with Number: 2021706050005-19. Oswari *Food* is able to produce rendang lokan with an average of 20 kg per day with a daily turnover of IDR 3,600,000.00 - IDR 4,000,000.00. These MSMEs run their production every working day, from Monday to Saturday.

Product quality is the main factor that consumers are highly considered in choosing or buying food (Rizqi & Masniadi, 2022). Sellers must strive for various ways to maintain consumer satisfaction (Arsyanti & Astuti, 2016). Rendang lokan has excellent prospects for the future. Consumer satisfaction is the feeling of a person who feels satisfied or dissatisfied with a product after comparing the performance of the product with that faced (Suriadi *et al.*, 2024). The number of industrial houses that produce rendang lokan will cause fierce competition, thus affecting the sustainability of a business. According to Arsyanti & Astuti (2016) to maintain the sustainability of a business, companies need to pay attention to changes in consumer tastes and rapid competition, and continue to improve product quality.

Based on a preliminary survey conducted by researchers, these MSMEs do not fully know the attributes expected by consumers in purchasing rendang lokan products and the level of consumer expectations is not yet known. The right approach is needed to optimize all the potential that exists in Oswari Food MSMEs so that they can compete with other rendang lokan home industries. One of the observation methods that can be used is the House of Quality (HOQ) as a source of data obtained from Quality Function Deployment (QFD) for business development. Therefore, HOQ is expected to help in business development for Oswari Food MSMEs in improving product quality and meeting consumer expectations, as well as achieving the goals of this research.

Research Method

The object of this research is Oswari Food MSMEs whose main product is rendang lokan. The population in this study is consumers who consume Oswari Food rendang lokan, rendang lokan brand A, and rendang lokan brand B. The sample in this study is consumers who consume Oswari Food rendang lokan, brand A rendang lokan, and 250 g packaged brand B rendang in the last 6 months. The number of respondents in the initial questionnaire was 20 respondents used to determine the main questionnaire, while the number of respondents in the main questionnaire was 90 respondents. The procedure in this study begins with a preliminary study and a literature study. After that, it is followed by identifying the initial problem, formulating the problem, setting goals, and then collecting primary and secondary data. The observation method uses the House of Quality (HOQ) as the source of data obtained from the Quality Function Deployment (QFD).

Results and Discussion

House of Quality (HOQ)

A tool in the form of a quality house, the House of Quality (HOQ) connects the customer's desires (WHAT's) and how (HOW's) a product will be designed and manufactured to meet the customer's desires (Irawati & Handayani, 2023). HOQ is the first part or stage of the QFD process that uses a matrix to connect consumer desires with how the company can meet the needs of consumer desires (Kusumadewi & Rusdian, 2022). HOQ is the first stage in the QFD method, in an effort to convert the Voice of Customer (VOC) directly to the technical characteristics or technical specifications of a product produced (Verdika *et al.*, 2016).

Companies can do various ways to make improvements ranging from improving existing systems in the company, improving product quality, improving the ability of human resources and others that can provide added value. The way to add value to products is to minimize or eliminate waste in the production process. Eliminating waste during the production process can achieve or meet the added value desired by consumers with few resources (Komariah, 2022). The overall relationship between quality attributes and technical requirements is expressed in *the Oswari Food rendang lokan House of Quality* matrix which can be seen in Figure 1.

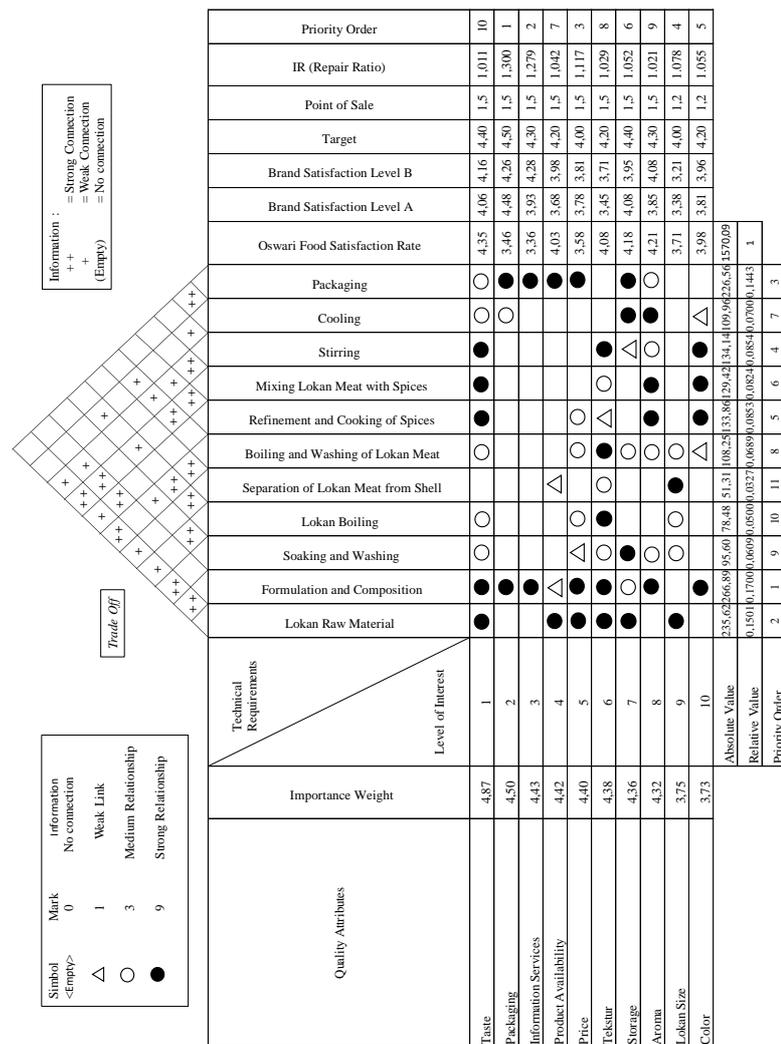


Figure 1. *House of Quality (HOQ) Rendang Lokan Oswari Food*

Based on Figure 1 the taste quality attribute has a strong relationship with many technical requirements, such as formulation and composition, refinement and cooking of spices, and mixing of lokan meat with spices. This shows that the taste is greatly influenced by the processing of the main ingredients and the mixing process. The packaging aspect also shows a strong relationship with packaging, meaning that in the packaging process it is important to ensure the visual quality and attractiveness of the product.

Quality attributes such as information services have a tendency to have a weak or no relationship with most technical requirements, but have a strong relationship with the technical requirements of formulation and composition and packaging. The information service attribute has a strong relationship with the technical response of formulation and composition as well as packaging because it can make packaging more attractive to consumers, for example having formulation and ingredient composition information on packaging and packaging that provides clear information about business contacts. The availability of products has a strong relationship with requirements such as raw materials, locks, and packaging. According to Parassih & Susanto (2020), visual design of packaging and labeling, including composition information and nutritional value claims, affect the purchase intention of food products.

The value of the relationship between technical requirements was obtained from the results of interviews and discussions with rendang lokan producer Oswari Food. In addition to the matrix of the interaction of consumer interests with technical parameters, an analysis of possible conflicts between technical parameters is also made. These technical parameters can be used to find out the technical things that are interconnected and to know how strongly they influence each other. The interaction matrix between technical parameters is found on the roof of a quality house.

This matrix is also known as the trade off matrix, it helps to know more conflicts that may occur and as much as possible to take the most optimal conditions to produce a product with the desired characteristics. The relationship between technical parameters is expressed by the symbol. Assessment of the relationship between technical requirements based on considerations of the current production process as well as the weaknesses and advantages of the current rendang lokan. This assessment is carried out to find out what technical matters are interrelated.

Based on the calculations in the House of Quality (HOQ) matrix, it is necessary to improve the quality attributes on product packaging, in order to increase consumer satisfaction with rendang lokan products. Packaging that has an attractive, hygienic, practical design, provides complete information on the product, and makes it easy to store. Producers are also expected to maintain the performance of taste, aroma, and shelf life quality attributes because these quality attributes already have a high satisfaction value.

Technical priorities are based on absolute values, relative values, and priority sequences for each element of the rendang lokan production process. The absolute value reflects the level of importance of each element in the production process. The formulation and composition have the highest absolute value of 266.89, which means that this element is the most important to pay attention to in the production process. The element of separation of lokan meat from the shell has the lowest absolute value of 51.31, so this element is considered to have a lower priority than other elements. The relative value is the normalization of the absolute value, with an overall total of 1. The

formulation and composition have the highest relative value of 0.1700, which means that it has the largest contribution of the other elements. On the other hand, the element of separation of the lokan meat from the shell becomes the lowest element, which is 0.0327. The order of priority is determined based on the relative values from the highest to the lowest. Formulation and composition, raw materials for lokan, and packaging are the three elements that are the highest priority due to their significant contribution to the success of the rendang lokan production process. Meanwhile, elements such as the separation of the lokan meat from the shell and the boiling of the lokan get a lower priority due to their relatively small impact. Overall, this analysis shows that the focus of improvement should be directed to the elements with the greatest contribution such as formulation and composition, raw materials, and packaging. The goal of focusing improvements on elements that have a great contribution is to ensure a significant improvement in quality. Elements with lower priority remain important to pay attention to, but can be noticed after the main element or the element that has a major contribution.

Companies can do various ways to make improvements ranging from improving existing systems in the company, improving product quality, improving the ability of human resources and others that can provide added value. The way to add value to products is to minimize or eliminate waste in the production process. Eliminating waste during the production process can achieve or meet the added value desired by consumers with few resources (Komariah, 2022).

Conclusion

Conclusions that can be drawn based on the results of the research are 10 attributes that consumers expect in purchasing rendang lokan products consisting of taste, packaging, information services, product availability, price, texture, shelf life, aroma, lokan size, and color. The level of importance of the 10 quality attributes is in taste and the lowest level of importance is found in the color quality attribute. Meanwhile, at the level of consumer satisfaction, for the quality attribute that gets the highest value, namely taste, and for the attribute that gets the lowest value, namely the information service quality attribute. The priority of improvement in quality attributes that need to be considered is based on the House of Quality (HOQ) matrix on Oswari Food's rendang lokan products, namely packaging, information services, and prices. Meanwhile, in the technical requirements, the priority of improvement that has the highest value is formulation and composition, raw materials, and packaging.

Based on the calculations in the House of Quality (HOQ) matrix, it is necessary to improve the quality attributes on product packaging, in order to increase consumer satisfaction with rendang lokan products. Packaging that has an attractive, hygienic, practical design, provides complete information on the product, and makes it easy to store. Producers are also expected to maintain the performance of taste, aroma, and shelf life quality attributes because these quality attributes already have a high satisfaction value.

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