
环保约束下的双渠道绿色供应链博弈模型的稳定性研究

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摘要

Keywords

1 介绍

问题的研究背景（说明研究的问题的背景是什么，给出近年来该问题在学术领域的发展情况）。问题来源（如果没有问题存在的意义，那就没有必要写论文了）。**note:** 双渠道供应链背景（电商、厂商），关于经济学的定性研究结论。

传统的双渠道供应链模型包括一个制造商和一个传统经销商的博弈模式。然后近年来许多学者从实际生产生活中抽象出多种模型，并分别进行了建模和均衡的求解。Wang 等 (2016)[5] 研究了厂商增加电商和第三方直销这两种额外渠道，分别对传统博弈结果的影响。Zhao(2017)[7] 等人求解了两个制造商和一个经销商的情况。Xie(2018)[9] 等人综合前人研究增加了厂商和经销商的一致模式，并给出了完整的数学求解。Arshad(2018)[10] 等人讨论了两个经销商的合作对抗厂商的博弈策略，并加入商品回收机制，考虑闭环供应链。Pathak、Giri 和 Hosseini-Motlagh 等 (2019)[18][19, 20] 都研究了闭环供应链模型中回收商的组织和回收价格对博弈策略的作用，并且讨论了参数对于均衡点稳定性的影响。**note:** 经销商的公平竞争考量，现实意义和措施。王虹等 (2009)[2] 讨论了一致与非一致下的 Stackelberg 博弈模型，认为厂商的决策在非一致模式下优于一致模式。Li 等 (2016)[6] 研究了非一致模式下考虑公平因素的 Stackelberg 博弈，认为经销商会在已知不对等的地位下，通过降低价格来获取市场份额的增加。Wang(2018)[11] 等人讨论了一致模式和非一致 Bertrand 模式下引入公平考虑的作用。Dai 等 (2019)[21] 进一步进行了同样的建模求解，进一步给出了参数显著性的分析。

这一类动态博弈模型，以及其演化模式，通常描述为一个动力系统模型。因此运用动力学分岔理论研究博弈系统的稳定性成为主流研究方法。唐兴巧等 (2017)[8] 利用数值模拟系统的分岔图等动力学特征分析了系统 Nash 均衡点的稳定性，并得出了系统存在混沌行为导致市场不规律的后果。张芳等

(2018)[13] 和 Zhang 等 (2015)[4] 分别在公平因素条件下和闭环系统条件下, 利用同样的工具研究动力系统的 Hopf 分岔图、Lyapunov 指数以及混沌引子等指标。Li 等人在 2018 年, 通过一系列问题的实证研究, 将该方法运用到了各个博弈场景中 [14, 15, 22, 23]。

note: 绿色供应链和制度约束 (ECSC) [1]。Sheu 等 (2012)[3] 的研究发现, 当政府基于环保因素考虑, 通过财政手段对供应链主体征税以及补贴, 供应链博弈均衡的收益和社会福利都有显著的提高。进一步, Sinayi 等 (2018)[16] 和 Aslani 等 (2019)[24] 引入了消费者对绿色产品的线性倾向性需求, 同时考虑制造商生产绿色产品的额外成本, 研究政府的各类干预措施分别的有效性。Rahmani 等 (2018)[17] 研究了需求扰动下的双渠道绿色供应链的定价模式。

提出的方法 (这部分就是重点了, 列出论文的贡献点, 写清楚你的创作点, 突出自己的方法与别人的不一样的地方)。实验结论 (只有当你论文中有一个强有力的结论时才添加, 这个部分需要谨慎)。相关工作。

6、论文概要

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