

首页 | 期刊介绍 | 编委会 | 编辑部介绍 | 投稿指南 | 期刊订阅 | 广告合作 | 留言板 | 联系我们 |

中国管理科学 2015, Vol. 23 Issue (5) :48-55

论文

[最新目录](#) | [下期目录](#) | [过刊浏览](#) | [高级检索](#)

[<< Previous Articles](#) | [Next Articles >>](#)

基于顾客策略行为和缺货损失的供应链定价与订购决策

徐兵, 熊志建

南昌大学管理科学与工程系, 江西 南昌 330031

Pricing and Ordering Decisions of Supply Chain based on Customer Strategic Behavior and Loss of Stock-out

XU Bing, XIONG Zhi-jian

Department of Management Science and Engineering, Nanchang University, Nanchang, 330031

摘要

参考文献

相关文章

Download: PDF (1014KB) | [HTML \(1KB\)](#) | **Export:** BibTeX or EndNote (RIS) | **Supporting Info**

摘要 顾客基于理性预期决定购买时机的策略行为造成供应链决策困难,影响到供应链利润。针对单生产商、单零售商组成、具有高支付意愿与低支付意愿两类顾客的供应链,利用均衡分析方法和理性预期理论建立了考虑缺货损失下高支付意愿顾客分别为策略型顾客与短视型顾客时供应链的分散式决策二层规划模型和集中式决策模型,对该四种模型进行了求解与对比分析、以及数值仿真和敏感性分析,算例表明了模型的合理性和结论的有效性。研究表明:高WTP顾客为策略型顾客时,集中式供应链与分散式供应链相比,其订货量高、但零售价低,故利润反而较低;高支付意愿顾客为策略型顾客时分散式供应链和集中式供应链的利润小于高支付意愿顾客为短视型顾客下的情形;四种供应链模式下的订货量随单位缺货损失的增加而增加,但供应链的利润降低。限量销售、回购剩余产品、提高顾客心目中的产品价值等策略可有效降低顾客策略行为对供应链的影响。本文将促进基于顾客策略行为的供应链理论研究与管理实践。

关键词: 顾客策略行为 供应链决策模型 缺货损失 理性预期均衡 定价与订购决策

Abstract: The strategic behavior that customers decide the purchase time based on the rational expectations will cause the supply chain (SC) difficulty in decision-making and affect its profits. Consider a supply chain (SC) consisting of a manufacturer, a retailer and two kinds of customers with high or low willingness to pay (WTP), the centralized decision models and decentralized bi-level programming models of supply chain, when high WTP customers are strategic customers or myopic customers and the loss of stock-out is considered, are set up respectively by using the equilibrium analysis method and rational expectations theory. These four models are solved and the comparison analysis is performed as well as numerical emulation and sensitive analysis. The numerical examples prove the rationality of models and validity of conclusions. The study shows that when the high WTP customers are strategic customer, the centralized SC has higher order quantity, but lower profit of supply chain due to lower retail price comparing with the decentralized SC. The profits of decentralized SC and centralized SC with strategic high WTP customers are lower than those with myopic high WTP customers. The higher the unit loss of stock-out is, the more the order quantities are, but the less the profits of SCs are in each mode. The strategies such as selling with limited quantities, buying back the surplus products, improving the product value in the heart of customers and so on, can effectively reduce the affection of customer strategic behavior on SC. The theoretic research and management practice of SC are promoted based on customer strategic behavior.

收稿日期: 2013-01-18;



基金资助:

国家自然科学基金资助项目(70961006);中国博士后科学基金(20100481186);中国博士后科学基金特别资助项目(2012T50593);"江西省'十二五'重点学科管理科学与工程"资助项目

作者简介: 徐兵(1972-),男(汉族),江西南昌人,南昌大学管理科学与工程系博士,教授;研究方向:运筹学、物流与供应链管理。

引用本文:

.基于顾客策略行为和缺货损失的供应链定价与订购决策[J] 中国管理科学, 2015,V23(5): 48-55

- [1] 杨慧,周晶.收益管理竞争定价的决策机理分析[J]. 南京理工大学学报(社会科学版), 2008, 21(1): 50-54.
- [2] Shen Z M, Su Xuanming. Customer behavior modeling in revenue management and auctions: A review and new research opportunities[J]. Production and Operations Management Society, 2007, 16(6): 713-728.
- [3] Aviv Y, Pazgal A. Optimal pricing of seasonal products in the presence of forward looking consumers[J]. Manufacturing & Service Operations Management, 2008, 10(3): 339 - 359. 
- [4] Su Xuanming. Inter-temporal pricing with strategic customer behavior[J]. Management Science, 2007, 53(5): 726-741. 
- [5] 计国君,杨光勇.策略顾客下最惠顾客保证对提前购买的价值[J]. 管理科学学报, 2010, 13(7): 16-25.

Service

把本文推荐给朋友

加入我的书架

加入引用管理器

Email Alert

RSS

作者相关文章

- [6] 刘晓峰,黄沛.基于策略型消费者的最优订购决策[J]. 管理工程学报, 2009, 23(4): 182-186.
- [7] 刘晓峰,黄沛.基于策略型消费者的最优动态定价与库存决策[J]. 管理科学学报, 2009, 12(5): 18-26.
- [8] Cachon G P, Swinney R. Purchasing, pricing, and quick response in the presence of strategic consumers[J]. Management Science, 2009, 55(3): 497-511. 
- [9] Xu Xianhao, Chen Wen, Qian Chen. Rationing and pricing with strategic consumer behavior.Proceedings of the 18th International Conference on Management Science & Engineering, Chengdu,China,Dctober 1-2,2011.
- [10] 黄松,杨超,张曦.考虑客户策略行为时报童模型定价与库存控制[J]. 运筹与管理, 2010, 19(3): 15-22.
- [11] Su Xuanming, Zhang Fugiang. Strategic customer behavior, commitment, and supply chain performance[J]. Management Science, 2008, 54(10): 1759-1773. 
- [12] 李娟,黄培清,顾锋.基于顾客战略行为下的供应链系统的绩效研究[J]. 中国管理科学, 2007, 15(4): 77-82. 浏览
- [13] 杨道箭,齐二石,姜宏.基于顾客策略行为的供货水平与供应链绩效[J].计算机集成制造系统,2010,16(9):1984- 1991.
- [14] 杨道箭,齐二石,魏峰.顾客策略行为与风险偏好下供应链利润分享[J]. 管理科学学报,2011,14(12):50-59.
- [15] Muth J F.Rational expectations and the theory of price movements[J]. Econometrica,1961,29(3):315-335. 
- [16] 黄松,杨超,张曦.考虑战略顾客行为时的供应链性能分析与协调[J].管理科学学报,2012,15(2):47-57.
- [1] 申成霖, 张新鑫, 侯文华.需求学习下考虑顾客策略行为的供应链决策[J]. 中国管理科学, 2015,23(4): 86-95
- [2] 姜宏.基于顾客策略性购买和退货行为的缺货保障策略价值研究[J]. 中国管理科学, 2015,23(4): 96-104
- [3] 张新鑫, 侯文华, 申成霖.顾客策略行为下基于CVaR和回购契约的供应链决策模型[J]. 中国管理科学, 2015,23(2): 80-91
- [4] 李武强, 刘树林, 孙荣庭, 李毅斌.不确定需求情境下的供应链预测契约设计[J]. 中国管理科学, 2013,21(5): 57-67
- [5] 徐贤浩, 陈雯, 彭红霞.基于策略消费者行为和市场细分的联合定价库存策略[J]. 中国管理科学, 2012,20(6): 78-86
- [6] 黄松, 杨超, 张曦.考虑战略顾客行为带预算约束的多产品报童问题[J]. 中国管理科学, 2011,19(3): 70-78
- [7] 彭志强, 熊中楷, 李根道.考虑顾客策略行为的易逝品定价与再制造柔性补货机制研究[J]. 中国管理科学, 2010,18(2): 32-41

Copyright 2010 by 中国管理科学