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考虑潜在突发危机的供应链事前优化决策

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Ex-ante optimal decision-makings for two-level supply chain with potential disruptions

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全文: PDF (617 KB)   HTML (1 KB)   输出: BibTeX | EndNote (RIS)　　背景资料

摘要 考虑潜在突发危机对市场需求的双向影响, 提出了突发危机依赖需求并特别关注到了伴随突出危机可能出现的负需求现象, 供应链双方根据对突发危机和市场相关信息的收集、分析与共享, 形成对突发危机随机性以及需求的危机依赖性的共同信念. 以此为基础构建报童背景下的分析模型, 探讨了双方的博弈过程, 揭示了潜在突发危机对供应链成员的事前决策与博弈均衡结果的影响. 此外, 通过数值分析说明了所构建的模型的应用, 并证实讨论了潜在突发危机的随机特征的影响.

关键词: 供应链　突发危机　突发危机依赖需求　报童　博弈

Abstract： The paper takes the bidirectional impact of the potential disruption in the selling season on market demand into account by introducing so-called disruption-dependent demand. The possible negative demand associated with disruption is particularly concerned. Based on the formulation for the disruption-dependent demand, an analytical model is proposed to study the Stackelberg game process between single supplier and single retailer (newsvendor), then how the stochastic characteristics of disruption, as well as the sensitivity of demand to disruption, affect the decision-makings are further investigated. Additionally, a numerical analysis is provided to show the application of the model.

Key words： supply chain　disruption　disruption-dependent demand　newsvendor　game

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引用本文:

杜少甫,朱贾昂,梁樑等. 考虑潜在突发危机的供应链事前优化决策[J]. 系统工程理论实践, 2012, (5): 928-936.

DU Shao-fu,ZHU Jia-ang,LIANG Liang et al. Ex-ante optimal decision-makings for two-level supply chain with potential disruptions[J]. Systems Engineering - Theory & Practice, 2012, (5): 928-936.

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