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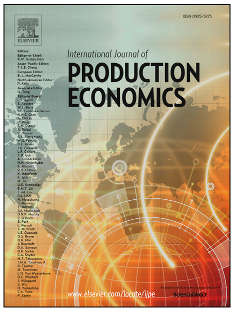

Swapping inventory between competing firms

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Title: Swapping Inventory Between Competing Firms

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Abstract: In this study, we investigate how competing firms swap inventory. We consider two firms located in two different markets that produce the same type of product. Each firm sells in the two markets. The selling price in each market is determined by the selling quantities of the two firms. We first show that the optimal swapping quantity is zero when firms decide to swap inventory without a sophisticated method. That is, they would not swap inventory. However, under our proposed inventory swapping method, competing firms swap a positive amount of inventory, enabling a higher profit for both firms. We also find that the swapped quantity increases as transportation costs decrease, and swapping inventory may not be beneficial if the transportation cost is either too low or too high. In addition, we investigate how to implement the swapping inventory agreement when the value of the swapped inventory differs by market. We show that firms may prefer to return the physical products to pay the value difference, especially if they are risk-averse.

Keywords: inventory swapping; competition; cooperation