SME CLUSTER DEVELOPMENT: A VIEW FROM STAKEHOLDER'S AND CUSTOMERS' PERSPECTIVE

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Abstract: *SME growth is the one of the determinants in economic development. Its existence has been proven by its resilience, even in times of crisis, as well as financial crisis. By this reason, every nation pays more attention in ways of finding each potential regional product/industry and its sustainability industry development so GDP can be increased. This research applies the integration of stakeholders' perception and customers' perspective in developing SME cluster using QFD method. It begins with developing attributes for setting up the House of Quality matrix from stakeholders' perception. The attributes from stakeholders' perception cover four major areas: infrastructure, product, human resources, and marketing. The second step is developing an evaluation based on customers' perspective. A case study was performed at one of the creative cities in East Java, namely Sidoarjo. Specifically, SME cluster in shoes and sandals sector was selected because these products are one of the highly developed sectors in Sidoarjo. The finding shows that product is the main factor that needs to be improved for the SME cluster. This paper also proposes policy directions for cluster development of SME.*

Keywords: *Stakeholders' Perception; Customers' Perspective; Quality Function Deployment; House of Quality; SME Cluster Development*

INTRODUCTION

We are now facing a global organizational competition; nevertheless it does not mean that only large scale enterprises are able to survive and compete in it, but also the small and medium enterprises (SMEs). The key point is how well the enterprise is managed. Besides the management aspects, identification of the regional potentials needs more attention by the government. Furthermore, by identifying and optimizing regional potentials, it will contribute directly to the increasing of GDP. Regarding those issues, SMEs have been proven to play a vital role in national economic growth and equitable development in developing countries. SMEs provide many jobs and play critical roles in local development in many countries.

SMEs are becoming important not only in developing countries but also in developed countries as many innovative SMEs grow and become the prime source of national economic growth. However, as cited by UNESCAP Consultant et al. ([11]), only a small number of SMEs can respond to such environmental changes and do not have such innovation capabilities. They are even left behind in these global and technological changes.

SMEs sector (small and medium enterprises) currently plays an important role in Indonesian economy. Inspite of Indonesia's economy's sluggishness due to the impact of economic crisis, SMEs still exists and were even able to support millions of victims of job losses due to the collapse of the industries which they worked in. In the 1998 recession, a survey by the Indonesian Ministry of Economy had shown that 64 percent of SMEs in Indonesia were able to maintain their revenue, and 31 percent was less in their sales. SMEs were also able to absorb 79 million workers, greater than large scale industries that only able to absorb 423,733 workers. One of the strengths of the SMEs is that most of the enterprises are entrenched in every element in society, they can stimulate the workers to produce good products, and sometimes they are also based on their regional cultural identity ([10]). On the other side, SMEs are facing another challenge from the outside, which is the ASEAN-China Free Trade Area (ACFTA) 2010. It means that all products from ASEAN and China, with various qualities and prices, are possible and allowed to enter and compete with markets of Indonesia. This condition, absolutely, requires the seriousness and unity of stakeholders in formulating the strategy in business development. The failure of competition will affect not only the SME, but also the supporting industries even threaten to stop their production activities.

Being aware of the strengths and challenges of SMEs sectors, various development programs undertaken by the government and private sectors are continue to be encouraged. In addition, the studies related to SMEs development strategy is also an interesting issue, even in the international level, and those studies have been published in many books, proceedings, and international journals. In the context of SMEs in Indonesia, many studies actually reveal the general conclusion that the key issues of approximately four millions SMEs in general lie in their powerlessness to survive, grow, and sustainably develop in the various levels of competition, nationally, and especially in the international level ([12]). Realizing it, various efforts to create and develop competitive advantages of the region are also continually conducted by enterprises, as well as by the government, in order to generate new approaches in the SMEs, particularly SMEs cluster development.

One of the SMEs clusters, which are well developed in East Java Indonesia, especially in the Sidoarjo city, is in the Wedoro and Tanggulangin areas which focus on shoes and sandals products, even their existence has become a tourist destination market and "a trademark" of the city. Furthermore, their products are very successful in national market, even it could reach the overseas buyers. Thus, it also raised the economic value of these areas indirectly. Unfortunately, the business development is not accompanied with the ability to analyze the market and its threats continually, so now it started to experience a decrease in product sales, especially in the Wedoro area. Hundreds of families living around the area rely their revenues on the job as salesmen and craftsmen of shoes and sandals products, so that a decrease in orders and visitors will directly affect the welfare of local communities. This study examined the quality function deployment (QFD) in determining attributes which are needed in SME cluster development, particularly in shoes and sandals products in Sidoarjo, from the view of stakeholders, as well as customers. Finally, the study proposed policy irections for cluster development of SME.

LITERATURE REVIEW

SME Cluster

The term "cluster" of the SMEs is a subject with a broad sense. Markusen, for instance, as cited by Shahid Yusuf ([13]), has classified clusters into four categories: marshallian, hub and spoke, satellite platform, and state anchored. Others have described them as competitive, strategic, emerging, potential, and mature. Nevertheless, Porter ([9]) has a clear and popular definition about cluster, he defined cluster as "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also co-operate" and as "a form of network that occurs within a geographic location, in which the proximity of firms and institutions ensures certain forms of commonality and increases the frequency and impact of interactions." It, however, can be used also in the context of SMEs cluster.

As cited by Schmitz and Syloz Labini ([8]), the worldwide empirical evidence has showed that SMEs are not individually successful, but flourish by working together. They combine forces and exploit agglomeration economies that permit them to compete with larger firms in the global market. One of the advantages, especially for entrepreneurs to stay remain in the same area in which they were working and living, as cited in Harrison et al. ([4]), is that it enables them to exploit the knowledge, networks, and reputation that they have acquired in their previous employment. By the time that the imitation stage has been reached, there will also be agglomeration and localization economies which reinforce the economic advantages of remaining local, notably cost-sharing for collective resources, the development of a local labor market for specialized skills, reduced interfirm shipment and transaction costs, and knowledge spillovers, learning and adaptation.

Quality Function Deployment (QFD)

QFD is a structured and practice-based methodology for translating customer requirement into design specifications. It is a powerful tool to ensure proper communication between the client and design team ([2]). An organization that properly utilizing QFD in their product planning and development; can enhance the engineering knowledge of their products or services. It can increase productivity and quality; reduce costs and lead time in product development. The increasing awareness of the importance of meeting customer needs has led to the use of QFD in a variety of other areas. QFD remains an important part of the development processes used for many manufactured goods, but it is also being successfully applied to the development of services, software systems, support systems, organizational structure and strategy ([5]). Furthermore, other studies using QFD analysis have been even conducted to plan and develop the curriculum, for example, in

vocational education ([1]) and Engineering Education ([7]).

The primary matrix to be used in QFD is known as the house of quality (HoQ). It translates the voice of customer into design requirement that meets specific target values and matches those against how an organization will meet those requirements. On the other hand, the house of quality (HoQ) is the matrix of a roadmap for the design process; starting from understanding customer requirements (demanded quality) to establishing priorities of design requirements (quality characteristics) to the requirements .The main components of the house of quality (HoQ) are shown in Figure 1 ([3]).

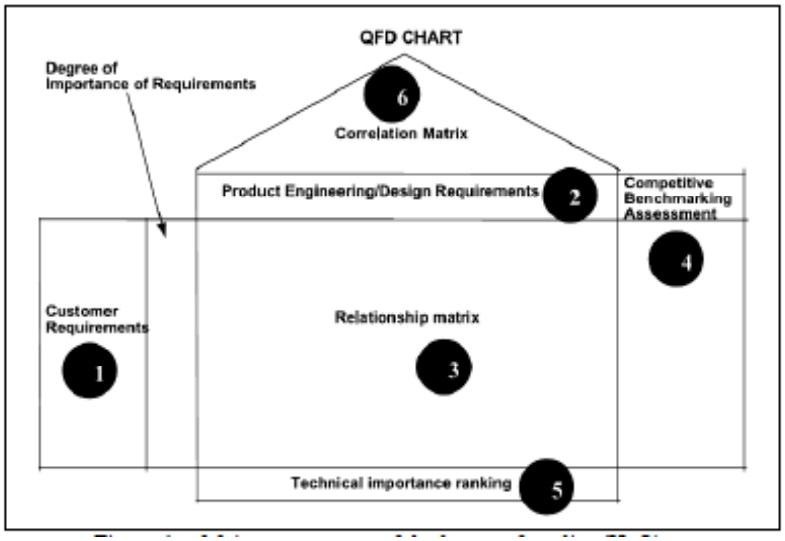

Figure 1. Main components of the house of quality (HoQ)

METHODOLOGY AND RESULTS

Stakeholder's Perception

The research was started by gathering stakeholder's perception of developing the SMEs cluster of shoes and sandals sector. Stakeholders who were involved in this study consist of the representative of craftsmen, traders, association, and the regional governments; that have been very concerned with the development of the SMEs cluster. They were asked to give their own perception of the main attributes of the SMEs cluster development of shoes and sandals sector, and it was done by Delphi method. The result was then summarized and categorized into four main groups, namely: infrastructure, product, human resources, and marketing.

The Importance to Customer Level of the SME Cluster Attributes

The study focused on identifying attributes which are needed to be developed for the SME cluster of shoes and sandals sector in Sidoarjo, specifically Wedoro area. Once the initial result was generated from stakeholder's perception, the questionnaire was then constructed based on the result. Twenty one attributes of SME cluster were identified from the stakeholder's perception. Respondents were classified by two groups, students and workers, based on the assumption that there are different characteristics of the groups. Ulwick, Griffin and Hauser (as cited in Killen et al. [6]) stated that for the qualitative research, the sample needs to be large – research shows that more than 95% of customer outcomes can be identified with around 30 interviews for each major customer type, provided that the respondents are carefully selected.

Using the questionnaire, the study was then continued to find out the important attributes of the SME cluster. A first survey was conducted to 30 respondents. Each respondent was asked to fill out the two-page questionnaire indicating his or her opinion about each attribute on a five-point Likert-type scale with the end points being "strongly unimportant" and "strongly important. The returned questionnaires were initially screened for reliability. Reliability was examined using the Cronbach's alpha values and the result showed that all attributes were reliable. It has the value above 0.70, the acceptable range recommended by the literature. From 21 SME cluster attributes, all were considered as important. From those 21 attributes, 7 (33%) were classified as infrastructure, 9 (43%) were product, 1 (5%) was human resources, and 4 (19%) were marketing.

The Customer and Competitive Satisfaction Performance of the SME Cluster

Having the result that all SME cluster attributes were considered important attributes for customers, the study was continued to find out customers' satisfaction level and expected satisfaction level of the SME cluster. It used a five-point Likert-type scale with the end points being "strongly dissatisfied" and "strongly satisfied". A total of 65 questionnaires were distributed and 57 were returned. Reliability analysis was also employed to the second questionnaire, and the result showed that all attributes were reliable. The Cronbach's alpha values for each category are presented in Table 1.

TABLE I. CRONBACH'S ALPHA VALUES

Category	Alpha
Importance to customer	0.9222
Customer satisfaction performance	0.9291
Competitive satisfaction performance	0.9276
Expected satisfaction performance	0.9564

By measuring the average of importance to customer level for each attribute, the result shows that the top four attributes considered important by customer are in the product group, the highest values are quality and design of products, with values of 4.456 and 4.298 respectively, and the other three attributes has a value above 4. It means that the attributes are can be said as very important to customer. Thus, the main factor which needs to be improved for the SME cluster is the product. The importance to customer level for each group/area, with value above 4 or above "Important Level" (IL), and value above 3 or above "Moderate Important Level" (MIL), is summarized in Table 2. As presented in the figure, infrastructure is also considered an important factor for the SME cluster, then human resources and marketing successively.

TABLE II. IMPORTANCE TO CUSTOMER PROFILE

	Infrastructure	Product	Human Resources	Marketing
IL	57%	55.6%	100%	25%
MIL	43%	44.4%	-	75%

Customer and competitive satisfaction performance also measured using performance weight. From the customer satisfaction performance, the result shows that 52% of the attributes don't meet the customer satisfaction (below the value of 3 or "Somewhat Satisfied" level) and 54% of them are in the product group. Again, it reveals the importance of the product in the development of the SME cluster. Opposite to that, competitive satisfaction performance is quite better than own satisfaction performance, the result shows that only 14% of the attributes don't meet the customer satisfaction.

The Goal

The goal is the performance level of the SME cluster needed to meet customer requirement and expectation. The value of goal is the trade off of customer and competitive satisfaction, importance to customer level, and the ability of the SME cluster to meet the target. By interviewing the stakeholder, we determine that the goal is to meet the performance of competitor. On the other hand, competitive satisfaction performance is the goal of the SME cluster.

The Target of the Design Requirements

The Design requirement here is the technical ability of the SME cluster to meet customer requirement. It is gained by brainstorming with association, who really knows and most of its committee is daily involved in the SME cluster operational. Twelve technical responses are then being agreed as the design requirement. The target is then determined by considering own performance, competitive performance, and the ability of the SME cluster to meet it. It is also approved that the target is based on the competitive performance value.

DISCUSSIONS AND CONCLUSIONS

The results above can be widely discussed, however, to simplify the discussion; several topics which are very important to be taken into consideration in making policy directions for cluster evelopment of the SME have been selected.

Analysis of Importance to Customer and Expected Satisfaction Performance

By comparing two data sets gained from customer, importance to customer level and expected satisfaction performance, it can be seen again what attribute that has a highest value for both importance and expected satisfaction performance. In the context of SME cluster of shoes and sandals sector, the value of quality and design of products occupy the highest value. It can be said that these attributes of the product are very important to customers and they have a high expectation of it. Thus, the craftsmen need to pay more attention to ways to improve their products' quality and design.

Gap Analysis of Customer Satisfaction and Expected Satisfaction Performance

The differences between the customer satisfaction and expected satisfaction performance in each attribute can be analyzed as a gap. The gap is obtained from the mean of expected customer satisfaction performance minus the mean of customer satisfaction performance. The result shows that expected satisfaction performance is higher than customer satisfaction performance, the gap of each attribute lies on the range of -1 to -0.5, the performance is weak (W), and > -1, the performance is very weak (VW). The gap analysis for each group can be seen in Table 3.

TABLE III. GAP ANALYSIS OF CUSTOMER SATISFACTION AND EXPECTED SATISFACTION PERFORMANCE

	Infrastructure	Product	Human Resources	Marketing
W	66.7%	71.5%	100%	50%
VW	33.3%	28.5%	-	50%

In formulating development program, the priorities must be made based on the very weak performance and be focused on those attributes. For instance, in infrastructure, the very weak attributes are road width of SME location center and car parking availability; in product, is product quality; and in marketing, is the new product promotion.

Analysis of the Goal and Expected Satisfaction Performance

The goal has been determined to be the same as the competitive satisfaction performance based on some considerations, especially the ability of the SME cluster to meet the customer requirements. From Figure 2 below, we can see that the goal of each attribute is still below the expected satisfaction performance. It indicates that the SME cluster must improve its performance continually, starting from the product area, since it is the main factor stressed by customer as mentioned in the previous analysis. In order to achieve the expected satisfaction performance, trust and good communication among the stakeholders are needed. It will lead to the development of SME cluster of shoes and sandals sector in Sidoarjo city.

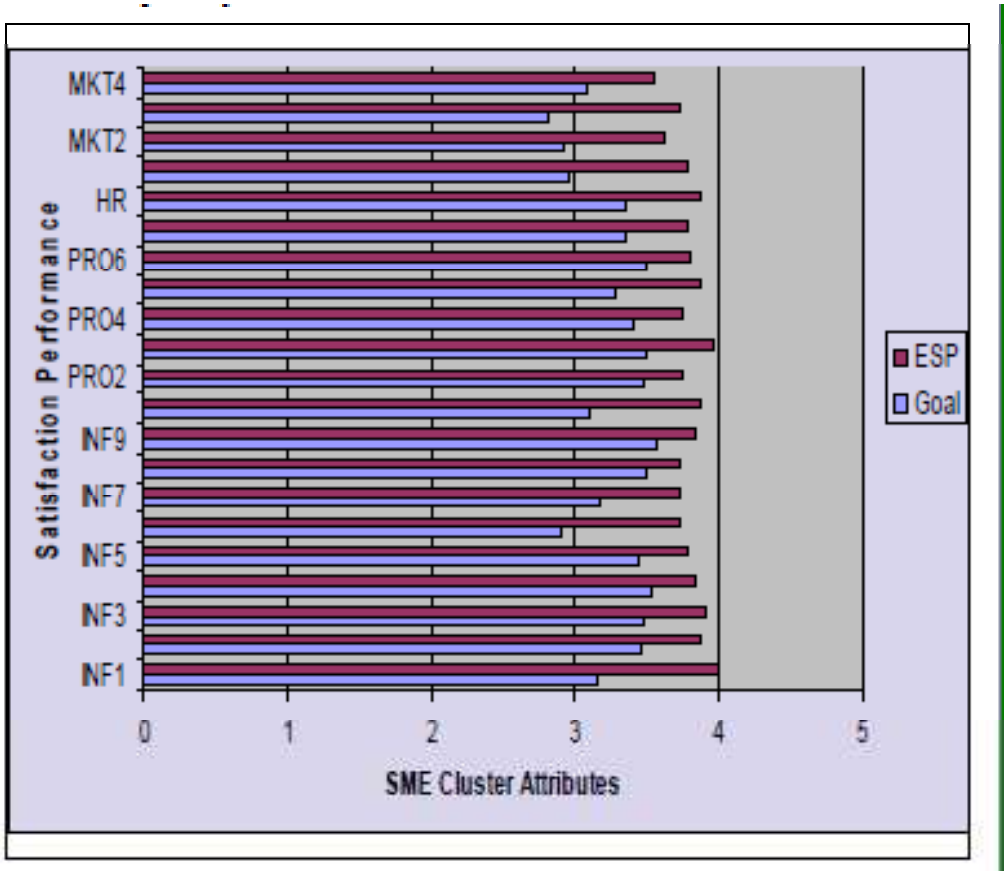

Figure 2. The goal and expected satisfaction performance diagram

Analysis of Design Requirements Contribution Priorities

The contribution priorities calculation is involving the customer requirement, competitive benchmarking assessment, and the relationship matrix. The contribution priorities order shows the design/technical requirements which greatly affect the customer requirements. In other word, the compliance of the highest contribution value of design requirement will improve the customer satisfaction. There are 12 design requirements which are prioritized, and the order is presented in Figure 3.

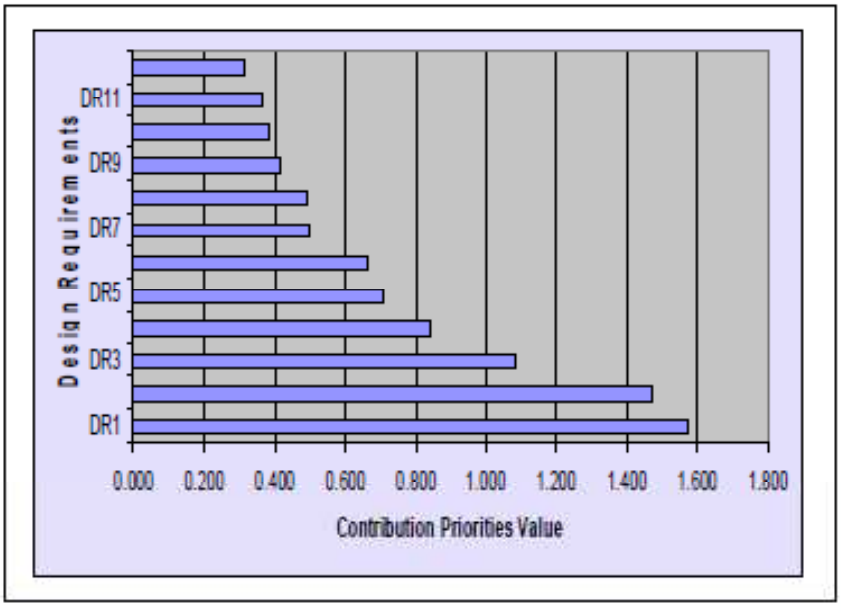

Figure 3. The design requirements contribution priorities diagram

The diagram presented above must be fully considered to project improvement of the SME cluster for the stakeholder inside the cluster, and for the regional government in proposing regional development of Sidoarjo city.

CONCLUSIONS

The QFD tool has been well tested and proven to be quite reliable and robust in translating customer requirements into design specifications. The study also shows that QFD can be applied in the context of SME cluster development of shoes and sandals sector in Sidoarjo city. In creating the attributes in the questionnaire, the stakeholder perceptions are needed due to their concern on the development of the SME cluster. The questionnaires are then distributed to the customers to find out their requirements. The methodology used in this study can strengthen the local cluster as a power to face the global changes. Furthermore, the SMEs will increase employment opportunities through job provisions in communities, which will lead to the regional wealth creation.

By combining stakeholders' and customers' perspectives for setting up the house of quality (HoQ) matrix, the study discovers the attributes which are considered very important to customers and also the technical responses for the SMEs cluster development. The study also proposes policy directions based on the design requirement contribution priorities.

In conclusion, to develop the SME cluster of shoes and sandals in Sidoarjo city, the stakeholders must demonstrate their commitment to develop a core competency of the cluster by doing the programs as follows:

- Product design and development training for the craftsmen
- Physical infrastructure improvement in the SME cluster location
- Business development training, both in technology and sustainability aspects

Finally, given the content presented in this paper, it is emphasized that the SME cluster of shoes and sandals sector in Sidoarjo city still has the strength to compete in global changes. The internal improvements must be done as soon as possible. Thus, this needs commitment from the companies' owners, workers, and also their supporting partners like regional governments, universities, and other institutions. The policy proposed above concerns the internal improvement of the SME cluster. It means that another policy, for instance related to legal and regulatory, and financial aspects, must be addressed to the SME cluster development.

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