1. Record Nr. UNINA9910484237403321

Titolo	Data Science and Productivity Analytics / / edited by Vincent Charles, Juan Aparicio, Joe Zhu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	9783030433840 3030433846
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (441 pages)
Collana	International Series in Operations Research & Management Science, , 2214-7934 ; ; 290
Disciplina	658.4034
Soggetti	Operations research Econometrics Statistics Operations Research and Decision Theory Quantitative Economics Statistical Theory and Methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Data Envelopment Analysis and Big Data: Revisit with a Faster Method -- Chapter 2. Data Envelopment Analysis (DEA): Algorithms, Computations, and Geometry -- Chapter 3. An Introduction to Data Science and Its Applications: an Introduction to Data Science and Its Applications -- Chapter 4. Identification of Congestion in DEA -- Chapter 5. Data Envelopment Analysis and Non-Parametric Analysis -- Chapter 6. The Measurement of Firms' Efficiency Using Parametric Techniques -- Chapter 7. Fair Target Setting for Intermediate Products in Two-Stage Systems With Data Envelopment Analysis -- Chapter 8. Fixed Cost and Resource Allocation Considering Technology Heterogeneity in Two-Stage Network Production Systems -- Chapter 9.Efficiency Assessment of Schools Operating in Heterogeneous Contexts: A Robust Nonparametric Analysis Using Pisa 2015 -- Chapter 10. A DEA Analysis in Latin-American Ports: Measuring the Performance of Guayaquil Contecon Port -- Chapter 11.

Effects of Locus of Control on Bank’s Policy - a Case Study of a Chinese State Owned Bank -- Chapter 12. A Data Scientific Approach to Measure Hospital Productivity -- Chapter 13. Environmental Application of Carbon Abatement Allocation by Data Envelopment Analysis -- Chapter 14. Pension Funds and Mutual Funds Performance Measurement With a New DEA (Mv-DEA) Model Allowing for Missing Variables -- Chapter 15. Sharpe Portfolio Using a Cross-Efficiency Evaluation.

Sommario/riassunto

This book includes a spectrum of concepts, such as performance, productivity, operations research, econometrics, and data science, for the practically and theoretically important areas of ‘productivity analysis/data envelopment analysis’ and ‘data science/big data’. Data science is defined as the collection of scientific methods, processes, and systems dedicated to extracting knowledge or insights from data and it develops on concepts from various domains, containing mathematics and statistical methods, operations research, machine learning, computer programming, pattern recognition, and data visualisation, among others. Examples of data science techniques include linear and logistic regressions, decision trees, Naïve Bayesian classifier, principal component analysis, neural networks, predictive modelling, deep learning, text analysis, survival analysis, and so on, all of which allow using the data to make more intelligent decisions. On the other hand, it is without a doubt that nowadays the amount of data is exponentially increasing, and analysing large data sets has become a key basis of competition and innovation, underpinning new waves of productivity growth. This book aims to bring a fresh look onto the various ways that data science techniques could unleash value and drive productivity from these mountains of data. Researchers working in productivity analysis/data envelopment analysis will benefit from learning about the tools available in data science/big data that can be used in their current research analyses and endeavours. The data scientists, on the other hand, will also get benefit from learning about the plethora of applications available in productivity analysis/data envelopment analysis.