ABSTRACT

The concept of inventory is not only important for the manufacturing sector but also important for the consumer goods industry sector such as the pharmaceutical sub-sector where the sector makes medicine an important material flow, especially in the health service chain in health care facilities. The PT LSP pharmacy is a pharmacy for PT PLN workers where the pharmacy ensures the availability of drugs in a health care unit with optimal inventory costs. The high ratio between supply and demand is a problem faced by PT LSP in controlling the supply of medicines, especially in the group of antibiotic drugs which has an impact on the total cost of supplies which exceeds 45% of the budget set by pharmacies in 2019.

This final project will solve this problem by designing an optimal antibiotic drug group inventory policy so that it can minimize the total inventory cost. The method used in this final project is the periodic joint replenishment method which aims to manage the inventory of a group of products that can be ordered simultaneously from one supplier. In the calculation of periodic joint replenishment using lead time, major order costs, minor order costs, demand, and holding costs.

The integrated system design method used will produce a total inventory cost and inventory policy components including interval review, maximum inventory levels, safety stock, and total inventory costs. The total cost of the resulting inventory is then compared with the actual inventory policy and continuous review to determine the policy that has the minimum total inventory cost.

The calculation results of this periodic joint replenishment model produce the lowest total inventory cost, which is Rp. 149,902,012,00 with a service level of 100%. Inventory policy design in this final project provides savings of Rp. 76,518,870 or 34% for total inventory costs.

Keywords: Antibiotic inventory policy, Inventory cost, Periodic joint replenishment