

عنوان مقاله:

A nonlinear model for common weights set identification in network Data Envelopment Analysis

محل انتشار:

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خلاصه مقاله:

In the Data Envelopment Analysis (DEA) the efficiency of the units can be obtained by identifying the degree of the importance of the criteria (inputs-outputs). In DEA basic models, challenges are zero and unequal weights of the criteria when decision-making units are evaluated. One of the strategies applied to deal with these problems is using common weights of the each input/output in all decision making units (DMUs). In practice the DMUs are containing intermediate process. However, these units are considered as a black box in DEA basic models, disregarding internal process. This was the main reason network data envelopment analysis was introduced. On the other hand, similar challenges mentioned for DEA, zero and unequal weights of the criteria, exist for network structures as well. This paper suggests a common set of the weights for network structures to deal with the above problems using nonlinear models, for general case. Also some numerical examples using proposed models are presented.

کلمات کلیدی:

Network Data Envelopment Analysis (NDEA), Decision Making Units (DMU), Efficiency, Epsilon, Assurance Value

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