

**EMMANUEL THANASSOULIS**  
**CURRICULUM VITAE EXTRACT - DATED 04/03/2013**

**PERSONAL DETAILS**

Address: **Office:** Operations and Information Management, Aston Business School,  
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Languages: Fluent in English and Greek

**ACADEMIC QUALIFICATIONS**

1984 University of Warwick, PhD. Research area: Operational Research.  
1975 University of Warwick, MSc in "Management Science and Operational Research".  
1973 Sussex University, BSc in "Engineering with Operational Research", 1st Class Honours.

**EMPLOYMENT**

1999- Professor in Management Sciences, Aston Business School, University of Aston,  
Birmingham B4 7ET.  
1996 - 1999 Senior Lecturer in Operational Research, Warwick Business School, University of  
Warwick, Coventry CV4 7AL.  
1977 - 1996 Lecturer in Operational Research, Warwick University as above.

**TEACHING**

**Subject areas**

The main subject areas I have taught are:

- Linear programming
- Project Scheduling
- Dynamic programming
- Statistics
- Data Envelopment Analysis
- Non-linear optimisation methods
- Multi-objective programming methods

**RESEARCH**

My research interests lie in the broad area of performance management with special emphasis on the quantitative methods of performance measurement, and especially those based on the broad set of methods known as **Data Envelopment Analysis, (DEA)**. My output of books, chapters in books, refereed journal papers and other publications is detailed at the end of this CV.

**RESEARCH FUNDING (Grants above £10k)**

- i. **Economic and Social Research Council** (2005-2009) (£60, 000) **Project Title:**  
Developing Panel Based Methods for Assessing Relative Performance in the English and Welsh Water and Sewerage Industry(Joint with Saal – Collaborative Case award with the Office of Water Services (OFWAT), economic regulator of water and sewerage companies in England and Wales) (With D. Saal)
- ii. **Higher Education Funding Council for England** (2004-5) (£70,000) (**Project director.**)  
The assessment of productivity change over time in central administrative services in UK Higher Education Institutions. (with Brignall, Aston Business School)
- iii. **The Department for Education and Skills** (£30,000) (**Project director.**) Costs of Higher Education in England (2003) – (With Prof. G. and Dr J. Johnes, Lancaster University)
- iv. **Higher Education Funding Council for England** (2003) (£11,000) (Dissemination of research findings on UK university central administrative services)
- v. **The Department for Education and Skills** (2002) (£25,000) (**Project director.**) Assessing school effectiveness using Data Envelopment Analysis ( with Drs Simpson and Battisti, Aston Business School)

- vi. **Higher Education Funding Council for England** (2000-3) (£188,000) (**Project director.**)  
The identification and dissemination of good quality cost-efficient central administrative services in UK Higher Education Institutions. (with Saunders and Brignall, Aston Business School)
- vii. **Leverhulme Trust** (1996 -7) (£12,000) (**Personal Research Fellowship**)  
Project: The identification of the determinants of school effectiveness.
- viii. **Home Office** (1995-7) (£50,000) (**Project director**) (with A. Athanassopoulos, then Warwick Business School)  
Project: The development of a Financial Model for Fire Brigades in England and Wales.
- ix. **Science and Engineering Research Council** (1990 - 93) (£30,000 PhD studentship)  
Project: Developing methods for setting targets to improve organisational efficiency.
- x. **Science and Engineering Research Council** (1993-96) (£30,000 PhD studentship) Project:  
The effects of weights restrictions in DEA.
- xi. **Science and Engineering Research Council** (1994-97) (£30,000 PhD studentship)  
Project: A comparison of stochastic frontier and data envelopment analysis methods
- xii. **Leverhulme Trust** (1988-1991) (£50,000) (with R. G. Dyson, Warwick Business School)  
Project: The incorporation of output quality measures in DEA performance assessments.

### **RESEARCH-RELATED FUNDING**

**Engineering and Physical Sciences Research Council:** (2001-2006) (£211,000)

Project: To set up a suite of training modules in Performance Management at Masters level.

### **SAMPLE EVIDENCE OF RESEASCH STANDING**

<b>NATIONAL LEVEL</b>	
<b>HM Treasury</b>	• Advice on the potential use of DEA to assess police performance (2000).
<b>The Department for Education and Employment</b>	• Advice on the use of DEA to assess school performance (2000-).
<b>Operational Research Society</b>	• Running some of its annual one-day courses on DEA (1988-).
<b>OFWAT</b> (Regulator of UK water companies)	• Research in performance measurement methodologies and advice. (1991) • Invited to offer a short course on performance measurement.
<b>Universities of York, Kent, Bradford, Kingston, Cambridge</b>	Current or past External Examiner

Advice, Fire Research Statistics Division of the Department for Department for  
Communities and Local Government, UK

Panel discussions– OFWAT Advisory Panel on the future of water regulation in  
the UK

Editorial Board European Journal of Operational Research

## SOFTWARE DEVELOPMENT

I initiated and co-developed with support from the Department for Education and Skills DEA software incorporating the most recent theoretical development in the area.

## JOURNAL EDITING

- Joint Editor, *Journal of Productivity Analysis*, (USA based) 2002-
- Associate Editor, *Journal of Productivity Analysis*, (1996-2002)
- Editorial Board, *European Journal of Operational Research* (2005-

## PUBLICATIONS AND OTHER RESEARCH OUTPUT

### *Books*

- 1 C. Morris and E. Thanassoulis, (1994), *Essential Mathematics: A Refresher Course for Business and Social Studies*, Macmillan Press Ltd, ISBN 0-333-57548-2. (250 pages)
- 2 E. Thanassoulis (2001) *Introduction to the Theory and Application of Data Envelopment Analysis: A foundation text with integrated software*. Kluwer Academic Publishers, Boston, Hardbound, ISBN 0-7923-7429-0, 312 pp.
- 3 C. Morris and E. Thanassoulis, (2007), *Essential Maths for Business and Management: Palgrave Publishers*, ISBN 978-1-4039-1610-5
- 4

### *Contributed Chapters in Books*

Thanassoulis E., Portela M.C. A. S. and Allen R. (2004) Incorporating value judgments in DEA. Cooper W. W., Seiford L. W. and Zhu J. Editors Handbook on Data Envelopment Analysis ISBN 1 40207797 1 (Kluwer Academic Publishers.)

Horncastle A., Jevons D. Dudley P. and Thanassoulis E. (2006) Efficiency Analysis of Delivery Offices in the Postal Sector Using Stochastic Frontier and Data Envelopment Analysis, in *Advances in Regulatory Economics: Liberalization of the Postal and Delivery Sector*, Crew M and Kleindorfer (Editors) Edward Elgar publisher.

Thanassoulis E., Portela Maria C. S., and Despić O. (2008) DEA – The Mathematical Programming Approach to Efficiency Analysis, in *The Measurement of Productive Efficiency and Productivity Growth*, (Hal Fried, Knox Lovell and Shelton Schmidt editors ) Oxford University Press. ISBN -10= 0195183525 and ISBN-13= 9780195183528

### *Refereed publications*

- 1 E. Thanassoulis (1983), The solution procedure PASEB for multi-objective linear programming problems. **In Multi-Objective Decision Making** (S. French, R. Hartley, L. C. Thomas and D. J. White Eds), pp. 145-177, **Academic Press**, London.
- 2 E. Thanassoulis (1985), An adaptation of PASEB for the solution of multi-objective linear fractional programming problems. *Journal of the Operational Research Society*, Vol. 36, No. 2, pp. 155-161.
- 3 E. Thanassoulis (1985), Selecting a suitable solution method for a multi-objective programming capital budgeting problem. *Journal of Business Finance and Accounting*, Vol. 12, No. 3. pp. 453-471.

- 4 E. Thanassoulis (1987), Two optimality tests for differentiable concave value functions in linear multi-objective programming problems. *Operational Research Letters*, Vol. 6, No. 1, pp. 53-59.
- 5 E. Thanassoulis, R. G. Dyson and M. J. Foster (1987) Relative efficiency assessments using data envelopment analysis: an application to data on rates departments. *Journal of the Operational Research Society*, Vol. 38, No. 5 pp. 397-411.
- 6 R. G. Dyson and E. Thanassoulis (1988), Reducing weight flexibility in data envelopment analysis. *Journal of the Operational Research Society*, Vol. 39, No. 6. pp. 563-576.
- 7 R. G. Dyson, E. Thanassoulis and A. Boussofiane, (1990), Data envelopment analysis, in "Operational Research Tutorial Papers", L.C. Hendry and R. Eglese (editors), pp. 13-28, published by *The Operational Research Society*, UK.
- 8 A. Boussofiane, R. G. Dyson and E. Thanassoulis, (1991), Applied Data Envelopment Analysis. *European Journal of Operational Research*, vol 52, No. 1, pp. 1-15.
- 9 E. Thanassoulis and R. G. Dyson, (1992) Estimating preferred input output levels using data envelopment analysis. *European J'rnal of Operational Research Vol 56 pp. 80-97*.
- 10 E. Thanassoulis, (1993), A comparison of regression analysis and data envelopment analysis as alternative methods for performance assessments. *Journal of the Operational Research Society*, Vol 44, No 11, pp. 1129-1144.
- 11 E. Thanassoulis, (1994), Performance assessments using DEA - Discussion of 'a cautionary note', *J'rnal of the Operational Research Society*, Vol 45 No 5, pp. 604-607.
- 12 E. Thanassoulis and P. Dunstan, (1994) Guiding schools to improved performance using data envelopment analysis: An illustration with data from a local education authority. *Journal of the Operational Research Society*, Vol 45, No 11, pp. 1247 - 1262.
- 13 E. Thanassoulis, A. Boussofiane and R. G. Dyson, (1995) Exploring output quality targets in the provision of perinatal care in England using DEA. *European Journal of Operational Research*, Vol 80, No. 3 pp 588-607.
- 14 A. D. Athanassopoulos and E. Thanassoulis (1995) Separating market efficiency from profitability and its implications for planning. *Journal of the Operational Research Society*, Vol. 46, No. 1. pp. 20 -34.
- 15 A. D. Athanassopoulos and E. Thanassoulis, (1995) Assessing marginal impacts of investments on organisational performance. *The Inter'nal Journal of Production Economics*, Vol. 39, No 1, pp. 149 - 164.
- 16 E. Thanassoulis, (1995) Assessing Police Forces in England and Wales Using Data Envelopment Analysis, *European Journal of Operational Research*, Vol. 87, pp. 641 - 657. (*EURO 20th anniversary issue of the journal*)
- 17 E. Thanassoulis, (1996) Assessing the effectiveness of schools with pupils of different ability using data envelopment analysis. *Journal of the Operational Research Society*, Vol. 47, No. 1, pp. 84 - 97.

- 18 E. Thanassoulis, A. Boussofiene and R. G. Dyson, (1996) A comparison of data envelopment analysis and ratios as tools for performance assessment, *Omega: the international journal of management science*, Vol. 24, No. 3, pp. 229 - 244.
- 19 E. Thanassoulis, (1996) Altering the bias in differential school effectiveness using data envelopment analysis, *Journal of the Operational Research Society*, Vol. 47 No. 7, pp. 882 - 894.
- 20 E. Thanassoulis, (1996) A data envelopment analysis approach to clustering operating units for resource allocation purposes, *Omega: the international journal of management science*, Vol. 24, No. 4, pp. 463 - 476.
- 21 E. Thanassoulis, (1997) Duality in Data Envelopment Analysis under Constant Returns to Scale, *IMA Journal of Mathematics Applied in Business and Industry*, Vol. 8, No. 3 (July 1997), pp. 253 - 266.
- 22 R. Allen, A. Athanassopoulos, R. G. Dyson and E. Thanassoulis, (1997) Weights restrictions and value judgements in data envelopment analysis: evolution, development and future directions, *Annals of Operations Research*, Vol. 73 pp. 13 -34.
- 23 J. Karkazis and E. Thanassoulis, (1998) Assessing the effectiveness of investment incentives in Northern Greece using data envelopment analysis. *Socio -Economic Planning Sciences*, Vol. 32, No. 2 pp. 123 - 137.
- 24 E. Thanassoulis and R. Allen, (1998) Simulating weights restrictions in data envelopment analysis by means of unobserved DMUs. *Management Science*, Vol. 44, No. 4 pp. 586 - 594 (April 1998).
- 25 E. Thanassoulis, (1998) Estimating efficient marginal resource levels using data envelopment analysis, *Journal of Cost Analysis*, Fall 1998, ISSN 0882 - 3871.
- 26 E. Thanassoulis, (1999) Data Envelopment Analysis and its Use in Banking. *Interfaces (Special issue on DEA in banking. )* Vol 29, No 3, (May – June 1999)
- 27 E. Thanassoulis, (1999) Setting Achievement Targets for School Children, *Education Economics*, Vol 7, No. 2, pp. 101 – 119.
- 28 N. Maniadakis, B. Hollingsworth and E. Thanassoulis, (1999) The Impact of the Internal Market on Hospital Efficiency, Productivity and Service Quality, *Journal of Health Care Management Science*, Vol. 2 No. 2 pp. 75-85.
- 29 E. Thanassoulis (2000) The Use of Data Envelopment Analysis in the Regulation of UK Water Utilities: Water Distribution, *European Journal of Operational Research*. Vol 126, 2, pp. 436-453.
- 29 L. Read and E. Thanassoulis (2000), Improving The Identification of Returns to Scale in Data Envelopment Analysis, *Journal of the Operational Research Society*, Volume 51, Issue 1, 102-110.

- 30 E. Thanassoulis (2000) DEA and its Use in the Regulation of Water Companies, *European Journal of Operational Research*, Vol 127, 1, pp. 1-13.
- 31 Maniadakis N, & E. Thanassoulis. (2000) Changes in Productivity of A Sample of Scottish Hospitals: A Cost Index Approach, *Applied Economics*, Vol. 32 pp. 1575-1589.
- 32 Maria da Conceição A. Silva Portela and Emmanuel Thanassoulis, (2001) Decomposing school and school type efficiencies, *European Journal of Operational Research* Vol. 132/2 pp. 357-373.
- 33 E. Thanassoulis, (2002) Comparative Performance Measurement in Regulation: The Case of English and Welsh Sewerage Services, *Journal of the Operational Research Society*, Vol 53, No 3, 292-302.
- 34 Emmanuel Thanassoulis and Maria da Conceição A. Silva Portela (2002) School Outcomes: Sharing the responsibility between pupil and school, *Education Economics* Vol 10, No 2, 2002, pp 183-207.
- 35 Thanassoulis E. (2002) Data Envelopment Analysis with Value Judgements, *Journal of the Royal Statistical Society, A*, Vol. 165 Part 3, pp. 431-32.
- 36 Portela, M.C.A.S., and Borges, P.C. and Thanassoulis, Emmanuel (2003), Finding Closest targets in non-oriented DEA models: the case of convex and non-convex technologies, *Journal of Productivity Analysis*, 19/2-3 pp 251-269.
- 37 N. Maniadakis and E. Thanassoulis ( 2004) A Cost Malmquist Productivity Index, *European Journal of Operational Research*. Volume 154, Issue 2, pp 396-409.
- 38 R. Allen and E. Thanassoulis, (2004) Increasing Envelopment in Data Envelopment Analysis. *European Journal of Operational Research* Volume 154, Issue 2, pp 363-379.
- 39 Maria Conceição A. Silva Portela, Emmanuel Thanassoulis and Gary Simpson (2004) Negative data in DEA: A directional distance approach applied to bank branches, *Journal of the Operational Research Society*, Vol 55, pp1111-1121
- 40 Portela M and Thanssoulis E. (2005) Profitability of a Sample of Portuguese Bank Branches and its Decomposition into Technical and Allocative Components, *European Journal of Operational Research*, Vol 162 pp. 850-866
- 41 Emrouznejad A. and E. Thanassoulis (2005) "A mathematical model for dynamic efficiency using data envelopment analysis", *Applied Mathematics and Computation*, Volume 160, Issue 2, Pages 363-378.
- 42 B. Casu, D. Shaw and E. Thanassoulis (2005), Using a Group Support System to Aid Input-Output Identification in DEA *Journal of the Operational Research Society*) vol 56 No 12, 1363-1372
- 43 Barbara Casu, Emmanuel Thanassoulis (2006) Evaluating Cost Efficiency in Central Administrative Services in UK Universities ( *Omega the international journal of management science*) volume 34, issue 5, pages 417-426 October, 2006

- 44 Maria Conceição A. Silva Portela, Emmanuel Thanassoulis (2006) Malmquist Indexes Using a Geometric Distance Function (GDF): Application to a Sample of Portuguese Bank Branches, *Journal of Productivity Analysis*, Vol 25, 1-2, pp. 25-42
- 45 Portela Maria Conceição A. Silva, Emmanuel Thanassoulis (2006) Zero Weights and Non-Zero Slacks: Different Solution to the same problem *Annals of Operational Research* 145/1, 129-147.
- 46 M. C. Silva Portela and E. Thanassoulis, (2007) Developing a decomposable measure of profit efficiency using DEA, *Journal of the Operational Research Society* April Volume 58 Number 4, pp.
- 47 Portela Maria Conceição A. Silva, Emmanuel Thanassoulis (2007) Comparative Efficiency Analysis of Portuguese Bank Branches, *European Journal of Operational Research* 177,1275-1278.
- 48 Podinovski V. V and Thanassoulis E. (2007) Improving Discrimination in Data Envelopment Analysis: Some Practical Suggestions *Journal of productivity Analysis*.
- 49 Geraint Johnes, Jill Johnes and Emmanuel Thanassoulis (2008), An Analysis Of Costs In Institutions Of Higher Education In England, *Studies in Higher Education*, 33 (5) pp 527-549
- 50 Emrouznejad A and Thanassoulis E. (2010) Measurement of productivity index with dynamic DEA *International Journal of Operational Research* 8 (2) 247-260.
- 51 Emrouznejad A, Abdel Anouze and Thanassoulis E. (2010) A semi-oriented radial measure for measuring efficiency of decision making units with negative data, using DEA *European Journal of Operational Research* 200(1): 297-304
- 52 De Witte K. Thanassoulis E. Simpson, Battisti, Charles-Worth May (2010) Assessing pupil and school performance by non-parametric and parametric techniques *Journal of the Operational Research Society*, Vol. 61, 1224 --1237
- 53 Maria C. A. S. Portela, Emmanuel Thanassoulis (2010) Malmquist Indices for measuring productivity in the presence of negative data: An application to bank branches, *Journal of Banking and Finance* Vol. 34 1472–1483
- 54 A. Emrouznejad, Gholam R. Amin, E. Thanassoulis, A. L. Anouze, (2010) On the boundedness of the SORM DEA models with negative data, *European Journal of Operational Research* 206 (1): 265-268
- 55 Thanassoulis, E. Kortelainen M. Geraint Johnes, Jill Johnes (2011) An Analysis of Costs in Institutions of Higher Education In England: DEA approach *Journal of the Operational Research Society* Vol. 62, pp 1282–1297
- 56 Maria C. A. S. Portela, Emmanuel Thanassoulis, Alan Horncastle, Tobias Maugg (2011) Productivity change in the Water Industry in England and Wales: Application of the Meta-Malmquist Index, *Journal of the Operational Research Society*, Vol. 62, pp 2173-2188.
- 57 Thanassoulis, E., M. Kortelainen, and R. Allen. (2011). Improving envelopment in Data Envelopment Analysis under variable returns to scale. *European Journal of Operational Research* 218(1):175-185.

- 58 Thanassoulis E, M Portela and Graveney M. (forthcoming) Estimating the Scope for Savings in referrals and drug prescription costs in the General Practice, units of a UK Primary Care Trust, European Journal of Operational Research <http://dx.doi.org/10.1016/j.ejor.2012.03.035>
- 59 Giraleas D., Thanssoulis E., Emrouznejad A. (forthcoming) Productivity change using growth accounting and frontier-based approaches – Evidence from a Monte Carlo analysis- European Journal of Operational Research