



Value Chain Analysis in Marble Production Process at South Aceh Polytechnic

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ABSTRACT

Potential rocks such as granite and marble are easy to find in mining products in South Aceh. South Aceh granite and marble, which have high quality, provide benefits and have great potential to be developed. Currently, the use of marble is made into various crafts carried out by workshop the South Aceh Polytechnic. Current market competition requires a value-added from a product, so the purpose of this study is to conduct a supply chain analysis in the marble production process at the South Aceh Polytechnic. Increasing value chain to marble products is expected to contribute to business development significantly. This research focused on the plan and source stages. The results found that activities in marble production at the South Aceh Polytechnic lack agreements with third parties as both marble supply agents and cooperation agreements with packaging companies, so the marble handicrafts produced have not produced a product. Ready to compete in the market.

INTRODUCTION

South Aceh Regency has abundant mining potential, one of which is the potential for rocks that can be found spread across various sub-districts of South Aceh such as granite, andesite, marble (Safridatul et al., 2017). Marble is a mining product that comes from limestone that comes from the metamorphosis process or what is meant by an increase in temperature and pressure that occurs in the earth (Fitriadi and Fatahillah, 2017).

Currently, marble from South Aceh is still widely processed as one of the materials in construction. In fact, marble can still be used as a craft product that has added value such as flower pots, ashtrays, stone rencong and so on.

South Aceh Polytechnic created a marble industry workshop as an answer to marble processing. South Aceh Polytechnic produces marble into ceramics and crafts. The results of marble production are distributed in various regions of Aceh (Safridatul, Audah and Bakruddin, 2017).

Along with the increasing market demand for marble craft products, there are obstacles in terms of producing on time and long lead times accepted by consumers, so that improvements need to be made by the South Aceh Polytechnic. One effort that can be made is in the supply chain management process.

Supply Chain Management is the process of planning, implementing and controlling the flow of goods effectively and efficiently, including the processes of transportation, storage, distribution and service (Siahaya, 2012). So that supply chain management can be called a value added activity (Hasibuan et al., 2021). So from this it can be called a value chain.

LITERATURE REVIEW

Value chain is related to the added value that exists in various production activity processes that provide the creation of value for a production so that the product provides more added value (Eisner and Ketchen, 2009). Previous research conducted value chain measurements using descriptive statistics in automotive companies, the results of 9 activities in the automotive production process showed 7 very good activities and 2 moderate activities (Hendri, 2019).

Furthermore, research into the value chain at a minimarket in Central Java found that there was a need to increase competitive advantage by increasing product variations that would make it easier for customers to find the goods they wanted (Pratama and Sholihah, 2021).

Other research is the implementation of value chain and management control to increase competitiveness. The results achieved that found dual functions in the organizational structure so that competitive improvement cannot be done well so that the company carries out new strategies such as labor criteria, machines and increasing product differentiation. So this study aims to conduct a value chain analysis on the marble production process at the South Aceh Polytechnic.

MATERIALS AND METHODS

South Aceh Polytechnic is a company that makes processed marble, the products processed are marble tiles, stone rencong, ashtrays, tombstones and other crafts.





Figure 1. Marble Products

South Aceh Polytechnic produces according to consumer demand, currently the most demand is marble tiles. Currently, the production process at South Aceh Polytechnic in making marble tiles with a size of 60 x 120 cm can produce 64 m² / month. The following is the marble production process at South Aceh Polytechnic.



Figure 2. Marble Production Process

This study focuses on the plan and sources process which are things that must be considered. Currently, the South Aceh Polytechnic has received an order for 952 m² of block tiles that must be worked on. However, the company's production capacity is only 64 m²/month or 15 months of production to meet customer needs.



Figure 3. Marble Stone

RESULTS AND DISCUSSION

The results achieved in the plan process that must be improved according to the value chain are as follows:

1. Carrying out the raw material screening process according to the criteria determined by the South Aceh Polytechnic.
2. Cooperating with wood makers to make crates or packaging for the marble products produced.
3. South Aceh Polytechnic cooperates with Stone Care Indonesia in procuring supporting materials and marble production equipment.
4. South Aceh Polytechnic cooperates with third parties in renting forklifts, lathe eye welding and so on.



The results of the plan process are in accordance with previous research conducted in the planning of supply chain management in the company, the results of which are that the company cooperates with predetermined criteria such as quality, price, credibility and so on (Sumarauw et al., 2014). The results achieved in the sources process that must be improved in accordance with the value chain are as follows:

1. Currently, the South Aceh Polytechnic has semi-automatic technology such as single cutting machines, chain cranes, and polishing machines. As well as other manual machines so that in order to close the production process, additional machines are needed in order to achieve the predetermined target.
2. The workers owned by the South Aceh Polytechnic have 4 workers, this requires recruitment of additional workers to increase productivity.

These results are supported by previous research in conducting supply chain management and value chain analysis on Lubricating Oil production. The review given is by inventing the use of semi-automatic machines or using full automation in increasing lubricating oil production (Hendri, 2021).

CONCLUSION

The conclusion reached in the marble production process at the South Aceh Polytechnic which is focused on 2 activities, namely Plan and Sources, is by establishing a cooperative relationship with a third party for marble raw materials supplied to the South Aceh Polytechnic and for Sources activities in completing market demand which takes 15 months, additional machines are needed to meet customer demand.

RECOMMENDATIONS

South Aceh Polytechnic can focus on market targets by collaborating with other parties and providing machine investment and increasing the number of workers to meet consumer demand.

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