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Across-chain inventory control of cluster supply chains based on E-business. (Chinese. English summary) [Zbl 1174.90312](#)

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Summary: Focusing on inventory control of cluster supply chains under E-business, the inventory model with cross-chain cooperation under time-varying demand is established. And the optimal orders are explored through utilizing game theory retaining external disturbance in H_∞ control theory to dwindle fluctuation of inventory and order and improve quick response to market in Supply-Demand network. The simulation is carried out by comparing analysis according to two situations with cooperation and noncooperation across supply chains. It is proved by simulation that implementing the policy of robust control method and emergency across transshipment can effectively avoid overstock or shortage, and enhance competition for supply chain and industrial cluster.

MSC:

90B05 Inventory, storage, reservoirs

93B36 H^∞ -control

Keywords:

cluster supply chains; across-chain cooperation; inventory control; across transshipment