CHAPTER 2

LITERATURE REVIEWS

This research is done based on the earlier researches that cover the similar topic about inventory management by using a simulation model. Earlier researchers decided to analyze inventory management because it is a real problem that is mostly faced by company. The aim of the researches is to minimize the inventory cost.

There are some researchers that have covered the similar topic in inventory management by using simulation, they are:

Richi (2006) has done the research at PT. Ekadharma Tape Industries, a retailer industry which is located in Yogyakarta. The company needs to know when and how much each type of tapes should be ordered by considering the transport and capacity requirements. The simulation has done using Microsoft Excel with fixed lead time. The type of demand data is continuous distribution and the demand data analysis is done by using Arena Input Analyzer Software. The main purpose of this research is designing an inventory model to reach the minimum inventory cost.

Winata (2009) has done the research at Princess Laundry. Princess laundry needs inventory management on the detergent and softener. The stockless of both products cause the temporary collapse for the business. Demand data analysis and simulation are done by using Microsoft Excel with fixed lead time. The delivery cost

and order cost are considered to calculate total inventory cost. The main purpose of this research is designing an inventory model to reach the minimum inventory cost.

Fransisca (2011) has done the research at PT. Menara Agung, the distributor of motorcycle spare part. The simulation is done using Microsoft Excel with fixed lead time. The type of demand data is continuous distribution and the demand data analysis is done by using Arena Input Analyzer Software. The main purpose of this research was designing an inventory model which proposed to reach the minimum inventory cost.

Poernomo (2011) has done the analysis at UD. Modern which sells camphor and air refreshers. The simulation is done using Microsoft Excel with probabilistic lead time. The type of demand data is continuous distribution and the demand data analysis is done by using Arena Input Analyzer Software. The main purpose of this research was designing an inventory model to reach the minimum inventory cost.

The current research analyzes the inventory at the distributors of Well Sanitary. The research is done at CV Rojo Surakarta, the authorized dealer of Well Sanitary in Central Java. The aim of the research is to find the best inventory model to reach the minimum inventory cost.

Comparison between former researches and the current research will be shown in the table 2.1:

Table 2.1. shows the comparison between the former researches and current research. The similarity among them is to determine when and how many to be ordered, in order to get the minimum inventory cost. All of the researches have been done using Microsoft Excel, although most of the former analysis using Arena Input Analyzer to process the continuous distribution type of demand data.

This research analyzed about multi item inventory which has the discrete distribution of demand. Simulation process is done using Microsoft Excel by considering the minimum order quantity. The order is sent using BlackBerry Messenger and CV Rojo never consider about the charge of order cost.