Supply Chain Consolidation and Cooperation in the Agricultural Industry

Presented by
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Competition has made supply chain consolidation and cooperation an important strategy within various sectors. We first present an optimization model that determines the consolidation and shipping quantities for each supplier and then design cost sharing mechanisms for freight consolidation in an agricultural supply chain. This cost-sharing mechanism determines the set of suppliers who will participate in the consolidation and their corresponding cost shares. We design this to ensure that every supplier is willing to reveal their preference truthfully and the total consolidation cost incurred is recovered by the allocated costs. Our study shows that our cost-sharing mechanism often yields cost shares that maximize the social welfare of all the suppliers.

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