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Professor and Chair in Business Analytics
[Business Analytics Team Leader](#)
Operations & Information Management Group
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Date of Birth: March 1961

Editor of [Annals of Operations Research](#)
Associate Editor of [IMA Journal of Management Mathematics](#)
Associate Editor of [Socio-Economics Planning Sciences](#)
Associate Editor of [RAIRO-Operations Research](#)
Senior Editor of [Data Envelopment Analysis Journal](#)

Member of editorial board of:

[EJDP \(EURO Journal on Decision Processes\)](#)
[IJPMAT \(Int. J. of Productivity Management and Assessment Technologies\)](#)
[IJSSS \(International Journal of Society Systems Science\)](#)
[IJADS \(International Journal of Applied decision Sciences\)](#)

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Academic Qualifications

1994 – 1998 (PhD)	Warwick Business School, Warwick University, UK PhD in Industrial and Business Studies (Operational Research and Systems)
2003 – 2004 (PGC)	PG certificate in “Learning and Teaching in Higher Education” Coventry University, UK
1986 – 1988 (MSc)	Ferdowsi University of Mashed, Mashed, Iran M.Sc. in Mathematics
1981 – 1986 (BSc)	Ferdowsi University of Mashed, Mashed, Iran B.Sc. in Applied Mathematics and Computer Science

Employment History

2014 -	Professor and Chair in Business Analytics Operational and Information Management Group, Aston Business School, Aston University, Birmingham, B4 7ET, UK
2011- 2014	Reader in Operational Research and Management Operational and Information Management Group, Aston Business School, Aston University, Birmingham, B4 7ET, UK
2006-2011	Senior Lecturer in Operational Research and Business Management Operational and Information Management Group, Aston Business School, Aston University, Birmingham, B4 7ET, UK
2002 –2006	Senior Lecturer in Knowledge and Information Management Department of Statistics and Operational Research, School of Mathematics and Information Science, Coventry University, Coventry, CV1 5F, UK.
1998 – 2002	Researcher and data analyst for performance indicators in Higher Educations Analytical Service Group, Higher Education Funding Council for England (HEFCE), Bristol, Coldhourbour Lane, BS16 1QD, UK
1999 – 2002	Lecturer

Faculty of Computer Studies, Engineering and Mathematics,
Part time lecturer teaching Analytical Modeling, University of the West of England, Bristol,
BS16 1QD, UK

1994 - 1998 **Tutor in Operational and Information Systems**
Operational Research and System Group, Warwick Business School, Warwick University,
Coventry, UK

1988 –1993 **Lecturer**
School of Mathematics and Computer Science, University of Zahedan, Zahedan, Iran

Editor / Associate Editor of Journals

2015 - Associate Editor of **RAIRO - Operations Research**

RAIRO-Operations Research is an international journal devoted to high-level pure and applied research on all aspects of operations research.

2014 - Associate Editor of **SEPS (Socio-Economic Planning Sciences)**

The SEPS publishes peer-reviewed original articles dealing with applications of quantitative models and techniques to important decision problems in the service and public sectors, Elsevier publisher.

2012 - Editor of **ANOR (Annals of Operations Research)**

The ANOR publishes peer-reviewed original articles dealing with key aspects of operations research, including theory, practice, and computation, Springer publisher.

2011 - Senior editor of the **DEAJ (Data Envelopment Analysis Journal)**

The DEAJ is the official journal of the International Data Envelopment Analysis Society publishes theoretical and applied research advancing the use of DEA as a methodology for improving organizational performance, Now publishers, USA.

2011 - Associate editor of **IMAMAN (IMA Journal of Management Mathematics)**

The IMA Journal of Mathematics Management is a quarterly, peer reviewed journal in selected areas of OR and Management Science, Oxford Journals, Oxford University Press, UK.

Member of Editorial Board of Journals

2012- Member of Editorial Board of **EJDP (EURO Journal on Decision Processes)**

EJDP promotes and publishes scientific knowledge on the theoretical, methodological, behavioral and organizational topics that contribute to the understanding and appropriate use of Operational Research in supporting different phases of decision making processes, *Springer publisher*.

2011- Member of international advisory board of **IJPMAT (International Journal of Productivity Management and Assessment Technologies)**

IJPMAT is an official journal of the Information Resources Management Association, IGI *Global: International Publisher of Science, Technology*.

2008- Member of Editorial Board of **IJSSS (International Journal of Society Systems Science) -**

IJSSS addresses the barriers between: social and natural sciences, theory and applications, hard decision models and soft ones, different business disciplines, government and industry, ivory tower and real society. *The Inderscience publisher*

2008- Member of Editorial Board of **IJADS (International Journal of Applied decision Sciences) -**

IJADS promotes integration of functional and behavioral areas of business with concepts and methodologies of decision sciences and information systems, with explicit focus on modeling and applied decision-making. *Inderscience publisher*.

Publications

Books (authored / edited):

1. **Emrouznejad, A.** and W. Ho (2012). *Applied Operations Research with SAS*, pp284, Hardback, CRC Press: Taylor & Francis Ltd, ISBN: 9781439841303,
2. **Emrouznejad, A.** and W. Ho (2017). *Fuzzy Analytic Hierarchy Process*, CRC Press: Taylor & Francis
3. **Emrouznejad, A.** (2016). *Big Data Optimization: Recent Developments and Challenges*. In the series of “Studies in Big Data”, Springer-Verlag, ISBN: 978-3-319-30263-8.
4. **Osman, I. H.**, A. L. Anouze and **A. Emrouznejad** (2015). *Handbook of Research on Strategic Performance Management and Measurement Using Data Envelopment Analysis*. IGI Global, USA, ISBN: 978-1-4666-4474-8.
5. **Emrouznejad, A.** and E. Cabanda (2014). *Managing Service Productivity: Uses of Frontier Efficiency Methodologies and MCDM for Improving Service Performance*. In the series of “International Series in Operations Research & Management Science”, Springer-Verlag, ISBN 978-3-662-43436-9
6. **Emrouznejad, A.** and M. Tavana (2014). *Performance Measurement with Fuzzy Data Envelopment Analysis*. In the series of “Studies in Fuzziness and Soft Computing”, Springer-Verlag, ISBN 978-3-642-41371-1

Conference Proceedings (edited):

7. **Emrouznejad, A.**, Banker R., H. Ahn, M. Afsharian (2016), *Data Envelopment Analysis and its Applications*, Proceedings of the 13th International Conference of DEA, August 2015, Braunschweig, Germany, : 10.13140/RG.2.1.4082.9202, ISBN: 978 1 85449 497 9.
8. Banker R., **A. Emrouznejad**, F. Vargas and P. Flores (2014), *Sustainable Development and Performance Measurement*, Proceedings of the International DEA Workshop, September 17-19, 2014, Hermosillo, Sonora, Mexico, ISBN: 978 1 85449 482 5.
9. **Emrouznejad, A.**, R. Banker, S. Munisamy, B. Arabi (2014), *Theory and Applications of Data Envelopment Analysis*, Proceedings of the 12th International Conference of DEA, April 2014, University of Malaya, Kuala Lumpur, Malaysia, ISBN: 978 1 85449 487 0.
10. Banker R., **A. Emrouznejad**, H. Bal, I. Alp, M. Ali Cengiz (2013), *Data Envelopment Analysis and Performance Measurement*, Proceedings of the 11th International Conference of DEA, June 2013, Samsun, Turkey, ISBN: 978 1 85449 477 1.
11. Banker, R., **A. Emrouznejad**, A.L.M. Lopes and M.R. de Almeida (2012). *Data Envelopment Analysis: Theory and Applications*, Proceedings of the 10th International Conference on DEA, Natal, Brazil, 340pp, ISBN: 978 185449 437 5.
12. **Emrouznejad, A.**, I. H. Osman and A. L. Anouze (2010). *Performance Management and Measurement with Data Envelopment Analysis*, Proceedings of the DEA2010 Conference, American University of Beirut, Lebanon, 258pp, ISBN: 978 1 85449 481 8.
13. **Emrouznejad, A.** and V. Podinovski (2004). *Data Envelopment Analysis and Performance Management*, Proceedings of the DEA2004 Conference, Aston Business School, Birmingham, UK. Warwick University Publisher, 421pp, ISBN: 0 902683 73 X.
14. **Emrouznejad, A.**, R. Green and V. Krivonozhko (2002). *Efficiency and Productivity Analysis in the 21st Century*, Proceedings of the DEA2002 Conference, Moscow, Russia. International Research Institute of Management Science (IRIMS); ISBN: 5-93467-007-7.

Software:

15. **Emrouznejad, A.** and E. Thanassoulis (2011). *Performance Improvement Management Software: PIM-DEAsoft-V3.0 User Guide*, ISBN: 978-1-85449-412-2.

Journals Guest Editorials:

16. **Emrouznejad, A.** (2015). Guest Editor of special issue of SEPS in “Data Envelopment Analysis in the

Public Sector". *Socio-Economic Planning Sciences*. Under preparation Springer Publisher.

17. **Emrouznejad, A.** (2014). Guest Editor of special issue of ANOR in "Advances in Data Envelopment Analysis". *Annals of Operations Research*. **214(1)**, Springer Publisher.
18. **Emrouznejad, A.** (2014). Guest Editor of special issue of SEPS in "Data Envelopment Analysis in the Public Sector". *Socio-Economic Planning Sciences*. **48 (1)**, Springer Publisher.
19. **Emrouznejad, A.** (2011). Guest Editor of special issue of JOMS in "Performance Measurement in the Health sector; Uses of Frontier Efficiency Methodologies and Multi-Criteria Decision Making". *Journal of Medical Systems*, **35 (5)**, Springer Publisher.
20. **Emrouznejad, A.** (2011). Guest Editor of special issue of IMAMAN in "Efficiency and productivity: Data Envelopment Analysis". *IMA Journal of Management Mathematics*, **22(4)**, Oxford University Press.
21. **Emrouznejad, A.** (2010). Guest Editor of special issue of IJESM in "Uses of Frontier Efficiency Methodologies and Multi-criteria Decision Making for Performance Measurement in the Energy Sector". *International Journal of Energy Sector Management*, **4(3)**, Emerald Group Publishing Limited.
22. **Emrouznejad, A.** (2010). Guest Editor of special issue in Data Envelopment Analysis: Efficiency and Productivity. *Annals of Operations Research*. **173(1)**, Springer Publisher.
23. **Emrouznejad, A.** (2009). Guest Editor of special issue of JORS in "Data Envelopment Analysis". *Journal of Operational Research Society*. **60(11)**, Palgrave Macmillan Publisher.
24. **Emrouznejad, A.** (2005). Guest Editor of part special issue of JORS in "Data Envelopment Analysis". *Journal of Operational Research Society*. **56(12)**, Palgrave Macmillan Publisher.
25. **Emrouznejad, A.** (2004). Guest Editor of special issue of JORS in "Data Envelopment Analysis". *Journal of Operational Research Society*. **55(10)**, Palgrave Macmillan Publisher.

Journal Papers

26. **Wank, P. F., C. Barros, A. Emrouznejad** (2016) "Assessing Productive Efficiency of Banks Using integrated Fuzzy-DEA and bootstrapping: A Case of Mozambican Banks", *European Journal of Operational Research*, 249 (1) 378–389.
27. **Ignatius, J., M. Ghasemi, F. Zhang, A. Emrouznejad, A. Hatami-Marbini** (2016) "Carbon Efficiency Evaluation: An Analytical Framework Using Fuzzy DEA", *European Journal of Operational Research*,
28. **Zervopoulos, P.D., T.S. Brisimi, A. Emrouznejad, G. Cheng** (2016) "Performance measurement with multiple interrelated variables and threshold target levels: Evidence from retail firms in the US", *European Journal of Operational Research*, 250 (1): 262–272.
29. **Safdar, K. J., A. Emrouznejad, P. K. Dey** (2016). "Assessing the Queuing Process Using Data Envelopment Analysis: An Application in Health Centres." *Journal of Medical Systems* 40(1):32-45.
30. **Arabi, B., S. M. Doraisamy, A. Emrouznejad and A. Khoshroo** (2016) Eco-Efficiency Measurement and Material Balance Principle: an Application in Power Plants Malmquist Luenberger Index, *Annals of Operations Research*, **Accepted**.
31. **Azar A., M. Zarei Mahmoudabadi, A. Emrouznejad** (2016), A new fuzzy additive model for determining the common set of weights in Data Envelopment Analysis, *Journal of Intelligent and Fuzzy Systems*, 30 (1): 61-69.
32. **Toloo M., A. Emrouznejad and P. Moreno** (2016) A linear relational DEA model to evaluate two-stage processes with shared inputs, *Computational and Applied Mathematics*, **Accepted**.
33. **Ghasemi M.R, J. Ignatius, S. Lozano, A. Emrouznejad, A. Hatamimarbini** (2015) A fuzzy expected value approach under generalized data envelopment analysis, *Knowledge-Based Systems*, 89: 148–159. .
34. **Marra M., Emrouznejad, A. W. Ho and J.S Edwards** (2015), The value of indirect ties in citation networks: SNA analysis with OWA operator weights, *Information Sciences*, **314 (2015) 135–151**.
35. **Toloo M., A Zandi and A. Emrouznejad** (2015) Evaluation efficiency of large-scale data set with negative data: an artificial neural network approach, *Journal of Supercomputing*, 71 (7): 2397-2411.

36. Indra Widiarto and **A. Emrouznejad** (2015) Social and Financial Efficiency of Islamic Microfinance Institutions: A Data Envelopment Analysis Application, *Socio-Economic Planning Sciences*, **50**:1-17.
37. **Gholami R.**, D. A. Higón, **A. Emrouznejad** (2015), "Hospital Performance: Efficiency or Quality? Can we have both with IT?" *Expert Systems with Applications*, **42** (12) 5390–5400.
38. **Arabi, B.**, S. Munisamy and **A. Emrouznejad** (2015), "A new Slacks-Based Measure of Malmquist-Luenberger Index in the Presence of Undesirable Outputs," *OMEGA*, **51**:29-37.
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39. Bahari A., **A. Emrouznejad** (2014) "Influential DMUs and outlier detection in Data Envelopment Analysis with an Application to Health Care". *Annals of Operations Research*, **223** (1):95-108.
40. **Emrouznejad, A.** and Marianna Marra (2014), Ordered Weighted Averaging Operators 1988–2014: A citation-based literature survey, *International Journal of Intelligent Systems*, 29:994-1014.
41. Hanen H., **A. Emrouznejad**, **O. M. Nejjib** (2014), Technical efficiency determinants within a Dual Banking System: a DEA-bootstrap approach, *International Journal of Applied Decision Sciences* **7** (4): 382 – 404.
42. **Matin, R. K.**, G.R. Amin and **A. Emrouznejad** (2014), A Modified Semi-Oriented Radial Measure for target setting with negative data, *Measurement* **54**: 152–158.
43. **Hanafizadeh P.**, H. R. Khedmatgozar, **A. Emrouznejad**, M. Derakhshan (2014), Neural Network DEA for Measuring the Efficiency of Mutual Funds, *International Journal of Applied Decision Sciences*, **7** (3): 255-269.
44. **Emrouznejad, A.** (2014) "Advances in Data Envelopment Analysis". *Annals of Operations Research*, **214** (1): 1-4.
45. **Arabi, B.**, S. Munisamy, **A. Emrouznejad** and F. Shadman (2014), "Power Industry Restructuring and Eco-Efficiency Changes: A New Slacks-Based Model in Malmquist-Luenberger Index Measurement," *Energy Policy*, **68**: 132–145.
46. Ghasemi, M. R., **J. Ignatius**; **A. Emrouznejad** (2014) "A bi-objective weighted model for improving the discrimination power in MCDEA", *European Journal of Operational Research*, **233** (3): 640–650.
47. Gattoufi S., G. R. Amin, **A. Emrouznejad** (2014). "A new inverse DEA method for merging banks." *IMA Journal of Management Mathematics*, **25**: 73–87.
48. Hatami-Marbini, A., **A. Emrouznejad**, P. J. Agrell (2014) Interval data without sign restrictions in DEA, *Applied Mathematical Modelling*, **38**: 2028–2036.
49. **Emrouznejad, A.** R. Banker, A.L.M Lopes, M. R. de Almeida (2014) "Data Envelopment Analysis in the Public Sector". *Socio-Economic Planning Sciences*, **48** (1): 2-3.
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50. Khoshroo, A., R. Mulwa, **A. Emrouznejad** and B. Arabi (2013), "A Non-Parametric Data Envelopment Analysis Approach for Improving Energy Efficiency of Grape Production," *Energy*, **63** (15): 189–194.
51. Mulwa, R. and **A. Emrouznejad** (2013) "Measuring Productive Efficiency Using Nerlovian Profit Efficiency Indicator and Meta-Frontier Analysis". *Operations Research: International Journal*, **13** (2): 271–287.
52. Zerafat Angiz L., M., **A. Emrouznejad**, **Adli Mustafa** and Joshua Ignatius (2013). "Type-2 TOPSIS: A group decision problem when ideal values are not extreme endpoints." *Group Decision and Negotiation*, **22** (5): 851-867.
53. **Amirteimoori, A. L.** Khoshandam and **A. Emrouznejad** (2013). "Classifying flexible measures in data envelopment analysis: A slack-based measure." *Measurement*, **46** (10): 4100-4107.
54. Hatami-Marbini, A., P. J. Agrell, **M. Tavana** and **A. Emrouznejad** (2013) "A Stepwise Fuzzy Linear Programming Model with Possibility and Necessity Relation," *Journal of Intelligent and Fuzzy Systems*, **25**: 81–93.
55. **Amin, G. R.**, **A. Emrouznejad** (2013). "A new DEA model for technology selection in the presence of ordinal data." *International Journal of Advanced Manufacturing Technology*, **65**: 1567-1572.

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56. Amin, G. R., **A. Emrouznejad**, H. Sadeghi (2012). "Metasearch information fusion using linear programming." *RAIRO Operations Research*, **46 (04)**: 289-303.
57. **Emrouznejad, A.**, Rostamy-Malkhalifeh, M., Hatami-Marbini, A. and Tavana, M. (2012). "General and Multiplicative Non-Parametric Corporate Performance Models with Interval Ratio Data." *Applied Mathematical Modelling*, **36 (11)**: 5506-5514.
58. Ho, W., **A. Emrouznejad**, T. He, C. K. Man Lee (2012). "Strategic logistics outsourcing: An integrated QFD and fuzzy AHP approach." *Expert Systems with Applications*, **39 (12)**: 10841-10850.
59. Amirteimoori, A. and **A. Emrouznejad** (2012). "On classifying inputs and outputs in data envelopment analysis." *Applied Mathematics Letters*, **25 (11)**: 1625-1628.
60. Giraleas, D. , **A. Emrouznejad**, E. Thanassoulis (2012) "Productivity change using growth accounting and frontier-based approaches – Evidence from a Monte Carlo analysis." *European Journal of Operational Research*, **222 (3)**: 673-683.
61. Mulwa, R., **A. Emrouznejad** and E.A. Nuppenau (2012). "An overview of Total Factor Productivity estimations adjusted for pollutant outputs: an application to sugarcane farming." *International Journal of Environmental Technology and Management*, **15(1)**: 1-15.
62. Sheikhzadeh Y., AV Roudsari, GR Vahidi, **A. Emrouznejad**, S. Dastgiri (2012). "Public and Private Hospital Services Reform Using Data Envelopment Analysis to Measure Technical, Scale, Allocative, and Cost Efficiencies." *Health Promotion Perspectives*, **2 (1)**: 28-41.
63. Amirteimoori, A. and **A. Emrouznejad** (2012). "Optimal input/output reduction in production processes." *Decision Support Systems* **52(3)**: 742–747.
64. **Emrouznejad, A.**, M. Zerafat Angiz L. and W. Ho (2012). "An alternative formulation for the fuzzy assignment problem." *Journal of the Operational Research Society* **63(1)**: 59–63.
65. Zerafat Angiz L, M., **A. Emrouznejad** and A. Mustafa (2012). "Fuzzy Data Envelopment Analysis: A Discrete Approach." *Expert Systems with Applications* **39(3)**: 2263–2269.
66. Hatami-Marbini, A., M. Tavana, M. and **A. Emrouznejad** (2012). "Productivity Growth and Efficiency Measurements in Fuzzy Environments with an Application to Health Care." *International Journal of Fuzzy System Applications* **2(2)**: 1-35.
67. Hatami-Marbini, A., M. Tavana, **A. Emrouznejad** and S. Saati (2012). "Efficiency measurement in fuzzy additive Data Envelopment Analysis." *International Journal of Industrial and Systems Engineering* **10(1)**: 1-20.
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68. Amin, G. R., **A. Emrouznejad** and S. Rezaei (2011). "Some clarifications on the DEA clustering approach." *European Journal of Operational Research* **215(2)**: 498–501.
69. Amin, G. R. and **A. Emrouznejad** (2011). "Optimizing search engines results using linear programming." *Expert Systems with Applications* **38(9)**: 11534–11537.
70. **Emrouznejad, A.** and P. K. Dey (2011). "Performance measurement in the health sector using frontier efficiency methodologies and multi-criteria decision making." *Journal of Medical Systems* **35(5)**: 977-97.
71. Osman, I. H., L. N. Berbary, Y. Sidani, B. Al-Ayoubi and **A. Emrouznejad** (2011). "Data Envelopment Analysis model for the appraisal and relative performance evaluation of nurses at an intensive care unit." *Journal of Medical Systems* **35(5)**:1039–1062.
72. **Emrouznejad, A.** , M. Rostamy-Malkhalifeh, A. Hatami-Marbini, M. Tavana, N. Aghayi (2011). "An overall profit Malmquist productivity index with fuzzy and interval data." *Mathematical and Computer Modelling* **54(11-12)**: 2827–2838.
73. Amirteimoori, A. and **A. Emrouznejad** (2011). "Flexible measures in production process: A DEA-based approach." *RAIRO Operations Research* **45(1)**: 63-74.
74. Kthiri, W., **A. Emrouznejad**, Y. Boujelbene and M. N. Ouertani (2011). "A framework for performance evaluation of employment offices: a case of Tunisia." *International Journal of Applied Decision Sciences* **4(1)**: 16-33.

75. Matin, R. K. and **A. Emrouznejad** (2011). "An integer-valued Data Envelopment Analysis model with bounded outputs." *International Transaction in Operational Research* **18(6)**: 741–749.
76. Hatami-Marbini, A., **A. Emrouznejad** and M. Tavana (2011). "A taxonomy and review of the fuzzy Data Envelopment Analysis literature: Two decades in the making." *European Journal of Operational Research* **214(3)**: 457–472.
77. **Amirteimoori, A.** and **A. Emrouznejad** (2011). "Input/output deterioration in production processes." *Expert Systems with Applications* **38(5)**: 5822-5825.
78. **Amin, G. R.** and **A. Emrouznejad** (2011). "Parametric aggregation in ordered weighted averaging." *International Journal of Approximate Reasoning* **52(6)**: 819–827.
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79. Zerafat Angiz L, M., **A. Mustafa** and **A. Emrouznejad** (2010). "Ranking efficient decision-making units in Data Envelopment Analysis using fuzzy concept." *Computers and Industrial Engineering* **59(4)**: 712-719.
80. Zerafat Angiz L, M., **A. Emrouznejad**, **A. Mustafa** and **A. S. Al-Eraqi** (2010). "Aggregating preference ranking with fuzzy Data Envelopment Analysis." *Knowledge-Based Systems* **23(6)**: 512-519.
81. Zerafat Angiz L, M., **A. Emrouznejad** and **A. Mustafa** (2010). "Fuzzy assessment of performance of a decision making units using DEA: A non-radial approach." *Expert Systems with Applications* **37(7)**: 5153-5157.
82. **Gholami, R., D. A. Higón, P. Hanafizadeh** and **A. Emrouznejad** (2010). "Is ICT the key to development?" *Journal of Global Information Management* **18(1)**: 66-83.
83. **Emrouznejad, A.** and **E. Thanassoulis** (2010). "Measurement of productivity index with dynamic DEA." *International Journal of Operational Research* **8(2)**: 247-260.
84. **Emrouznejad, A.** and **K. De Witte** (2010). "COOPER-framework: A unified process for non-parametric projects." *European Journal of Operational Research* **207(3)**: 1573-1586.
85. **Emrouznejad, A.**, **E. Cabanda** and **R. Gholami** (2010). "An alternative measure of the ICT-Opportunity Index." *Information and Management* **47(4)**: 246-254.
86. **Emrouznejad, A.** and **E. Cabanda** (2010). "An aggregate measure of financial ratios using a multiplicative DEA model." *International Journal of Financial Services Management* **4(2)**: 114 - 126.
87. **Emrouznejad, A.** and **R. D. Banker** (2010). "Efficiency and productivity: Theory and applications." *Annals of Operations Research* **173(1)**: 1-3.
88. **Emrouznejad, A.**, **A. L. Anouze** and **E. Thanassoulis** (2010). "A semi-oriented radial measure for measuring the efficiency of decision making units with negative data, using DEA." *European Journal of Operational Research* **200(1)**: 297-304.
89. **Kirigia, J. M., Omer A. Mensah, C Mwikisa, E. Z. Asbu, A. Emrouznejad, P. Makoudode** and **A. Hounnankan** (2010). "Technical Efficiency of Zone Hospitals in Benin." *The African Health Monitor*, **12**: 30-39.
90. **Emrouznejad, A.** and **A. L. Anouze** (2010). "Data Envelopment Analysis with classification and regression tree - A case of banking efficiency." *Expert Systems* **27(4)**: 231-246.
91. **Emrouznejad, A.**, **G. R. Amin**, **E. Thanassoulis** and **A. L. Anouze** (2010). "On the boundedness of the SORM DEA models with negative data." *European Journal of Operational Research* **206(1)**: 265-268.
92. **Emrouznejad, A.** and **G. R. Amin** (2010). "Improving minimax disparity model to determine the OWA operator weights." *Information Sciences* **180(8)**: 1477-1485.
93. **Emrouznejad, A.** (2010). "SAS/OWA: Ordered weighted averaging in SAS optimization." *Soft Computing* **14(4)**: 379-386.
94. **Amin, G. R.** and **A. Emrouznejad** (2010). "Finding relevant search engines results: A minimax linear programming approach." *Journal of the Operational Research Society* **61(7)**: 1144-1150.
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95. Zerafat Angiz L, M., **A. Emrouznejad**, **A. Mustafa** and **A. Rashidi Komijan** (2009). "Selecting the most

- preferable alternatives in a group decision making problem using DEA." *Expert Systems with Applications* **36(5)**: 9599-9602.
96. Mulwa, M. R., **A. Emrouznejad** and L. Muhammad (2009). "Economic efficiency of smallholder maize producers in Western Kenya: A DEA meta-frontier analysis." *International Journal of Operational Research* **4(3)**: 250-267.
97. Mulwa, M. R., **A. Emrouznejad** and F. M. Murithi (2009). "Impact of liberalization on efficiency and productivity of sugar industry in Kenya." *Journal of Economic Studies* **36(3)**: 250-264.
98. Ho, W. and **A. Emrouznejad** (2009). "Multi-criteria logistics distribution network design using SAS/OR." *Expert Systems with Applications* **36(3 - Part 2)**: 7288-7298.
99. Ho, W. and **A. Emrouznejad** (2009). "A mathematical model for assembly line balancing model to consider disordering sequence of workstations." *Assembly Automation* **29(1)**: 49-51.
100. **Emrouznejad, A.** and E. Shale (2009). "A combined neural network and DEA for measuring efficiency of large scale datasets." *Computers and Industrial Engineering* **56(1)**: 249-254.
101. **Emrouznejad, A.**, V. V. Podinovski and E. Thanassoulis (2009). "Data envelopment analysis: Theory and applications." *Journal of the Operational Research Society* **60(11)**: 1467-1468.
102. **Emrouznejad, A.** and A. L. Anouze (2009). "A note on the modeling the efficiency of top Arab banks." *Expert Systems with Applications* **36(3 Part 1)**: 5741-5744.
103. **Emrouznejad, A.** and G. R. Amin (2009). "DEA models for ratio data: Convexity consideration." *Applied Mathematical Modelling* **33(1)**: 486-498.
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104. Kirigia, J. M., **A. Emrouznejad** R. G. Vaz, H. Bastiene and J. Padayachy (2008). "A comparative assessment of performance and productivity of health centres in Seychelles." *International Journal of Productivity and Performance Management* **57(1)**: 72-92.
105. Kirigia, J. M., **A. Emrouznejad**, B. Cassoma, E. Z. Asbu and S. Barry (2008). "A performance assessment method for hospitals: The case of municipal hospitals in Angola." *Journal of Medical Systems* **32(6)**: 509-519.
106. **Emrouznejad, A.**, B. R. Parker and G. Tavares (2008). "Evaluation of research in efficiency and productivity: A survey and analysis of the first 30 years of scholarly literature in DEA." *Socio-Economic Planning Sciences* **42(3)**: 151-157.
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