Data Envelopment Analysis and Performance Management

24-27 AUG 2011
University of Macedonia
Thessaloniki, Greece
http://www.deazone.com/DEA2011/
Dear Participants,

It is a great pleasure to welcome you all to the 9th International Conference on Data Envelopment Analysis (DEA2011), co-organized by the University of Macedonia, Thessaloniki Greece, Aston Business School of Aston University, Birmingham UK, the Fox School of Business of Temple University, Philadelphia, USA, and the iDEAs.

Over the years, the International DEA conference has grown not only in respect of volume of papers and number of delegates but also in terms of the variety of methodological contributions and areas of application. This year’s conference features several firsts. It is the first DEA conference which will be associated with a Special Issue of a Journal, namely the Journal of the DEA Society. It is the first DEA conference in which the launch of a DEA Journal will take place; and it is the first DEA Conference in which the formation of the International DEA Society (IDEAS) will be launched. The conference is the largest yet of the series of DEA conferences with in excess of 150 delegates and accompanying persons from all corners of the globe. We believe that this is a wonderful opportunity, especially in the present challenging economic times, to bring together DEA researchers and practitioners to explore how the DEA community can contribute to addressing some of the key issues facing organizations at the present time.

We would also like to warmly welcome you to Thessaloniki, Greece’s second largest city with a population close on 1 million. It is a beautiful city with a seafront stretching for miles. It has a long history with remnants stretching from Roman times through to Byzantine, Ottoman and modern day. You will have we hope some spare time to enjoy a seafront stroll in the warm early evening air or wonder through the modern shopping thoroughfares of the city. We hope this conference will also be an opportunity for all of us to exchange social and cultural experiences in this beautiful Byzantine city.

Last but not least, we would like to thank our sponsors, the University of Macedonia and PIM-DEA software and most of all, you the participants, for your contribution in making this conference successful. We wish you all an intellectually stimulating experience and an enjoyable stay.

Best Wishes,

Andreas Andronikidis, University of Macedonia
Rajiv D. Banker, Fox School of Business, IDEAS
Ali Emrouznejad, Aston Business School
Andreas C. Georgiou, University of Macedonia
Giannis Karagiannis, University of Macedonia
Emmanuel Thanassoulis, Aston Business School

The 9th DEA was made possible by the generous support of the following organizations:
12:00 - 20:30  Registration
19:00 - 20:30  Welcome Reception

09:00 - 09:50  Opening Ceremony  (Grand Hall)
10:00 - 11:00  Demonstration of DEA Software - PIM-soft | Computer Room

T.1.1: Banking | Room A
T.1.2: Health | Room B
T.1.3: Finance | Room C
T.1.4: Facets | Room D
T.1.5: Public Services | Room E

11:00 - 11:30  Coffee Break
11:30 - 12:30  T.2.1: Banking | Room A

T.2.2: Health | Room B
T.2.3: Finance | Room C
T.2.4: Electricity | Room D

12:30 - 13:15  Lunch Break
13:30 - 20:00  Trip to winery or trip to Vergina
08:30 - 10:00  F.1.1: Banking | Room A  
F.1.2: Fuzzy | Room B  
F.1.3: MCDM | Room C  
F.1.4: Modelling | Room D  
10:00 - 10:20 Coffee Break  
10:20 - 11:50 F.2.1: Banking | Room A  
F.2.2: Regions-Methodology | Room B  
F.2.3: Productivity | Room C  
F.2.4: Modelling | Room D  
F.2.5: Public Services | Room E  
11:55 - 12:40 Plenary 1 | Room P  
Chair: Giannis Karagiannis  
Invited Speakers:  
Rolf Fare, Shawna Grosskopf and Dimitris Margaritis  
12:40 - 13:30 Lunch Break  
13:30 - 15:00 F.3.1: Banking | Room A  
F.3.2: Regions | Room B  
F.3.3: Transport Systems | Room C  
F.3.4: Modelling | Room D  
F.3.5: Transport & MFG | Room E  
15:00 - 15:30 Coffee Break  
15:30 - 16:30 F.4.1: Farming | Room A  
F.4.2: Electricity | Room B  
F.4.3: IT - Modelling | Room C  
F.4.4: Modelling | Room D  
16:35 - 17:30 Panel Session | Room A  
Panel Discussion: Getting Published  
Chair: Emmanuel Thanassoulis  
Rajiv Banker  
Ali Emrouznejad  
Victor Podinovski  
Emmanuel Thanassoulis  
20:30 - late GALA Dinner
09:00 - 10:00  Panel Session | Room A
Panel Discussion: Applying DEA in practice: Opportunities for reaching users, do's and don'ts in selling DEA
Chair: Rajiv Banker
Mike Graveney
Nikolaos Maniadakis
Ibrahim Osman
Maria Conceicao Portela
Emmanuel Thanassoulis
Rajiv Banker

10:00 - 10:20  Coffee Break

10:20 - 11:50  Demonstration of DEA software – Repeat PIMsoft | Computer Room
  S.2.1: Agriculture | Room A
  S.2.2: Education - Sport | Room B
  S.2.3: Methodologies | Room C
  S.2.4: DEA Applications | Room D

11:55 - 12:40  Plenary 2 | Room P
Chair: Emmanuel Thanassoulis
Invited Speaker:
Rajiv Banker

12:40 - 13:30  Lunch Break

13:30 - 15:00  S.3.1: Manufacturing-Reviews | Room A
  S.3.2: Methodological Contributions | Room B
  S.3.3: Methodologies | Room C
  S.3.4: Methodological Contributions | Room D

15:00 - 15:30  Coffee Break

15:30 - 16:00  Closing Ceremony | Grand Hall
sessions schedule

THURSDAY
AUGUST 25TH
Thursday
Opening Ceremony | GRAND HALL
09:00 - 09:50

Host: E. Thanassoulis

09:00 – 09:10 Host welcomes and makes safety announcements
09:10 – 09:30 City authorities and Rector welcome the delegates
09:30 – 09:50 Rajiv Banker on JDEA and DEA Society

Session 1
10:00 - 11:00

DEMO | Computer Room
Demonstration of DEA software – PIMsoft

T.1.1 Banking | Room A
Chair: Loula- Eleni Triantafyllou

2. (193) Abdel Latef Anouze, Ibrahim H. Osman and Ali Emrouznejad, “Banks’ Performance in Mena Region Before, During and After the Financial Crises”

T.1.2 Health | Room B
Chair: George Fragkiadakis

1. (121) Roxani Karagiannis, “Evaluating the Financial Performance of Public Hospitals in Greece”
2. (130) Aurore Pélissier, Martine Audibert, Jacky Mathonnat and Xiaoxian Huang, “Health Insurance Reform and Efficiency of Township Hospitals in Rural China: an Analysis from Survey Data”
3. (140) George Fragkiadakis, Michael Doumpos and Constantine Zopounidis, “Evaluation of Technical and Allocative Efficiency of Greek Hospitals: a Non-Parametric Methodology and Managerial Implications”
T.1.3 Finance | Room C
Chair: Layla Ashoor

1. (86) Panagiotis Tziogkidis, “Post-Event Analysis of Greek Financial Intermediaries Using Bootstrap DEA”
2. (98) Layla Ashoor and Jian-Bo Yang, “Integrated Production Trade off DEA and MOLP Model”
3. (67) Khursid Djalilov and Jenifer Piesse, “Efficiency of Banking Institutions in Central Asia”

T.1.4 Facets | Room D
Chair: Hirofumi Amatatsu

1. (49) Tohru Ueda and Hirofumi Amatatsu, “Performance Evaluation Methods Based on Minimum Distance and Extrapolated Facets”
2. (75) Alireza Amirteimoori and Sohrab Kordrostami, “Generating Strong Defining Hyperplanes of Production Possibility Set in DEA”
3. (87) Hirofumi Amatatsu and Tohru Ueda, “Returns to Scale of Chemical Companies Using Facet Coordinates of the DEA”

T.1.5 Public Services | Room E
Chair: Rui Marques

2. (144) Ricardo Souza, Marcos Lins and Rogerio Valle, “Assessing Brazilian waste collection services with Data Envelopment Analysis”

Session 2
11:30 - 12:30

T.2.1 Banking | Room A
Chair: Muhammad Maishanu

1. (12) Violeta Cvetkoska and Blagorodna Todosioska, “A Two-Stage Approach for Measuring the Efficiency of Banks with the Application of DEA and AHP”
3. (16) Muhammad Auwalu Haruna and Muhammad Maishanu, “Consolidation and Productivity Gains of the Nigerian Banking System”
T.2.2 Health | Room B
Chair: Rhory Fernandez

1. (148) Maria Portela, Emmanuel Thanassoulis and Mike Graveney, “Comparative Analysis of Referral and Drug Costs at the Level of Specialty: General Medicine and Geriatrics”

2. (195) Nurhan Davutyan and Murat Bilsel, “Hospital Efficiency with Risk Adjusted Mortality as Undesirable Output: the Turkish Case”


T.2.3 Finance | Room C
Chair: Karligash Kenjegalieva

1. (3) Mohammad Hemati, Seyyedabdolla Heydariyeh and Amir Mehdiaadi, “Representation a Combined Technique from DEA and Topsis in Order to Appraisal the Efficient industrials”

2. (45) Antonella Basso and Stefania Funari, “Relative Performance of SRI Equity Funds: An Analysis of European Funds Using Data Envelopment Analysis”

T.2.4 Electricity | Room D
Chair: Farhad Hosseinzadeh Lotfi

1. (51) Shane Mullarkey, Brian Caulfield, Aoife Foley, Biswajit Basu and Sarah McCormack, “Efficiency Assessment of Electricity Power Generation on Ireland’s Single Electricity Market (SEM) by Data Envelopment Analysis”


Friday

Session 1
08:30 - 10:00

F.1.1 Banking | Room A
Chair: Branka Tuskan

1. (36) Arash Aliakbari and Ahmad Makui, “Evaluating the Relation Between Efficiency Scores and Environmental Conditions”
2. (52) Mohsen Afsharian, Anna Kryvko and Peter Reichling, “Efficiency and its Impact on the Performance of European Commercial Banks”
4. (83) Branka Tuskan and Maja Mihelja Zaja, “DEA Approach vs Accounting Approach as a Measure of Efficiency of Financial Institutions in the Republic of Croatia”

F.1.2 Fuzzy | Room B
Chair: Shavazipour Babooshka

1. (6) Madjid Zerafat Angiz E Langroudi, Adli Mustafa, Ali Emrouznejad and Joshua Ignatius, "Integrating Fuzzy DEA into TOPSIS Approach for Finding an Ideal Solution in Multiple Attribute Decision Making Problems"
2. (34) Mozhgan Mansouri Kaleibar and Sahand Daneshvar, "The Minimal Allocated Cost and Maximal Allocated Benefit for Fuzzy Data"
3. (70) Najmeh Malekmohammadi, Farhad Hosseinzadeh Lotfi and Hishamuddin Zainuddin, "Limited Resources in Fuzzy Data Envelopment Analysis"

F.1.3 MCDM | Room C
Chair: Andreas C. Georgiou

1. (38) Yossi Hadad and Baruch Keren, “Combined Methods for Ranking DMUs via Performance Evaluation and Improvement Trend”
2. (42) Rita Markovits-Somogyi, “Modification of a DEA-AHP Based Method for Ranking the Decision Making Units”
3. (126) Gordana Savic, Marija Kuzmanovic and Milan Martic, “Conjoint Analysis based Approach to Criteria Selection in Data Envelopment Analysis”

F.1.4 Modelling | Room D
Chair: Joseph C. Paradi

1. (124) Cecilio Mar-Molinero and Fabiola Portillo, “Weight multiplicity in DEA: causes and a proposed solution”
2. (90) Torbjørn Hanson and Finn R. Førsund, “Efficiency and productivity in operational units of the armed forces”
3. (129) Ahti Salo and Antti Punkka, “Ratio-Based Efficiency Analysis”

Session 2
10:20 - 11:50

F.2.1 Banking | Room A
Chair: Juha Eskelinen

1. (85) Süleyman Kale, Mehmet Hasan Eken and Huseyin Selimler, “Efficiency of European Banks: A Risk and Profitability Approach”
3. (100) Angana Deb and Nitish Datta, “Nature of the Managerial Behavior of Indian Commercial Banking Sector: An Empirical Investigation”

F.2.2 Regions - Methodology | Room B
Chair: Dimitris Despotis

1. (89) George Vlontzos, Garyfallos Arabatzis and Basil Manos, “Investigation of the Relative Efficiency of Leader+ in Rural Areas of Northern Greece”
2. (66) Nikos Pettas and Ioannis Giannikos, "Measuring the Administrative Efficiency of EU Leader Development Programmes with DEA: An Application in the Local Implementation of Greek Leader+


4. (55) Dimitris Despotis and Dimitris Sotiros, "Max-Normalized DEA Models: Meaning and Properties"

F.2.3 Productivity | Room C
Chair: Dimitris Giraleas

1. (31) Shabnam Razavyan and Ghasem Tohidi, “The Productivities Comparing of Units at Two Different Points in Time Using Global Cost Malmquist Index”
2. (56) Mohsen Afsharian and Gerhard Wäscher, “A New Malmquist-Type Index for Measuring Productivity Changes Over Time”
3. (10) Bernhard Mahlberg and Mikulas Luptacik, “Efficiency Change Over Time in a Multisectoral Economic System”

F.2.4 Modelling | Room D
Chair: Alireza Amirteimoori

1. (165) Mette Asmild, Jens Leth Hougaard and Dorte Kronborg, "Is the Distribution of Efficiency Scores Independent of the Input Mix? A Statistical Test"
2. (173) Rajiv Banker, Mihir Mehta and Kikyoung Song, “Citizens’ Happiness and National Performance Scorecard”
3. (175) Farhad Hosseinzadeh Lotfi, Gholamreza Jahnanshahloo, Alireza Amirteimoori and M. Moghaddas, “Non-Radial Piecewise Linear DEA model”
4. (176) Sohrab Kordrostami, Alireza Amirteimoori and Farhad Hosseinzadeh Lotfi, “Efficiency Analysis in Production Systems With Imprecise Data”

F.2.5 Public Services | Room E
Chair: Panagiotis Zervopoulos

2. (74) Xiaopeng Yang and Hiroshi Morita, “Efficiency Improvement in the Case of Multiple Perspectives”


Plenary 1 | Room P
11:55 - 12:40
Chair: Giannis Karagiannis
Invited Speakers: Rolf Fare, Shawna Grosskopf and Dimitris Margaritis, “Coalition Formation and Pricing of Decision Making Units”

Session 3
13:30 - 15:00
F.3.1 Banking | Room A
Chair: Mohammad-Reza Alirezaee

1. (113) Mohammad Reza Alirezaee and Masoume Rajabi Tanha, “Large Loans Management: Loan Portfolio Selection”

2. (132) Mohammad Reza Alirezaee and Seyede Hoda Shajari, “Large Loan Management: Loan Package Calculation”

3. (14) Mohammad Hemati and Vahideh Zabihi, “Represent an Approach for Integrating Different Models of Data Envelopment Analysis by Using of Linear Assignment Method”

F.3.2 Regions | Room B
Chair: Monica Matei

1. (92) Evangelia Desli and Emmanouil Chatzigiannis, “Testing EU Efficiency at Country Level Versus Regional Level”
2. (109) Spyros Niavis, Serafeim Polyzos and Triantafyllos Pnevmatikos, “Evaluating the Efficiency of Greek Prefectures by Using Data Envelopment Analysis”
3. (125) Yücel Özkara, Bilal Toklu and Dursun Balkan, “Regional Efficiency Measurement of Turkey’s Manufacturing Industry with Electricity Input Using DEA”

F.3.3 Transport Systems | Room C
Chair: Elke Hermans

2. (107) Nicole Adler, Gianmaria Martini and Nicola Volta, “Moving towards a Greener Fleet: A DEA Estimation of the Aircraft Environmental Production Frontier”
3. (114) Yongjun Shen, Elke Hermans, Tom Brijs, Da Ruan, Geert Wets and Koen Vanhoof, “Development of a Multiple Layer DEA Model with Applications in Road Safety Performance Evaluation”

F.3.4 Modelling | Room D
Chair: Kristof de Witte

1. (178) Ahmad Shahvarani, Leila Khoshandam and Ali-reza Amirteimoori, “A Data Envelopment Analysis Model for Centralized Decision Processes”
2. (184) R Ramya and Muthiah Palani Natha Raja, “Defects Minimization through Principal Component Analysis (PCA)- Data Envelopment Analysis (DEA)”
3. (186) Babooshka Shavazipour and Vahid Asrami “Ranking Using Ideal Decision Making Unit in Data Envelopment Analysis”
F.3.5 Transport Systems & Manufacturing | Room E
Chair: Akbar Khodabakhshi

1. (162) Francesco Russo and Corrado Rindone, “Data Envelopment Analysis to Compare Investments on Hub Ports”
2. (44) Akbar Khodabakhshi and Mohammad Jafari, “Measuring of the Efficiency of the Iranian Railway Companies by Using Data Envelopment Analysis”
4. (204) Ming-Miin Yu, Bo Hsiao and Shaw Yu Li, “Using Multi-Activity Network DEA Model to Measure Container Ports with Harbor Management, Stevedoring and Warehousing Activities”

Session 4
15:30 - 16:30

F.4.1 Farming | Room A
Chair: Alexandros Theodoridis

1. (48) Sofia Kourtesi, Apostolos Polymeros and Panos Fousekis, “Robust Technical Efficiency Comparisons With Application to Greek Olive Farms”
2. (57) Alexandros Theodoridis and Athanasios Ragkos, “A Restricted DEA Approach of Dairy Farms in Greece”

F.4.2 Electricity | Room B
Chair: Rajiv D. Banker

1. (84) Hasan Bal and Mehmet Güray Unsal, “Integrating of Multi Dimensional Scaling Algorithm To PCA-DEA and Electricity Efficiency Evaluation of OECD Countries”
2. (137) Trishit Bandyopadhyay, “Improving the Efficiency of a Multi-unit Coal Based Thermal Power Corporation in the Presence of Undesirable Outputs - A Case Study Employing Data Envelopment Analysis”
3. (172) Rajiv D. Banker, Ana Lucia Miranda Lopes and Daqun Zhang, “Empirical Consideration of Returns to Scale in Incentive Regulation”

F.4.3 IT - Modelling | Room C
Chair: Guiwu Wei

1. (64) Pooria Niknazar and Anders Hjalmarsson, “Evaluating Information Technology Impact on Firm Performance Using BSC-DEA Method”
2. (170) Yahuza Kassim, Jason Underwood and Benny Raphael, “Data Envelopment Analysis Model of Information Technology Business Value in Engineering Organisation: Benchmarking IT induced Productivity”

3. (123) Guiwu Wei and Jiamin Wang, “Stochastic Super Efficiency Analysis”

**F.4.4 Modelling | Room D**

Chair: Ray Subhash

1. (209) Ray Subhash, “Scale Economies and Capacity Utilization in U.S. Manufacturing”

2. (208) Førsund Finn “Weight Restrictions in DEA: Misplaced Emphasis?”

**Panel Session | Room A**

**16:35 - 17:30**

Panel Discussion: Getting Published

Chair: Emmanuel Thanassoulis

Rajiv Banker, Ali Emrouznejad, Victor Podinovski, Emmanuel Thanassoulis
Saturday

Panel Session | Room A
09:00 - 10:00

Panel Discussion: Applying DEA in Practice: Opportunities for reaching users, dos and don’ts in selling DEA
Chair: Rajiv Banker
Mike Graveney, Nikolaos Maniadakis, Maria Conceicao Portela, Emmanuel Thanassoulis, Rajiv Banker, Ibrahim Osman

Session 2
10:20 - 11:50

DEMO | Computer Room
Demonstration of DEA software – Repeat PIMsoft

S.2.1 Agriculture | Room A
Chair: Roma Debnath
3. (117) Athanasios Theocharopoulos, Katerina Melfou and Evangelos Papanagiotou, “Efficiency Analysis under Different Production Technologies: An Application to the Greek Agricultural Sector”
4. (118) Roma Debnath, Ravi Shankar and Surender Kumar, “A Happy Planet: An Application of Data Envelopment Analysis”

S.2.2 Education - Sport | Room B
Chair: Giannis Karagiannis
1. (7) Jean-Marc Huguenin and Alessio Ishizaka, “DEA does not Like Positive Discrimination: The Case of Primary Schools in the State of Geneva, Switzerland”
2. (23) Milagros Baldemor, “Performance Efficiency of Colleges and Institutes: A Data Envelopment Analysis Study”

S.2.3 Methodologies | Room C
Chair: F. Hosseinzadeh Lotfi

3. (30) Ghasem Tohidi and Shabnam Razavyan, “Classification of Interval Data in Data Envelopment Analysis”

S.2.4 DEA Applications | Room D
Chair: F. Rolando Manuel Valdivia

2. (35) H. Hasan ÖrkcÜ and Hasan Bal, “Cross Efficiency Method Based on Minimization of Weights And Evaluation of Turkey Cities”
4. (183) Rolando Manuel Valdivia, “The Efficiency and Productivity Analysis in the Bolivian Petroleum Refinery Industry: Case of Study”
Plenary 2 | Room P
11:55 - 12:40

Chair: Emmanuel Thanassoulis

Invited Speaker: Rajiv Banker, “Advances in DEA”

Session 3
13:30 - 15:00

S.3.1 Manufacturing - Reviews | Room A
Chair: Kostas Triantis

1. (151) Kankana Mukherjee, “Capacity Utilization in Indian Manufacturing: A Non-Parametric Analysis of State Level Data”

S.3.2 Methodological Contributions | Room B
Chair: Victor Podinovski

1. (72) Panagiotis Zervopoulos and Miltiades Filippou, “Developing a Hybrid Comparative Optimization Model for Short-Term Forecasting: An ’Idle Time Interval’ Roadmap for Operational Units’ Strategic Planning”
2. (37) Baruch Keren and Yossi Hadad, “ABC Inventory Classification via DEA Ranking Methods and Linear Discriminant Analysis”
4. (53) Victor Podinovski, “CRS Technologies with Exogenously Fixed Factors”
S.3.3 Methodologies | Room C

Chair: Hasan Bal

2. (58) Bozana Zekan, “Efficient Tourism Destinations & Optimal Benchmarking Variables: Is There Such a Thing?”
3. (93) Maryam Reshadi, “Ranking in DEA by Using Different Efficiency Levels”
4. (95) Hasan Bal and Ayhan Gölcükcü, “A Computerized Follow up for DEA Literature”

S.3.4 Methodological Contributions | Room D

Chair: Subhash C Ray

1. (103) Celik Parkan, Jiamin Wang, Desheng Wu and Guiwu Wei, “Data Envelopment Analysis based on Maximin Relative Efficiency”
4. (79) Subhash C Ray and Lei Chen, “A Normative Interpretation of the Tornqvist Productivity Index”

Closing Ceremony | GRAND HALL

15:30 - 16:00

Host: E. Thanassoulis