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论文

基于移动商务平台的供应链优化与协调研究

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Supply Chain Optimization and Coordination Based on the Mobile Commerce Platform

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摘要
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摘要 3G网络的普及为移动商务的进一步发展提供了广阔的平台,越来越多的企业通过开发基于移动商务平台的应用来销售产品进而扩大市场份额。本文考虑一个网络零售商和一个移动平台服务商组成的供应链系统;其中零售商借助于服务商的营销努力来开拓移动渠道需求。零售商根据平台销量向服务商支付佣金;考虑到捕获的需求所带来的网络外部性,服务商需要确定自身的营销投入。基于一个Stackelberg博弈模型,我们研究了零售商的最优佣金和服务商的最优营销努力决策,刻画了最优决策的结构性质,并提出了一个分段佣金契约来实现供应链的协调。数值实验表明通过零售商和平台服务商的协调运作,能够有效地提高整体利润。研究结果对新时期网络零售商开展基于移动商务平台的协作具有较强的管理启示。

关键词: 电子商务 供应链管理 网络外部性 营销努力 最优定价

Abstract: The wide adoption of the third generation (3G) network has provided ample opportunities for the development of mobile commerce(MC). An increasing number of firms are considering developing applications on the MC platforms to expand their market. The paper considers a supply chain which consists of one retailer and one platform service provider. The retailer seeks to exploit additional market that would otherwise be missed through the MC platforms owned by the service provider. Suppose the commission charged by the service provider is in proportional to the selling quantity,and the service provider needs to determine his/her marketing effort by considering the potential service revenue from the induced market depending on the platform network externality.Based on a Stackelberg game,we investigate the optimal commission decision for the retailer and the optimal marketing effort decision for the service provider are investigated, characterize the structure of the optimal decisions,and develop a piecewise commission contract to coordinate the supply chain. Numerical experiments show that the coordination between the retailer and service provider has great potential in improving the performance of the entire supply chain. Our research provides useful managerial insights for online retailers to conduct new business models on MC platforms in the information age

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