

## **CHAPTER 1**

### **INTRODUCTION**

Purpose of this chapter is to describe the research background, problem statements, objectives, and the limitation and scopes of this research. The explanations are followed below.

#### **1.1. Background**

Customer satisfaction is an indicator to measure how well the products or services which are supplied by an enterprise to the customer. In order to get customer satisfaction, an enterprise has to ensure that the products and services meet or exceed the customer's expectation. Therefore, customer is the top priority for an enterprise to keep them in business competition. If customer feel more satisfied with the result of the other company, then the enterprise will lose their customer and sales. If the enterprise could keep and increase the customer satisfaction, the demand will tend to increase.

Customer's expectation depends on customer requirements and characteristics. Each customer may have different requirements and characteristics, but at least an enterprise should fulfill the major and general customer needs. There are a lot of aspects that may affect the customer in choosing the product, such as the standard quality of the product, product cost, delivery time, the availability, and the others. Therefore, an enterprise should try to always do better and better over the time, by evaluating and improving their business system.

The availability of product is an important aspect in today's business competition. Therefore, the enterprises should ensure that they are capable to fulfill demand on the right time and also provides good quality of the product in a good price. If the customer cannot get their needs on time, or get the product but with low quality, then it will lead to the decrement of the customer satisfaction. That is the reason why an enterprise should manage their resources well, such as the man power, machines, and raw material. If the firm cannot manage the resources well, then it will lead them to run their business inefficiently. Inefficiency leads to unproductive work, which means that the production cost or operating cost may be high. A huge amount of production cost will also increase the selling price of the products, which may make them out of the competition. In order to manage

the resources well, the company has to know their current performances and their needs in the future.

An enterprise has to plan their production for several next periods, by doing forecasting in order to predict the future condition. The result of forecasting could help the company to predict their needs such as their resources in the next periods. Then, the result can be compared with the current level of their production in order to find out the gap in terms of resources.

An enterprise is required to fulfill their demand on time. Therefore, once the enterprise detects that their demand will increase in the certain period of time, they have to be able to manage their resources, while increasing their resources as well. The enterprise could not do planning by only increasing the number of raw material, number of workers, and other facilities. The enterprise has to do analysis on how big is the enlargement needed for them to fulfill the demand, but also did not waste their money to have much useless investment.

A company which is named CV. Karya Wahana Sentosa (KWaS), is the object in this research. The owner of CV. KWaS predict that their demand will increase in the future by approximately 150%, which means that it is the target of the production order in the future. The prediction comes from his expertise in managing a furniture industry and his network. He has been contacted by some new customers which will make orders for the company in the future. In order to anticipate the condition, the owner wants to increase their capacity. Besides, since the owner does not have exact data related to their current level of capacity, the owner cannot know how much resources should be increased, especially the man power. Knowing the production capacity is very important to the company, because it may help them to organize their agreement with the customer related to the deadlines.

Since the company has no idea about their current capacity level, the company cannot organize the customer demand and deadlines. The owner and production manager used their feelings on dealing with the customer related to the deadlines. When the production load is bigger than their capacity, it leads them to do overtime. Sometimes the overtime helped the company, but sometimes does not. Even though the company does the overtime, they cannot fulfill the demand on time quite often.

This research focused on how the company can know their current capacity level and how much resources they need in order to deal with customer demand in the future.

## **1.2. Problem Formulation**

The company (CV. Karya Wahana Sentosa) does not have any idea related with their current capacity level. It leads to an unreasonable decision while they are dealing with the customer related with the deadlines, which make them cannot fulfill the demand on time. Since the owner predict that there will be a quite big increment in their demand, the company has to be able to deal with it. The company has to have enough resources in order to run their production system and fulfill the customer demand, especially the man power resources. Therefore, the company has to have a clear plan related to its production capacity, with the purpose of dealing with the future condition in order to satisfy their customer.

## **1.3. Objectives**

The aim of this research is to find the current capacity level in the company and do capacity planning in order to determine how much resources that are needed in order to deal with the future condition. The specific objectives of this research are:

- a. Measuring the standard time needed for producing each type of family product in order to know how much their production load.
- b. Knowing the current production capacity level and compare it with the production load.
- c. Analyzing how many additional resources needed in order to anticipate the demand increment and fulfill the demand on time.

## **1.4. Scopes and Limitations**

This research has several limitations such as:

- a. The research took a furniture industry in Yogyakarta which is CV. Karya Wahana Sentosa (KWaS). Based on the high variety of products in furniture industry and the variation of processing time in each manufacturer, therefore the result of this research can only be applied in CV. Karya Wahana Sentosa or in the company that has similarities in terms of processing time and product variety.

- b. There will be no improvement of the working method that are used in the company.
- c. The calculation of production capacity is based on the human resources on the production floor. The other resources such as raw material and number of machines are not calculated in this research, as the biggest problem for the company is to determine how many persons in each production department needed.
- d. The setup time for splitting, cutting and assembly process are the same, and it is assumed for ten minutes. The value of 10 minutes is given by the estimation from the related worker and the production manager.
- e. The most common raw materials that are used in the company are plywood (2.4 meters of length and 1.2 meters of width) and wood (2.5 meters of length and 15 cm of width). The thickness for plywood and wood may vary, depends on the need for each product, but generally are 1.5 cm for plywood and 2 cm for wood material.