Journal of Mathematics

Hindawi

Special Issue on

Data Envelopment Analysis: Methodological Contributions, Recent Developments, Applications, and Future Challenges/Trends

CALL FOR PAPERS

Data envelopment analysis (DEA) is a widely used nonparametric linear programming method for assessing the efficiency and productivity of decision-making units (DMUs). The theory and applications of DEA are spread over a very wide area and are very diverse. It is compared or combined with other disciplines or subjects in the field such as truncated, tobit, or ordinary regression analysis, analytic hierarchy process, cluster analysis, principal component analysis, factor analysis, multicriteria decision analysis, time series analysis, and fuzzy sets. As a result of these various interactions, both the model structure of the DEA and the application areas of the DEA have been expanded in such a way, and derivative models such as the Free Disposal Hull (FDH) and the Stochastic Frontier Analysis (SFA) have emerged. With regard to model structure, there are many other studies such as directional distance measurement, Russell measure, and slack based measure, which contain interpretations related to the analytical significance of the DEA and efficiency decompositions. Besides, DEA is widely used in the area of energy, service sector, education, banking, commerce, agriculture, and so forth as an application for measuring efficiency and inefficiency. Depending on the structure of the data, different models are proposed for fuzzy, uncertain, or other types of data such as negative, categorical, qualitative, or interval data. In addition, studies and benchmarking of tests and methods that will measure the validity and reliability of these models have an important place in DEA research. Moreover, these studies are carried out by researchers from many different disciplines. As a consequence, it would be appropriate to prepare a special issue in order to bring researchers working in this field on a common ground and share their experiences. In addition, this would be a chance for giving direction to future challenges/trends about DEA.

For this reason, we have taken the initiative to edit a special issue on data envelopment analysis: methodological contributions, recent developments, applications, and future challenges/trends.

Potential topics include but are not limited to the following:

- DEA efficiency and benchmarking DEA
- New models of DEA
- Evaluating DEA
- Applications of DEA
- Two-stage DEA
- Network DEA
- Fuzzy DEA
- Sensitivity analysis in DEA

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jmath/operations.research/dea/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline
Friday, 24 November 2017

Publication Date
April 2018