Modeling production schemes for oyster mushroom commodities and their processed products using a supply chain management approach

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Abstract. Oyster Mushroom is one of the superior products of Ranu Pakis Village in Klakah District, Lumajang Regency, East Java. From the procurement of raw materials, storage, production to marketing and distribution of processed mushroom products have been carried out in one cycle in the village of Ranu Pakis. To increase the leverage of innovation and product competitiveness towards similar products, innovation, efficiency and competitive strategies are needed. Therefore the role of Supply Chain Management is needed to be able to contribute to the efficiency of oyster mushroom producers, in order to provide and maintain customer satisfaction which is the ultimate goal of creating sustainability and development of production and most importantly the cultivation of oyster mushrooms in Klakah, Lumajang, East Java.

1. Introduction
Lumajang Regency has a geographical position at 7 ° 52 ' - 8 ° 23' South Latitude and 112 ° 50 ' - 113 ° 22' East Longitude with an area of 1,790.90 km². Specifically Lumajang Regency has advantages over other districts because it is flanked by three volcanoes, namely Mount Semeru (3,676 m), Mount Bromo (3,292 m) and Mount Lamongan, so that it has fertile land because it gets sediment deposits from the rivers that flow. There are several rivers flowing in the area, namely Glidik River, Kali Rawan, Kali Gede, Kali Regoyo, Rejali, Besuk Sat, Kali Mujur and Bondoyudo [1].

PPDM partners are: (1) Manut Mushroom Farmer Group (KPJT) with Chairman Moch. Imam Agus Saichu, (2) Oyster Mushroom Processing Group Mr. Soleh as a producer of processed oyster mushrooms. Among the problems at Manut KPJT is the need to improve management, production and marketing systems based on Supply Chain Management (SCM). [5] The key to a supply chain management is information. Accuracy Information on time has an impact on producers or companies to minimize inventory, optimize routes and schedule transportation, and improve customer service. Therefore, information technology offers opportunities for fast, accurate and safe data processing, both internally for users within the company and externally for suppliers and customers. Information technology can complete routine tasks in processing and scheduling accurately so that it can provide opportunities to optimize planning, control, and inventory management processing functions. The purpose of this paper is to develop and develop a model for information flow in supply chain management.
2. Research Methods
Using system information for driving supply chain management will help in much sector, such as reduced transportation spend, greater accuracy, more economic, high productivity, efficient processing. According to Turban, Rainer, Porter (2004), there are 3 types of supply chain components, namely:

1. Upstream supply chain (Upstream supply chain)
The upstream (upstream) supply chain includes the activities of a manufacturing company with its distribution (which can be manufacturing, assembler, or both) and their connection to their suppliers (second-trier suppliers). Relationships of suppliers can be expanded to several strata, all roads from origin material (for example mine ore, plant growth). Inside the upstream supply chain, the main activity is procurement.

2. Internal Supply Chain Management
Parts of the internal supply chain include all the process of entering goods into a warehouse which is used in transforming input from suppliers to the organization’s output. This extends from time input into the organization. Inside the internal supply chain, that attention the main is management of production, manufacturing, and inventory control.

3. Downstream Supply Chain Segment
Downstream (estuary direction) supply chain includes all activities that involve the delivery of products to end customers. In the downstream supply chain, attention is directed to distribution, warehousing, transportation, and after-sales-service

![Fig 1: supply chain management](image)

This research method consists of several stages, such as literature review, data collection, modelling design, results and discussion, conclusions and recommendations.

a. Literature Review
 Literature review is carried out to collect information from several references related to the issues to be discussed. Theories related to research problems are used as a basis for processing data. At this stage, identification and problems formulation will be conducted which will be the objectives of the research. Problem formulation to be examined based on the background of the problem.

b. Data Collecting and Problem Identification

c. Analysis and Modelling

d. Conclusions and Recommendations
 Based on the analysis of the situation and the achievements of the research activities, the urgency for the use of supply chain management in the production of oyster mushrooms is as follows.
3. Result and Discussion

Fig 2. Modelling SCM For Mushroom Production In Klakah Village
As shown in Figure 2, all Mushroom production processes are carried out from the beginning of baglog making to the marketing process, so that the efficiency in the production process to marketing can be optimized. So that it can easily control the quality and quantity of mushroom production and processing.

4. Conclusion

Based on the research that has been conducted, it can be concluded several things. The research activities carried out in the producers of processed Klakah mushrooms can be summarized as follows, Modeling methods can provide a discourse for increasing business capacity and quality, Members of producer groups involved in activities are able to increase their innovation in efforts to diversify processed from mushrooms to support Klakah as a center for mushroom production and various processed products, Producers and communities get the benefits and additional insights after participating in training and mentoring and the technology that is granted is very useful in supporting the business involved.

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References


