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ANALYSIS OF PRODUCTION OPTIMIZATION STRATEGY TO INCREASE THE CAPACITY OF KAMUMU KIMPUL CHIPS AT UD. SONA GUNUNGSITOLI IDANOI

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Abstract

The fast food industry continues to grow as the public's need for practical products, including Kamumu Kimpul chips, increases. However, small business actors such as UD. Sona in Gunungsitoli Idanoi faces obstacles in production due to the use of traditional methods, limited equipment, and lack of optimal management. This condition has an impact on delays in meeting demand, increasing production costs, and declining competitiveness. Therefore, a production optimization strategy is needed to improve product capacity, efficiency, and quality. This study aims to analyze the production optimization strategy implemented by UD. Sona, formulate a capacity building strategy, as well as identify obstacles and solutions that can be done. The results of the research are expected to be practically useful for business actors in production management, as well as make a theoretical contribution to the development of production management science in MSMEs. The research method uses a descriptive qualitative approach. Data was obtained through interviews with owners, employees, and customers, supplemented by observation and documentation. Data analysis is carried out through reduction, presentation, and inductive conclusions, so as to be able to describe the real conditions of the business and develop the right optimization strategy. The results of the study show that UD. Sona has made efforts such as setting up production flows and scheduling planning. However, limited machinery, unstable supply of raw materials, and marketing that has not been maximized are still obstacles. Consumers rate the product as good quality, but its availability has not been consistent. Suggested strategies include the implementation of lean production, improvement of inventory management, and the use of production technology.

Keywords: *Production Optimization, Production Strategy, Production Management*

1. INTRODUCTION

The fast food industry continues to show significant growth amidst changing consumer consumption patterns. Products like kamumu kimpul chips have become a popular choice due to their practicality and flexibility to meet consumer preferences. However, despite the significant market opportunity, businesses, particularly Micro, Small, and Medium

Enterprises (MSMEs), face challenges in remaining competitive in an increasingly crowded market. In this context, adapting to digital marketing trends and good business management are key to a company's success. According to Zulkifli (2020), optimization is defined as achieving results that meet expectations, are appropriate, effective, and efficient. Optimization is also often defined as the extent to which all needs are met through the activities undertaken.

Production planning is one of the pillars of industrial success. Cipta (2020) explains that production planning is a process of determining the quantity of products to be produced, and considerations are obtained from previous data to ensure they meet market demand. Meeting market demand must also consider the optimal availability of available resources. These resources include raw materials, machinery, labor, and other equipment that support the production process. According to Fahmi (2020), optimizing production activities implies that producers always make optimal decisions, including input-output, input-input, and output-output. According to S. Rao (2009), production optimization is the efficient use of limited production factors. These production factors are capital, machinery, equipment, raw materials, auxiliary materials, and labor.

A production optimization strategy is a series of actions designed to improve the efficiency and effectiveness of a production process, with the goal of maximizing output, reducing costs, and improving product or service quality. This involves identifying and addressing waste, improving processes, adopting new technologies, efficient inventory management, and focusing on quality improvement.

UD. SONA's Kamumu Kimpul Chips business is an activity with its business of processing raw materials into ready-to-consume products. Kamumu Kimpul Chips is one of the businesses on Nias Island that operates in the fast food sector, these chips are a typical souvenir of the city of Gunungsitoli and are in demand by many people, including Micro, Small and Medium Enterprises (MSMEs). This business is located in Bawadesolo Village, Gunungsitoli Idanoi District, Gunungsitoli City. The types of chips produced are kamumu kimpul chips, cassava chips. This industry or business has been established since 2020.

Currently, UD. SONA still faces production constraints, such as reliance on traditional methods, limited equipment, and suboptimal work efficiency. If not addressed immediately, this could lead to increased production costs, an imbalance between demand and production capacity, and a decline in market competitiveness. Therefore, a production optimization strategy is needed that can improve operational efficiency, ensure product quality is maintained, and provide a competitive advantage for UD. SONA in the increasingly fierce market competition.Some problems arise due to a lack of knowledge about the right production optimization strategies which have a very negative impact on the business, namely a decrease in profitability, loss of market share and even reputation damage.

THEORY

According to Mujito (2023), strategic analysis is strategic management, the process of planning, organizing, directing, and controlling company resources to achieve long-term goals. Strategic analysis is an integrated set of actions and commitments designed to exploit core competencies to gain an advantage (Hitt et al., 2022).

According to Maria in Andrianto (2022), strategic analysis is the art and science of formulating, implementing, and evaluating cross-functional decisions to achieve

organizational goals. According to Ahmad (2020:2), strategy can be defined as a broad outline of action to achieve predetermined goals.

According to Maria Angela (2022), strategic management is the art and knowledge of formulating, implementing, and evaluating cross-functional decisions to achieve organizational goals, and strategic analysis is an important part of this strategic management.

Here are some of the benefits of strategic analysis:

1. Better decision making
2. Formulating more effective strategies
3. Improving organizational performance
4. More efficient goal achievement
5. Adaptation to change
6.Creating competitive advantage

Strategic analysis is influenced by various internal and external factors in a company. According to Bernando Delano (2022), strategic analysis is a set of goals and objectives that provide direction to entrepreneurs, primarily as a company's response to the environment. Internal factors include the company's strengths and weaknesses, while external factors include opportunities and threats in the business environment.

Production Optimization

According to the Big Indonesian Dictionary, optimization (optimization) is defined as "optimization," a process, method, or creation to produce the most novel result. Optimization, on the other hand, comes from the English dictionary, "optimization," meaning "optimal." Optimization is a normative approach that identifies the best solution to a problem, directed toward the maximum or minimum point of an objective function.

The following are several explanations about production optimization put forward by experts:

a. According to Pinja (2022), production optimization is a process in which manufacturing companies use various methods to increase production efficiency with the aim of saving money or time while taking into account human and environmental factors.
b. ColomboIn Nanny Mayasari (2020), production optimization is automation in the production process that not only reduces dependence on manual labor but also minimizes the risk of errors and increases overall productivity.
c. According to Alwendi (2021), production optimization is a process to increase activities or work so as to maximize profits and solve problems in the production planning process.
d. According to Esther in Azzahra (2019), production optimization is achieving the best possible condition or achieving a solution to a problem that is aimed at the maximum and minimum limits.
e. According to Tarmizi (2018), production optimization is a measure of how much all needs can be met from the activities carried out.

Benefits of Production Optimization

Karo in Handayani et al (2020) the benefits of production optimization are as follows:

1. Increased efficiency
2. Cost reduction
3. Improving product quality
4. Increased profits
5. Increased competitiveness
6. More efficient goal achievement

Production optimization is influenced by several key factors related to production inputs, processes, and resources. According to Azzaroh (2019), production optimization is the achievement of the best possible condition or solution to a problem, defined by maximum and minimum limits. These factors include natural resources, human resources, capital, technology, entrepreneurship, and the efficient use of raw materials and labor.

RESEARCH METHODS

The approach used in this study is a qualitative approach. According to Sugiyono (2020:18), qualitative research methods are research methods based on the philosophy of postpositivism or a school of thought that seeks to correct the weaknesses of positivism used to research natural object conditions where the author is the key instrument, data collection techniques are carried out through triangulation, data analysis is inductive/qualitative and qualitative research results emphasize meaning rather than generalization.

In this study, the data source used is primary data. Primary data is data obtained directly from the source and given to the data collector or author. The primary data in question is the result of discussions, dialogues, or direct interviews with the owner of the Kamumu Kimpul chips product, UD. SONA, UD. SONA employees, and customers of the Kamumu Kimpul chips product.

Data collection techniques are used to obtain the data needed in research. The techniques that will be used in this research are as follows:

a. Technique Interview
b. Technique Documentation
c. Technique Observation

The data analysis used in this study is:

a. Data collection
b. Data reduction
c. Data presentation
d. Drawing conclusions

RESULT DISCUSSION

Production optimization strategies include the application of lean manufacturing methods to reduce waste, six sigma to improve quality and consistency, data-based predictive maintenance, and the use of technology and automation for efficiency, the goal is to increase productivity, reduce costs, and ensure smooth workflows by identifying and addressing problems and continuous process improvement.

According to Zulkifli (2020), a production optimization strategy is the process of refining and improving production activities to achieve the best (maximum) results effectively and efficiently, which can include increased profitability, reduced costs, improved quality, and time efficiency. This process involves various techniques and approaches to identify the best solutions amidst existing constraints.

According to the results of researchers' observations in the field, production optimization strategies are still very lacking due to inadequate raw materials and limited tools or machines, which affect the production process.

Based on the results of interviews conducted by researchers with the owners and employees of UD. Sona as data sources in data collection, namely the main informant, key informant, and supporting informant, it turns out that:

a. By utilizing cheap and efficient raw materials to reduce expenses so as to produce profits and product quality, but in reality, raw materials are still very rare because farmers do not really like to farm kimpul because the selling price is cheap and the tools and machines are still limited.

Based on the answer above, UD. Sona's main raw material is kimpul, a relatively inexpensive material, thus reducing costs. However, this raw material is unstable, this is due to the lack of interest in kimpul farming due to its low selling price. According to Rosida (2021), kimpul is a plant that can grow year-round in tropical and subtropical regions. In Indonesia, kimpul is cultivated in various regions, including Kalimantan, North Sumatra, East Kalimantan, West Java, and East Java.

Production Optimization Strategy to Increase Kamumu Kimpul Chips Capacity at UD. SONA

Production optimization strategies to increase production capacity include the use of advanced manufacturing technologies such as software and machine data platforms, improving operational efficiency through lean manufacturing principles to eliminate waste, effective resource planning and management, and regular performance analysis to identify and address production bottlenecks.

Here are some key strategies to increase production capacity:

1. Take Advantage of Advanced Technology and Software

Use software that provides full visibility into the production process, including machine status and estimated production times, to optimize workflow.

2. Increase Efficiency Through Lean Manufacturing

Apply lean manufacturing principles to identify and eliminate non-value-added activities in the production flow. Analyze and restructure production processes to simplify them and accelerate production cycle times.

3. Manage Resources Effectively

Optimize the use of labor, materials, and equipment to ensure the maximum utilization of available resources. Ensure adequate staffing, in accordance with production schedules, to meet product requirements.

4. Conduct Continuous Performance Analysis

Conduct regular performance evaluations to compare installed capacity with actual capacity. Performance analysis can help you understand where adjustments need to be made to ensure your production facility is operating as expected.

According to researchers' observations in the field, production optimization strategies to increase capacity have been implemented to the maximum extent possible, but their implementation has not yielded satisfactory results. This is evident in the limited equipment and machinery available at UD. Sona, which slows production and sometimes fails to meet customer requirements.

Based on the results of interviews conducted by researchers with UD. Sona employees as data sources in data collection, namely primary informants, key informants, and supporting informants, it turns out that:

a. Planning and supervision of the entire production flow, but at UD. Sona, tools and machines are still limited, so the production process is relatively slow.

Based on the answers above, the production optimization strategy to increase the production capacity of Kamumu Kimpul chips at UD. Sona has been implemented well, but is still hampered by limited tools and machines, which can affect the number of production processes and cannot meet customer needs.

A production optimization strategy to increase production capacity is a series of steps or processes to refine, analyze, and improve various aspects of the manufacturing or operational process so that a company can produce maximum output by efficiently utilizing resources, reducing waste, and improving product quality. According to Alwendi (2021), optimization is the process of increasing activities or work to maximize profits and solve problems in production planning.

Obstacles Faced by UD. SONA in Using Production Optimization Strategies to Increase Competitiveness and How to Overcome Them

An entrepreneur certainly has obstacles or constraints in running his business, obstacles in improving production optimization strategies include resistance to change, limited budget and resources, challenges of integrating new technology, lack of competent workforce, product quality and customer satisfaction, coordination problems between teams, ineffective inventory management, machine breakdowns, and the complexity of balancing competing goals.

According to the results of researchers' observations in the field, obstacles in using production optimization strategies to increase competitiveness are the lack of raw materials, namely kimpul, tools or machines are still limited so that they affect the production process and do not utilize technology properly.

Based on the results of interviews conducted by researchers with the owners and employees of UD. Sona as data sources in data collection, namely the main informant, key informant, and supporting informant, it turns out that:

a. There are several obstacles we sometimes encounter in the production process, including a lack of raw materials, inadequate technology and equipment, and substandard management and marketing.

Based on the answers above, UD. Sona has not optimally planned its production optimization strategy. This is evident in its lack of raw material inventory and its failure to utilize marketing technology effectively. According to Eskak (2020), technology is a fundamental tool for creating and maintaining competitive advantage by increasing operational efficiency and reducing costs.

To overcome obstacles and increase competitiveness through production optimization, identify root causes, apply lean manufacturing principles to reduce waste, invest in advanced technologies such as automation and data analysis software, enhance employee capabilities through training, and conduct continuous performance monitoring and evaluation.

The following are steps to overcome obstacles in production optimization strategies:

1. Identification and analysis of obstacles

Use manufacturing accounting software or other management systems to collect accurate data on production processes, supply chain management, and workforce performance. Once the data is collected, analyze the root causes of any identified problems or bottlenecks, such as production bottlenecks or increased costs.

2. Implementation of data-driven solutions

Create a clear and precise production plan to align capacity with market demand, aiming to avoid waste and increase efficiency. Improve the efficiency of your supply chain management to ensure raw material availability and smooth production flow.

3. Utilization of technology and innovation

Invest in technologies like automation and robotics to streamline production processes, reduce human error, and significantly increase productivity. Use digital and analytics software for continuous monitoring, data analysis, and iterative performance improvement.

4. Development of human resource quality

Provide training programs that ensure employees have the skills and knowledge to operate modern equipment and production processes. Foster a culture of innovation and continuous improvement throughout the organization to ensure long-term benefits and competitive advantage.

Based on the results of interviews conducted by researchers with the owners and employees of UD. Sona as data sources in data collection, namely the main informant, key informant, and supporting informant, it turns out that:

Creating raw material stocks, improving technology and equipment or machines and utilizing digital marketing.

Based on the answers above, UD. Sona will implement a better production optimization strategy to increase its proven competitiveness. UD. Sona will stock raw materials, upgrade technology and equipment or machinery, and utilize digital marketing. Arifin (2020) emphasized that utilizing good information systems can improve operational efficiency and support strategic decision-making. Digital marketing also allows direct feedback from consumers, helping products adapt to market needs and creating a competitive advantage.

CONCLUSION

Based on the results obtained from data analysis and hypothesis testing, the researcher can draw the following conclusions:

1. Brand image has been shown to have a positive and significant influence on online purchasing decisions among students at the Faculty of Economics, Nias University. The better a product's brand image, the more likely students are to purchase through digital platforms.
2. The analysis showed that brand image explained 69.4 percent of the variation in students' purchasing decisions, while the remainder was influenced by factors outside the study, such as price, promotion, user reviews, product quality, and other external factors. This confirms that brand image is a dominant factor in determining online purchasing decisions.

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