

Analysis of Quality Management in Improving Competitiveness in Sustainable Pottery Businesses

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ABSTRACT

This study aims to analyze the implementation of quality management in improving competitiveness at Tembikar Lestari. Using descriptive qualitative methods, this research explores how the management of raw materials, production techniques, and marketing strategies impact the competitiveness of pottery products. The results show that the use of local quality raw materials, the application of rotary production techniques, and the adaptation of modern and traditional technologies in the firing process synergistically improve product quality. Marketing strategies through MSME bazaar participation and social media promotion proved effective in expanding the market to various regions in North Sumatra, Aceh and Riau. Word-of-mouth and social media effects also play an important role in increasing consumer buying interest. The main obstacle faced is the limited delivery system, which restricts wider market access. The findings confirm that quality management integrated with marketing strategy is key to building the competitiveness of small and medium-sized enterprises, especially in the creative industry sector.

Keywords: *Competitiveness, Quality Management, Pottery*

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1. INTRODUCTION

In the context of intensifying global competition, pottery businesses in Indonesia need to adopt effective quality management approaches to improve their competitiveness. Pottery, as one of the handicraft products rich in cultural and artistic values, faces challenges in maintaining its quality and relevance in an increasingly competitive market. Therefore, quality management analysis becomes essential to ensure that the products produced not only meet quality standards, but are also able to meet evolving consumer expectations.

Quality management is a systematic approach to improving the quality of products and services through effective management of processes and resources. In the pottery industry, the application of quality management can cover various aspects, from the selection of raw materials, production processes, to customer service. By applying the principles of quality management, potters can identify areas for improvement and develop strategies to increase the efficiency and effectiveness of their operations.

One of the commonly used methods in quality management is Total Quality Management (TQM). TQM focuses on continuous improvement and involves all members of the organization in an effort to achieve customer satisfaction. In the context of pottery businesses, the application of TQM can help artisans to better understand consumer needs and expectations, as well as increase employee involvement in the production process. This not only has an impact on the quality of the final product, but also on employee motivation and job satisfaction.

Previous research shows that the implementation of good quality management can have a positive impact on company performance. For example, a study by Rizky Fathia Della Khoirunisa, et al. (2022) found that companies that implement a comprehensive quality management and quality control system in each of their production activities can minimize the occurrence of interruptions or defective products so that the products



produced can match consumer demand [1]. In addition, research by Tjiptono (2016) emphasizes the importance of quality measurement as a basis for continuous improvement in organizations [2].

On the other hand, sustainable pottery businesses in Indonesia have great potential to grow by applying quality management principles. These enterprises not only focus on producing highquality pottery but also strive to preserve local craft traditions. However, challenges such as limited resources and lack of knowledge about effective quality management practices are still obstacles to the development of the business. Through analyzing quality management in Lestari's pottery business, this research aims to evaluate how the implementation of quality management principles can improve the competitiveness of the business. This research will use a qualitative approach with data collection methods through direct observation, interviews with owners and employees, and document analysis related to the management system implemented.

The results of this study are expected to provide insight into the key factors that influence the successful implementation of quality management in the handicraft sector. As well as recommendations for other pottery businesses to improve their product quality and competitiveness in local and international markets.

THEORETICAL OVERVIEW

Pottery

Pottery in the Big Indonesian Dictionary (KBBI) is an item of burnt clay and glazed. According to [3] initially pottery began to be known in Indonesia around 6000 BC which is one of the results of art and human culture that is used as a necessity of life where at that time the men's group was used to farm and hunt. Pottery and pottery are often said to be the same but actually have a slightly different meaning from pottery. Pottery is a container and cooking utensils in the kitchen while pottery is a craft made of clay so that it can be used as a container or form of all art development which includes flower vases, piggy banks, pots, and. So it can be concluded that pottery is part of pottery.

Quality Management

Management consists of two words, namely management and quality. G.R Terry states that management is the framework and process of directing by involving a group towards real and organizational goals [4]. Quality management in the pottery industry includes a set of processes and practices aimed at ensuring that the products produced meet certain quality standards. Total Quality Management (TQM) is one approach that is often used to achieve this goal [5]. TQM focuses on continuous improvement in all aspects of an organization, including production processes, product design, and customer service [6]. By applying TQM principles, potters can improve the quality of their products, reduce defects, and increase customer satisfaction.

One important aspect of quality management is process control. In pottery production, this means monitoring every stage of production from raw material selection to firing and finishing processes. Strict quality control can help identify problems early in the production process, thereby reducing the risk of defective products reaching the consumer [7]. In addition, employee training is also an integral part of quality management. Well-trained employees will be better able to produce high-quality products and understand the importance of maintaining quality standards.

Competitiveness

Competitiveness is the ability of a country, company, or product to compete in the global market by offering better value than competitors. According to Porter (1990), a country's competitiveness is determined by four main factors that are interrelated in the Competitiveness Diamond model, namely production factors, demand conditions, related and supporting industries, and corporate strategy [8]. One of the key aspects of competitiveness is innovation. A study by Timothy (2023) shows that innovation contributes significantly to the improvement of industrial competitiveness in Indonesia [9]. Innovation is not only limited to new products but also includes more efficient production processes and innovative business models [10].

In addition, the quality of human resources also plays an important role in improving competitiveness. According to research by Indrawati and Kuncoro (2021), skills development and higher education can increase productivity and competitiveness in the industrial sector [11]. Another important factor is infrastructure. Good infrastructure supports companies' operational efficiency and facilitates access to markets. In the Indonesian context, infrastructure development is one of the priorities to improve national competitiveness. Competitiveness is also influenced by government policies. Policies that support industrial development, protection of intellectual property rights, and regulations that facilitate business can create a conducive environment for business growth. According to research by Acheampong (2023), pro-business government policies can significantly improve the competitiveness of the industrial sector in Indonesia [12].

2. RESEARCH METHODOLOGY

The method used in this research is a qualitative approach to gain knowledge and understanding of the quality management strategies used to improve competitiveness in sustainable pottery businesses in Tanjung Morawa. Data collection was carried out by conducting documentation, observation to the sustainable pottery business and direct interviews at the pottery maker by the owner of the sustainable pottery business, Mr. Irwansyah Sembiring. Data obtained from observations, interviews, and documentation will be analyzed descriptively. The analysis is done by identifying the main themes that emerge from the data, and linking them with relevant quality management theories. The results of the analysis will be used to answer the research question of how quality management can improve the competitiveness of Tembikar Lestari's business.

3. RESEARCH RESULT

History of Business Establishment

Pottery began to be known in Indonesia around 6000 BC in prehistoric times which is one of the results of human art and culture that is used as a necessity of life which at that time in the male group, which is used for farming and hunting. One of the pottery businesses in Deli Serdang that we chose as the object of research is Tembikar Lestari which is located on Jl. Medan-Tanjung Morawa km: 12.5 no. 27, Bangun Sari Village Kec. Tanjung Morawa, Medan, Indonesia. Tembikar Lestari sells various types of crafts such as kitchen utensils, jars, flower pots, etc. The business was established in 2004 founded by Mr. Abdul Malik Sembiring who passed on to his son, Mr. Irwansyah Sembiring, who runs and manages the business until now who is the source of our research. The business began to be continued and run by Mr. Irwan and his wife in 2008 by employing 15 workers. In 2018 to 2019, it experienced a decline until at the beginning of Covid-19, this business experienced a significant increase by obtaining a turnover of 30-40 million per month due to the large demand for flower pots, which was caused by the lockdown policy by the government so that people were looking for activities that could be done at home, one of which was planting flowers. The increase in business did not last long in 2021 until now, which only has 3 workers with a turnover of around 5 million per month.

Production Process

Pottery uses clay as the main raw material. Based on information, in the Tembikar Lestari business the clay which is the raw material is obtained from suppliers in the Lubuk Pakam area. This business received assistance from the government in 2013 in the form of machinery, socialization, and capital that can increase production and sales. Tembikar Lestari maintains product quality by always striving for the best from the selection of raw materials to manufacture. The informant said that the technique used by sustainable pottery is the rotary technique. Meanwhile, the manufacture of ceramics uses many techniques such as slab technique, twisting technique, molding technique, and massage technique. The process of making raw materials is ground and then formed, then dried or dried in the sun which takes one week. Then it is processed to firing in 8 hours using a traditional furnace (using firewood) with a temperature of 700-800 degrees Celsius with a capacity of 60 pieces. With the help of the government, Tembikar Lestari has a modern furnace (using gas) with a temperature of 1000- 1300 degrees Celsius. Burning is done from day to night. For the selection of motifs, inspiration is obtained from thoughts and special art motif books.

Efforts to Improve Competitiveness

The most popular products from Tembikar Lestari are decorative jars. The biggest markets for this pottery are in North Sumatra, Aceh and Riau. Based on the information stated by Mr. Irwan, apart from word-of-mouth, the promotion and marketing carried out to be able to compete with other competitors is by conducting UMKM bazaars at events organized by the local government. Because according to him, even though few people make purchases, it can make the public aware so that the market share becomes wider. In addition, the promotion carried out by this business utilizes social media such as Facebook, Instagram, and Google Business and it is not uncommon for him to attend socialization events about the handicraft business he is engaged in ranging from attending in schools to increase student creativity to seminars held by the local government. According to him, the clear impact on purchasing interest itself is through word of mouth of consumers who influence other consumers to buy because it is by word of mouth that consumers think the quality of the product is guaranteed.

However, Tembikar Lestari is constrained in the delivery process, so when there are buyers from social media, it is advisable to come and pick up directly to the location.

Discussion

Based on the results of the interview, Tembikar Lestari has implemented TQM theory in practice. Where Tembikar Lestari makes customer satisfaction a goal in its business by selecting quality raw materials, workers who have good skills, and a gradual process. However, we also found shortcomings in Tembikar Lestari, namely the lack of innovation in producing products. Innovation is needed so that consumers are attracted by the many variations and can compete with competitors. To increase innovation, Tembikar Lestari can work with local artists or designers to create diverse products. In addition, Tembikar Lestari can build better branding on social media so that it can attract more consumers and reach a wider market segment.

Tembikar Lestari uses clay as the main raw material obtained from suppliers in the Lubuk Pakam area. The choice of local raw materials provides two advantages: quality that can be guaranteed and cost and time efficiency that can be achieved due to geographical proximity. By sourcing local raw materials, Tembikar Lestari can guarantee a consistent supply to support production without being affected by instability in supply from outside. The use of quality raw materials also increases the durability of the products produced, in line with quality management principles that emphasize the importance of material quality in improving competitiveness.

The rotary technique used by Tembikar Lestari in pottery making provides its own uniqueness compared to other techniques such as slab, twisting, molding, or massage that are prevalent in ceramic crafts. The turning technique requires special skills and gives a deeper artistic touch to each product produced. This technique, although it takes longer, produces products that have special characteristics that can attract the attention of consumers who want quality and uniqueness. This is also in accordance with the concept of product differentiation competitiveness proposed by [8], where competitiveness can be obtained by producing products that are different from competitors.

Tembikar Lestari's pottery firing process combines traditional kilns (using firewood) and modern kilns (using gas). This combination shows flexibility in facing production challenges and is a form of adaptation to technological assistance provided by the government. The modern stoves allow products to be fired at higher temperatures (1000-1300°C) resulting in stronger and more durable products, in line with high quality standards. Improving product quality through this technology strengthens Tembikar Lestari's competitiveness in the market, supporting the findings of De Meyer and Utterback (1988) that technological adaptation in production can accelerate the development of product competitiveness.

To increase visibility and competitiveness, Tembikar Lestari promotes through participation in government-organized MSME bazaars and utilizes social media such as Facebook, Instagram, and Google Business. This promotional strategy enabled Tembikar Lestari to expand its market share to regions such as North Sumatra, Aceh, and Riau. In addition, involvement in socialization events at schools and local seminars provides the added benefit of increasing public awareness of local products while educating about the traditional pottery process. This finding is in line with the views of [13] which emphasizes the importance of diverse marketing channels to expand reach and increase competitiveness through strong brand awareness.

Despite having good product quality and effective promotional strategies, Tembikar Lestari still faces obstacles in delivering products to consumers located outside the region. The absence of an efficient delivery system requires buyers to pick up the products directly on site, potentially limiting market reach and reducing consumer appeal beyond the local area. This challenge shows that logistics is still an important factor that needs to be improved to strengthen overall competitiveness.

4. CONCLUSION

After Tembikar Lestari has implemented TQM theory in practice. Where Tembikar Lestari makes customer satisfaction a goal in its business by selecting quality raw materials, workers who have good skills, and a gradual process. The implementation of quality management through quality control of raw materials, technological adaptation, marketing strategies, and the power of word-of-mouth has succeeded in increasing the competitiveness of Tembikar Lestari products in the local market. The main challenge still faced is limited product delivery, which if overcome could further expand the competitiveness and increase Tembikar Lestari's market share. In addition, innovation is needed in the production of this pottery craft in order to continue to compete in the industry. This research confirms the importance of integrating quality management and marketing strategies in building competitiveness for small and medium enterprises in the creative industry sector.

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