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| Disciplina | 519.72 |
| Soggetti | Operations research Decision making Management science Industrial engineering Production engineering Operations Research/Decision Theory Operations Research, Management Science Industrial and Production Engineering |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters and index. |
| Nota di contenuto | Ranking Decision Making Units: The Cross-Efficiency Evaluation -- Data Envelopment Analysis for Measuring Environmental Performance -- Input and Output Search in DEA: The Case of Financial Institutions -- Multi-period efficiency measurement with fuzzy data and weight restrictions -- Pitching DEA against SFA in the context of Chinese domestic versus foreign banks -- Assessing organizations' efficiency adopting complementary perspectives -- an empirical analysis through Data Envelopment Analysis and Multidimensional Scaling, with an application to Higher Education -- Capital Stock and Performance of R&D Organizations: A Dynamic DEA-ANP Hybrid Approach -- Evaluating Returns to Scale and Convexity in DEA via Bootstrap: A Case Study with Brazilian Port Terminals -- DEA and Cooperative Game Theory -- Measuring Bank Performance: From Static Black Box to Dynamic Network Models -- Evaluation and Decomposition of Energy |

and Environmental Productivity Change Using DEA -- Identifying the Global Reference Set in DEA: An Application to the Determination of Returns to Scale -- Technometrics Study Using DEA on Hybrid Electric Vehicles (HEVs) -- A Radial Framework for Estimating the Efficiency and Returns to Scale of a Multi-Component Production System in DEA -- DEA and Accounting Performance Measurement -- DEA Environmental Assessment (I): Concepts and Methodologies -- DEA Environmental Assessment (II): A Literature Study -- Corporate Environmental Sustainability and DEA.

Sommario/riassunto

This handbook focuses on Data Envelopment Analysis (DEA) applications in operations analytics which are fundamental tools and techniques for improving operation functions and attaining long-term competitiveness. In fact, the handbook demonstrates that DEA can be viewed as Data Envelopment Analytics. Chapters include a review of cross-efficiency evaluation; a case study on measuring the environmental performance of OECS countries; how to select a set of performance metrics in DEA with an application to American banks; a relational network model to take the operations of individual periods into account in measuring efficiencies; how the efficient frontier methods DEA and stochastic frontier analysis (SFA) can be used synergistically; and how to integrate DEA and multidimensional scaling. In other chapters, authors construct a dynamic three-stage network DEA model; a bootstrapping based methodology to evaluate returns to scale and convexity assumptions in DEA; hybridizing DEA and cooperative games; using DEA to represent the production technology and directional distance functions to measure bank performance; an input-specific Luenberger energy and environmental productivity indicator; and the issue of reference set by differentiating between the uniquely found reference set and the unary and maximal types of the reference set. Finally, additional chapters evaluate and compare the technological advancement observed in different hybrid electric vehicles (HEV) market segments over the past 15 years; radial measurement of efficiency for the production process possessing multi-components under different production technologies; issues around the use of accounting information in DEA; how to use DEA environmental assessment to establish corporate sustainability; a summary of research efforts on DEA environmental assessment applied to energy in the last 30 years; and an overview of DEA and how it can be utilized alone and with other techniques to investigate corporate environmental sustainability questions.
