

博士论坛

考虑设施失效的军事物流配送中心选址模型

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摘要 为了提高军事配送系统的经济性, 针对物资配送中后勤设施失效时进行支援保障和越级保障的情况, 将军事物流配送中心的属性分为“首选”与“备选”两种, 并把设施失效时的应急配送成本作为决策目标的一部分, 建立了最小化设施固定成本、正常配送成本、应急配送成本之和的军事物流配送中心选址模型, 采用贪婪取走的启发式算法进行了模型求解, 比较了考虑设施失效情况的选址方案与未考虑设施失效情况的选址方案之间的差别。仿真算例结果表明, 虽然由模型所得选址方案的设施固定成本与正常配送成本之和高于未考虑设施失效情况的选址方案, 但平均期望成本增加值低于后者。

关键词 [军事物流配送中心](#) [设施失效](#) [选址问题](#) [贪婪取走启发算法](#)

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Location model for military logistics distribution centers considering facilities failure

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Abstract

Abstract: In order to enhance the economic benefits of military distribution system, an optimization location model for military logistics distribution centers is presented according to the fact that there are bypassing support and reinforcement support in material distribution when logistics facilities have been failed. In the model, military logistics distribution center has primary and backup attributes, and the total cost is composed of fixed charge, normal transportation cost and emergency transportation cost in facilities failure environment. A heuristic algorithm based on greedy dropping is adopted to solve the model. Then, a comparison is made to illustrate the difference between the model and the traditional location model. Numerical example shows that the result of the model has an advantage in mean expected cost added when some facilities are faced with failure risk.

Key words [military logistics distribution center](#) [facilities failure](#) [facility location problem](#) [greedy dropping heuristic algorithm](#)

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