

ABSTRACT

At first business competition occurs between the brand product, and then inter-company, and now in the era of globalization of business competition has entered the era of competition among the supply chain. One of the problems that arise in a supply chain system is the inventory policy to determine the ordering lot size, reorder point, and the number of backup safety. Determination is an important issue in a supply chain system because the policy will impact on the total cost of inventory and service levels. The determination of lot size independently in an existing supply chain resulted in the aggrieved party and benefit. One way that can be used to overcome this problem is to establish good relationships in the form of collaboration or partnership in the circuit supply chain. One of the collaborative model is currently widely used is the Vendor Managed Inventory (VMI).

PT Sinar Terang Logamjaya or PT Stallion is a company engaged in the manufacturing industry. PT Showa is one of the largest consumer of the two PT Stallion. The main products are ordered PT Showa Oil Lock Collar and Damper Cap. Requests PT Showa has a very high fluctuation, giving rise to uncertainty on the number and type of request. The uncertainty of demand can create supply PT Stallion become erratic, causing swelling of the cost of unwanted inventories. To overcome these problems, it should be applied to models of collaborative Vendor Managed Inventory (VMI).

Analytically, an implicit function difficult to solve. Therefore to mementukan value of the function is searched with an iterative manner. One way to solve these equations is by using the method of Hadley-Within algorithm. In this research, ordering lot size, reorder point, and the amount of the security reserve is determined using the method of Hadley-Within.

The results of this study the results of calculations obtained using the method of Hadley-Within a production point of return, period, the number of backup safety, and optimal production lot size. Using the results of this calculation, PT Stallion can overcome the demand of PT Showa that has a very high level of fluctuation. Thus the swelling cost of inventories PT Stallion can minimized, which affects the total cost is subtracted. This would provide benefits for PT Stallion.

Keywords: hadley-within, vendor managed inventory, supply chain