

Business Development in Increasing Productivity with the Application of Just in Time in the Production System: Case Study on Fish Floss Business

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ABSTRACT: *This study aims to determine the development of the business after using the application of just in time in the production system in increasing business productivity. This type of research is Research and Development (R&D). In this research, the approach used is descriptive qualitative using data collection methods through observation, interviews, and documentation which will then be analyzed by drawing conclusions and using the Nvivo 12 Pro application. The results showed that the application of just in time is very effective in every business, but for Fish floss business, it is still considering the application of just in time to be used because the production cycle is pre order (PO) by looking at today's consumers who have to be fast paced and there are no regular partners who ask for products in large quantities, so everything is still being considered. However, the bija ta' fish floss business has successfully completed the production process by maintaining the product quality standards requested by customers. Each production step has been improved and monitored to prevent product damage with the management of product stock inventory carried out has lowered the risk of waste and reduced high storage costs so as to increase productivity in terms of price competition with improved product quality and can meet customer demand on time by improving delivery performance well.*

Keywords: *Just in time, production system, productivity*

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I. INTRODUCTION

Fisheries and fisheries are one of the most important natural resources that have recently received a lot of attention in Indonesia. Sea and fishermen are inseparable from the sea of Indonesia, many Indonesian communities, especially in Tanah Jaya, which is located in the coastal area, make fish as a source of hydropower income. However, one of the most important aspects of fish commodities is the processing of fishery products. Because fish is one of the fast-ripening foods that is processed by enzymes from bacteria, fish process, and the fish itself becomes a seed of impulse. Bacteria that cause impurities in fish multiply more rapidly due to their high-water content. One of the challenges faced in the effort to increase the distribution of fishery products is the shortening of the shelf life of loose fish. In fact, when fish production is high, it often results in a large amount of waste. To overcome this challenge, the community has been trying to implement various post-processing programs for fish since a long time ago by processing it into shredded fish.

The shredded fish business is carried out by many household industries, small industries, and medium industries, thus resulting in increased competition in this sector by increasing the number of companies to develop and improve their performance. In the Tanah Jaya sub-district, Kajang sub-district, Bulukumba district is recognized as a sub-district with abundant marine fishery resources. Because of that, one of the local residents has established a fish floss business called Bija ta'. Bija ta' fish floss is a business that operates in the field of processing by turning raw materials into finished products that utilize skipjack raw materials. This business attracts a lot of attention because it sells local products in two flavors: original and basic.

The increasingly fast development of the business world in the digital era has increased competition between business operators to maximize their respective capabilities [1]. The development of digital technology makes media literacy one of the factors determining buyer decisions in online business [2]. Every business owner will strive to increase their productivity in order to maximize profits. Maximum turnover can be achieved by improving the quality of the goods produced while minimizing the spread of costs. Maximum turnover requires implementation so that the company's profitability can reach its target.

One of the business innovations used to improve productivity is the implementation of just in time. This application is carried out to eliminate the original form of waste and reduce various processes that do not provide value to the product. Because one of the main goals of just in time is to increase productivity.

The application of just in time is one of the techniques to increase the productivity of the company where the application can increase business efficiency. The application of just in time (JIT) is a production system that helps in meeting customer demands and desires in a timely manner. By using this application, it can help reduce waste in ordering production quantities, completing production inventory, and waiting periods.

Based on preliminary observations made, it is known that the production of shredded fish in the Bija ta' business in Tanah Jaya Village, Kajang District, Bulukumba Regency can produce \pm 500 pcs per production (quarter), but the sales are still uncertain, so that the increase in business productivity decreases due to excessive product production. Therefore, the researcher is interested in knowing how the development of the bija ta' shredded fish business after applying just in time implementation to the production system in increasing productivity. The purpose of this study was to determine the development of Bija ta' shredded fish business after using the application of just in time in the production system in increasing business productivity.

II. LITERATUR REVIEW

a. Entrepreneurship

Entrepreneurship is the result of a methodical process that applies creativity and innovation to market possibilities and demands [3][4]. One of the best markers of entrepreneurship is a passion for starting a business. Therefore, how to understand someone who aspires to be an entrepreneur is based on their passion for entrepreneurship [5]. Because entrepreneurship fosters creativity and innovation in one's ability to create new things that are different from other [6].

Entrepreneurship is a study of the values, skills, and behaviors of individuals in overcoming obstacles and seizing opportunities while bearing various risks. Entrepreneurship can also be defined as a way of thinking that always tries to improve the results of its work in order to generate more income [7].

b. Business Development

Business development is the culmination of all efforts made by individuals in business and industry to provide the products and services needed to maintain and improve standards and quality of life [8]. Business activities can be started by starting a company (starting), forming a partnership, buying out other people's companies (buying out), or franchising [9]. The objectives of business development are market expansion, product innovation, scale, and innovation [10]. Business development has the same meaning as developing activities, products, sales, consumers, supporting profits, and developing the value of interchangeable products [11].

c. Just In Time

Just in time is an application that seeks to minimize waste, increase efficiency, and save costs while maintaining quality. As early as 1950, the first person to implement just in time (JIT) was Taiichi Ohno, an executive vice president of Toyota Motor Company. In order to meet consumer demand at that time, Ohni wanted Toyota to be able to produce a wide range of products quickly and efficiently to meet consumer demand [12]. Just in time is also an inventory management strategy that applies the concept to increase the return on investment of business ventures through reducing inventory and production-related costs [13].

d. Production System

The production system is an integrated system with structural and functional components that are very important to maintain the system's ability to operate continuously. The structural elements of the production system are labor, capital, energy, information, land, machinery and equipment, materials, and so on. While the functional components include leadership, control, coordination, planning, and supervision, all of which are related to management and organization [14].

An effective production planning system can provide details about the products made, the materials needed for the production process, the resources available to the business, and the resources needed to produce goods, so that production planning can be implemented and is expected to be realistic [14].

e. Productivity

Productivity is one of the alternatives to assess the performance that has been done which is also one of the most appropriate methods in assessing the efficiency of using a number of inputs in producing certain outputs [15]. A business needs to know its productivity in order to compare it with the productivity set by its management. Because increasing productivity is expected to accelerate business growth and development [16].

Productivity can also be defined as having an enthusiastic mental attitude to make improvements or strive for better results than before [17].

f. Shredded Fish

Shredded fish is a processed fishery product made from processed fish meat, fried, dried with a frying system, and flavored [18]. The end result is a product with a smooth shape, appetizing taste, distinctive aroma, and long durability. Starting this business does not require much money because the equipment needed is relatively simple. This makes the shredded fish business has great potential to operate in various regions of Indonesia that are rich in marine fishery resources.

III. RESEARCH METHOD

This type of research is Research and Development (R&D). In this study, the approach used was descriptive qualitative. Because the research produces conclusions in the form of detailed data and not data in the form of numbers, the research and development approach seek to combine a descriptive qualitative approach. This is because the qualitative approach is a research method that produces descriptive data from people and behaviors of interest in the form of written or spoken words.

The purpose of this research is to increase the productivity of the shredded *bija ta'* fish business by applying just in time to the production system. By using the ADDIE development model consisting of five stages including Analysis, Design, Development, Implementation, and Evaluation. To improve production output and overall quality of shredded fish, this research will examine the application of just in time in production efficiency and stock management.

At the data collection stage, the data collection techniques used in this research are interviews, observation and documentation. The data analysis used in this research is using descriptive analysis, where this data analysis aims to describe systematically correctly and accurately about the facts and relationships between the phenomena studied. Based on this data, the process of analyzing this research is carried out starting from reading, studying, and examining the data using steps, namely data reduction, data presentation, and conclusion drawing.

To be able to maximize the results of the interviews conducted, the Nvivo 12 pro application was used to analyze the study data. Nvivo is software used to analyze qualitative data in managing and analyzing data effectively and efficiently based on data collected from interviews and direct observation in the field.

IV. RESULTS AND DISCUSSION

A. Results

Based on research and development by developing the application of just in time in the production system using the ADDIE research model which consists of five stages, namely: Analysis, Design, Development, Implementation, and Evaluation that have been carried out, the research results are as follows:

a. Analysis

At this stage, the analysis carried out includes analysis of production activities. Activity analysis is carried out to find out and classify the problems faced in the shredded *bija ta'* fish business related to the production system carried out so far. After conducting an activity analysis, it is known that the production system used so far is a processing system by producing products with an amount of ± 500 pcs per quarter so that the causes of waste are in storage costs and product quality. For this reason, the application of just in time is expected to eliminate the waste that occurs.

b. Design

Designing the development of just in time implementation by designing the just in time work cycle in the production system which is divided into 7 stages. First: customer requests, customers who have already done the order through the e-commerce platform that has been provided will be confirmed to the customer to ensure the smoothness of the volume, price and delivery time. Fourth: the procurement of bakery materials, the business owner engages the supplier to provide the bakery materials within the agreed time and in the desired quantity. Third: the processing of raw materials, raw materials that have been received from suppliers will be subjected to quality testing to ensure that they meet the standards. Fourth: the production process, in the production process must first prepare the raw materials used to be cleaned and then proceed to the processing process and carry out quality control to ensure the continuity of the standard. Fifth: lubrication, the business must provide lubrication that already has the name of the product, the date of production and the expiry date when the finished product is stored in the container that has already been provided, which is provided by the date of production, as well as preparing the customer service according to the number requested. Sixth: delivery, products that have been packaged will be sent by courier or other logistics services tailored to the customer's location and will be confirmed. Seventh: evaluation and feedback, reviewing the entire process of raw material procurement to delivery to identify areas for improvement and collect feedback from customers regarding the quality of products and services provided to be followed up for improvement.

c. Development

The results of the production system use the application of just in time by developing a just in time work cycle to facilitate production and help businesses manage their products effectively. The following is a picture of just in time work steps:

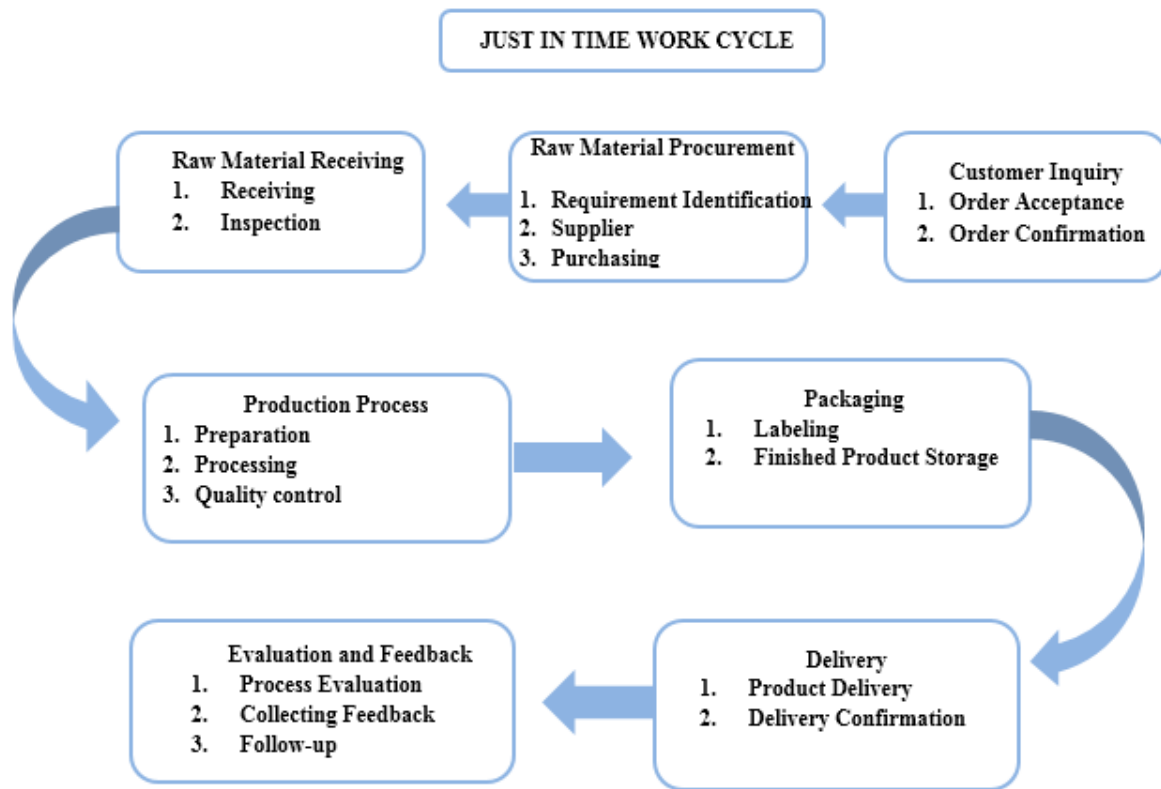


Figure 1.

Just In Time Work Steps

Source: www.serasanciptaabadi.com

d. Implementation

At the implementation stage based on the results of the trial application of just in time in the shredded fish bija ta' business, the results show that the application of just in time is effectively used in every business, but in the shredded fish bija ta' business in applying just in time is still a consideration because there are no permanent partners who ask for products in large quantities, while the application of just in time is a pre order production cycle (PO) by looking at today's consumers who want fast service without having to wait so that the processing system used previously is only effectively managed for the products produced.

e. Evaluation

At the evaluation stage, the final revision of the implementation of just in time in the production system is carried out. Based on the results of responses from business owners and employees, suggestions are obtained to identify what is the solution to managing available products so that there is no waste. So that researchers can find out that the application of just in time in the production system is still a matter of consideration to be applied in the shredded Fish Bija ta' business but the existing product inventory can be managed properly which has been able to reduce waste by selling the first time it is produced and managing inventory properly.

This research is a study to see an overview of increasing production yields and the overall quality of shredded fish in production efficiency and stock management.

From the results of calculations using the word cloud feature in the Nvivo 12 pro application, it was found that the word “demand” was the word most often used by informants in answering questions about stock management because informants generally said that “requests made by customers will be monitored to estimate the level of inventory needed in order to anticipate the adequacy of product stock in accommodating customer demand”. The next additional word obtained from the word cloud feature is the word “inventory” inventory is carried out by controlling regularly in conducting routine monitoring of shredded fish stock inventory to identify goods that are approaching the expiry date and optimizing the production process by adjusting production volume to demand to reduce the risk of excessive stock.

Based on the results of interviews with informants regarding stock management, the results show that in meeting customer demand, monitoring will be carried out to be able to estimate the desired number of products and control the stock inventory to avoid expiration.

B. DISCUSSION

1) Implementation of just in time in the production system

The implementation of just in time in the production system for the shredded fish business of *bija ta'* is still a consideration to implement it because the production cycle is pre order (PO) by looking at today's consumers who have to be fast paced without having to wait and there are no permanent partners who ask for products in large quantities so that the *bija ta'* business is still considering everything in implementing just in time in its production system. So that products produced per quarter are only carried out effective inventory management.

High inventory allows businesses to meet customer demand suddenly, but high inventory will cause businesses to have to provide funds for large capital. For this reason, considerations are needed to determine the amount of stable inventory so that business activities can run smoothly [19].

Just in time aims to increase profits and improve the competitive position of each business. Both of these goals can be achieved by eliminating or reducing inventory, improving quality, controlling activities to lower costs (thus allowing for lower selling prices and increased profits), and improving delivery performance. Just in time is a continuous and forced problem-solving approach that focuses on inventory removal and reduction. [20].

2) Production Efficiency

From the results of the interviews that have been conducted, it is known that the *bija ta'* fish floss business has successfully completed the production process while maintaining the product quality standards requested by customers. To prevent product damage and waste of inventory, each production step has been improved and monitored. so as to produce quality products that encourage customers to buy again and recommend the product to others.

The most important factor in achieving maximum profit for any company is production efficiency, which reduces the cost of labor, raw materials, and overhead costs during the production process. The cost of raw materials, direct labor, and factory overhead used to produce a particular output can be used to determine the level of production efficiency of a company [21].

Therefore, production efficiency can be defined as the ratio of output to input in relation to achieving the greatest output with a given amount of input. A better level of efficiency is indicated by a greater output ratio. Therefore, the optimal way to use inputs in the production of goods can be defined as efficiency. The act of optimizing output with the least amount of capital (the least amount of labor, resources, and equipment)[22].

Efficiency as achieving the highest possible output by utilizing a certain amount of resources [23]. The level of efficiency achieved will be higher if the output produced exceeds the resources used. while all product compromises required to create high-quality products are known as production factors.

3) Stock Management

From the results of the interviews that have been conducted, it is known that the *bija ta'* fish floss business will meet product demand from customers. Every time a customer makes an order, a record is made of how much product is needed so that an estimate can be prepared. Therefore, the management of product stock inventory that is carried out can reduce the risk of waste and reduce high storage costs.

Every company must manage its inventory efficiently, from planning and implementation to monitoring and control. Inventory as a tangible asset purchased by a company with the aim of reselling, either directly reselling or after going through additional procedures [19]. Because, when viewed from its quantity, inventory is often the largest part of working capital. This is natural considering that inventory plays an important role in ensuring the smooth operation of a business. Every company will most likely not be able to make a profit

without sufficient inventory because the production process will be hampered. Although having a large inventory allows companies to meet unexpected customer demand, it also forces them to offer large capital expenditures. Therefore, various factors must be taken into account when determining a stable inventory level to ensure that business operations run smoothly [19].

Stock management is the process of controlling and supervising the procurement of materials needed in the required amount and time at the lowest possible cost to determine the quantity and composition of inventory. Therefore, maintaining inventory control in a business requires competent management [24].

V. CONCLUSION

The implementation of just in time is very effective for every business, but for the *bija ta'* fish floss business, it is still considering the implementation of just in time for use because its production cycle is pre-order (PO) by looking at today's consumers who have to be fast and the absence of permanent partners who request products in large quantities, making everything have to be considered. However, the business has succeeded in completing the production process by maintaining the product quality standards requested by customers. Every production step has been improved and monitored to prevent product damage. With the management of product stock inventory carried out, the *bija ta'* fish floss business can reduce the risk of waste and reduce high storage costs so that it can increase business productivity in terms of price competition with increased product quality and can meet customer demand on time by improving delivery performance well.

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