论文

基于风险厌恶的供应链订货时机分析

熊恒庆[1,2], 黄勇[1], 杨建仁[1]

1. 景德镇陶瓷学院工商学院, 江西 景德镇 333403;
2. 华中科技大学管理学院, 湖北 武汉 430074

Analysis of Order Timing based on Risk Aversion in Supply Chain

XIONG Heng-qing[1,2], HUANG Yong[1], YANG Jian-ren[1]

1. School of Business, Jingdezhen Ceramic Institute, Jingdezhen 333403, China;
2. School of Management, HuaZhong University of Science and Technology, Wuhan 430074, China

- 摘要
- 参考文献
- 相关文章

Download: PDF (1872KB)   HTML (1KB)   Export: BibTeX or EndNote (RIS)   Supporting Info

摘要 基于报童模型,在一个由风险厌恶型制造商和零售商组成的供应链中,分析了三种供应链订货时机:预先订货、延迟订货、柔性订货,并调查了风险厌恶对供应链的影响。不同于已有文献关于风险中性的假设,发现由于风险厌恶,在预先订货方式下零售商有最小化订货量的倾向,在延迟订货方式下制造商有最小化生产量的倾向;进一步的分析结果显示在一定条件下零售商将削减订货量至少一半,制造商利润减少至少一半。为此设计了特许费契约进行协调。认为提升企业信心、消除风险厌恶引起的不利影响,在经济萧条时有着非常重要的作用。

关键词: 订货时机 订货延迟 风险厌恶 供应链协调

Abstract: Based on the newsboy model,three types of order timing are analyzed in a supply chain which consists of a risk-averse manufacturer and a risk-averse retailer. The three types of order timing are advance order, delayed order and flexible order. The influence of risk aversion on the supply chain is also examined. Different from literatures about risk neutral assumption,the results show that due to risk aversion,the retailer tends to minimize his order quantity under the mode of advance order, and the manufacturer tends to minimize her production quantity under the mode of delayed order. Further analysis shows that the retailer may cut his order quantity by at least half and the manufacturer's profit may be reduced by at least half under certain conditions. So a Franchisee fee contract is employed to coordinate. It is suggested that enhancing business confidence and eliminating adverse influence play a very important role during economic depression.

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

熊恒庆
黄勇
杨建仁

引用本文:

熊恒庆, 黄勇, 杨建仁 .基于风险厌恶的供应链订货时机分析[J] 中国管理科学, 2013,V(1): 63-70

[1]   Cachon G P.The allocation of inventory risk in a supply chain:push, pull, and advance-purchase discount contracts [J].Management Science, 2004, 50(2): 222-238.

[2]   Granot D, Yin Shuya.Price and order postponement in a decentralized newsvendor model with multiplicative and price-dependent demand [J].Operations Research,2008,56(1):121-139.

[3]   Tong Chunyang.Order postponement in a supply chain in the presence of exponential demand with gamma prior[J].Operations Research Letters, 2010, 38(2): 97-103.

[4]   Ferguson M E. When to commit in a serial supply chain with forecast updating[J].Naval Research Logistics, 2003, 50(8):917-936.

[5]   Ferguson M E, Decroix G A, Zipkin P H.Commitment decisions with partial information[J].Updating Naval Research Logistics, 2005, 52(8):

780-795. cross ref

[6] Taylor T A.Sale timing in a supply chain: when to sell to the retailer [J]. Manufacturing and service operations management, 2006,8(1):23-42. cross ref

[7] Dong Lingxiu, Zhu Kaijie.Two-wholesale-price contracts:push, pull, and advance-purchase discount contracts [J].Manufacturing & Service Operations Management, 2007, 9(3): 291-311. cross ref

[8] Greenwald B C, Stiglitz J E.Asymmetric information and the new theory of the firm: financial constraints and risk behavior[J].The American Economic Review,1990, 80(2): 160-165.

[9] Li Jing, Lau H, Lau A H.A two-product newsboy problem with satisfying objective and independent exponential demands[J].IIE Transactions, 1991, 23(1): 29-39. cross ref

[10] Lanzillotti R F.Pricing objectives in large companies[J].American Economic Review, 1958, 48(5): 921-940.

[11] Shi C, Chen B.Pareto-optimal contracts for a supply chain with satisficing objectives [J].Journal of the Operational Research Society, 2007, 58(6): 751-759. cross ref

[12] Ferrante A.Conservative ordering makes inventory strategy critical to avoid stock outs this holiday season[EB/OL].(2009-10-21).http://www.Retail touch points.com/retail-store-ops /306 conservative ordering makes inventory strategy critical to avoid stock outs this holiday season.html.

[1] 张建军, 赵晋, 张洪见, 张艳霞.面向道德风险的易逝品供应链声誉演化研究[J]. 中国管理科学, 2013,(1): 180-184

[2] 李琰, 达庆利, 孙浩.产品市场纵向差异的两阶段再制造供应链契约协调[J]. 中国管理科学, 2012,20(6): 52-60

[3] 吴忠和, 陈宏, 赵千, 吴晓志.需求和零售商购买成本同时扰动的供应链应急协调[J]. 中国管理科学, 2012,20(6): 110-117

[4] 申成霖, 侯文华, 张新鑫, 卿志琼 .基于信息更新与服务水平约束的供应链订货及协调决策[J]. 中国管理科学, 2012,20(5): 55-63

[5] 李新然, 牟宗玉, 黎高.VMI 模式下考虑促销努力的销量回扣契约模型研究[J]. 中国管理科学, 2012,(4): 86-94

[6] 孙自愿 黄元元 董晶晶.基于"不公厌恶"与"风险厌恶"的经理人持股激励契约[J]. 中国管理科学, 2011,19(6): 177-184

[7] 慕银平 唐小我 牛扬.不同折扣券发放模式下的供应链定价与协调策略[J]. 中国管理科学, 2011,19(6): 48-56

[8] 张晓建 沈厚才 吴婷 .供应链中的批量与信用期联合决策研究[J]. 中国管理科学, 2011,19(5): 42-49

[9] 林略 杨书萍 但斌 .时间约束下鲜活农产品三级供应链协调
[J]. 中国管理科学, 2011,19(3): 55-62

[10] 张义刚 唐小我 .延迟支付下短生命周期产品批发价契约研究
[J]. 中国管理科学, 2011,19(3): 63-69

[11] 吴江华 翟昕 何玉红 .供应链中基于信息更新的订货时间及价格联合决策研究
[J]. 中国管理科学, 2010,18(5): 58-65

[12] 申成霖 张新鑫 卿志琼 .服务水平约束下基于顾客策略性退货的供应链契约协调研究

[J]. 中国管理科学, 2010,18(4): 56-64

[13] 宋华明 杨慧 罗建强 段子珺 .需求预测更新情形下的供应链Stackelberg博弈与协调研究

[J]. 中国管理科学, 2010,18(4): 86-92

[14] 庞庆华.收益共享契约下三级供应链应对突发事件的协调研究[J]. 中国管理科学, 2010,18(4): 101-106

[15] 但斌 唐国锋 宋寒 张旭梅 .需求不确定下两阶段应用服务供应链市场风险分担机制研究
[J]. 中国管理科学, 2010,18(3): 45-52