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Supply Chain Coordination under Asymmetric Production Cost Information and Inventory Inaccuracy

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Abstract

In this paper, considering a supply chain subject to stochastic demand, we present a

newsvendor model to study the game process between a supplier owning private cost information

and a retailer suffering from inventory inaccuracy problem. We present that by setting the contract

parameters appropriately, both partners have the right incentive for maximizing the total supply

chain profit: the supplier share information actively by choosing the contract designed for his

marginal production cost, while the retailer's rational decision concurs with the overall optimal

decision. We further study the supply chain performance and the interval of the coordinating

contract parameters under different situations by illustrating the model through some numerical

assumptions, establishing and highlighting the conditions under which the RFID technology is

preferable to the system.

Keywords: Supply chain coordination; Asymmetric information; Inventory inaccuracy; Radio

frequency identification

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