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论文

TPLSPs竞争模式下的物流合同

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Logistics Coordination Contract under the Mode of Competing TPLSPs

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摘要 本文研究了一个客户企业与两个竞争的第三方物流服务提供商（TPLSP）、且两个TPLSPs的努力水平同时影响市场需求的模型。利用博弈理论，研究了存在两个TPLSP竞争时，系统集中决策、独立决策两种情况下，客户企业与TPLSPs的最优决策.探讨了TPLSPs的最优努力水平与其市场占有率、服务价格、服务成本之间的动态关系，为了协调该模型，给出了客户企业与两个TPLSPs之间的收入共享与成本共担的组合合同，讨论了合同使得系统达到协调的条件；由系统协调条件可以看出，市场占有率越高的TPLSP越容易接受TPLSP分配客户企业收益比重较小的合同；证明了竞争能提高努力水平、提高客户订货量。

关键词： 物流合同 博弈 努力水平 市场占有率

Abstract： In this paper,a model is proposed to study a system,which consists of one client enterprise and two competing third party logistics service providers(TPLSPs).Meanwhile, the effort level of two TPLSPs affect the stochastic demand simultaneously. Using the game theory, the optimal decisions are given, the dynamic relations are studied among the optimal effort level of two TPLSPs and their share of market, service price and unit cost, in the two cases of centralized decision-making and decentralized decision-making. In order to coordinate the model, a combined contract is introduced in which the client enterprise should share its revenue with both TPLSPs, and need to take part of the effort cost of both TPLSPs, discuss the conditions of the contract could coordinate the system. It can be found that heavier share of market, more easily the TPLSP accept a contrace with a lower share of enterprise's revenue. Results prove that competition of TPLSPs can not only improve both TPLSPs's effort level, but also promote the enterprise's optimal order quantity.

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