Contents

1 Data Envelopment Analysis: History, Models, and Interpretations ................................................................. 1
   William W. Cooper, Lawrence M. Seiford, and Joe Zhu

2 Returns to Scale in DEA .................................................. 41
   Rajiv D. Banker, William W. Cooper, Lawrence M. Seiford, and Joe Zhu

3 Sensitivity Analysis in DEA ............................................. 71
   William W. Cooper, Shanling Li, Lawrence M. Seiford, and Joe Zhu

4 Choices and Uses of DEA Weights ............................... 93
   William W. Cooper, José L. Ruiz, and Inmaculada Sirvent

5 Malmquist Productivity Indexes and DEA ..................... 127
   Rolf Färe, Shawna Grosskopf, and Dimitris Margaritis

6 Qualitative Data in DEA .............................................. 151
   Wade D. Cook

7 Congestion: Its Identification and Management with DEA ......... 173
   William W. Cooper, Honghui Deng, Lawrence M. Seiford, and Joe Zhu

8 Slacks-Based Measure of Efficiency ............................... 195
   Kaoru Tone

9 Chance-Constrained DEA ............................................. 211
   William W. Cooper, Zhimin Huang, and Susan X. Li

10 Performance of the Bootstrap for DEA Estimators and Iterating the Principle ............................................. 241
    Léopold Simar and Paul W. Wilson
11 Statistical Tests Based on DEA Efficiency Scores ........................................ 273 Rajiv D. Banker and Ram Natarajan

12 Modeling DMU’s Internal Structures: Cooperative and Noncooperative Approaches .................................................. 297 Wade D. Cook, Liang Liang, and Joe Zhu

13 Assessing Bank and Bank Branch Performance .................................... 315 Joseph C. Paradi, Zijiang Yang, and Haiyan Zhu

14 Engineering Applications of Data Envelopment Analysis .................... 363 Konstantinos P. Triantis

15 Applications of Data Envelopment Analysis in the Service Sector ........... 403 Necmi K. Avkiran

16 Health-Care Applications: From Hospitals to Physicians, from Productive Efficiency to Quality Frontiers ....................... 445 Jon A. Chilingerian and H. David Sherman

Index ........................................................................................................... 495
Handbook on Data Envelopment Analysis
Cooper, W.W.; Seiford, L.M.; Zhu, J. (Eds.)
2011, XXVI, 498 p. With online files/update., Hardcover
ISBN: 978-1-4419-6150-1