[1]张明媛,双晴,袁永博.基于DEA的城镇防灾有效性评价及提高途径分析研究[J].自然灾害学报,2013,01:19-23.

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基于DEA的城镇防灾有效性评价及提高途径分析研

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Title: Research on efficiency evaluation of urban disaster prevention and its improvement way based on DEA

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摘要: 城镇的防灾水平或能力是不是足以与城镇的功能特性相匹配,是合理评价城镇防灾有效性的标准之一。从城镇的社会性、经济性和环境性3方面考察城镇的功能特征,选取适当的、能够反映城镇防灾能力或水平的易得变量指标,利用DEA具有评价多输入多输出决策单元相对效率的能力,选择经典传统的C2R模型进行了城镇防灾有效性的评价。通过实例分析的评价结果,对输入输出向量的权重进行调整,通过非有效单元向有效单元的转化,实现了提高防灾有效性途径的分析。

Abstract: Whether the urban disaster-prevention capability matches the urban functions well is one of the standards in evaluating the efficiency of urban disaster prevention. This study investigated urban functions in respect of society, economics and environment and chose proper indices that can reflect the capability of disaster-prevention as well as can be easily obtained to evaluate the efficiency of the urban disaster-prevention capability. The DEA method which has the capacity to evaluate the relative efficiency of decision-making units with multi-input and multi-output was adopted as the analysis method, and the C2R classic model were chosen as the example. Through the example study and analysis of results, adjust the weights of input and output vectors, and transfer the non-efficient units into efficient units, the efficiency of urban disaster-prevention could be improved.

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