

Healthcare Systems Engineering & Operations Research Research Colloquia

Center for Health Organization Transformation
Northeastern University, Boston MA

“Benchmarking for Best Practice: Learning from Outliers with Data Envelopment Analysis”

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October 22, 2010; 1:30 - 2:30 pm

Room to be announced

Abstract

Charnes and Cooper recently received the INFORMS Impact Prize for their development of data envelopment analysis (DEA). This talk will demonstrate how DEA has become a widespread important performance measurement tool, particularly in public and non-profit sectors that lack "marketplace" mechanisms of cost minimization and profit maximization. DEA offers a new means for evaluating relative performance of such organizations, based in mathematical programs that identify best-practice units and inefficiency level of others. This is accomplished by focusing on "outlier" observations in contrast to traditional central tendency analyses. The underlying methodology is a powerful tool for evaluating performance and modeling operational processes that has proven itself in a host of successful applications. This presentation will provide a basic introduction to DEA and describe its use in performance measurement. Several applications will illustrate the modeling process including the identification of input/output variables, the choice of an appropriate DEA model, and extensions to the methodology such as categorical and non-discretionary variables.

Bio

Lawrence M. Seiford is the Goff Smith Co-Director of the Tauber Institute for Global Operations and Professor of Industrial and Operations Engineering at the University of Michigan. He previously was director of the National Science Foundation *Operations Research* and *Production Systems* programs and a faculty member at the University of Massachusetts, University of Texas at Austin, University of Kansas, and York University. Professor Seiford is a leading expert in data envelopment analysis and has co-authored 4 books and over 100 articles in productivity, operations management, and decision analysis. He is a Fellow of the *Institute for Operations Research and the Management Sciences*, *Institute of Industrial Engineers*, and *American Society for Quality*. He has received the *General Electric Outstanding Teaching Award* and *CBA Foundation Award for Research Excellence*, been a Lily Endowment Teaching Fellow, and was awarded the degree *Docteur Honoris Causa* from the National Ministry of Education of France in 2000.

Refreshments will be served



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