

1. Record Nr.	UNINA9910746953003321
Autore	Hosseinzadeh Lotfi Farhad
Titolo	Comparative Efficiency in Data Envelopment Analysis Based on Ratio Analysis
Pubbl/distr/stampa	Cham : , : Springer International Publishing AG, , 2023 ©2023
ISBN	3-031-43181-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (192 pages)
Collana	Studies in Big Data Series ; ; v.138
Altri autori (Persone)	AllahviranlooTofigh PedryczWitold MozaffariMohammad Reza GeramiJavad
Disciplina	658.4033
Soggetti	Data envelopment analysis Ratio analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Contents -- List of Figures -- List of Tables -- 1 Relationship Between Ratio Analysis, DEA-R and DEA Models -- 1.1 Background -- 1.2 Basic Concepts -- 1.2.1 Efficiency Evaluation of DMUs in the Input and Output Orientated -- 1.2.2 Production Function -- 1.2.3 Approximation of the Production Function -- 1.2.4 Production Possibility Set -- 1.2.5 CCR Model in the Input Oriented -- 1.2.6 CCR Model in the Output Oriented -- 1.2.7 BCC Model in the Input Oriented -- 1.2.8 The BCC Model -- 1.3 Relationship Between Models DEA and DEA-R -- 1.3.1 The DEA Models in Output Oriented and DEA-R Models in Input Oriented -- 1.3.2 The DEA Models in Input Oriented and DEA-R Models in Output Oriented -- 1.4 DEA Models Without Explicit Inputs and DEA-R -- 1.5 A Numerical Example for Commercial Banks -- 1.6 Conclusions -- References -- 2 Determining the Production Possibility Set for Ratio Data: A Novel Hybrid DEA-R Approach -- 2.1 Background -- 2.2 The Novel Hybrid DEA-RA Approach -- 2.2.1 Ratio Analysis (RA) -- 2.2.2 The Inputs and Outputs of DEA-RA Model -- 2.3 DEA-RA Axiomatic Structure -- 2.3.1 DEA-R Space -- 2.3.2 Convexity

## Sommario/riassunto

This book, 'Comparative Efficiency in Data Envelopment Analysis Based on Ratio Analysis,' explores advanced methodologies in data envelopment analysis (DEA) with a focus on ratio analysis. It is part of the 'Studies in Big Data' series and aims to bridge theoretical and practical applications in evaluating the performance of decision-making units (DMUs). The authors, including Farhad Hosseinzadeh Lotfi and others, present hybrid models combining DEA and Ratio Analysis (DEA-R) to enhance efficiency calculations and rankings. The book targets researchers in applied mathematics, industrial engineering, management, and computer engineering, offering insights into DEA-R's applications in various sectors such as banking and supply chain management. The text is a comprehensive resource for those interested in operational research and efficiency evaluation.

---