

ABSTRACT

This research has as its background the problem of unmet demand for rattan in East Kalimantan. Non-timber forest products have many types, one of which is rattan. The supply of rattan raw materials in East Kalimantan is very low due to low distribution capabilities, causing the inability to meet maximum demand. The lack of distribution is caused by several factors, namely, difficult distribution access, uneven supply of raw materials sent, the absence of a distribution center that can provide added value to raw rattan into semi-finished rattan so that it can be directly utilized into furniture by companies engaged in the rattan furniture industry. In order for demand to be met, it must have a distribution center determination and design, so that it is able to provide optimal rattan delivery services. The distribution center plays a very important role in the process of fulfilling customer demand. This research focuses on determining and designing the location of distribution centers in the supply chain of rattan raw materials in East Kalimantan for the furniture industry using the P-Center method. The results of the design in this study are in the form of meeting customer demand and the optimal location of the distribution center. After the optimal location is found, it can be continued by conducting a business feasibility study. In this case, the business processes in the warehouse are very important for the design of a warehouse that has added value for customers engaged in the rattan industry. Activities in this distribution center need to be considered so that they can be efficient and measurable from the initial to the final stage. Feasibility studies play an important role in the creation of a business or project. The aspects in it have a very strong link that includes financial aspects, environmental aspects, legal aspects, technical aspects, and others. A project if it does not have an investment picture in the future will be difficult to survive from year to year. That is the importance of a feasibility study in designing a business. There are several alternative solutions for this research, namely, the rattan supply chain network is too long with a supply chain network optimization solution from rattan raw materials. Minimizing the distance of shipping raw material supplies from the source of supply to the supply destination. Unbalanced between demand and available materials so that they can carry out implementation planning and

calculation of supply needs for the source of origin of supply. Inadequate distribution of raw materials, the suggested solution is to create a rattan distribution center based on demand points in East Kalimantan. Lack of availability of rattan raw materials so as to allocate production to the distribution center with the criteria of minimizing shipping distance. This research focuses on determining the location and design of distribution center facilities in the supply chain of rattan raw materials in East Kalimantan for the furniture industry. Using the P-Center method, this research aims to optimize the location of the distribution center in order to minimize distribution costs and improve supply chain efficiency. The selection of the right location is very important because it can affect the total logistics cost. Therefore, this research will consider various factors such as distance, cost, and raw material demand in determining the optimal location. By using the P-Center approach, location determination can be said to be more accurate because it pays attention to variables that are quite influential such as minimizing the distance of the farthest location, model simplicity, operational efficiency and adapting to various types of data needed.

Keywords: rattan, distribution center, distance, P-Center, feasibility study.