

Quality Function Deployment Analysis on the Marketing of Traditional Fabric

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Abstract: *The fierce competition in the marketing of traditional fabric products requires a research for product development and marketing improvement to accelerate the time-to-market of local products. Nowadays, the government has begun exploration to market traditional fabrics, but the result in product sales is not significant. This study aimed to analyze the traditional fabric marketing with by using the Quality Function Deployment (QFD) method. The sample studied was 100 respondents, namely consumers of traditional fabric products. The results of the analysis suggest a sequence of steps to improve MSME product marketing is by developing product designs routinely, developing product variations and innovations, taking part in national-level exhibitions, lowering prices according to the market, providing technical training to workers, improving company management capabilities, building good relations with government, design effective production processes, find investors, and follow the development of the banking business. The improvement steps are expected to be carried out optimally. The limitation of this research is that it does not implement the suggested improvements.*

Keywords: Marketing strategy, QFD, Survey, Traditional fabric

1. Introduction

The business competition nowadays demands the companies to survive by producing good quality products that meet consumers' need and expectation. Business strategies can be broadly interpreted as deep creations maintain compatibility between commercial businesses and its environment [1]. A research is needed so that companies can create products that are in accordance with the consumers' need and then market the product effectively. According to Lamb et al. [2], there are four steps to marketing strategies in designing and managing markets, namely analysis, planning, implementation and management. Furthermore, Kotler and Armstrong [3] explained that marketers will be successful if they implement a consumer-oriented marketing strategy, where considerations are made from the customer's perspective first, then build 4P to develop their business. The difference between objective and subjective business performance measures are influenced by human element. However, the most objective step regarding financial data, and financial approval information can be constructed subjectively [4].

Traditional fabrics are one of handicraft products that has meanings, historical value, and represent the local wisdom of various regions in Indonesia. Several types of traditional fabric products in Indonesia are including batik, ikat, ulos, songket, silk, sasirangan, tapis, and others. These products are cultural heritages that must be preserved. Considering the current competition in the textile market, traditional fabric products tend to be less competitive than today's fabric products. Thus, the government began to develop traditional fabric products to be marketed in a modern concept. Efforts that have been made by the government are holding exhibitions, and designing products made from traditional fabrics, such as shoes, bags, accessories and others. So far, these attempts have not had a significant impact on the sales of traditional fabric products.

In addition to intense business competition, the number of competitors is also increased continuously. This requires the

development of new products that can accelerate the time-to-market of a product. One of the common methods for organizing product development is the Quality Function Deployment (QFD). QFD method is a systematic translation of the product desired by consumers using the voice of the customer into a real product. The results of QFD analysis can be valuable suggestions for companies to develop the business.

The Quality Function Deployment is an adaptation of several tools used in Total Quality Management. The QFD is a method for encouraging team members of product development to communicate more effectively with other members using a complex set of data. QFD can reduce the time of product design up to 40% and reduce product design costs up to 60%. This can be realized as QFD improves the accuracy of communication between the teams of product development [5].

According to Benner et al. [5], the advantages of using the QFD method are:

- 1) Help companies make key trade-offs between what consumers want and how they create the product.
- 2) Improve effective communication between divisions within the company and improve team work.
- 3) Increase consumer satisfaction by including the desires of consumers in the product development process.
- 4) Present all the data needed for good product development and the development team can read quickly when additional data is needed during the process.
 - 5) Shortening the time-to-market of a new product.
 - 6) Companies that use the philosophy of Total Quality Management (TQM) will always prioritize customer satisfaction. A key component in TQM is adopting tools to assist the creative thinking and problem solving. The device is not physical equipment such as a computer with various software, but rather than a method that connects data to one another and encourages more effective communication between team members. Quality Function Deployment (QFD) is used to support and implement the TQM

philosophy. QFD is used in various plans, where all team members can take decisions systematically to prioritize responses to specific goals. QFD is used to improve the planning process, overcome problems in a team, and assist in making improvements to the organizational culture. An effective marketing policy must be based on the TQM principle and focus on the customer so that it can continuously meet customer needs and expectations.

QFD is a tool for implementing the TQM and quality improvement programs. The QFD method has several stages of planning and development formulated in a matrix [4]. The matrix includes:

- a) The matrix of product planning (House of Quality/HOQ), or better known as the first house R1. This describes customer needs, technical requirements, co-relationships, relationships, customer competitive evaluations, competitive technical assessments, and targets.
- b) The matrix of design deployment, or better known as the second house (R2), which is a matrix to identify designs that are critical to product development.
- c) The matrix of process planning, or better known as the third house (R3). This is a matrix to identify the development process of making a product.
- d) The matrix of production planning, or better known as the fourth house (R4). This matrix describes the actions that need to be taken in improving the production of a product.
- e) The most important element in QFD is the information from customers. Information from customers can be grouped into two categories, namely feedback and review. Feedback is usually obtained after the fact occurs, or after a product has been developed, produced and priced. On the other hand, review is obtained before the fact occurs, in the manufacturing environment, this means during product development.

A research on marketing strategies to increase sales applies two strategies steps, namely short-term and long-term strategies. This short-term strategy can consist of program promotion, supervision of management, improvement of workers' abilities, establishing good relations with consumers, one of which is in the form of bonuses. While the long-term strategy consists of innovation efforts. According to research results in 2004 stated that market orientation is a important component of business performance and offerings approval of implementation approval marketing concept [4].

Traditional fabric is the result of traditionally produced by human hand skills. This is one of Indonesia's cultural arts, where each region has fabric products with a variety of motives and ways of making them. The traditional fabric has a meaning, value, and history, which characterize each region. This product is one of the nation's cultures that is always preserved. the basic of strategy is carrying out of activities in order to achieve the goals which is targeted by the company. The company strategies uses to maintain business focused on business growth. This term in line with the development of traditional fabric business which is one of the small and medium enterprise that has the potential to be developed, because yearly the bussiness has increased

and be able to breach the international market. According to elaboration above, this study aimed used Quality Function Deployment (QFD) method to analyze the traditional fabric products and marketing from consumers' point of view.

2. Method

This research used a descriptive method to identify the variables related to the marketing strategy for the traditional fabric products. QFD analysis was used to systematically identify the factors of the marketing in order to develop the strategies to increase product sales. The sample studied was 100 respondents, namely the traditional cloth consumers. The sampling technique used is simple random sampling, where members of the population are chosen randomly as respondents without regard to certain factors. Primary data were collected using a questionnaire consisting of 28 question items with 4 answer choices; Strongly agree (4), agree (3), slightly agree (2), and disagree (1).

3. Result

Quality Function Deployment (QFD) is a method used to concept the product development or service improvement of a company by involving customers. The following sections are the results of the Quality Function Deployment (QFD) analysis regarding the factors that can influence the increase in sales of traditional fabrics.

3.1 Matrix of What's (Customer needs)

The first step in QFD analysis is to input all the service attributes in the matrix of What's, regarding the customer needs. There are 10 attributes which leads to the priority on the skill of human resources. These attributes are shown in table 1.

Table 1: Matrix of What's

No.	How/Technical Response Whats Customer Needs
1.	The skill of human resources
2.	Access to the government market
3.	Product variance
4.	Product price
5.	Debt-to-capital ratio
6.	Business "Return" capability
7.	Marketing opportunity
8.	Human resources development
9.	Condition of national banking
10.	Product delivery

3.2 Customer Importance

Customer Importance contains the level of expectations of the attributes that are desired by the consumers. Priority score on the product variant was 2.81. The scores of the attributes were obtained by calculating the average of attribute value.

Table 2: Importance of What's

No.	How/Technical Response Whats Customer Needs	Importance of the WHATs
1.	The skill of human resources	2.58
2.	Access to the government market	2.57
3.	Product variance	2.81
4.	Product price	2.37
5.	Debt-to-capital ratio	2.5
6.	Business "Return" capability	2.58
7.	Marketing opportunity	2.58
8.	Human resources development	2.7
9.	Condition of national banking	2.27
10.	Product delivery	2.26

3.3 Matrix How's (Technical Response)

This stage aims to determine the technical response in the form of Matrix of How's, which is how the company increase the product sales. Data were obtained by conducting Focus Group Discussions with experts and workers. Technical responses can be seen in table 3.

Table 3: Matrix of How's (The quality Function Development)

No.	Whats Customer Needs How/Technical Response
1.	Provide more frequent technical training and improve the ability of workers to be more qualified.
2.	Consider lowering prices to reach all market segments.
3.	Routinely develop new designs, variations and innovations in accordance with the trends.
4.	Maintain good relationships with relevant government agencies.
5.	Maintain the company's financial stability and find investors.
6.	Participate in national-level exhibitions and develop promotions and sales via the internet.
7.	Design an effective production process to finish all the productions punctually.
8.	Conduct workshops to improve the competence and expertise of workers.
9.	Following the development of the banking business.
10.	Improve management's ability to develop the company.

3.4 Correlation Matrix

Correlation Matrix is used to identify the correlation of synergies or compromises between the corrective steps listed in HOW. Data obtained by conducting Focus Group Discussions with experts and workers.

3.5 Relationship Matrix

At this stage, the level of association between WHAT and HOW is identified and grouped in the Strong, Moderate or Weak categories. Data were obtained by conducting Focus Group Discussions with experts and workers. The following steps are the sequence of efforts that the company needs to do to increase the product sales.

- 1) Routinely develop new designs, variations and innovations in accordance with the trends. (17.4)
- 2) Participate in national-level exhibitions and develop promotions and sales via the internet. (17.3)

- 3) Consider lowering prices to reach all market segments. (11.2)
- 4) Provide more frequent technical training and improve the ability of workers to be more qualified. (9.8)
- 5) Conduct workshops to improve the competence and expertise of workers. (9.0)
- 6) Improve management's ability to develop the company. (8.4)
- 7) Maintain good relationships with relevant government agencies. (7.6)
- 8) Design an effective production process to finish all the productions punctually. (7.0)
- 9) Maintain the company's financial stability and find investors. (6.8)
- 10) Following the development of the banking business. (5.6)

4. Conclusion

The steps to increase the sales of traditional fabric products, sequentially from the top priority to the bottom, are develop the product design regularly, develop new product variations and innovations based on the trends, participate in the national-level exhibitions and conduct promotions and sales via the internet, consider lowering the product price to reach all market segments, conduct training regularly and intensively to improve the skill of the workers. The improvement step is expected to be carried out optimally. The limitation of this research is that it does not implement the suggested improvements.

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