

Abstract

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Factors Affecting The Bullwhip Phenomenon When Reverse Supply Chain Flow Exists

Bullwhip effect is one of the most important factors that affects the performance of a supply chain. It results in a much larger variation going up in a supply chain resulting in consuming resources in anticipation of a demand that is not true, a delay in production due to false sharp decrease in demand. In this research, we examine the factors affecting the bullwhip performance in a serial supply chain adopting a minimum/maximum inventory policy. We consider a reverse flow that includes returned products like what happens in peak seasons such as holidays. The bullwhip effect is large in these seasons. We build a simulation model and use design of experiment in performing a factorial experiment to examine the interactions among different factors.