عنوان مقاله:

A Hybrid Dynamic Programming for Inventory Routing Problem in Collaborative Reverse Supply Chains

محل انتشار:

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

Inventory routing problems arise as simultaneous decisions in inventory and routing optimization. Inthe present study, vendor managed inventory is proposed as a collaborative model for reverse supplychains and the optimization problem is modeled in terms of an inventory routing problem. The studiedreverse supply chains include several return generators and recovery centers and one collection center.Since the mathematical model is an NP-hard one, finding the exact solution is time consuming andcomplex. A hybrid heuristic model combining dynamic programming, ant colony optimization andtabu search has been proposed to solve the problem. To confirm the performance of proposed model,solutions are compared with three previous researches. The comparison reveals that the method cansignificantly decrease costs and solution times. To determine the ant colony parameters, four factorsand three levels are selected and the optimized values of parameters are defined by design ofexperiments.

کلمات کلیدی:

Reverse Supply ChainsCollaborationDynamic ProgrammingAnt Colony OptimizationTabu search

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