

14th European Workshop on Efficiency and Productivity Analysis

CONFERENCE PROGRAM



15 – 18 June 2015 Helsinki, Finland

Contents

WELCOME TO HELSINKI (AGAIN)

Dear Colleague,

We would like to take this opportunity to warmly welcome you to the 14th European Workshop on Efficiency and Productivity Analysis – XIV EWEPA 2015. Over the years the 'workshop' has grown to a four-day conference with over 200 presentations and participants from all over the world. Still, the EWEPA conferences maintain casual atmosphere of a workshop that offers opportunities to discuss, debate, and exchange ideas.

In the previous conference in 2013 we introduced several practical ideas to the EWEPA conference, including software tutorials, special sessions intended for practitioners and the industry, three different types of parallel sessions - "Discuss", "Express", and "Explain" – and last but not least, Aalto "That's Interesting!" paper competition. This year we have focused on further development of innovations that worked well last time.

In this year's EWEPA conference we want to draw attention to fresh new ideas. The first plenary session on Tue 16 features two up-and-coming researchers, Chris Parmeter and Andy Johnson, who present their recent works on nonparametric smoothing and shape constraints. This theme is important for building further bridges between different approaches in our field. Econometrician Parmeter and industrial engineer Johnson approach the theme from different perspectives, and hence it is interesting to see whether and to what extend they can agree or disagree on the issues. In the second plenary session on Wed 17, the three finalists of Aalto "That's Interesting!" paper competition - Daniela Puggioni, Thomas Triebs, and Russel Cooper - present their works. Selecting plenary speakers through a competition is one way to encourage and celebrate to new ideas.

The social events are extremely important for networking and informal exchange of ideas. After the young researcher's pre-conference workshop and software tutorials on Mon 15, we host an informal get-together at Aalto University School of Business. On Tue 16, the City of Helsinki sponsors a reception at the City Hall where all conference participants are welcome to join for some snacks and wine. The Conference Dinner with a three course meal and a nice sea-side view to the city will take place on Wed 17. The conference ends on Thu 18 with a farewell coffee.

We wish you a fascinating and productive conference experience in Helsinki!



Timo Kuosmanen, General Chair



Antti Saastamoinen, Event Chair



Abolfazl Keshvari, Program Chair

COMMITTEES

Organizing Committee

Timo Kuosmanen (General Chair), Aalto University School of Business, Finland Antti Saastamoinen, (Event Chair) Aalto University School of Business, Finland Abolfazl Keshvari, (Program Chair) Aalto University School of Business, Finland

Scientific Committee

Ex Officio Members:

- Timo Kuosmanen, Aalto University School of Business, Helsinki, Finland Representative of the current organisers of EWEPA
- Cinzia Daraio, Sapienza University of Rome, Italy Representative of the organisers of EWEPA XI and XII
- Kristiaan Kerstens, IESEG School of Management, France Representative of the organisers of EWEPA IX and X
- Meryem Duygun Fethi, University of Leicester, UK Representative of the Euro Working Group Efficiency and Productivity Analysis
- Tsu-Tan Fu, Soochow University, Taiwan Coordinator from the Asia-Pacific Productivity Conference scientific committee
- C. A. Knox Lovell, University of Georgia, USA and University of Queensland, Australia Coordinator from the North American Productivity Workshop scientific committee
- Robin Sickles, Rice University, USA Former Editor-in-chief of the Journal of Productivity Analysis

Other Members (elected by the ex officio members):

- Alfons Oude Lansink, Wageningen University, Netherlands
- Victor Podinovski, Loughborough University, UK
- Maria Conceição A. Silva Portela, Universidade Católica Portuguesa, Portugal
- Léopold Simar, Catholic University of Louvain-la-Neuve, Belgium
- Angelo Zago, University of Verona, Italy

SPONSORS

Funding and I support for EWEPA"15 from the following organizations is gratefully acknowledged:



Liikesivistysrahasto - The Foundation for Economic Education



Yrjö Jahnsson Foundation



Aalto University School of Business



HSE Foundation



City of Helsinki

CONFERENCE VENUES

Main conference – Scandic Grand Marina Congress Center

Scandic Marina Congress Center is a unique congress venue located right in the heart of Helsinki next to waterfront and Kauppatori (Market Square). The trademark seaside view of Helsinki is right next to the conference center. Many of the famous sights and locations, such as the Helsinki Cathedral and the Uspenski Cathedral are right next to the venue. The area of Katajanokka, where venue is located, is filled with historic buildings. The special feature of the location is that cruise ships to Stockholm and Tallinn depart right next to the conference venue.

The conference venue offers 11 meeting rooms with exceptionally flexible solutions for all types of events. The facilities are ideal for hosting conferences, congresses, exhibitions and banquets for up to 2,500 people. The meeting rooms vary from modern and spacious halls to a private dining room with seaside view. The conference venue has approximately 500 events annually.



YR workshop – Aalto University School of Business (Chydenia building)

Aalto University School of Business is part of the Aalto University. Established in 2010, the Aalto University is a new university that has centuries of experience. The Aalto University was created from the merger of three Finnish universities: Helsinki School of Economics, Helsinki University of Technology and The University of Art and Design Helsinki. The combination of three schools opens up new possibilities for strong multi-disciplinary education and research. The name "Aalto University" symbolizes change and is a tribute to a courageous, overarching renaissance man, Alvar Aalto. Aalto himself is one of our alumni as well as being the architect of the School of Science and Technology main building.

The School of Business (former Helsinki School of Economics) is both the largest and the highest ranking business school in Finland, consistently listed among the best business schools in Europe and worldwide by the Financial Times. The School was awarded AACSB accreditation in 2007. Its MBA and EMBA Programs are the first business management programs in Finland and the Nordic Countries to receive AMBA accreditation. In addition it was among the first European business schools to receive EQUIS accreditation. The Finnish Higher Education Evaluation Council (FINHEEC) has audited the Business School quality system. Aalto University School of Business is also a member of CEMS, the Global Alliance in Management Education and PIM, Partnership in International Management.

The Chydenia building is one of the buildings of the Business School. The Business School took this building for its use in 1970. Before that, it was used by a high school for girls.

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(Photo source: Aalto archives)











PROGRAM HIGHLIGHTS

PLENARY SESSIONS

Plenary session 1: Tuesday 16 June, 9:00 - 10:30

Nonparametric smoothing and shape constraints Christopher Parmeter Andrew Johnson

Plenary session 2: Wednesday 17 June, 9:00 - 10:30

Finalists of Aalto "That's Interesting!" paper competition The prize jury has selected the following three papers as the finalists:

The value of being Socially Responsible: A DEA Approach for Recovering Shadow Prices of CSR Activities in the Food Manufacturing Sector Daniela Puggioni* and Spiro Stefanou

Management in Production: From Unobserved to Observed Thomas Triebs* and Subal Kumbhakar

The Productivity of the Internet from the Perspective of Households **Russel Cooper**

The three finalists will present their works in the plenary session. Each finalist should give a presentation of 20 min, followed by questions and comments from the jury consisting of Jaap Bos, Victor Podinovski, and Timo Kuosmanen. After the plenary session, the jury meets to decide the winner. The winner will be announced at the Conference Dinner held at the Grand Marina Congress Center, on the evening of 17th of June.

SOFTWARE TUTORIALS

The following software tutorials are offered during the pre-conference day 15 June.

Basic R tutorial

Introduction to SFA and DEA estimation using R

Time: 9:00-12:00 Location: Classroom C-250, The main building of Aalto University School of Business Instructor: Tomasz Czekaj

Advanced R tutorial

R tutorial for advanced users, including kernel regression and density estimation

Time: 13:00-16:00 Location: Classroom G-113, Chydenia building of Aalto University School of Business Instructor: Chris Parmeter

GAMS tutorial

Frontier estimation and efficiency analysis using GAMS (General Algebraic Modeling System)

Time: 13:00-16:00 Location: Classroom C-250, The main building of Aalto University School of Business Instructor: Andrew Johnson

Contact Antti Saastamoinen for a trial license of GAMS.

CONFERENCE MECHANICS

<u>Venues</u>

Main conference 16-18 June

Grand Marina Congress Center Street address: Katajanokanlaituri 6

Pre-Conference, 15 June

Chydenia building of Aalto University School of Business. Street address: Runeberginkatu 22-24.

Location and maps

The location of the conference venues and the indoor maps are at the end of this program book.

Session rooms

Pre-conference:

The young researchers' pre-workshop is held in the room G-324 (Stora Enso) of the Chydenia building. The room is located on the third floor of the building.

Main conference:

The conference rooms are the located in the first and second floor of the Grand Marina Congress Center. See the indoor map at the end of this book.

Note that each room has a laptop for the presentations.

Registration

On 15th of June, registration takes place at the lobby of Chydenia building in Aalto University School of Business.

On 16th-18th of June registration takes place at the registration desk in the main lobby of Grand Marina Congress Center.

Internet connections

See separate instructions provided in the conference bag.

Name Badges

Name badges are provided at the registration. The name badges must be worn at all sessions and social events throughout the conference.

<u>Language</u>

Official language of the conference is English. No simultaneous translation will be provided.

Local currency

The local currency is Euro (€). In the city center, money exchange can be found for example from Central Railway Station and from the shopping mall Kamppi.

Credit cards

Common credit cards such as Visa, Mastercard, Eurocard, Diners Club and American Express are accepted almost everywhere.

Transportation

The city center is within walking distance from the main conference venue. If you want to explore Helsinki further, we would recommend to use public transportation. Within the city center, tram is the most effective way to move around. Single tickets can be bought from the driver. Further information about the tickets and the tram routes can be found from the following link: http://www.hsl.fi/EN/

<u>Weather</u>

The weather in mid-June in Helsinki is pleasant, varying from 20-25 Celsius degrees of daily high temperature during the daytime to around 10 Celsius degrees at the night time. Occasional showers and wind from the sea are possible.

The conference package:

Your conference package should include the following items:

- This program book
- Name badge
- Vouchers for the Conference Dinner (for those who registered for these events)
- A pen and a notebook

Information Desk/Conference office

During the conference you may ask assistance from the student assistants at the registration desk. The conference office during the main conference is located at the Meeting Room 1 of Grand Marina Congress Center (see the maps at the end of the book for rooms)

<u>Lunches</u>

Pre-conference: Restaurants Proffa/Rafla in the Main building. Please show your name badge at the cashier to identify yourself as a conference delegate. **Main conference:** Restaurant of the Grand Marina Congress Center (2nd floor).

Coffee Breaks

During the main conference, coffee is available all the time at the lobby of Congress center. During the scheduled coffee breaks, some light snacks are provided.

Smoking

The conference venue is a non-smoking site, smoking is not permitted anywhere inside the building. Smokers should use the designated smoking areas outside the building.

<u>Toilets</u>

See the maps given at the end of this program book to see the location of toilets.

Announcements

News, announcements, or last minute changes to the conference program will be posted on the conference website at **ewepa.org** and on the bulletin board next to the registration desks.

Changes and cancellations to the program

Further requests to change the conference program will not be processed at this juncture as the final program has gone to print. Please inform to the event chair Antti Saastamoinen (antti.saastamoinen@aalto.fi) or the program chair Abolfazl Keshvari (abolfazl.keshvari@aalto.fi) about any last minute cancellations.

Hotel Information

Scandic Grand Marina is the official main conference hotel. The hotel is located right next to the Grand Marina Congress Center.

Scandic Grand Marina

Katajanokanlaituri 7 00160, Helsinki +358 9 16661 grandmarina@scandichotels.com

Below we have listed the contacts of two hostels that we have recommended and which offer affordable accommodation.

| Hotel Euro Hostel Hostel Academica | Street address Linnankatu 9 Hietaniemenkatu 14 | Phone +358 9 622 04 4 +358 9 1311 43 | |
|---|---|---|--|
| Important telephone numbers General emergency number | 1 | 12 | |
| Helsinki City Tourist Information Helsinki-Vantaa Airport Information Taxi (Taksi Helsinki) | | 358 9 3101 3300 358 200 14636 358 100 0700 | |

SOCIAL EVENTS

The following social events are arranged. <u>Except for the Conference Dinner</u>, all social events are included to the conference fee and thus are free for all conference participants. The name badge is however required for all events. For the Conference Dinner, also the **dinner voucher** is needed.

Informal Get-together

Date and Time: Monday June 15, 17:30 onwards **Location:** Third floor lobby in the Chydenia building of Aalto University School Business

When the academic program ends on Tuesday, the party begins in the hallway. Wine, beverages, and snacks will be served.

A reception/networking event sponsored by the City of Helsinki

Date and Time: Tuesday June 16, 18:00-19:30 **Location:** Helsinki City Hall, Pohjoisesplanadi 11–13

City Hall is located at Kauppatori ('Market Square') and it is within walking distance from the main conference venue. See the location from the maps at the end of this book.



Helsinki City Hall Source of the photo: http://commons.wikimedia.org/wiki/File:Helsingin_kaupungintalo_satamasta.jpg

Conference Dinner

Date and Time: Wednesday June 17, 18:30-00:00 **Location:** Fennia 1 hall, Grand Marina Congress Center

Welcome drinks are served at 18:30 and the dinner itself starts at 19:00. Please have your dinner voucher with you, these will be collected by our student assistants at the registration desk. After the dinner, a cash bar for beverages opens to the second floor lobby of the Congress Center.

Farewell Coffee

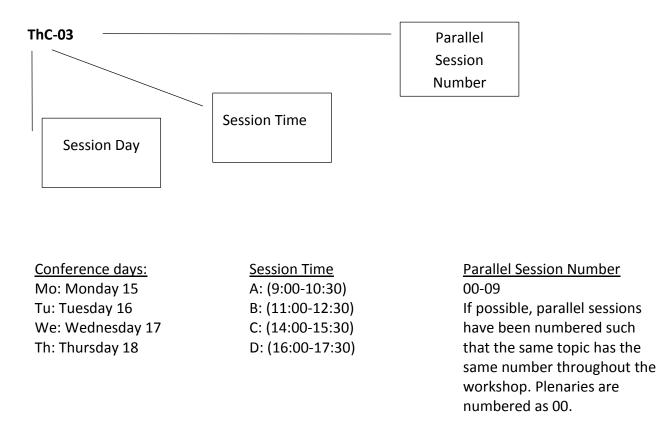
Date and Time: Thursday June 18, 15:30-16:00 Location: The first floor hallway of the Congress Center

Informal farewell coffee.

HOW TO READ THE PROGRAM

Each session has been assigned an alphanumeric session code that helps one to see immediately the time, the type of session, and the session room.

The first two letters (capital letter and a lower case letter) indicate the conference day. The third capital letter indicates the session time. The two numbers after a hyphen indicate the parallel session number. The parallel sessions with the same number are always in the same conference room.



For co-authored papers, the presenting author is indicated by asterisk *.

GUIDELINES FOR SESSIONS

SESSION CHAIRS

As a general rule, the last presenter of each parallel session has been assigned as the session chair, unless otherwise indicated in the conference program. All session chairs should be aware of the session type as the presentation times differ across session type. In general, the session chair should arrive to the conference room <u>at least 15 minutes before the session starts</u>. Note that each room has a laptop for the presentations.

The session chair is responsible for keeping the session on time. For this purpose, the session chairs can show the presenters a card that indicates the remaining presentation time when there is 5 minutes or 1 minute of presentation time left. These cards are provided in the rooms.

The recommended presentation times are the following:

- **Discuss sessions** (3 papers): 20 min presentation + 5 min discussant + 5 min general discussion
- Explain sessions (3 papers): 25 min presentation + 5 min general discussion
- Express sessions (depending on the number of papers)
 5 papers: 15 min presentation + 3 min general discussion
 4 papers: 18 min presentation + 4 min general discussion
 3 papers: 25 min presentation + 5 min general discussion

In the case of last minute cancellations, the presentation times can be adjusted accordingly. It is recommended to use all the time allocated for the session and not leave gaps in the program.

PRESENTERS

Presenters are kindly asked to adhere to the following general guidelines. Note that each room has a laptop for the presentations.

- 1. Prepare your presentation to match the session type. Unless otherwise agreed with the session chair, the presentation times are the following:
- **Discuss sessions** (3 papers): 20 min presentation + 5 min discussant + 5 min general discussion
- **Explain sessions** (3 papers): 25 min presentation + 5 min general discussion
- Express sessions (depending on the number of papers)
 5 papers: 15 min presentation + 3 min general discussion
 4 papers: 18 min presentation + 4 min general discussion
 3 papers: 25 min presentation + 5 min general discussion
 - 2. Arrive to the conference room at least <u>15 minutes before your session starts</u> and identify yourself to the session chair. Bring your presentation with you on a memory stick, and keep a copy of the file accessible through the internet (e.g., in your own webmail inbox).
 - 3. Copy your presentation to the desktop of the PC used for presentation.

DISCUSSANTS

Presenters in the Discuss session are expected to discuss one paper if they have been assigned a discussant role in the session program. Please check carefully from the session program which paper you are expected to discuss. If you have not received the paper you are discussant for, please contact the author/presenter directly.

Some general instructions and tips: Discussants have approximately 5 minutes to make their comments and questions. Please keep this time. Discussants can use visual aids (e.g., PPT presentation) but this is not mandatory. The discussants are not expected to summarize the paper (this is the job of the author). Present your critical comments in a constructive manner. All authors appreciate comments and questions that can help them to improve their paper. Keep focus on the contribution of the paper and avoid discussion of minor details.

OVERALL SCHEDULE

| Time | Track | Monday | Tuesday | Wednesday | Thursday |
|---------------|-------|---|--|--|----------------------|
| 8:30 - 17:00 | | Registration | Registration | Registration | Registration |
| 9:00 - 10:30 | А | Young researcher workshop Software tutorials | Plenary session 1 TuA | Plenary session 2: That's Interesting Competition WeA | Discuss sessions ThA |
| 10:30 - 11:00 | | Coffee break | Coffee break | Coffee break | Coffee break |
| 11:00 - 12:30 | В | Young researcher workshop Software tutorials | Discuss sessions TuB | Discuss sessions WeB | Express sessions ThB |
| 12:30 - 14:00 | | Lunch break | Lunch break (EWEPA Scientific committee lunch meeting) | Lunch break (JPA Editiorial Board lunch meeting) | Lunch break |
| 4:00 - 15:30 | С | Young researcher workshop Software tutorials | Express sessions TuC | Express sessions WeC | Explain sessions ThC |
| L5:30 - 16:00 | | Coffee break | Coffee break | Coffee break | Farewell coffee |
| 6:00 - 17:30 | D | Young researcher workshop | Explain sessions TuD | Explain sessions WeD | |
| 17:30- | | Informal get-together at Aalto University School of Business (Chydenia) | | | |
| 18:00- | | | Reception at the City Hall | | |
| 18:30- | | | | Conference Dinner at Grand Marina Congress Center | |

SESSION SCHEDULE - MONDAY

Young Researcher (YR) Workshop, Software Tutorials * Pre-registration required for software tutorials.

| Time | Young researcher workshop, | Software tutorials * | | |
|---------------|---|-------------------------------|--------------------------------|--|
| | H324 Stora Enso (Chydenia building) | C250 Tieto (Main building) | G113 (Chydenia building) | |
| 8:30 - 17:00 | Registration, Lobby | | | |
| 8:50 - 9:00 | Opening Remarks | | | |
| 9:00 - 10:30 | MoA-01: Inference | MoA-02 Basic R Tutorial | | |
| 10:30 - 11:00 | Coffee break | | | |
| 11:00 - 12:30 | MoB-01: Dynamic models 1 | Basic R Tutorial (cont.) | | |
| 12:30 - 14:00 | Lunch break (Restaurants Proffa and Rafla in the Main Building) | | | |
| 14:00 - 15:30 | MoC-01: Regions and sectors | MoC-02 GAMS Tutorial | MoC-03 Advanced R Tutorial | |
| 15:30 - 16:00 | Coffee break | | | |
| 16:00 - 17:30 | MoD-01: Dynamic models 2 | GAMS Tutorial (cont.) | Advanced R Tutorial (cont.) | |

SESSION SCHEDULE - TUESDAY

| Time | Track | | | | | | | | |
|------------------|--|---------------|--|---------------------------|-------------------|---------------|---------------|---------|--|
| 8:30- 17:30 | | Registration | | | | | | | |
| 9:00 - 10:30 | A Plenary | Plenary Sessi | Plenary Session 1, TuA-01 (Europaea): "Nonparametric smoothing and shape constraints" Christopher Parmeter and Andrew Johnson | | | | | | |
| 10:30 - 11:00 | | | | Co | ffee break | | | | |
| | | | | Ses | sion rooms | | | | |
| | | Europaea | Fennia I | Fennia II | Nordia | Nautica | Press room | Baltica | |
| 11:00 - | В | TuB-01 | TuB-02 | TuB-03 | TuB-04 | TuB-05 | TuB-06 | TuB-07 | |
| 12:30 | Discuss | Banking 1 | Nonparametric | Stochastic | TFP 1 | Energy 1 | Agriculture 1 | | |
| | | | models | frontiers 1 | | | | | |
| 12:30 - | Lunch break (Restaurant, 2 nd floor | | | | | | | | |
| 14:00 | | | EWEP | PA Scientific Comr | nittee meeting (N | /larine room) | | | |
| 14:00 - | С | TuC-01 | TuC-02 | TuC-03 | TuC-04 | TuC-05 | TuC-06 | TuC-07 | |
| 15:30 | Express | Banking 2 | Production | Stochastic | TFP 2 | Energy 2: | Agriculture 2 | | |
| | | | theory | frontiers 2 | | Regulation | | | |
| 15:30 - | | 1 | 1 | Co | ffee break | 1 | 1 | 1 | |
| 16:00 | | | | | | | | | |
| 16:00 - | D | TuD-01 | TuD-02 | TuD-03 | TuD-04 | TuD-05 | TuD-06 | TuD-07 | |
| 17:30 | Explain | Banking 3 | DEA 1 | Stochastic frontiers 3 | TFP 3 | Energy 3 | Education 1 | | |

SESSION SCHEDULE - WEDNESDAY

| Time | Track | | | | | | | | |
|------------------|--------------|---|----------|-----------|---------------------------|----------|-------------|------------------------|--|
| 8:30 – 17:30 | | Registration | | | | | | | |
| 9:00 - 10:30 | A Plenary | Plenary Session 2, WeA-01 (Europaea): Aalto That's Interesting! finalists Daniela Puggioni, Thomas Triebs and Russel Cooper | | | | | | | |
| 10:30 - 11:00 | | Coffee break | | | | | | | |
| | | Session rooms | | | | | | | |
| | | Europaea | Fennia I | Fennia II | Nordia | Nautica | Press room | Baltica | |
| 11:00 - | В | WeB-01 | WeB-02 | WeB-03 | WeB-04 | WeB-05 | WeB-06 | WeB-07 | |
| 12:30 | Discuss | Banking 4 | DEA 2 | | Health care 1 | Energy 4 | Education 2 | Stochastic frontiers 4 | |
| 12:30 - | | Lunch break (Restaurant, 2 nd floor) | | | | | | | |
| 14:00 | | JPA editorial board meeting (Marine room) | | | | | | | |
| 14:00 - | С | WeC-01 | WeC-02 | WeC-03 | WeC-04 | WeC-05 | WeC-06 | WeC-07 | |
| 15:30 | Express | Environment 1 | | | Health care 2 | Energy 5 | Education 3 | Banking 5 | |
| 15:30 - 16:00 | Coffee break | | | | | | | | |
| 16:00 - | D | WeD-01 | WeD-02 | WeD-03 | WeD-04 | WeD-05 | WeD-06 | WeD-07 | |
| 17:30 | Explain | DEA 3 | | | Stochastic frontiers 5 | Energy 6 | Education 4 | Decision making 1 | |

SESSION SCHEDULE – THURSDAY

| Time | Track | | | | | | | | |
|------------------|---------|---------------------------|----------|---------------|-------------------|----------|---------------|---------|--|
| 9:00 - 11:00 | | Registration | | | | | | | |
| | | | | Se | ssion rooms | | | | |
| | | Europaea | Fennia I | Fennia II | Nordia | Nautica | Press room | Baltica | |
| 9:00 - | Α | ThA-01 | ThA-02 | ThA-03 | ThA-04 | ThA-05 | ThA-06 | ThA-07 | |
| 10:30 | Discuss | Banking 6 | | Well-being | TFP 4 | Energy 7 | Agriculture 3 | DEA 4 | |
| 10:30 - 11:00 | | Coffee break | | | | | | | |
| 11:00 - | В | ThB-01 | ThB-03 | ThB-02 | ThB-04 | ThB-05 | ThB-06 | ThB-07 | |
| 12:30 | Express | Stochastic frontiers 6 | DEA 5 | Environment 2 | TFP 5 | Energy 8 | Agriculture 4 | | |
| 12:30 - 14:00 | | Lunch break | | | | | | | |
| 14:00 - | С | ThC-01 | ThC-02 | ThC-03 | ThC-04 | ThC-05 | ThC-06 | ThC-07 | |
| 15:30 | Explain | Stochastic frontiers 7 | DEA 6 | | Decision making 2 | Energy 9 | Agriculture 5 | | |
| 15:30 – 16:00 | | | | Far | ewell coffee | · | | | |

SESSION PROGRAM

MONDAY 15 June

Note: the presenting author indicated by asterisk *

Opening Remarks 8:50 - 9:00, H-324 Stora Enso

MoA-01: Inference 9:00-10:30, H-324 Stora Enso Session chair: Christopher Parmeter

Bootstrap-based testing for network DEA: Some theory and application Kelly Trinh* and Valentin Zelenyuk Discussant: Mika Kortelainen

Heterogeneity of inefficiency persistence under a Bayesian framework Ioannis Skevas,* Grigorios Emvalomatis and Bernhard Bruemmer Discussant: TBA

Non-parametric efficiency estimation using Richardson-Lucy blind deconvolution Xiaofeng Dai **Discussant**: Christopher Parmeter

MoA-02: Basic R Tutorial 9:00-10:30, C250 Tieto (Main Building) 11:00-12:30, C250 Tieto (Main Building) Tomasz Czekaj

MoB-01: Dynamic models 1 11:00-12:30, H-324 Stora Enso Session chair: Andrew Johnson

Nonparametric analysis of dynamic production with storable and durable input Laurens Cherchye and Pieter Jan Kerstens* Discussant: Andrew Johnson Dynamic stochastic analysis of the farm subsidy-efficiency link: Theory and evidence Jean Joseph Minviel* and Timo Sipiläinen **Discussant**: TBA

US bank main financial ratios time varying and size effects: An econometric examination of inter-temporal stability and proportionality Richard Simper and Aristeidis Dadoukis* and Yuzhu Li and Rob Webb and Andrea Pilava **Discussant**: TBA

MoC-01: Regions and sectors 14:00-15:30, H-324 Stora Enso Session chair: Jaap Bos

Financial effects of Chinese import competition: The case of disappearing IPOs Jaap Bos, Omar Hassib* and Lu Zhang **Discussant**: Thomas Triebs

Scale economies of multi-output public agencies: An empirical analysis of English and Welsh local male prisons Veerle Hennebel,* Richard Simper and Marijn Verschelde **Discussant**: Victor Podinovski

An evaluation of production efficiency of ICT sectors in the EU: A stochastic frontier approach to Malmquist productivity index Jan Mandak **Discussant**: Jaap Bos

MoC-02: GAMS Tutorial 14:00-15:30, C250 Tieto (Main Building) 16:00-17:30, C250 Tieto (Main Building) Andrew Johnson MoC-03: Advanced R Tutorial 14:00-15:30, G113 (Chydenia Building) 16:00-17:30, G113 (Chydenia Building) Christopher Parmeter

MoD-01: Dynamic models 2 16:00-17:30, H-324 Stora Enso Session chair: Kristiaan Kerstens

Environmental growth convergence among Chinese regions Jean Philippe Boussemart, Hervé Leleu and Zhiyang Shen* Discussant: Mette Asmild

Measuring the technical efficiency of farms producing environmental output: Semiparametric estimation of multi-output stochastic ray production frontiers Tomasz Gerard Czekaj* **Discussant:** Daniel Henderson

Measuring the development of efficiency and productivity of banks in the Visegrád group: An application of CCR model and the Malmquist approach Lucie Chytilova **Discussant**: Kristiaan Kerstens

TUESDAY 16 June

TuA-01: Plenary session 1 9:00-10:30, Europaea

Nonparametric smoothing and shape constraints

Christopher Parmeter Andrew Johnson

Coffee break

TuB-01: Banking 1 11:00-12:30, Europaea Session chair: Jaap Bos

Considering favourability indexes as part of the Malmquist index Mette Asmild and Kwaku Ohene-Asare* Discussant: Jaap Bos

Banking on Industry: microeconomic evidence on the impact of financial services on industrial structure and development Jaap Bos and Marta Degl'Innocenti* **Discussant:** Mette Asmild

A double whammy: Credit chains and idiosyncratic supplier shocks Dennis Bams, Jaap Bos* and Magdalena Pisa **Discussant:** Marta Degl'Innocenti

TuB-02: Nonparametric models 11:00-12:30, Fennia I Session chair: Andrew Johnson

Bandwidth selection issues for nonparametric conditional efficiency estimation: a Monte-Carlo investigation Luiza Badin,* Cinzia Daraio and Leopold Simar **Discussant:** Abolfazl Keshvari Penalized shape restricted least squares with an application to productivity analysis Abolfazl Keshvari **Discussant:** Andrew Johnson

Shape constrained kernel weighted least squares for the estimation of production functions Daisuke Yagi* and Andrew Johnson **Discussant:** Luiza Badin

TuB-03: Stochastic frontiers 1 11:00-12:30, Fennia II Session chair: Subal Kumbhakar

The validity of statistical inference about unitspecific technical efficiencies in crosssectional stochastic frontier models: Comparison of Bayesian and classical approaches Oleg Badunenko and Yaryna Kolomiytseva* **Discussant:** Christine Amsler

Endogeneity in stochastic frontier models Christine Amsler, Artem Prokhorov* and Peter Schmidt Discussant: Subal Kumbhakar

A general error revenue function model with technical inefficiency: An application to Norwegian fishing trawler Subal Kumbhakar, Frank Asche, Kristin Roll and Ragnar Tveteras* **Discussant:** Yaryna Kolomiytseva

TuB-04: TFP 1 11:00-12:30, Nordia Session chair: David Tripe

Offshoring, biased technical change and the increasing capital share: An analysis of global manufacturing production Marcel Timmer and Xianjia Ye* **Discussant:** Thanh Ngo The innovative input mix: Assessing the importance of R&D and ICT investments for firm performance in manufacturing and services Marina Rybalka **Discussant:** Xianjia Ye

Nonparametric Fisher total factor productivity index using shadow prices: panel vs. time series data Thanh Ngo* and David Tripe **Discussant:** Marina Rybalka

TuB-05: Energy 1 11:00-12:30, Nautica Session chair: Mette Bjørndal

Operational conditions in regulatory benchmarking models - A Monte Carlo simulation study Maria Nieswand and Stefan Seifert* **Discussant:** Mark Andor

SFA quasi-likelihood: A new stochastic frontier estimation method Mark Andor **Discussant:** Astrid Cullmann

Challenged, or just inefficient? Compensating for exogenous cost drivers in the regulation of electricity networks Endre Bjørndal, Mette Bjørndal, Astrid Cullmann, and Maria Nieswand **Discussant:** Maria Nieswand

TuB-06: Agriculture 1 11:00-12:30, Press room Session chair: Magdalena Kapelko

Estimating the economic value of symbiotic nitrogen: A distance function approach Robertson Khataza,* Atakelty Hailu, Graeme Doole and Marit Kragt

Bayesian analysis of productivity growth of Polish dairy farms Kamil Makiela, Jerzy Marzec and Andrzej Pisulewski* Dynamic input-specific productivity change: measurement and application to European dairy manufacturing firms Magdalena Kapelko,* Alfons Oude Lansink and Spiro Stefanou

Lunch break

TuC-01: Banking 2 14:00-15:30, Europaea Session chair: Paul Rouse

Sources of productivity growth in Indonesian banks: An empirical analysis during 1993 – 2011 Felisitas Defung

Efficiency and risk in the banking industry: Evidence from Southeast Europe Bashkim Nurboja

How many and what to include: Reevaluating the Z environmental variables in an SFA cross country banking model Richard Simper,* Aristeidis Dadoukis, Yuzhu Li and Rob Webb

How do we know what the right price is (and does it matter)? Paul Rouse* and David Tripe

TuC-02: Production theory 14:00-15:30, Fennia I Session chair: Kristiaan Kerstens

Choice of technology which generates normalized CES production function Andrei Matveenko and Vladimir Matveenko*

Multiplicative duality theory in production economics Walter Briec and Paola Ravelojaona*

Frontier metatechnologies and convexity: A restatement Kristiaan Kerstens,* Christopher O'Donnell and Ignace Van de Woestyne

TuC-03: Stochastic frontiers 2 14:00-15:30, Fennia II Session chair: Jos Blank

Assessing substitutability among undesirable outputs using parametric directional output distance function: A Monte Carlo analysis Viktor Khanzhyn

The assimilation of young workers into the labour market in France: A stochastic frontier approach Stephen Bazen and Khalid Maman Waziri*

The scaling property and the use of a system of equations approach: An application to Dutch secondary education Jos Blank*

TuC-04: TFP 2 14:00-15:30, Nordia Session chair: Nicky Rogge

Effects of imports on technical efficiency in Russian food industry Yevhenii Shchetynin

The dynamics of total factor productivity and its components: Russian plastic production Irina Ipatova

Relation between determinants of total factor productivity and stock returns Matthieu Belarouci

Benchmarking EU social inclusion and poverty policies in the period 2005 – 2012 Nicky Rogge

TuC-05: Energy 2: Regulation 14:00-15:30, Nautica Session chair: Roar Amundsveen Comments on the Brazilian benchmarking model for energy distribution regulation -Fourth cycle of tariff review (2015-2018) Peter Bogetoft and Ana Lopes*

Application of the StoNED method in the regulation of electricity distribution operators in Finland: The regulator's perspective Matti llonen

Economies of vertical integration and efficient electricity markets Roar Amundsveen and Hilde Marit Kvile*

TuC-06: Agriculture 2 14:00-15:30, Press room Session chair: Tomasz Czekaj

Scale efficiency of farms with different systems of rearing pigs Elzbieta Jadwiga Szymanska

Addressing technical efficiency and technology heterogeneity in the Irish cattle sector: Exploring the effects of the Single Farm Payment on different cattle farm types Maria Martinez-Cillero,* James Breen, Fiona Thorne, Thia Hennessy and Michael Wallace

Determinants of MD2* adoption, production efficiency and technology gaps in the Ghanaian pineapple production sector Amos Mensah* and Bernhard Brümmer

A meta-frontier approach for causal inference in productivity analysis: The effect of contract farming on sunflower productivity in Tanzania Arne Henningsen, Daniel Mpeta, Anwar Adem, Joseph Kuzilwa and Tomasz Czekaj

Coffee break

TuD-01: Banking 3 16:00-17:30, Europaea Session chair: Paul Wilson Managerial efficiency under centralized management - A dynamic approach with an empirical illustration to German saving banks Mohsen Afsharian* and Heinz Ahn

Bank branch operational performance: A robust and fuzzy clustering approach Oscar Herrera-Restrepo and Kostas Triantis* and William Seaver and Joseph Paradi

Sources of returns to scale of U.S. banks: Cost, revenue, and profit David Wheelock and Paul Wilson*

TuD-02: DEA 1 16:00-17:30, Fennia I Session chair: Jesus Pastor

Output-specific inputs in DEA Maria Portela

Performance evaluation of the public employment services in Finland Juha Eskelinen* and Abolfazl Keshvari

An enhanced BAM for unbounded or partially bounded CRS additive models Jesus Pastor,* Juan Aparicio, Javier Alcaraz, Fernando Vidal, Diego Pastor and Juan Monge

TuD-03: Stochastic frontiers 3 16:00-17:30, Fennia II Session chair: Peter Schmidt

Do direction, normalization and the Jacobian matter in the productivity measurements based on the directional output distance function? Mike Tsionas, Emir Malikov and Subal Kumbhakar*

Stochastic metafrontiers Christine Amsler,* Christopher O'Donnell and Peter Schmidt

Distinguishing heterogenity and inefficiency in a panel data stochastic frontier model

Christine Amsler and Peter Schmidt*

TuD-04: TFP 3 16:00-17:30, Nordia Session chair: Bert Balk

Productivity and efficiency in the handbook of input-output analysis Thijs ten Raa

A novel approach to the aggregation of economic productivity indices Bert Balk

TuD-05: Energy 3 16:00-17:30, Nautica Session chair: Gerald Granderson

Energy efficiency and the economy-wide rebound effect: A computable general equilibrium analysis for Spain Pablo Arocena* and Antonio Gómez-Plana and Sofía Peña

A decomposition of the aggregate energy intensity change of Spanish manufacturing industry Pablo Arocena and Antonio Gómez-Plana and Sofía Peña*

Impact of the 1990 Clean Air Act, and ISO membership, on production cost and efficiency in the electric utility industry Gerald Granderson and Finn Forsund

TuD-06: Education 1 16:00-17:30, Press room Session chair: Jose Dula

A unified productivity-performance approach applied to secondary schools in the Netherlands Laurens Cherchye, Kristof De Witte and Sergio Perelman* Assessing the multidimensional performance of universities: Overcoming rankings with conditional efficiency analysis Cinzia Daraio,* Andrea Bonaccorsi and Leopold Simar

Lessons learned from DEA applied to university rankings M.-L. Bougnol and Jose Dula*

WEDNESDAY 17 June

WeA-01: Plenary session 2 9:00-10:30, Europaea

Finalists of Aalto "That's Interesting!" award

The value of being socially responsible: A DEA approach for recovering shadow prices of CSR activities in the food manufacturing sector Daniela Puggioni* and Spiro Stefanou

Management in production: From unobserved to observed Thomas Triebs* and Subal Kumbhakar

The productivity of the internet from the perspective of households Russel Cooper

Discussants: Jaap Bos, Victor Podinovski and Timo Kuosmanen

Coffee break

WeB-01: Banking 4 11:00-12:30, Europaea Session chair: Mette Asmild

A global house of debt effect? Mortgages and post-crisis recessions in fifty economies Lu Zhang* and Dirk Bezemer **Discussant:** Tsu-Tan Fu

Performance evaluation of Taiwan banking industry with the consideration of corporate governance and risk management Tsu-Tan Fu **Discussant:** Mette Asmild

Inefficiency patterns amongst different types, and generations, of Bangladeshi bank Mette Asmild,* Dorte Kronborg and Kent Matthews **Discussant:** Lu Zhang WeB-02: DEA 2 11:00-12:30, Fennia I Session chair: Marijn Verschelde

The moments bootstrap: An alternative to smooth bootstrap DEA Panagiotis Tziogkidis **Disciussant:** Marijn Verschelde

Ranking with a Euclidean common set of weights in data envelopment analysis: With application to the NZ banking sector Thanh Ngo and David Tripe* **Discussant:** Panagiotis Tziogkidis

Nonparametric analysis of multi-product firms with unobserved technological heterogeneity Laurens Cherchye, Thomas Demuynck, Bram De Rock and Marijn Verschelde* **Discussant:** David Tripe

WeB-04: Health care 1 11:00-12:30, Nordia Session chair: Katharina Schley

An evaluation of technical efficiency in the nursing home sector in Ireland Shiovan Ni Luasa,* Declan Dineen and Marta Zieba **Discussant:** Ana Rodríguez Álvarez

By estimating the cost of reducing the waiting lists: A new approach Ana González Vidales and Ana Rodríguez Álvarez* **Discussant:** Shiovan Ni Luasa

Health care efficiency differences in German districts Helmut Herwartz and Katharina Schley*

WeB-05: Energy 4 11:00-12:30, Nautica Session chair: Endre Bjørndal Cluster analysis for energy distribution benchmarking: the 2014 Brazilian case Marcelo Costa,* Aline Veronese and Ana Lopes

Discussant: Antti Saastamoinen

Merger gains in the Norwegian electricity distribution industry Antti Saastamoinen,* Endre Bjørndal and Mette Bjørndal **Discussant:** Ana Lopes

Malmquist productivity analysis based on StoNED: The case of Norwegian electricity distribution companies Xiaomei Cheng,* Endre Bjørndal and Mette Bjørndal **Discussant:** Marcelo Costa

WeB-06: Education 2 11:00-12:30, Press room Session chair: Sverre Kittelsen

Quality of upper secondary schools in Finland: evaluating persistent and non-persistent differences in value-added Mika Kortelainen,* Heikki Pursiainen and Jenni Pääkkönen **Discussant:** Sverre Kittelsen

Environmental influences on academic performance: Evidence from Colombian higher education institutions Ligia Melo and Jorge Ramos **Discussant:** Mika Kortelainen

Productivity of Norwegian institutions of higher education 2004 – 2013 Dag Fjeld Edvardsen, Finn Førsund and Sverre Kittelsen* Discussant: Jorge Ramos

WeB-07: Stochastic frontiers 4 11:00-12:30, Baltica Session chair: Daniel Wikström The non-linear input-output model with time varying random coefficients: Evidence for the US economy Panayotis Michaelides,* Efthymios Tsionas and Konstantinos Konstantakis

A two-tier stochastic frontier model with correction for sample selection Hung-pin Lai

A stochastic frontier model with discrete inefficiency Aljar Meesters

Modified fixed effects estimation of technical inefficiency Daniel Wikström

Lunch break

WeC-01: Environment 1 14:00-15:30, Europaea Session chair: Alan Wall

Dynamic eco-efficiency under the byproduction of undesirable output Hervé Dakpo* and Alfons Oude Lansink

Reconcilableness of environment and income - An environmental efficiency analysis of smallholder palm oil and rubber producers Mareike Holtkamp* and Bernhard Brümmer

Estimating the materials balance condition: A stochastic frontier approach Benjamin Hampf*

Eco-efficiency using a stochastic frontier approach with applications to dairy farming José Antonio Pérez, Luis Orea, David Roibás and Alan Wall*

WeC-04: Health care 2 14:00-15:30, Nordia Session chair: Michael Vardanyan Testing gender differences in productivity: an application to Spanish hospitals Maria Perez-Villadoniga,* Ana Rodriguez-Alvarez and David Roibas

The efficiency of health expenditure: Comparison of European countries Mária Grausová, Miroslav Hužvár* and Jana Štrangfeldová

A directional distance function approach for identifying the input/output status of medical residents Gary Ferrier, Hervé Leleu, Vivian Valdmanis

and Michael Vardanyan*

WeC-05: Energy 5 14:00-15:30, Nautica Session chair: Heike Wetzel

The use of composite indicators to evaluate the performance of Brazilian hydropower plants Ana Camanho,* Andreia Zanella and Felipe Calabria

Efficiency of wind power production and its determinants Simone Pieralli,* Matthias Ritter and Martin Odening

Carbon-decreasing developments among new competitors: Gas- and coal-fired plants in the US power sector Christian Growitsch, Simon Paulus and Heike Wetzel*

WeC-06: Education 3 14:00-15:30, Press room Session chair: Claudio Thieme

What can be learned from efficiency in sports to rank schools? Julio del Corral

Locus of decision-making and the efficiency of the education sector

Marie Le Mouel,* Alexander Schiersch and Martin Gornig

Exploring cross-country differences in the efficiency of schools: A conditional nonparametric approach Jose Cordero,* Cristina Polo, Daniel Santin and Rosa Simancas

An educational value added method using weight restrictions and nonparametric frontier techniques Claudio Thieme,* Diego Prior, Emili Tortosa-Ausina and René Gempp

WeC-07: Banking 5 14:00-15:30, Baltica Session chair: Stefania Rossi

The performance evaluation on the efficiency and productivity change of securities industry in China Mei-Ying Huang* and Jun-Wey Fan

What drives performance among Tanzanian savings and credit cooperatives? Multiple case study approach Nyankomo Marwa and Meshach Aziakpono

Does ownership always matter? Evidence from the Indian banking Ram Mohan* and Ganesh Radhakrishnan

Credit crunch, gender discrimination and social capital: An empirical investigation on the European countries Emma Galli and Stefania Rossi*

Coffee break

WeD-01: DEA 3 16:00-17:30, Europaea Session chair: Victor Podinovski Measuring input-specific productivity change through a Luenberger indicator based on the principle of least action Juan Aparicio, Magdalena Kapelko, Bernhard Mahlberg* and Jose Sainz-Pardo

Interval scale data in the BoD model Roxani Karagiannis* and Giannis Karagiannis

Consistent weight restrictions and production trade-offs in DEA Victor Podinovski and Tatiana Bouzdine-Chameeva

WeD-04: Stochastic frontiers 5 16:00-17:30, Nordia Session chair: Leopold Simar

Elasticities of substitution and complementarity across space Anthony Glass,* Karligash Kenjegalieva, Robin Sickles and Thomas Weyman-Jones

Global dependence and productivity: A robust nonparametric world frontier analysis Camilla Mastromarco* and Leopold Simar

The "wrong skewness" problem in stochastic frontier models: A new approach Christian Hafner, Hans Manner and Leopold Simar*

WeD-05: Energy 6 16:00-17:30, Nautica Session chair: William Greene

Yardstick regulation of electricity distribution – Disentangling short-run and long-run inefficiency Subal Kumbhakar and Gudbrand Lien*

Persistent and transient efficiency – An application to the Swiss hydro power sector Massimo Filippini, Thomas Geissmann* and William Greene Persistent and transient productive inefficiency of the New Zeeland electricity distribution companies Massimo Filippini and William Greene*

WeD-06: Education 4 16:00-17:30, Press room Session chair: Jill Johnes

Efficiency in education: A review of literature and a way forward Kristof De Witte^{*} and Laura Lopez-Torres

The three i's of public schools: Irrelevant inputs, insufficient resources and inefficiency Daniel Henderson,* Leopold Simar and Le Wang

University mergers in England: An analysis of efficiency effects using Bayesian methods Jill Johnes* and Mike Tsionas

WeD-07: Decision making 1 16:00-17:30, Baltica

Session chair: Jef Van Meensel

The effect of manager's risk preference and bank consolidation on risk diversification in U.S.

Ming-Hsiang Huang,* Hsiu-Wen Hsueh, Tsui-Yueh Cho and Yung-Lieh Yang

Inefficiency and risk taking behavior in Spanish banking Maria García-Alcober, Emili Tortosa-Ausina, Diego Prior* and Manuel Illueca

Marrying frontier analysis-based benchmarking and user-tailored decision support Jef Van Meensel* and Ludwig Lauwers

THURSDAY 18 June

ThA-01: Banking 6 9:00-10:30, Europaea Session chair: Emili Grifell-Tatjé

Evaluating private pension funds using data envelopment analysis considering the effect of regulations and experts' judgments Maryam Badrizadeh* and Joseph Paradi

A cost efficiency analysis of the Insurance Industry in Mexico Ana María Reyna* and Hugo Fuentes **Discussant:** Jonathan Calleja-Blanco

Downsizing effects on the financial performance of European automobile production plants Jonathan Calleja-Blanco* and Emili Grifell-Tatjé **Discussant:** Ana María Reyna

ThA-03: Well-being 9:00-10:30, Fennia II Session chair: Chiara Peroni

Part-time work and firm productivity: Evidence from Italy Francesco Devicienti, Elena Grinza* and Davide Vannoni **Discussant:** Chiara Peroni

Measuring of quality of life in Turkey provinces Halil Tunca **Discussant:** Elena Grinza

Making wellbeing productive: A network DEA framework Charle-Henri Dimaria, Chiara Peroni* and Francesco Sarracino Discussant: Halil Tunca ThA-04: TFP 4 9:00-10:30, Nordia Session chair: Elina Berghäll

Cross-country income differences revisited: accounting for the role of intangible capital Wen Chen **Discussant:** Marianna Papakonstantinou

Composition of human capital, distance to the frontier and productivity Marianna Papakonstantinou* **Discussant:** Elina Berghäll

FDI and the world technology frontier Elina Berghäll Discussant: Wen Chen

ThA-05: Energy 7 9:00-10:30, Nautica Session chair: Humberto Brea-Solís

Tariff regulation of electricity distribution: A comparative analysis of regulatory benchmarking models Ana Lopes and Roberto Mesquita*

Bayesian mapping methods applied to the 2014 Brazilian energy distribution benchmarking models: accounting for unobserved local determinants of inefficiency Guilherme Gil, Marcelo Costa* and Ana Lopes **Discussant:** Humberto Brea-Solís

The twilight zone between latent class modelling and outlier detection: A caveat for the regulatory use of frontier analysis Per Agrell and Humberto Brea-Solís* **Discussant:** Marcelo Costa

ThA-06: Agriculture 3 9:00-10:30, Press room Session chair: Alfons Oude Lansink Climatic variability and adaptation in U.S. agriculture Eric Njuki and Boris Bravo-Ureta **Discussant:** Alfons Oude Lansink

Decomposing profit change: A Fisher-based approach applied to Finnish farms Xavier Irz* and Timo Sipiläinen **Discussant:** Boris Bravo-Ureta

Dynamic profit inefficiency: A DEA application to Belgian dairy farms Frederic Ang and Alfons Oude Lansink* Discussant: Xavier Irz

ThA-07: DEA 4 9:00-10:30, Baltica Session chair: Michaela Staníèková

Two decades of data envelopment analysis applied to the transport sector: A bibliometric analysis Laurent Cavaignac and Romain Petiot **Discussant:** Michaela Staníèková

Application of the nonparametric DEA metafrontier approach to compare technology gaps and environmental efficiency technology gaps among European regions Jana Hanèlová, Lukáš Melecký* and Michaela Staníèková **Discussant:** Romain Petiot

Context-dependent DEA approach: Performance catching up among European EU28 NUTS 2 regions Michaela Staníèková* and Lukáš Melecký and Jana Hanèlová **Discussant:** Laurent Cavaignac

Coffee break

ThB-01: Stochastic frontiers 6 11:00-12:30, Europaea Session chair: Robin Sickles Importing scale efficiencies from publicprivate collaboration in household waste collection J.A. Wilschut,* H. de Groot, Thomas Niaounakis and Jos Blank

Importing scale efficiencies through municipality collaboration. An application of the one-step approach to Dutch municipality taxes Thomas Niaounakis* and Jos Blank

Returns to scale and curvature in the presence of spillovers: Evidence from European countries Anthony Glass, Karligash Kenjegalieva* and Robin Sickles

ThB-02: DEA 5 11:00-12:30, Fennia I

Session chair: John Walden

The orientation of DEA models with dual-role factors Wen-Chih Chen

A DEA-based approach to evaluate the efficiency in the performing arts: Focus on German and Italian opera houses Andrea Baldin* and Stefania Funari

Economic measures of capacity utilization: A nonparametric cost function analysis Subhash Ray and John Walden*

ThB-03: Environment 2 11:00-12:30, Fennia II Session chair: Fabrizio Erbetta

Sustainable Directions Frederic Ang,* Simon Mortimer, Francisco Areal and Richard Tiffin

Measuring social welfare and drivers of its change Martin Lábaj, Mikuláš Luptáèik and Eduard Nežinský* Marginal CO2 abatement costs: Findings from alternative shadow price estimates for Shanghai industrial sectors Xun Zhou

Business innovation and waste management sustainability: the case of door-to-door collection Graziano Abrate, Clementina Bruno, Fabrizio Erbetta,* and Giovanni Fraquelli

ThB-04: TFP 5 11:00-12:30, Nordia Session chair: Doreen Cerny

Price-setting with unobservable elasticities of demand: The business-cycle effects of heterogeneous expectations Christian Jensen

Productivity, structural change and informality: the case of Russia Ilya Voskoboynikov and Vladimir Gimpelson

The sources of economic growth in Sub-Sahara African countries Nosratollah Nafar

Productivity versus self-regulation - An empirical analysis on paradoxes in teaching profession Doreen Cerny

ThB-05: Energy 8 11:00-12:30, Nautica Session chair: Manuel Llorca

Analyzing efficiency of biogas plants in Austria using data envelopment analysis Andreas Eder,* Günther Bochmann and Bernhard Mahlberg

Estimation of efficiency levels in electricity consumption by Swiss households: A Stochastic frontier approach Nina Boogen,* Souvik Datta and Massimo Filippini A new approach to measuring the rebound effect associated to energy efficiency improvements: An application to the US residential energy demand Luis Orea, Manuel Llorca*, and Massimo Filippini

ThB-06: Agriculture 4 11:00-12:30, Press room Session chair: Alan Wall

Trade reform and technical efficiency in the Indonesian food industry Bernadetta Dwi Suatmi* and Ruhul Salim and Harry Bloch

Inefficient or just different? Accounting for heterogeneity in small-scale rice production using latent class stochastic frontier models R. Owusu* and Atakelty Hailu

Production potential, heterogeneous technology and productivity: The case of Hungarian crop producing farms Lajos Baráth* and Heinrich Hockmann

The effects of forage crop mix on the efficiency and quality of milk production Luis Orea, Jose Perez, David Roibas* and Alan Wall

Lunch break

ThC-01: Stochastic frontiers 7 14:00-15:30, Europaea Session chair: Phill Wheat

Nonparametric least squares methods for stochastic frontier models Leopold Simar and Ingrid Van Keilegom and Valentin Zelenyuk*

A Stochastic frontier model with endogenous treatment status and mediator Yi-Ting Chen and Yu-Chin Hsu and Hung-Jen Wang* Uncertainty in efficiency predictions in common panel data stochastic frontier models Phill Wheat*

ThC-02: DEA 6

14:00-15:30, Fennia I Session chair: Emmanuel Thanassoulis

Cross-country difference in evaluations of socioeconomic conditions: A life satisfaction approach Hideyuki Mizobuchi,* Jue Yang and Shunsuke Managi

On aggregating cross efficiencies Giannis Karagiannis*

Identifying the scope for savings at inpatient episode level: An illustration applying DEA to chronic obstructive pulmonary disease Emmanuel Thanassoulis^{*}, Maria Portela, and Mike Graveney

ThC-04: Decision making 2 14:00-15:30, Nordia Session chair: Pekka Korhonen

Two-stage processes and an evaluation of their efficiencies with a multiple objective DEA model Mahdi Mahdiloo*, Abdol Hossein Jafarzadeh, Abdollah Noorizadeh, Reza Farzipoor Saen and Peter Tatham

A multiple criteria data envelopment analysis approach to two-stage processes Adel Hatami-Marbini and Mehdi Toloo

Non-convex value efficiency analysis Pekka Korhonen*, Merja Halme, and Juha Eskelinen

ThC-05: Energy 9 14:00-15:30, Nautica Session chair: Luis Orea Capital structure and ownership in regulated electricity distribution Astrid Cullmann, Maria Nieswand and Stefan Seifert

Estimating market power in homogenous product markets using a composed error model: application to the California electricity market Luis Orea* and Jevgenijs Steinbuks

ThC-06: Agriculture 5 14:00-15:30, Press room Session chair: Christopher O'Donnell

Defining low input dairy farms across European countries: a frontier approach J. Hamerlinck, J. Van Meensel, J. Bijttebier, S. Moakes, J. Buysse, and L. Lauwers*

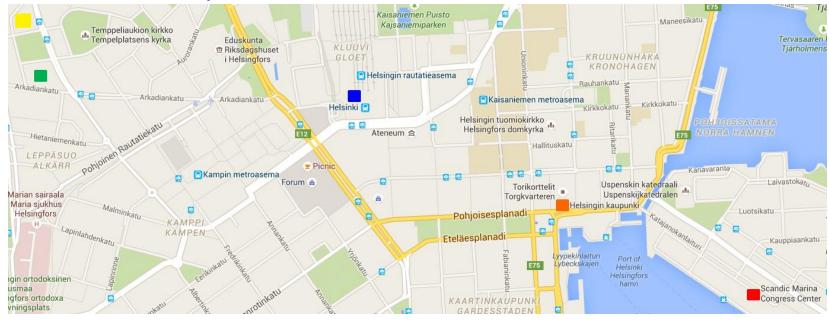
Land problems and efficiency in Salvadoran agriculture: A state-contingent approach Boris Bravo-Ureta, María Pérez-Urdiales, and Alan Wall

Maize productivity and input subsidies in Malawi: A state-contingent stochastic production frontier approach S.T. Holden and Christopher O'Donnell*

Farewell coffee

MAPS

Important Locations – Overall Map



| Grand Marina Congress Center |
|--|
| Central Railway Station |
| City Hall |
| Aalto University School of Business – Main building |
| Aalto University School of Business –Chydenia building |

Directions – Grand Marina Congress Center

Easiest way to get to the conference location is to use tram 4 or 4T. The closest stop is called "**Kauppiaankatu**". The trams 4 and 4T can be taken from the Mannerheimintie close to Railway station.



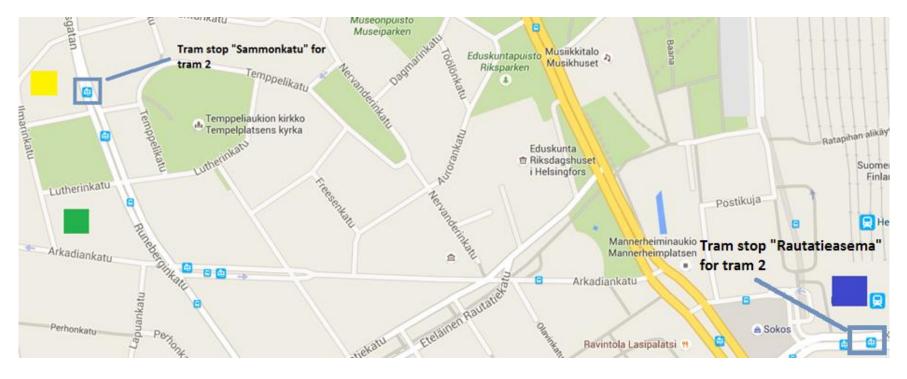
1) From Central Railway Station, go to stop Lasipalatsi to take either tram 4 or 4T towards Katajanokka.



2) Get off on the stop "Kauppiaankatu.

Directions - Aalto University School of Business; Chydenia building

The Chydenia building is easily reached from Railway Station with tram 2 towards Töölö. Tram 2 can be taken directly in front of Railway Station from the stop "**Rautatieasema**". The closest stop to Chydenia building is "**Sammonkatu**" the next stop from "Kauppakorkeakoulut" stop that is the main stop for Business School.



Grand Marina Congress Center – Indoors Map



List of Participants

| Last name | First name | Affiliation |
|-----------------|---------------|---|
| Abrate | Graziano | University of Piemonte Orientale |
| Afsharian | Mohsen | Technische Universität Braunschweig |
| Ahlgren | Oskar | Aalto University |
| Ahn | Heinz | Technische Universität Braunschweig |
| Akkanen | Päivi | University of Helsinki |
| Alcaraz | Javier | Universidad Miguel Hernández |
| Alem | Habtamu | NMBU |
| Amsler | Christine | Michigan State University |
| Amundsveen | Roar | Norwegian Water Resources and Energy Direcorate |
| Andor | Mark | Rheinisch-Westfälisches Institut für Wirtschaftsforschung |
| Ang | Frederic | The University of Reading |
| Arocena | Pablo | Universidad Pública de Navarra |
| Asmild | Mette | University of Copenhagen |
| Badin | Luiza | Bucharest University of Economic Studies |
| Badrizadeh | Maryam | University of Toronto |
| Baldin | Andrea | Università Ca' Foscari |
| Balk | Bert M. | Erasmus University Rotterdam |
| Baráth | Lajos | Hungarian Academy of Sciences |
| Belarouci | Matthieu | Institut Catholique de Lille |
| Berghäll | Elina | VATT Institute for Economic Research |
| Bjørndal | Endre | Norwegian School of Economics |
| Bjørndal | Mette | Norwegian School of Economics |
| Blank | Jos | Delft University of Technology |
| Boogen | Nina | ETH Zürich |
| Bos | Jaap | Maastricht University |
| Boussemart | Jean-Philippe | IESEG School of Management |
| Bravo-Ureta | Boris | University of Connecticut |
| Brea Solis | Humberto | University of Liege |
| Briec | Walter | University of Perpignan Via Domitia |
| Calleja Blanco | Jonathan | Autonomous University of Barcelona |
| Camanho | Ana | University of Porto |
| Carlsen | Line | Energitilsynet |
| Cavaignac | Laurent | Université de Perpignan Via Domitia |
| Cerny | Doreen | University of Teacher Education Salzburg |
| Chen | Wen | University of Groningen |
| Chen | Wen-Chih | National Chiao Tung University |
| Cheng | Xiaomei | Norwegian School of Economics |
| Chytilová | Lucie | VŠB-Technical University of Ostrava |
| Cooper | Russel | University of New South Wales |
| Cordero Ferrera | Jose Manuel | University of Extremadura |
| Costa | Marcelo | UFMG |
| Cullmann | Astrid | DIW Berlin |
| Czekaj | Tomasz | University of Copenhagen |
| Dadoukis | Aristeidis | University of Nottingham |
| Dai | Xiaofeng | Aalto University School of Business |
| Dakpo | Herve | INRA |
| Daraio | Cinzia | Sapienza University of Rome |
| De Witte | Kristof | KU Leuven |
| | | |

Defuna Degl'Innocenti del Corral Cuervo Dula Eder Ek Erbetta Eskelinen Feteira Inácio Frantsev Fu Geissmann Glass Glass Goude Granderson Grausová Greene Grifell-Tatjé Grinza Hampf Hančlová Hassib Hatamimarbini Henderson Hennebel Holden Holtkamp Huang Huang Hužvár llonen Ipatova lrz Jamasb Jensen Johnes Johnson Kapelko Karagiannis Karagiannis Kerstens Kerstens Keshvari Khanzhvn Khataza Kittelsen Kolomiytseva Korhonen Kortelainen Kronborg Kumbhakar

Felisitas Marta Julio Jose Andreas Göran Fabrizio Juha Catarina Anton Tsu-Tan Thomas Anthony Karligash Fanny Gerald Mária William Emili Elena Benjamin Jana Omar Adel Daniel Veerle Stein T. Mareike Mei-Ying Ming-Hsiang Miroslav Matti Irina Xavier Toorai Christian Jill Andrew Magdalena Giannis Roxani Kristiaan Pieter Jan Abolfazl Viktor Robertson Sverre Yaryna Pekka Mika Dorte Subal

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Sofia Sergio Maria José Chiara Romain Simone Andrzej Victor Maria Diego Artem Daniela Tarmo Paola Ana Maria Ida Ana Nicky David Stefania Paul Marina David Antti Katharina Peter Stefan Yevhenii Zhyiang Robin Leopold Ioannis Michaela Bernadetta Elżbieta Thijs Emmanuel Claudio Son Mehdi **Konstantinos** Dung David Halil Ragnar Panagiotis Bikesh John Alan Jef Hung-Jen Mikayel

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