Call for Papers
Annals of Operations Research
Special Volume: DEA and Its Applications in Operations and Data Analytics

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The DEA research community and probably other related ones have been witnessing a tremendous expansion in the volume of DEA literature. Several excellent survey papers published in a timely manner since inception till now nicely evidence this phenomenon in informative and structured ways. While earlier DEA studies focused primarily upon purely theoretical and methodological developments, the accumulated volume of DEA research embedding real-world applications has already caught up with that of purely-methodological ones. Industries addressed most frequently in the DEA literature include banking, health care, agriculture and farm, transportation, and education, with energy, environment, and finance gaining the greatest growth momentum recently. In addition to these industry-specific applications, discipline-specific applications, although their volume is relatively small, have appeared focusing on topics such as supply chain management, human resources management, operations management, technology management, and logistics. DEA's wide-ranged applicability spanning so many industries and disciplines is mainly due to its high flexibility and versatility as an informative multi-faceted decision-making tool. As such, we believe this on-going flourish of DEA applications will continue for a significant period of time in the future.

Among various business disciplines of DEA applications, we give special attention to operations and data analytics, as a promising area, in this special issue of the *Annals of Operations Research*. Operations and data analytics are fundamental tools and techniques for improving business functions and attaining long-term competitiveness. The essence of operations is the feedback loop of planning, coordinating, and controlling the transformation process that converts inputs (in the forms of raw materials, labor, and energy) into more valuable outputs (in the form of goods and/or services). The controlling phase in the feedback loop requires appropriate metrics for measuring and evaluating the process's efficiency and effectiveness, and obviously DEA can be a useful and powerful tool for providing for such performance metrics. DEA results can be effectively utilized for reconfiguring the process, reallocating resources, and redesigning operations strategy. Possible areas for DEA applications in operations and data analytics are not confined to process control. DEA can also be used as a versatile tool for making various operational decisions such as in inventory policy design, supplier evaluation and selection, product and service design, and so on.

This special issue aims to provide a forum for discussing the general applicability of DEA in operations and data analytics by compiling state-of-the-art research papers spanning models, theory, empirical studies, and application and case studies on DEA applied to both manufacturing and service organizations. We seek contributions that provide valuable insights into and implications for the practice of DEA in performance

evaluation, benchmarking, and multi-criteria decision-making in all fields of operations management. Potential topics may include but are not limited to:

- Manufacturing/service system performance evaluation and benchmarking
- Product and service design using DEA
- Data analytics and business intelligence using DEA
- Process design, coordination, and improvement using DEA
- Supply chain performance evaluation
- Multi-criteria supplier evaluation and selection
- Multi-criteria inventory decision-making
- Quality considerations in operational performance evaluation
- Productivity analysis in the manufacturing/service sectors
- Strategic issues in operations and data analytics with DEA
- Supply/demand planning and control with DEA

Considering that the existing literature on DEA applied to operations and data analytics is more or less fragmented, we wish this special issue also to be a place for in-depth collaboration among practitioners in engineering, business, economics, and other fields.

Manuscripts should be submitted no later than **30 September 2016** and should conform to the *Annals of Operations Research* format. See (http://www.springer.com/business/operations+research/journal/10479). Please submit your article via the online submission site at http://www.editorialmanager.com/anor/default.asp

Be sure to note when leaving a comment that your work is intended for the special volume and to select the article type: S.I. : DEA in Data Analytics.

Papers will undergo a strict review process managed by the Guest Editors, and accepted papers will be published online individually, before print publication.

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