

عنوان مقاله:

A Stochastic Profit Maximizing Hub Location-Routing Model for Rapid Transit Networks Design Considering Transfer Effects

محل انتشار:

پانزدهمین کنفرانس بین المللی انجمن ایرانی تحقیق در عملیات (سال: 1401)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Malihe Fallah-Tafti - *Department of Industrial Engineering, Yazd University, Yazd, Iran*

Mahboobeh Honarvar - *Department of Industrial Engineering, Yazd University, Yazd, Iran*

Ahmad Sadegheih - *Department of Industrial Engineering, Yazd University, Yazd, Iran*

Reza Tavakkoli-Moghaddam - *School of Industrial Engineering, College of Engineering, University of Tehran, Tehran, Iran*

خلاصه مقاله:

This study focuses on the development of a stochastic profitmaximizing hub location-routing model for rapid transitnetwork design problem, where transfers are considered. Due to the use of rapid transit systems, the developed huband spoke model consists of stopovers (stations) in the huband spoke alignments. The decisions to make concern thelocation of the hub and spoke nodes, the selection of the huband spoke edges, the determination of the hub and spokelines, and the routing of flows through the lines. Uncertaintyis assumed for the demands, represented by a finite set ofscenarios, and the problem is formulated through a twostage stochastic modeling framework. The goal is tomaximize the total expected profit. Transfers are penalizedthrough including their costs in the objective function, considering that passengers always try to avoid them whencommuting. The performance of the proposed model isevaluated through computational tests using the well-knownAP dataset. Some managerial insight is also providedthrough the analysis of the resulting networks under variousparameter settings.

کلمات کلیدی:

.Hub Location, Hub and Spoke Network, Rapid TransitNetwork, Line Planning, Stochastic Optimization, Transfers

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1601320>

