

The effect of replenishment policy on bullwhip effect considering the higher level shipments

Dayong Wang, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20495946&lokasi=lokal>

Abstrak

ABSTRACT

A multi level and multi node supply chain multi agent simulation model is established based on the two maximum inventory level replenishment strategies, which consider the superior shipments. The effect of these two replenishment strategies on the bullwhip effect of supply chain role level and enterprise node is discussed. This paper describes in detail how the supply chain enterprises deal with important issues such as, receipt from superior, subordinate delivery, and order to the higher level. What is more important is that how to carry out demand forecasting and replenishment using the maximum inventory level strategy when ordering to the superiors. Results show that the bullwhip effects on the other three kinds of scenarios are all different from those with a higher quantity of goods, which the bullwhip effect is not notable. The bullwhip effect significantly increases from downstream to upstream. In the development of replenishment strategy, compared to not considering the superior shipments, considering it will significantly reduce the layer bullwhip effect and node bullwhip effect of the agents in supply chain. Considering the superior shipments has brought beneficial impact to the order quantity stability of each layer and the order quantity stability of each node enterprise.