Mixed Hub-and-Spoke Intra-Network Routes Design for the Fixed-Route Trucking Carriers

張建彥,Yuh-Jen Cho,Chia-Chun Wu
Transportation Technology and Logistics Management
Management
0

Abstract

The operation network of a fixed-route trucking carrier can be divided into intra-network and extra-network. To improve the efficiency, the intra-network can further be transferred into a hub-and-spoke intra-network. The purpose of this study is to propose a model of routes design for the intra-network, named as the Mixed Hub-and-Spoke Network Routing Problem (MHSNRP). A heuristic method is developed to solve the MHSNRP. In order to evaluate the MHSNRP and the heuristic method, we generate a set of 72 MHSNRP instances and code a computer program in C# language to conduct the experimental tests. Results show that the proposed MHSNRP is full of potential benefits to the intra-network routes design.

Keyword：Fixed-Route Trucking Carrier, Intra-Network, Hub-and-Spoke, Heuristic Method.