

## **DEVELOPING A HYBRID MULTI-CRITERIA MODEL FOR SELECTION OF OUTSOURCING PROVIDERS**

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### **ABSTRACT**

Outsourcing is a good strategy for firms that need to reduce operating costs and improve competitiveness, but it remains important for firms to scientifically select the appropriate outsourcing providers. Some efforts have been made regarding outsourcing problems, but these efforts incorrectly assumed that the criteria in the decision process are independent, which is not true in the real world. In this paper, we propose a new hybrid multiple criteria decision-making (MCDM) model, which addresses the dependent relationships among criteria with the aid of the Decision-Making Trial and Evaluation Laboratory (DEMATEL) method to build a relations-structure among criteria. The Analytical Network Process (ANP) is used to determine the relative weights of each criterion with dependence and feedback. The VIKOR method (*VlseKriterijumska Optimizacija I Kompromisno Resenje* in Serbian, meaning Multi-criteria Optimization and Compromise Solution) is then used to prioritize the alternatives. The proposed model can help practitioners improve their decision process, especially when criteria are numerous and inter-related. Throughout our study, we use data from a Taiwanese airline to demonstrate this method.

Keywords: Outsourcing; VIKOR; ANP; Decision-Making Trial and Evaluation Laboratory (DEMATEL); MCDM

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