Contents

1 DEA for Two-Stage Networks: Efficiency Decompositions and Modeling Techniques .......................... 1
   Wade D. Cook and Joe Zhu

2 Network DEA Pitfalls: Divisional Efficiency and Frontier Projection ........................................... 31
   Yao Chen, Wade D. Cook, Chiang Kao, and Joe Zhu

3 Efficiency Decomposition in Network Data Envelopment Analysis ............................................. 55
   Chiang Kao

4 Two-Stage Network Processes: DEA Frontier Identification ....................................................... 79
   Yao Chen, Wade D. Cook, and Joe Zhu

5 Additive Efficiency Decomposition in Network DEA ................................................................. 91
   Yao Chen, Wade D. Cook, and Joe Zhu

6 Scale Efficiency Measurement in Two-Stage Production Systems ............................................. 119
   Chiang Kao and Shiuh-Nan Hwang

7 Decomposing Efficiency and Returns to Scale in Two-Stage Network Systems ........................... 137
   Biresh K. Sahoo, Joe Zhu, and Kaoru Tone

8 Evaluating Two-Stage Network Structures: Bargaining Game Approach ................................... 165
   Juan Du, Yao Chen, Wade D. Cook, Liang Liang, and Joe Zhu

9 Shared Resources and Efficiency Decomposition in Two-Stage Networks ................................... 189
   Yao Chen, Juan Du, H. David Sherman, and Joe Zhu
10 A Network-DEA Model with Internal Dynamic Effects ........................................ 209
   Chien-Ming Chen
11 Slacks-Based Network DEA .................................................. 231
   Kaoru Tone and Miki Tsutsui
12 DEA Models for Extended Two-Stage Network Structures .................................. 261
   Yongjun Li, Yao Chen, Liang Liang, and Jianhui Xie
13 An Efficiency Measurement Framework for Multi-Stage Production Systems ........... 285
   Boaz Golany, Steven T. Hackman, and Ury Passy
14 Network DEA II .............................................................. 307
   Rolf Färe, Shawna Grosskopf, and Gerald Whittaker
   Lorenzo Castelli and Raffaele Pesenti
16 Multicomponent Efficiency Measurement in Banking ........................................... 377
   Wade D. Cook, M. Hababou, and H. Tuenter
17 Evaluating Power Plant Efficiency: Hierarchical Models ........................................ 405
   Wade D. Cook, D. Chai, J. Doyle, and R. Green
18 Multicomponent Efficiency Measurement and Core Business Identification in Multiplant Firms ........................................... 431
   Wade D. Cook and R.H. Green
19 Two-Stage Network DEA with Bad Outputs .................................................. 451
   Hirofumi Fukuyama and William L. Weber
20 Performance Measurement of Major League Baseball Teams Using Network DEA ........ 475
   Herbert F. Lewis
21 Production and Marketing Efficiencies of the U.S. Airline Industry: A Two-Stage Network DEA Approach ........................................... 537
   Wen-Min Lu, Shiu-Wan Hung, Qian Long Kweh, Wei-Kang Wang, and En-Tzu Lu
22 Network Representations of Efficiency Analysis for Engineering Systems: Examples, Issues and Research Opportunities ........................................... 569
   Konstantinos (Kostas) Triantis

Index ........................................................................ 585
Data Envelopment Analysis
A Handbook of Modeling Internal Structure and Network
Cook, W.D.; Zhu, J. (Eds.)
2014, XII, 599 p. 109 illus., 41 illus. in color., Hardcover
ISBN: 978-1-4899-8067-0