

## Organization Development through Value Chain and Technometric Model

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*Abstract* - Strategy of management affects the progress of company in every aspect. Strategy management decides what steps that company must do to achieve the vision and mission and also to keep standing in the industrial competition these days. It is required to identify the company's position in term of advantages and disadvantages to consider the strategically management. Moreover, value chain model can be used to identify the whole process. This research will be done in Small and Medium Enterprise (SME) Yan's CERAMIC Malang, East Java. The advancement of technology can be one of the beneficial aspect to survive, but the use of technology should be precisely correct and balancing with the human resources. By using the technometric model can be assumed, that all of the technology component which are exist in the SME be one of the basic development plan in SME. The result from this research is focus strategy and expansion strategy with considering the vision and mission SME itself, SWOT matrix, value chain model and technometric model.

**Keywords** – **strategic management, technology management, model value chain , model technometric**

### I. INTRODUCTION

Nowadays, there is an increment of industrial competition, indicated by more producer in different area of work. The way which can be done by the producer to still exist in this competition is planning to have a continue management system according to market and company's demand, so that the company able to maintain among the new competitor which have new and modern systems. There is a close relation of good management system and company's demand with company's growth.

Many big competitors such as foreign investor in Indonesia affect local business which is growing more and more. It's only because of lack of equity and experience or non-complex management system, making local business in Indonesia can't compete with the big companies. The most significant difference that we can see is the advance technology and simple organization of management system which are still not but those things require more analysis whether that thing is needed by SME so that can help them to grow and compete with the big company.

There are many SME which don't have a good management system, because the owner contends that the production and sales are more than just enough for the SME [1]. The development of technology of course take a contribution to push the company to always update with new technology or the most powerful technology to become one of value added for the company itself. The basic difference is the lack of knowledge in SME, so it is very difficult to use an advance technology, even the technology can lift up the productivity, efficient and get better quality of product [1].

Management strategy concept which is needed by SME is the main focus for this research, by using Porter's value chain model in 1989 to know the input and output from overall production [2]. With the making of value chain, we can see the position of SME in the process. Also with the measurement technometric, we can find the proportional strategic management which suit for SME as result of value chain. Research objectives:

1. Identified value chain at SME YAN'S CERAMIC, Malang - East Java.
2. Measured technology aspect based on technometric model at SME YAN'S CERAMIC, Malang - East Java.
3. Concluded which strategic management would suit value chain model and result of technometric model at SME YAN'S CERAMIC, Malang - East Java.

### II. METHODOLOGY

The steps of research conducted with the following stages:

1. Preparation of research  
Carried out to identify the problems that appear at SME.
2. Preliminary  
It is part of the background, objectives and formulation of research problems.
3. Literature study  
Doing the collection of literature theories that support research.
4. Data collection and processing  
This stage is when all data being collected based on the research literature and data processing.

5. Analysis  
This stage to discuss the results of data processing associated with the theory contained in the literature.
6. Conclusions and suggestions  
This stage contains the results of the study in accordance with the purpose of research as well as advice for SME and further research.

### III. RESULTS AND REVIEW

Current strategic management is struggling with the current market due to the SME production capacity which not adequate to accept large production capacity. It is also accompanied by a lack of decent technology to increase production capacity, especially the Human Resources (HR) that has minimal knowledge about the technology [3]. The vision and mission of SME itself have not fully carried out, where the vision of the first SME is introducing a ceramic Indonesian products originating from the city of Malang and to absorb employment needs for community at Malang.

Based of the results of the collection strengths, internal weaknesses, external opportunities and threats of SME came out a SWOT analysis as showed in Table 1.

TABLE I  
MATRIX OF STRATEGY

Internal	(Strengths) (S)	(Weakness) (W)
External	Strategy SO	Strategy WO
<b>(Opportunities) (O)</b>	1. Retain SME specialties compared to other ceramics SME	1. Retain and globalize the current market
	2. Maintaining the quality of production and service to consumers	2. Use hi-tech equipment which would improve the quality and quantity of products
	3. Providing job training to improve the quality of human resources	3. Providing job training to improve the quality of human resources
	4. Provide decent compensation to the workers so that workers remain to work in SME	4. Encourage the employees to be more creative
	5. Retaining the value of ceramic art in order not to eliminate its culture.	5. Working with governments to develop ceramics schools
	6. Working with governments to develop ceramics schools	6. Making some overseas marketing to attract interest from foreign sellers.
	7. Making some overseas marketing to attract interest from foreign sellers.	

TABLE I  
MATRIX OF STRATEGY (Continued)

Internal	(Strengths) (S)	(Weakness) (W)
External	Strategy ST	Strategy WT
<b>(Threats) (T)</b>	1. Appropriate compensation to the workers so that workers remain to work in SME	1. Appropriate compensation to the workers so that workers remain to work in SME
	2. Retaining the value of ceramic art in order not to eliminate the culture of ceramics	2. Retaining the market and also try other, more global markets and wider
	3. Add to the cultural diversity of Indonesia into the ceramic design as typical	3. Buying technology is expected to assist in improving the quality and quantity of products
	4. Giving seminars in order to increase knowledge about the ceramic to the community	4. Providing job training to improve the quality of human resources
	5. Doing marketing more aggressively into the country and also abroad	5. Giving seminars in order to increase knowledge about the ceramic to the community
	6. Retain SME's specialization compared to others	
	7. Maintaining the quality of production and service to consumers	

Result of the process in the value chain is to produce a model of the proposed management strategies that lead SME to its purchased technology with the relevant parties, as it would improve the quality and quantity of SME. This should be accompanied by training to workers so that the workers are ready to use the technology. Making an agreement between SME and delivery, there are usually scrap goods at the time of delivery if there is a written agreement for compensation by the expedition it will reduce the losses incurred SMEs to switch to consumers.

Differentiation strategies can be chosen based on the results of the model at SME for value chain has its own uniqueness in producing ceramic model of small amounts. This makes SME has a sample variance models more than other locals. In term of service SME also have the uniqueness that consumers can consult about the ceramic models to be ordered, as well as timely delivery of goods is also a characteristic of SME.

SME's functional structure will also help in order to focus on developing some areas, such as marketing where currently doing all the marketing process through seminars and exhibitions at SME. Quality standards also need to be improving so the quality of ceramics would be better.

The results of processing technometric model are diagramming that known by THIO technology which

component conditions and circumstances at the time of maximum.

Based on the diagram THIO management strategy technometric mode used component technology which [3] going to be better utilized for better and enhanced where necessary so that the value contribution of the technology components into higher to achieve the vision and mission of SME, thus the need to increase technoware components by purchasing new technology [4][5] or add a device which has the longest production process that uses combustion oven.

Human ware components also need to be improved with training-job training for improving employee's knowledge in terms of technology or general knowledge of ceramics in order to make improvements to the production process or even innovations on the product.

Components can be improved by making standard operations on the production floor can be used for new employee. In additional other employees who have more knowledge of the ceramics also need to be considered, given them who are now old enough to work with the ability of the brain that has been decreasing. This can make the flow of information on the production floor can be useful.

Orgaware components can be enhanced by the presence of a functional division of the organization so that the function can be further improved.

Management strategy is a long-term plan to achieve the vision and mission of an organization. Which need to be considered in determining the strategy of some aspects of the organization in this case is SME. SWOT matrix is used to determine the internal and external situation of SME, in order to adapt to the management strategy by leveraging strengths and opportunities in SME, and also minimize weaknesses and threats. Modeling of value chain is determining that there are processes in SME and SME positions of the various aspects of the present [6], is expected to manufacture this model, management strategy that does cover all aspects of the organization can be more precise. Third is technometric modeling to identify the components of technology, which has become one of the important aspects in the industrial world today.

Strategic management analysis is a strategy generated by the relationship between the management of the resulting strategy is based on value chain analysis and technometric models. There is a close relation of value chain models with models technometric; this can be seen in Figure 1.

From Figure 1 it can be seen that the components contained in the model of techno metric contained in the model of the value chain and closely related. From the relations between the two models, it is a close relationship with the objectives of the management strategy where the goal of making the strategy is to achieve the goals, vision and mission of SME and in order to survive and compete nowadays-competitive industry, as well as the purpose of the technology. Modeling value chain also has a goal to be known more

widely about the current position of SME [6], of course, a good strategy making must consider the overall aspects of SME. The proposed management strategy must be in accordance with the needs and objectives of SME owners, as well as a SWOT analysis of the results must match the value chain model's ability and the ability of the technology components.

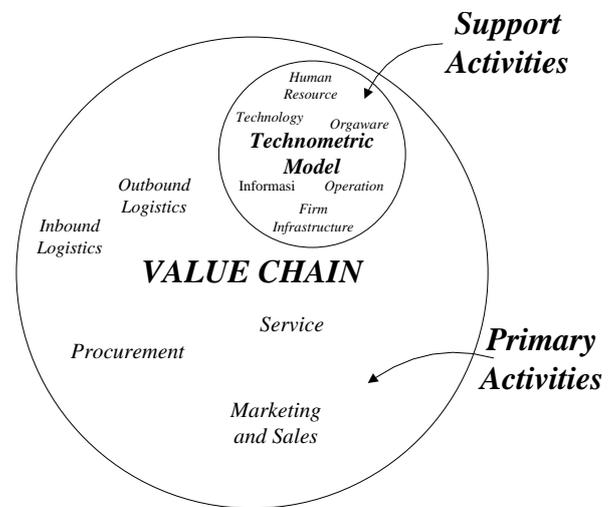


Fig1. Relation between Value Chain Model with Technometric Model

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Based on these explanations, it can be done by combining proposed management strategies based on value chain models and models techno metric, by looking at the components of the two models are the same that the proposed management strategies to develop aspects of both models, rather than being dropped.

Proposed management strategy for SME is divided into two stages: the first focused strategy aims to focus the strategy adopted by SME as a business strategy, the goal is to stay focused on maintaining existing markets to increase revenue. There are two

alternatives that are usually chosen on the focus of the strategy is differentiation and cost advantages. The process-focused strategy also aims to develop the potential of SME in advance to prepare its expansion strategy. The first step is to conduct training for workers to prepare technology development in SME, the second increase in the standard operating and quality standards [4]. The third step is to analyze the appropriate technology tailored to the skill level of employees; the fourth is for the development of market analysis and suggested that at this stage has been split functional, especially for market share. The fourth component relationships supporting the strategic focus can be seen in Figure 2.

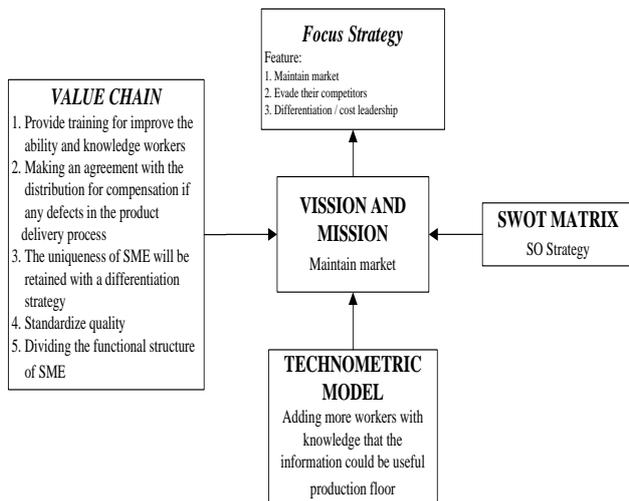


Fig 2. Fourth Component Relationships to Generate Focus Strategy

The second is the expansion strategy that aims to develop the market. The expansion strategy also considered related components between models techno metric and value chain model, which is a core part in this study and also based on the SWOT matrix analysis and vision, mission SME.

The first step in this stage is necessary to increase production capacity also improving the quality of human resources through training. The second step is to conduct more extensive marketing; the third step is to perform the division of responsibility towards the part of structural function not just marketing organization. Relationships four components in the manufacture of expansion strategy can be seen in Figure 3.

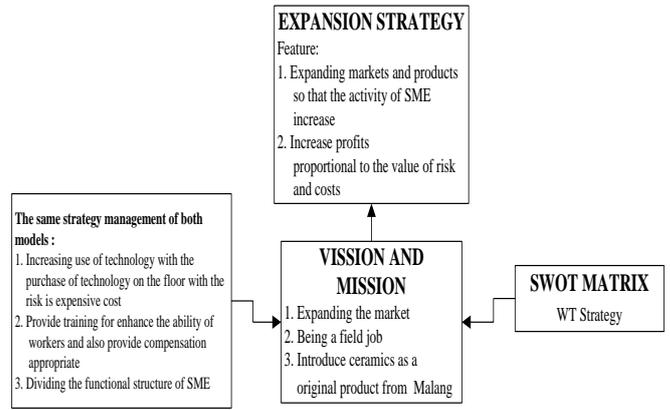


Fig 3. Fourth Component Relationships to Generate Expansion Strategy

#### IV. CONCLUSION

The conclusion of the study is

1. Research can identify the model of the value chain in the SME YAN'S CERAMIC Malang.
2. Research can measure the component technology based on SME techno metric models YAN'S CERAMIC Malang.
3. Proposed strategic management for SME is focused strategies followed by expansion strategy

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