

工程与应用

AHP的改进算法及其在供应链中的应用

杨继君¹, 许维胜², 吴启迪², 孙靖¹

1. 同济大学 经济与管理学院, 上海 201804

2. 同济大学 电子与信息工程学院, 上海 201804

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摘要 针对层次分析法(AHP)在群组决策应用中的不足,例如当AHP算法实际应用时,对其残缺矩阵、专家权重不同以及可信度等情况考虑不足,故将多目标决策中的可能满意度引入相容性检验与改进,提出了基于可能满意度的判断矩阵相容性修正及排序的改进AHP算法。接着分析影响节点企业选择的诸多因素,提出了两层评价指标体系。在此基础上应用改进的AHP算法建立节点企业选择模型。最后所采用一个实际的案例来验证所提算法的有效性和模型的可行性。

关键词 [改进层次分析法](#) [节点企业选择](#) [群组决策](#) [可能满意度](#)

分类号

Improved AHP and its application in supply chain

YANG Ji-jun¹, XU Wei-sheng², WU Qi-di², SUN jing¹

1. School of Economics & Management, Tongji University, Shanghai 201804, China

2. School of Electronics and Information Engineering, Tongji University, Shanghai 201804, China

Abstract

With the extensive application of AHP in group decision making, some defects of it emerged. For example, when AHP is applied, incomplete matrix, different weights between experts and reliability of matrix are not enough taken into account. Owing to the defects of existing method, after possibility-satisfiability degree in multi-objective decision is introduced to compatibility check of AHP, the authors put forward an improved AHP based on possibility-satisfiability degree. Based on analysis of evaluation factors in supply chain nodal enterprise selection, the two layers of evaluating indexes are proposed. The model of supply chain enterprise selection by using improved AHP is set up. Finally, a case of this model's application is presented in order to prove efficient of the improved AHP and feasible of the model.

Key words [improved AHP](#) [nodal enterprise selection](#) [group decision making](#) [possibility-satisfiability degree](#)

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通讯作者 杨继君 petyang810@sohu.com

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