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Evolutionary game analysis of the role of government under sharing of logistics terminal distribution resources.  (Chinese. English summary) Zbl 07366868

Summary: Resource sharing is an effective way to solve the problem of logistics terminal distribution. When companies cannot share distribution resources independently, how can the government play a role in motivating enterprises to share resources. In this paper we build the evolutionary game model of sharing logistics distribution resources between logistics enterprises and third-party service, and research the resource sharing behavior of both parties at the end of logistics distribution and its influencing factors, and analyze the decision-making mechanism of promoting resource sharing at the end of logistics distribution by the government. It is concluded that only the excess returns of both sides are higher than the extra costs invested, can the resource sharing be promoted when the government does not participate in the management. The government’s policy subsidies can promote the development of resource sharing within the acceptable range of resource sharing cost when the government participates in the management. From the perspective of mechanism design, this paper analyzes the promotion effect of government participating in logistics resource management in the future, and then gives corresponding solution and suggestions, to provide some ideas for the mechanism design of the government.

MSC:
91B32  Resource and cost allocation (including fair division, apportionment, etc.)
90B06  Transportation, logistics and supply chain management
91B03  Mechanism design theory
91A22  Evolutionary games

Keywords:
resource sharing; terminal distribution; evolutionary game