Coordinating contracts for a three-lever logistics service supply chain

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Abstrak

A three-lever logistics service supply chain (LSSC) consisting of a logistics service integrator (LSI), a logistics service provider (LSP), and a functional logistics service subcontractor (LSS) is discussed in this paper. Since the improvement of logistics service levels caused by the effort of LSS can significantly effect the market demand for LSSC, a dynamic game theory model is developed to solve the coordinating contract design problem in this condition. A joint contract is between LSI and LSP, which are regarded as a whole to share revenue and cost with LSS in the two transactions of LSSC. The reasonable choice of parameters can attain the maximum of the expected profit of LSSC and the win-win good among all members, finally, a corresponding numerical example is presented to illustrate the conclusions.