

ENHANCING PRODUCTION EFFICIENCY OF BAN CHIANG PROCESSED AGRICULTURAL COMMUNITY ENTERPRISE GROUP

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ABSTRACT

This research aims to enhance competitiveness for entrepreneurs, community enterprises, and the utilization of technology. It also aims to increase the efficiency of community enterprise groups in processing products by at least 10%. This creates more opportunities to purchase wood at lower prices, resulting in cost savings for wood procurement. Previously, the wood was purchased for 8,000 baht and could produce a total of 14 carved wooden Buddha statues, averaging 572 baht per piece. After the improvement, the same amount of wood can be purchased for 8,000 baht, but it can produce a total of 21 carved wooden pieces, averaging about 381 baht per piece. This reduces the cost of wood procurement by 33.39%.

Keywords: Wood carving, Cost reduction, Efficiency

INTRODUCTION

During the COVID-19 crisis, the tourism industry was the most heavily impacted and affected. We had been doing everything to support Chinese tourists in the past, but when Chinese tourists stopped coming, it had a significant and widespread impact. This impact spread to other sectors such as hotels and restaurants, and the economy as a whole. If we talk about the economic aspect, the GDP of the Bangkok metropolitan area accounts for about 40% of the country's GDP. This means that when economic activities were halted within Bangkok, almost half of the workforce and jobs disappeared. The number of people employed in the formal sector is around 10 million, and there are even more people employed in the informal sector. If we shut down economic activities, people will lose their jobs, and consumption power will definitely decrease. Analyzing the impact of the COVID-19 situation on the economy and Thai SMEs, there are several adjustments that need to be made.

For the province of Udon Thani, which is an agricultural city, the main agricultural products are rice, rubber, cassava, sugarcane, bananas, and durian. These are high-quality raw materials that should be further developed with innovation to create value-added products. When it comes to successful e-commerce, business owners need to provide information about their products to buyers because content

plays a vital role in creating awareness and influencing customers' purchasing decisions. Business owners also need to focus on building their brand to enter the e-commerce market. They need to be prepared in terms of various standard systems Apiratasakul (2006).

For the individuals mentioned, they can help develop a sustainable plan to assist the local community. They can identify which group needs help and how to support them. The four principles to consider are:

1. How to increase income for the people of Udon Thani after the COVID-19 crisis.
2. How to reduce expenses.
3. How to create opportunities for people to have income in every household.
4. How to shift from hiring foreign workers to employing local labor.

Yirrong, Kittimetee & Ongurusiri (2018) research on the process of community enterprise management for sustainable development: A case study of community enterprises in Nan province. Objectives: 1. To study the process of community enterprise management for sustainable development: A case study of community enterprises in Nan province. 2. Analyzing the process of community enterprise management for sustainable development: A case study of community enterprises in Nan province. 3. To explore strategies for developing a sustainable management model for community enterprises: A case study of community enterprises in Nan province. The researcher presented the results of qualitative data analysis from in-depth interviews. The sample was selected through targeted sampling of individuals, and the data was analyzed using content analysis, according to the research objectives.

Apibunyopas & Lakkawanit (2022) aims to analyze the operational status and business models of the community enterprise in the valuable rice group of ethical farmers in Yasothon province. The research also aims to enhance the business capabilities of the community enterprise, enabling them to operate robustly, sustainably, and compete in the market. The research emphasizes the participation of researchers, community leaders, and members of the enterprise to facilitate knowledge sharing and exchange. It involves analyzing strengths, weaknesses, opportunities, and challenges, along with business model analysis, proposing strategies, and key factors in conducting the business. Training is provided to enhance business knowledge and study field visits are organized. Additionally, product development and expansion of both online and offline distribution channels are carried out to develop members' business skills and competitive potential. The outcomes of this development are as follows: 1) Improved product development, increased distribution channels, and enhanced promotional media, resulting in more customers and increased income. 2) Members of the enterprise have acquired knowledge and recognized the importance of online marketing to increase sales. 3) The accounting system has been standardized, making production and marketing planning more convenient, with improved production planning and marketing strategies. 4) The rice mill has been developed according to standards, enabling the transformation of raw rice into quality rice, thus increasing the income of the community enterprise.

Kuanmuang, Kumklong, & Bunban (2020), research on improving the production process of community enterprises in Udon Thani Province. The objective of this research is to improve the efficiency of community enterprise groups in the production process by at least 10%. The research aims to identify and address the problems encountered and provide in-depth consultation. The method used is to ask questions, observe the behaviors of employees during work, record data, and conduct interviews with the workers following the 4M principles. This research provides consultation, improvement, and

solutions for two community enterprise groups: 1) Plara Bong Ta Tum Community Enterprise and 2) Kao Taen Nantaengmo Bai Fern Community Enterprise. The results of the research are as follows: 1. In terms of improving the efficiency of the community enterprise groups in the production process by at least 10%, it was found that the adjustments made to the steps and positions in the production process were in line with the objectives. This may be attributed to the Plara Bong Ta Tum Community Enterprise and the Kao Taen Nantaengmo Bai Fern Community Enterprise having a higher movement of raw materials, resulting in a production output of more than 10% for both groups. However, the production time was less than 10% in line with the objectives. This could be due to the standardized production process in each step, reducing the time required due to the closer proximity of the raw material movement points. 2. In evaluating the problems encountered and providing in-depth consultation, it was found that providing consultation to the group leaders in line with the objectives could lead to a decrease in the production process.

Sunthararak (2008), This research study analyzes and examines the quality cost in an industrial factory. The factory produces leather goods and furniture, as well as construction materials. The results from data analysis after the study revealed that the factory that prioritizes defect prevention and allocates a higher budget for quality control, measurement, and evaluation costs had lower internal failure costs and external failure costs. The overall quality cost accounted for 2.56% of the sales. On the contrary, the factory that does not prioritize defect prevention and allocates a lower budget for quality control had higher internal failure costs and external failure costs. Consequently, the overall quality cost was higher than the first factory, accounting for 8.19% of the sales.

Paramichae (2007) is an application of the quality cost approach in a jewelry manufacturing factory. After conducting the study, it was found that the cost of quality defects could be reduced from 11.12% to just 6.56% of the gold used in the production process. However, due to the high value of gold as a cost compared to other types of quality costs in the factory, the internal quality cost remains at a high level. Therefore, there is still a need to improve and further reduce the cost of quality.

OBJECTIVES

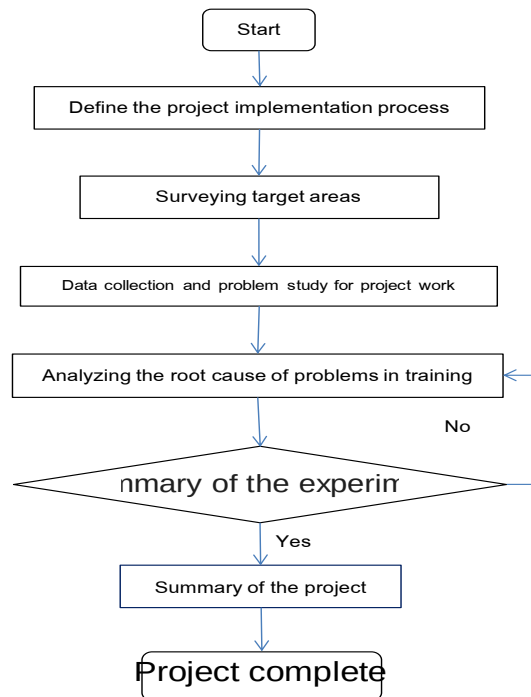
1. To enhance the competitiveness of entrepreneurs and community enterprises by improving the efficiency of community enterprise groups in processing products by at least 10% and utilizing the benefits of technology.
2. To build confidence in the consultation process for increasing productivity and driving the development of entrepreneurs and community enterprises, in order to strengthen the grassroots economy of the community.

METHODOLOGY

The objectives of this study are as follows: 1. To enhance the competitiveness of community enterprises through a process that improves the efficiency of community enterprise groups in product processing by at least 10%. This will enable them to better compete in the business sector. 2. To utilize technology to create confidence in the consulting process, increase productivity, and drive the

development of community enterprise operators. This will contribute to the strengthening of the grassroots economy. The study has been designed with the following procedures.

Figure 1.



Research

Research tools Studying the tools used to edit the research on increasing production efficiency of the Ban Chiang Agricultural Processing Community Enterprise Group according to the research objectives can be carried out in the following steps.

1. Research and Information Gathering: The process begins by surveying and gathering information about popular technologies that can enhance production efficiency in community-based agricultural processing enterprises. This can include books, research papers, academic articles, or online resources related to this topic.

2. Assessment of Existing Tools: If there are already tools or technologies being used in community-based agricultural processing enterprises, it is important to assess these tools to understand their effectiveness and limitations.

3. Exploration of New Tools: Look for new tools or technologies that may help improve production efficiency. This can involve exploring new technological products or adopting existing technologies for community enterprises.

4. Experimentation and Analysis: Conduct experiments using selected tools or technologies to determine their viability and effectiveness in achieving the research objectives. Analyze the results of the experiments to identify comparative advantages and limitations of the tools.

5. Learning and Development: It may be necessary to further learn about the tools or technologies used to enhance production efficiency. This involves developing a deeper understanding and acquiring the necessary skills to effectively use these tools.

6. Report Writing and Presentation: Compile the data obtained from studying the tools and conducting experiments into a research report. Present the research findings and conclusions to interested parties. Jao ka.

7. Promotion of Adoption: After completing the research, promote the adoption of the tools or technologies to community-based agricultural processing enterprises and stakeholders in the Chiang area. Conducting research on tools to enhance production efficiency requires thoroughness and specific objectives. Collaboration with experts in technology and production is important to ensure the quality and success of the research in improving the production efficiency of community-based agricultural processing enterprises in Ban Chiang.

Data analysis

Data analysis is an important step in conducting research on improving the efficiency of community enterprise groups in agro-processing in Ban Chiang. Therefore, the steps related to analysis and problem identification can be divided as follows:

1. Current Situation Analysis:

- Study data on community enterprises and agro-processing groups in Ban Chiang, including problems and potential impacts on production and competition in the market.
- Survey the technologies used in current production and community enterprises to understand the working systems and issues.

2. Objectives Setting:

- In this case, there are two main objectives:
 1. Enhance competitiveness for community enterprise groups by applying technology.
 2. Improve the efficiency of community enterprise groups in agro-processing by at least 10%.

3. Problem Analysis:

- Study the current problems faced by agro-processing community enterprise groups in Ban Chiang, which could be economic (e.g., inability to compete in the market) or technological (e.g., insufficient use of technology).
- Analyze the causes of these problems, such as technology limitations, lack of necessary technical knowledge, or other influencing factors.

4. Research Scope:

- Define the scope of the research to focus on addressing the main problem.
- Specify whether the research will focus on developing new technologies, improving technical knowledge, or other methods to help the community enterprise groups achieve their objectives.

5. Research Plan:

- Develop a research plan that includes the steps of research, data collection, experimentation, and evaluation.
- Specify the time frame and resources necessary for the research, analysis, and problem identification. This will ensure that the research is conducted efficiently and effectively, aligning with the objectives of improving the production efficiency of community enterprise groups in agro-processing in Ban Chiang.

RESULTS

The research findings suggest that improving the procurement process can enhance the efficiency of producing carved Buddha sculptures. The important benefits for businesses and the community are as follows:

1. Cost reduction: The research shows that optimizing the procurement of wood can reduce production costs by up to 33.39%. This is a significant benefit for businesses as it translates into overall cost reduction in the production process and increased profits.

2. Increased production efficiency: The improved procurement process helps businesses enhance production efficiency without increasing expenses. This allows for increased productivity in producing carved Buddha sculptures.

3. Improved product quality: By selecting high-quality and appropriate wood, the research indicates that the overall quality of the products can be improved, leading to higher value-added products.

4. Opportunities for development: Implementing efficiency improvements and cost reductions in production can create opportunities for further development. This may include job creation and the overall development of the wood carving industry in the community.

5. Better quality of life: By increasing income and improving the quality of life for wood carvers and producers of Buddha sculptures, the research findings contribute to enhancing stability and improving the overall quality of life in the community.

Improving the procurement process for raw materials is a good example of how to increase efficiency and sustainability in the wood carving community and Buddha sculpture production. It enables effective competition in the market and brings significant benefits to the community as a whole.

FUTURE WORK

Controlling costs and improving the procurement process are crucial steps in business development. Therefore, the following recommendations should be considered:

1. Control the quality of raw materials: Purchasing high-quality and suitable raw materials for wood carving greatly affects the quality of the final products. It is important to establish collaboration with reputable suppliers that are well accepted by the market.

2. Efficient inventory management: Efficient management of raw material stocks is crucial to reduce costs associated with storage and control the risk of losses. Implementing effective inventory control measures can help prevent losses and minimize risks.

3. Price control and negotiation: Being aware of market conditions and negotiating prices during the procurement process can also help reduce costs. Research and learn about pricing and dispute resolution methods in purchasing raw materials.

4. Develop production techniques: Improving understanding and refining the wood carving process can reduce losses and increase productivity. This, in turn, helps to reduce costs and improve output.

5. Market research and demand analysis: Being aware of market demands and aligning production and procurement accordingly is essential. Understanding customer requirements helps to tailor production and procurement processes to meet market needs.

6. Training and skill development: Training and developing the skills of procurement staff are important. These skills help in quality checking of raw materials and efficient stock management.

7. Monitoring and evaluation: Tracking and measuring the impact of procurement process improvements is crucial. Regular monitoring and evaluation provide insights for continuous improvement.

8. Support for wood carvers: Supporting the education and skill development of wood carvers and craftsmen by providing knowledge about appropriate and quality raw material procurement is important.

Improving the procurement process is a crucial step to enhance the efficiency and profitability of a business. Being mindful of quality control and stability in raw material procurement is essential for sustainable growth of your business in the future.

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