

博士论坛

弹性效用价格竞争博弈的纯策略寡占均衡

洪永发^{1,2}, 徐娟¹

1. 同济大学 计算机科学与技术系, 上海 200092
2. 山东科技大学 信息科学与工程学院, 山东 青岛 266510

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摘要 讨论了具有弹性效用的并行路径网络的多个服务提供商之间的价格竞争博弈问题。如果每个拥有链路的服务提供商的目的是设定使自己利润最大化的价格, 而用户依据Wardrop原理选择自己的传输流量和传输路径。当每个用户的效用函数为凹函数且其一阶导数也是凹函数, 网络链路的延迟函数为线性函数时, 则证明了这种多个服务提供商之间的价格竞争博弈存在纯策略寡占均衡。

关键词 [价格竞争博弈](#) [均衡](#) [寡占](#) [弹性效用](#)

分类号

Pure strategy oligopoly equilibrium of price competition game with elastic utility

HONG Yong-fa^{1,2}, XU Juan¹

1. Department of Computer Science and Technology, Tongji University, Shanghai 200092, China
2. College of Information Science and Engineering, Shandong University of Science and Technology, Qingdao, Shandong 266510, China

Abstract

This paper discussed the price competition among multiple service providers in a parallel-path network with elastic traffic. The authors studied a model in which service provider owned the link in a network and set prices to maximize their profits, while the users had chosen the amount of flow to send and the routing of the flow according to Wardrop's principle. When utility function of users were concave and had concave first derivatives and the delay function was linear, the authors could prove the existence of pure strategy oligopoly equilibrium of price competition game among multiple service providers.

Key words [price competition game](#) [equilibrium](#) [oligopoly](#) [elastic utility](#)

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通讯作者 洪永发 hzyfl@126.com

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