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Abstract
The Data Envelopment Analysis (DEA) was a methodology to measure the relative efficiency of the decision making units (DMUs) with the same input and output items. Since 1978, Charnes, Cooper and Rhodes proposed DEA method, many researchers were engaged in related researches. Traditionally, the coefficients of DEA models were assumed to be crisp values. However, it was invalid in some cases. Based on Zadeh's fuzzy theory, some researchers developed the fuzzy DEA (FDEA).

This paper is intended to give an another approach to FDEA model. First of all, we set strict criteria and select fitted fuzzy ranking methods. The fuzzy inputs and fuzzy outputs of the DMUs can be transformed into crisp values of α-level. And then, the relative efficiency in α-level of a particular DMU can be solved by the traditional DEA model. Finally, we can compare the relative efficiency by applying area measurement method.

It follows from the result, the method we proposed in this study is not only valid but also more efficient than existing methods.
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