# Research on Logistics Service Quality Control Considering Reference Dependence and Fair Concern under Demand Update

*ZHANG Cui- hua,[1,*] LI Chun-yu,[1] and SHI Quan-jie [1]*

*[1] School of Business Administration, Northeastern University, Shenyang 110819, China*

Under demand update, quality control issues of logistics provider service with consumer's reference dependent and integrator fairness concern were investigated. Based on market demand uncertainty, the effects of consumer's reference dependent and integrator fairnes concern on logistics service were taken into account, and quality sensitive demand function was established, then quality control models of logistics service composed of single supplier and single integrator were developed. Applying the method of game theory, the optimization of integerated and centralized decision-making models were conducted, and the optimal solution to quality commitment defects rate, the purchase index and the service price of logistics service were obtained. Moreover, numerical simulation analysis was carried out. The results showed that, first, demand updating can reduce the defect rate of the optimal quality commitment. Secondly, the optimal quality commitment defect rate was negatively correlated with the reference dependent sensitivity coefficient under decentralized decision-making. In addition, the supply chain expected total profit in case of demand updating was maximal under centralized decision-making., and the expected total profit under centralized decision-making was less than that under decentralized decision-making when the demand updating was not conducted.