



EWEPA XIX CONFERENCE PROGRAM

June 16th – 19th, 2026

Munich, Germany



LAST UPDATED: 27.04.2026

CONFERENCE PROGRAMME AT A GLANCE

Tuesday, June 16th	
09:00 – 10:00	Welcome & Plenary 1 – Mette Asmild
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch
13:30 – 15:00	PhD sessions
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
17:30 –	Welcome drinks
Wednesday, June 17th	
09:00 – 10:00	Plenary 2 – Johan Swinnen
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch JPA meeting
13:30 – 15:00	Parallel sessions
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
Thursday, June 18th	
09:00 – 10:00	Plenary 3 – Christoph Kaserer
10:00 – 10:30	Coffee break
10:30 – 12:00	Parallel sessions
12:00 – 13:30	Lunch ISEAPA meeting
13:30 – 15:00	Special plenary session In Honor of Knox Lovell
15:00 – 15:30	Coffee break
15:30 – 17:00	Parallel sessions
19:00 –	Conference dinner
Friday, June 19th	
09:00 – 10:30	LAA to Erwin Diewert
10:30 – 11:30	Bavarian brunch
11:30 – 13:00	Parallel sessions
13:00 – 14:00	Light lunch
14:00 – 15:30	Parallel sessions
15:30 – 16:00	Coffee break
16:00 – 17:30	Parallel sessions
17:30 – 18:00	Closing session

DETAILS OF SCIENTIFIC PROGRAMME

		Terra	Jupiter	Mars 1	Mars 2	Venus 1	Venus 2	Orion 1
Tue (16 th)	09:00 – 10:00	Welcome & Plenary 1 Mette Asmild						
	10:30 – 12:00	Agriculture 1	SFA methods 1	Regulation 1	Sust & eco-eff 1	Country analysis 1	Energy 1	
	13:30 – 15:00	PhD Session 1	PhD Session 2	PhD Session 3				
	15:30 – 17:00	Organized session 1: Efficiency & sustainability	DEA methods 1	Banking & Finance 1	Education 1	Electricity 1	Productivity 1	
Wed (17 th)	09:00 – 10:00	Plenary 2 Johan Swinnen						
	10:30 – 12:00	Special Session: Index numbers	Agriculture 2	Productivity 2	SFA methods 2	Manufacturing 1	Water 1	
	13:30 – 15:00	Organized Session 2: Agricultural TFP + Environment	DEA methods 2	Energy 2	Country analysis 2	Health 1	Governance 1	
	15:30 – 17:00	Organized session 3: Composite indicators	Agriculture 3	Energy 3	SFA methods 3	Sust & eco-eff 2	Regulation 2	
Thu (18 th)	09:00 – 10:00	Plenary 3 Christoph Kaserer						
	10:30 – 12:00	DEA methods 3	Agriculture 4	Productivity 3	Sust & eco-eff 3	Oxera 1	ACM 1	Health 2
	13:30 – 15:00	Special plenary session In Honor of Knox Lovell						
	15:30 – 17:00	Sust & eco-eff 4	DEA methods 4	Banking & Finance 2	Justice 1	Oxera 2	ACM 2	Education 2
Fri (19 th)	09:00 – 10:30	Life-time Achievement Award to Erwin Diewert						
	11:30 – 13:00	DEA methods 5	Agriculture 5	Sust & eco-eff 5	Education 3	Justice 2	Gender	
	14:00 – 15:30	Organized session 4: Efficiency in system design	Agriculture 6	Country analysis 3	Sust & eco-eff 6	Manufacturing 2	Health 3	
	16:00 – 17:30	Agriculture 7	SFA methods 4	Sust & eco-eff 7	Productivity 4	Justice 3	Water 2	
	17:30 – 18:00	Closing session						

TUESDAY JUNE 16th, 2026

Tue | 09:00-10:00 | Terra & Jupiter - Welcome and Plenary 1

Mette Asmild, Professor, Section for Production, Markets and Policy, Department of Food and Resource Economics (IFRO), University of Copenhagen.

Tue | 10:30-12:00 | Terra - Agriculture 1

CLIMATE-SMART AGRICULTURE AND TECHNICAL EFFICIENCY UNDER EXTREME WEATHER: A LATENT CLASS STOCHASTIC FRONTIER ANALYSIS OF SOYBEAN FARMS IN SÃO PAULO, BRAZIL
Larissa Gui Pagliuca; Marcelo José Carrer; Rodrigo Damasceno; Marcela de Mello Brandão Vinholis

TECHNICAL EFFICIENCY OF SEEMINGLY “RELATED” COW AND CALF PRODUCTION.

Federico Garcia Suarez; Camilo Alvarez Garcia; Mercedes Motta

PREDICTORS OF EMISSION-ADJUSTED EFFICIENCY IN POLISH CROP FARMS: NONLINEARITIES, INTERACTIONS AND POLICY THRESHOLDS

Jakub Staniszewski; Bazyli Czyżewski; Anna Matuszczak

CLIMATE CHANGE, POLICY INITIATIVES AND FARM EFFICIENCY: THE CONTRASTING CASE OF TWO STATES IN THE INDIAN HIMALAYAS

Subir Sen

Tue | 10:30-12:00 | Jupiter - SFA Methods 1

IMPLICIT ESTIMATION FOR STOCHASTIC FRONTIER MODEL

Mohamed Nejib Ouertani; Hanene Hamdani

INCORPORATING INTERMEDIATE OUTPUTS INTO STOCHASTIC COST FRONTIER MODELS

Alexander Stead; Trang Tran; Phill Wheat

ZERO INEFFICIENCY AND LATENT CLASS STOCHASTIC FRONTIER MODEL AND ITS APPLICATION

Yi-Wun Chen

IATROGENIC MISSPECIFICATION ERROR AND ESTIMATION OF INEFFICIENCY

Christopher Parmeter

Tue | 10:30-12:00 | Mars 1 – Regulation 1

IMPACT OF OPERATING SUBSIDIES ON SEWERAGE EFFICIENCY

Tomohiro Kitamura

MODELING SPATIAL COOPETITION IN ENVIRONMENTAL EFFICIENCY: A NON-PARAMETRIC APPROACH FOR FAIR REGIONAL GOVERNANCE

Yunlong Zhang; Emili Grifell-Tatjé; Zhiyang SHEN

EFFICIENCY OF CENTRAL GOVERNANCE: A STOCHASTIC INPUT DISTANCE FUNCTION ANALYSIS

Nan Jiang

A DEA BASED MODEL OF SEWAGE TREATMENT COSTS WITH MULTIPLE PLANTS AND SHARED OPERATIONAL MANAGEMENT

David Saal; Takayoshi Nakaoka; Tomoyasu Tanaka

Tue | 10:30-12:00 | Mars 2 – Sustainability/Eco-efficiency 1

EVALUATING HEALTH, ENVIRONMENTAL AND CIRCULARITY TRADE-OFFS OF WASTE DERIVED FUELS IN THE CEMENT INDUSTRY

Maria Michali

DEVELOPMENT AND APPLICATION OF A METHODOLOGY FOR ASSESSING THE EFFICIENCY OF SUSTAINABLE DEVELOPMENT USING DEA, SHANNON ENTROPY, AND MACHINE LEARNING

Thomas E. Pappas; Roxani Karagiannis; Georgios Tsaples; Andreas C. Georgiou

NAVIGATING SUSTAINABILITY TRADE-OFFS: BENCHMARKING ORGANIC AND CONVENTIONAL DAIRY FARMS UNDER CARBON TAXATION

Andreas Michael Wolff; Mette Asmild

FARMERS' OPPORTUNITY COSTS OF BIODIVERSITY PROVISION AND AGRI-ENVIRONMENTAL PAYMENTS

Carolin Canessa, Philipp Mennig, Johannes Sauer

Tue | 10:30-12:00 | Venus 1 – Country Analysis 1

UNLOCKING EFFICIENCY IN INDONESIA'S PALM OIL INDUSTRY: A STUDY ON INEFFICIENCY AND PRODUCTION RISKS

Muhammad Fawait; Dyah Wulan Sari; Rista Setyana; Haura Azzahra Tarbiyah Islamiya

EFFICIENCY UNVEILED: EXPLORING GEOGRAPHICAL CHALLENGES AND NATURAL RISKS IN ITALIAN MUNICIPALITIES THROUGH A STOCHASTIC FRONTIER ANALYSIS

Graziella Bonanno; Francesco Aiello; Lucia Errico; Sandro Rondinella

THE WORKLOAD–PERFORMANCE RELATIONSHIP WHEN OVERSEEING ALGORITHMIC SYSTEMS

Changyu Men; Maud Van den Broeke; Marijn Verschelde; Bart Roets

ARTIFICIAL INTELLIGENCE AND THE PRODUCTIVITY PARADOX: FRONTIER EXPANSION, EFFICIENCY DYNAMICS, AND POLARIZATION IN A CROSS-COUNTRY SETTING

Francesco Aiello; Graziella Bonanno; Lidia Mannarino; Valeria Pupo

Tue | 10:30-12:00 | Venus 2 – Energy 1

THE PERFORMANCE IMPLICATIONS OF INTERIM CEO APPOINTMENT: EVIDENCE FROM SWEDISH ELECTRICITY DISTRIBUTORS

Kristofer Månsson; Magnus Soederberg; Pär Sjölander; Jan Weiss

EXPLORING CONDITIONAL DEA FOR DETERMINING REVENUE CAPS FOR NORWEGIAN ELECTRICITY DSOS

Håvard Bergheim Holvik

THE EFFECT OF SMALL-SCALE ELECTRICITY GENERATION ON THE COST AND EFFICIENCY OF ELECTRICITY DISTRIBUTORS: A THRESHOLD RIDGE APPROACH

Fatemeh Jamhiri; Kristofer Månsson; Pär Sjölander

STATIC AND DYNAMIC EFFICIENCY ASSESSMENT FOR EUROPEAN GAS TRANSMISSION: THE ACER STUDY

Per J. Agrell

Tue | 13:30-15:00 | Terra – PhD Session 1

CONDITIONAL FRONTIER DIAGNOSTICS OF STRUCTURAL PRODUCTIVITY CONSTRAINTS UNDER CLIMATE STRESS: EVIDENCE FROM KENYAN SMALLHOLDER AGRICULTURE

Denis Momanyi

UNDERSTANDING THE RELATIONSHIP BETWEEN U.S. AGRICULTURAL LABOR AND MACHINERY

Linge Yang

ECONOMIES OF SCOPE IN CONVENTIONAL AND ORGANIC FARMING

William Louis Reingaard Vissing

Tue | 13:30-15:00 | Jupiter – PhD Session 2

BY-PRODUCTION EFFICIENCY ANALYSIS UNDER A CAP-AND-TRADE FRAMEWORK

Nicolas Marissiaux PhD

META GREEN INNOVATION EFFICIENCY IN EUROPEAN REGIONS: SPATIAL SPILLOVERS FROM REGIONAL FINANCIAL DEVELOPMENT

Myungjun Kim

TRANSITIONING FROM LIVESTOCK TO CROP PRODUCTION: A BAYESIAN STOCHASTIC RAY PRODUCTION FRONTIER ANALYSIS

Jeronya Mbiatat Petnkeu

Tue | 13:30-15:00 | Mars 1 – PhD Session 3

A COPULA-BASED FRAMEWORK FOR IDENTIFYING CONGESTION IN DATA ENVELOPMENT ANALYSIS

Zakiatul Wildani

EVALUATING TEACHING EFFICIENCY IN EUROPEAN UNIVERSITIES USING NONPARAMETRIC TECHNIQUES

Andreea Monica Munteanu

EVALUATING MULTIDIMENSIONAL PERFORMANCE IN THE EUROPEAN UNION: A COMPOSITE INDEX APPROACH TO EUROPE 2030

Jonathan Alulea Pembwe

Tue | 15:30-17:00 | Terra – Organized session 1: Efficiency and Sustainability

Efficiency and Sustainability in European Agriculture: Evidence from the AgEnRes Project

This organized session presents selected results from the AgEnRes project, focusing on the joint assessment of productivity, environmental performance, and energy efficiency in European agriculture. The contributions combine methodological advances in efficiency and frontier analysis with newly integrated economic, structural, and environmental data. By linking FADN, structural surveys, and biophysical indicators, the papers move beyond conventional productivity measures toward multidimensional performance assessment. Empirical evidence covers multiple European countries and production systems,

with particular attention to energy use, emissions, and policy impacts. Together, the session offers insights relevant for researchers and policymakers concerned with sustainable agricultural transitions.

ENVIRONMENTAL PRODUCTIVITY MEASUREMENT USING SHADOW PRICES: AN APPLICATION TO DUTCH DAIRY FARMS

Kexin Wang

INTEGRATING ECONOMIC, STRUCTURAL AND ENVIRONMENTAL DATA FOR MULTI-DIMENSIONAL EFFICIENCY ANALYSIS IN EUROPEAN AGRICULTURE

Tamás Krisztin

A CROSS-COUNTRY COMPARISON OF LONG- AND SHORT-TERM NON-RENEWABLE ENERGY USE EFFICIENCY IN EUROPEAN AGRICULTURE

K. Hervé Dakpo

TECHNOLOGICAL HETEROGENEITY AND HETEROGENEOUS SUBSIDY EFFECTS ON TECHNICAL EFFICIENCY: EVIDENCE FROM SWEDISH DAIRY FARMS

Zhen Chen

Tue | 15:30-17:00 | Jupiter – DEA Methods 1

EVERY COIN HAS TWO SIDES: AN EXTENDED FRAMEWORK FOR MODELING BENEFICIAL AND HARMFUL BY-PRODUCTS

Yunguo Mu; Zhiyang Shen; Michael Vardanyan

GAIN-LOSS PORTFOLIO EFFICIENCY AND ASSET-PRICING BOUNDS: A DIRECTIONAL DISTANCE APPROACH

Maryam Hasannasab; Dimitris Margaritis

A UNION ENDOGENOUS DIRECTIONAL DISTANCE FUNCTION APPROACH TO META-FRONTIER EFFICIENCY ANALYSIS UNDER TECHNOLOGICAL HETEROGENEITY

Ming-Miin Yu; Rajinder Kaur

ENHANCING FDH BY PRODUCTION TRADE-OFFS

Mahmood Mehdiloo; Grammatoula Papaioannou; Victor Podinovski

Tue | 15:30-17:00 | Mars 1 – Banking & Finance 1

A GROUP-BASED PROFITABILITY GAP DECOMPOSITION MODEL: AN APPLICATION TO TAIWANESE AND CHINESE CITY BANKS

Xiang Chen; Xisi Chen

THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY ON BANK PERFORMANCES: AN APPLICATION OF NETWORK STOCHASTIC FRONTIER ANALYSIS

Chu-Nan Hu; Kuo-Jui Huang

ASSESSING THE EFFICIENCY OF EUROPEAN LISTED REGIONAL BANKS: A CONDITIONAL NONPARAMETRIC APPROACH

Anamaria Aldea; Luiza Bădin; Carmen Lipară

COST, OUTREACH AND GENDER: AN EMPIRICAL ANALYSIS OF SOUTH ASIAN MICROFINANCE INSTITUTIONS

Sayati Ghosh; Simanti Bandyopadhyay

Tue | 15:30-17:00 | Mars 2 – Education 1

FEED A COLD: NEW EVIDENCE ON THE IMPACT OF COVID-19 ON SCHOOL ATTENDANCE AND ACHIEVEMENT

Kathy Hayes; Lori Taylor; Shawna Grosskopf; Laura Razzolini

TWO DECADES OF PUBLIC SPENDING EFFICIENCY IN EU COMPULSORY EDUCATION

Giovanni Antonini; Tommaso Agasisti

MODELING THE DETERMINANTS OF EDUCATION EFFICIENCY UNDER FISCAL DECENTRALIZATION: A TWO-STAGE DEA–TOBIT ANALYSIS IN EAST JAVA, INDONESIA

Widya Sylviana; Dyah Wulan Sari; Haura Azzahra Tarbiyah Islamiya; Muhammad Fawait; Rista Setyana

NETWORK DEA MODEL FOR EFFICIENCY ANALYSIS OF THE UNIVERSITIES IN THE UK

Akram Dehnokhalaji; Oleg Badunenko

Tue | 15:30-17:00 | Venus 1 – Electricity 1

DISTINGUISHING HIGH-IMPACT AND ATYPICAL OUTLIERS IN REGULATION: EVIDENCE FROM GERMAN ELECTRICITY NETWORKS

Mohsen Afsharian; Peter Bogetoft

TOTEX-BASED REGULATORY BENCHMARKING: EUROPEAN LESSONS FOR THE BRAZILIAN ELECTRICITY DISTRIBUTION FRAMEWORK

Ana Lopes Ahn; Bruno Vilela; Heinz Ahn Heinz; Carolin Ladda; Roberto Mesquita; Roger dos Reis Alves

OPTIMAL MERGERS AND SECTOR RESTRUCTURING

Peter Bogetoft; Merc.

FRONTIER REGULATION OF ELECTRICITY DISTRIBUTION: WHY ECONOMISTS ARE WRONG AND ENGINEERS ARE ONLY HALF RIGHT

Kristiaan Kerstens; Stefano Nasini; Miguel Alves Pereira

Tue | 15:30-17:00 | Venus 2 – Productivity Analysis 1

A THEORY OF TECHNOLOGY-BASED PRODUCTIVITY INDEX

Sung Ko Li; Long Zhao

FIRM SUBSIDIES AND FACTOR USE

Thomas Triebs; Mingyang Li; Kai Sun

STRUCTURAL IDENTIFICATION OF MULTIDIMENSIONAL PRODUCTIVITY SPILLOVERS

Zhezhi Hou; Emir Malikov; Shunan Zhao

PARADOXES OF THE PUBLIC SECTOR PRODUCTIVITY MEASUREMENT

Timo Kuosmanen; Xun Zhou

WEDNESDAY JUNE 17th, 2026

Wed | 09:00-10:00 | Terra & Jupiter - Plenary 2

Johan Swinnen, Director General, International Food Policy Research Institute (IFPRI)

Chair: Spiro E. Stefanou

Wed | 10:30-12:00 | Terra – Special session: Index numbers

Chair: Christopher Parmeter

ON THE THEORY AND PRACTICE OF PROPER INDEXES

Erwin Diewert

PROPER QUANTITY INDEXES FOR COHERENT PRODUCTIVITY COMPARISONS

Christopher O'Donnell

Wed | 10:30-12:00 | Jupiter – Agriculture 2

HOW CAP SUBSIDIES AFFECT TECHNICAL EFFICIENCY: EVIDENCE FROM HUNGARIAN DAIRY FARMS USING AN ENDOGENEITY-CORRECTED DYNAMIC BAYESIAN SFA

Lajos Baráth; Andrzej Pisulewski; Imre Fertó; Jerzy Marzec

AGRICULTURAL PRODUCTIVITY AND CARBON DIOXIDE EMISSIONS IN BRAZIL: EVIDENCE FOR THE BORLAUG HYPOTHESIS

Ricardo Muniz Simões; Humberto Francisco Silva Spolador

A SYSTEMATIC REVIEW OF THE NET CONTRIBUTION OF PESTICIDES ON AGRICULTURE: ACCOUNTING FOR ECONOMIC, ENVIRONMENTAL, AND SOCIAL EFFECTS

Xiaojie Wen; Niklas Möhring

PRODUCTIVITY GROWTH ADJUSTED FOR ANIMAL HEALTH IN SWEDISH DAIRY FARMS

Frederic Ang; Enoch Owusu-Sekyere; Karin Alvåsen; Helena Hansson

Wed | 10:30-12:00 | Mars 1 – Productivity Analysis 2

INTANGIBLES IN TANGIBLE PRODUCTIVITY DISCREPANCIES

Charles-Henri DiMaria

STATISTICAL INFERENCE FOR CONSUMER PRICE INDICES

Valentin Zelenyuk; Shirong Zhao

MAKING INFERENCES ABOUT DIFFERENCES IN PRODUCTIVITY ACROSS GROUPS IN NON-PARAMETRIC, CROSS-SECTIONAL SETTINGS

Paul Wilson

SATO-VARTIA PRODUCTIVITY INDEX

Hideyuki Mizobuchi; Valentin Zelenyuk

Wed | 10:30-12:00 | Mars 2 – SFA Methods 2

PANEL STOCHASTIC FRONTIERS: COINTEGRATION AND ENDOGENEITY

Anton Skrobotov; Artem Prokhorov; Yiannis Karavias

STANDARD STOCHASTIC FRONTIER ANALYSIS FRAMEWORK WITH DEPENDENCY BETWEEN INEFFICIENCY AND NOISE

Zangin Zeebari; Scott Hacker

SHAPE-AWARE DEEP LEARNING FOR MODELS OF PRODUCTION

Artem Prokhorov; Zheng Wei; Huiyan Sang; Yu Ma

SPATIAL DISTRIBUTIONAL STOCHASTIC FRONTIER ANALYSIS: SPECIFICATION AND INEFFICIENCY IMPLICATIONS

Ioannis Skevas; Thomas Kneib

Wed | 10:30-12:00 | Venus 1 – Manufacturing 1

SIZE THRESHOLDS AND THE ADOPTION OF AI-BASED TECHNOLOGIES: EVIDENCE FROM SPANISH MANUFACTURING FIRMS

Luis Orea; Inmaculada Álvarez; Christopher Parmeter; Desiderio Romero

COMPARING PERFORMANCE USING ADDITIVE MODELS BASED ON REGRESSION SPLINES: AN APPLICATION TO FIRMS IN MAJOR EUROPEAN COUNTRIES WITHIN THE MEAT MANUFACTURING INDUSTRY

Juan Aparicio; Victor J. España; Magdalena Kapelko

FROM FUNDS TO FRONTIERS: HOW PON E&C SHAPES EFFICIENCY IN ITALIAN MANUFACTURING SECTOR

Marco Alberto De Benedetto; Camilla Mastromarco; Anna Rita Dipierro

PARETO KOOPMANS EFFICIENCY AT THE UNIT AND THE INDUSTRY LEVEL: AN APPLICATION TO INDIAN MANUFACTURING

Subhash C Ray

Wed | 10:30-12:00 | Venus 2 – Water 1

WATER-USE EFFICIENCY IN WINE-GRAPE PRODUCTION. STOCHASTIC ESTIMATION WITH PANEL DATA

Ines Hugalde; Sebastián Riera; Dela Dem Do Fiankor

VALUING WATER QUALITY AND QUANTITY TRADE-OFFS FROM IRRIGATION: AN INTEGRATED BIO-PHYSICAL - PRODUCTIVITY APPROACH

Tiho Ancey; Morian Bostian; Akash Ghokale; Francisco Rosas

EVALUATING IRRIGATION WATER PRODUCTIVITY, SHADOW PRICES, AND PER-HECTARE WATER VALUATION IN VINEYARDS USING STOCHASTIC FRONTIER ANALYSIS

Carlos Bopp; Roberto Jara-Rojas; Boris Bravo-Ureta; Alejandra Engler

LINKING SUSTAINABILITY EFFICIENCY TO FARMERS' WILLINGNESS TO ADOPT IMPROVED WASTEWATER MANAGEMENT: EVIDENCE FROM COLOMBIAN COFFEE FARMS

Maria Vrachioli; Amer Ait Sidhoum

Wed | 13:30-15:00 | Terra – Organized session 2: Agricultural TFP and environment

Agricultural Productivity Slowdown under Environmental Pressure: Competitiveness Implications Across Scales

Agricultural productivity growth is central to global food security, farm incomes, and environmental sustainability, yet recent decades have witnessed a marked slowdown in total factor productivity (TFP). This session examines the role of weather extremes and climate change as non-marketed inputs shaping agricultural performance from global to local scales. Combining macro-level evidence with micro-level farm data, the contributions assess the persistence, magnitude, and distributional effects of climate shocks on productivity and competitiveness. The session emphasizes policy-relevant insights on resilience and adaptation in an increasingly competitive international environment. A clear message for policymakers is complemented by methodological discussion and audience engagement.

Chair: Simone Pieralli

THE PERSISTENCE OF CLIMATE SHOCKS ON GLOBAL AGRICULTURAL PRODUCTIVITY GROWTH

Ariel Ortiz-Bobea; Yurou He; David B. Lobell

AN ENVIRONMENTAL EXTENSION OF THE FARM ACCOUNTANCY DATA NETWORK USING GEOLOCATIONS: A CASE STUDY ON FARM CLIMATE VULNERABILITY

Ana Klinnert; Kevin Schneider

MEASURING THE EXTREME EFFECTS OF WEATHER ON FRENCH AGRICULTURAL FARMERS

Simone Pieralli

Discussant: Bob Chambers

Wed | 13:30-15:00 | Jupiter – DEA Methods 2

EXTENSIONS OF DEA-MARKOV MODELS WHEN TARGETS, PLANNING HORIZON AND DMUS ARE CO-DESIGNED

Andreas Georgiou; Emmanuel Thanassoulis; Konstantinos Kaparis; Georgios Tsaples

NONPARAMETRIC PRODUCTION APPROACH TO HEDONIC PRICE FUNCTIONS

Kassoum Ayouba; Hervé Leleu

WINDOW-BASED DYNAMICS IN CHANCE-CONSTRAINED DATA ENVELOPMENT ANALYSIS MODEL WITH OPTIMAL CONTROL THEORY PRINCIPLES: A TOTAL COST EFFICIENCY MODEL

Paulo Nocera Alves Junior; Isotilia Costa Melo

A THREE-STAGE NETWORK DEA APPROACH FOR MODELING RESILIENCE AND DYNAMIC EFFICIENCY UNDER EXTREME CLIMATE EVENTS

Juan Pablo Henao Henao; Maria Vrachioli; Roberto Villalba; Johannes Sauer

Wed | 13:30-15:00 | Mars 1 – Energy 2

EFFICIENCY MEASUREMENT THROUGH NON-PARAMETRIC AND PARAMETRIC TECHNIQUES: ACCOUNTING FOR SAMPLE HETEROGENEITY AND CONTEXTUAL VARIABLES IN EUROPEAN ELECTRICITY DSO

Rui Rita; Vitor Marques; Diogo Bárbara

PERSISTENT AND TRANSIENT PRODUCTIVE INEFFICIENCY IN THE SWISS HYDROPOWER SECTOR

Samuel Schenk; Massimo Filippini

THE EFFECTS OF SETTLEMENT STRUCTURES AND WIND PARK PLANNING ON THE EFFICIENCY OF ELECTRICITY DISTRIBUTION IN SWEDEN

Maria Nieswand

COST WEIGHTS AS MODEL OUTPUT IN A WORLD OF RAPID AND ASYMMETRIC PRICE INCREASES

Brita Engen Finne; Kathrine Aasvik

Wed | 13:30-15:00 | Mars 2 – Country Analysis 2

MEASURING AND EXPLAINING RESOURCE IMPACTS ON GLOBAL INNOVATION PERFORMANCES

Barnabe Walheer

SPATIAL SPILLOVERS AND PROVINCIAL ECONOMIC EFFICIENCY IN VIETNAM: EVIDENCE FROM A SPATIAL STOCHASTIC FRONTIER APPROACH

Thanh Viet Nguyen; Michel Simioni

FRONTIER ANALYSIS OF ECO-EFFICIENCY GAPS: EVIDENCE FROM EUROPEAN COUNTRIES

Golnaz Amjadi; Charles-Henri Di Maria

MEASURING PRODUCTIVITY GROWTH USING MACHINE LEARNING. AN APPROACH BASED ON EFFICIENCY ANALYSIS TREES APPLIED TO OECD COUNTRIES

Mateusz Wojniak; Magdalena Kapelko; Juan Aparicio; Marta Zieba

Wed | 13:30-15:00 | Venus 1 – Health 1

A CONDITIONAL COMPOSITE INDICATOR WINDOW APPROACH TO MONITORING DETERIORATING SOCIAL RESILIENCE: AN APPLICATION TO HOME-CARE

Ahmed-Youssef Oukassou; Marijn Verschelde; Raluca Parvulescu; Nicky Rogge

WHEN PARALLEL NETWORK DEA MEETS AGGREGATED DATA: LIMITS OF PROCESS-LEVEL DIAGNOSIS IN PUBLIC HOSPITALS

Marta Abreu; Miguel Pereira

PRIMARY HEALTHCARE ORIENTATION, HEALTH SYSTEM EFFICIENCY, AND PROGRESS TOWARD SDG 3 TARGETS: INFRASTRUCTURE AND SUSTAINABILITY DIMENSIONS IN SUB-SAHARAN AFRICA

Kwadwo Arhin; Eric Fosu Oteng-Abayie

A MULTI-FRONTIER APPROACH TO SUSTAINABILITY: PRODUCTIVITY ANALYSIS IN ECONOMIC, ENVIRONMENTAL, AND SOCIAL DIMENSIONS

Wenzhuo Zhou; Zhiyang Shen; Michael Vardanyan

Wed | 13:30-15:00 | Venus 2– Governance 1

BEYOND EVALUATION SUITES FOR LLMS: ROBUST PARTIAL-FRONTIER COST-EFFECTIVENESS USING TOKEN PRICES AND USER PREFERENCES

Simone Di Leo

WHY TAX ADMINISTRATIONS DO NOT FULLY ENFORCE: A RATIONAL INEFFICIENCY APPROACH

Ebrahim Rezaei; Josef Jablonsky

CONSUMPTION EFFICIENCY AND POPULATION AGING: EVIDENCE FROM EXPENDITURE FRONTIERS IN BRAZIL

Alexandre Nunes Almeida; Carlos R. Azzoni; Subal C. Kumbhakar

POLITICS, REVEALED PREFERENCES AND LOCAL SPENDING PERFORMANCE: A BENEFIT OF THE DOUBT APPROACH

Lorenzo Catalano; [Giovanna D'Inverno](#); Kristof De Witte

Wed | 15:30-17:00 | Terra – Organized session 3: Composite indicators

Benchmarking and Monitoring with Composite Indicators

This organized session brings together researchers and practitioners working on the methodological development and applied use of composite indicators and scoreboards. Co-organised in collaboration with the European Commission's Joint Research Centre and the Competence Centre on Composite Indicators and Scoreboards (CC-COIN), the session highlights recent advances in Benefit-of-the-Doubt and related frameworks. The contributions cover innovations in benchmarking methodologies as well as applications to health care, education, justice, industry, social rights, and regional development. Emphasis is placed on robustness, conditional assessments, and interpretability for policy monitoring. The session aims to foster interdisciplinary exchange and strengthen links between research and policy practice.

MEASURING AND BENCHMARKING NURSES' PERFORMANCE IN HOME CARE NURSING: A CONDITIONAL BENEFIT-OF-THE-DOUBT APPROACH

[Nicky Rogge](#)

SUSTAINABLE RURAL DEVELOPMENT IN SEMIARID REGIONS: A STUDY OF THE CAATINGA BIOME IN BRAZIL

[Jefferson Staduto](#); [Andreia Zanella](#); [Hermilio Vilarinho](#); [Ana S. Camanho](#)

UNVEILING COMPANY READINESS FOR INDUSTRY 4.0 USING BENEFIT-OF-THE-DOUBT MODELS

[Hermilio Vilarinho](#); [André Guimarães](#); [Eduardo Oliveira](#); [Teresa Pereira](#)

A ROBUST CONDITIONAL ASSESSMENT OF PERFORMANCE TRENDS IN EDUCATION AND TRAINING SYSTEMS OF EUROPEAN REGIONS

[Fernando J. Osorio](#); [Flavia Barbosa](#); [Giovanna D'Inverno](#); [Ana S. Camanho](#)

AN INTERVAL SCALE BENEFIT-OF-THE-DOUBT MODEL

[Roxani Karagiannis](#); [Giannis Karagiannis](#)

A COMPOSITE PERFORMANCE INDICATOR FOR COURTS OF JUSTICE

[Giannis Karagiannis](#); [Stavros Kourtzidis](#); [Panagiotis Ravanos](#)

EVALUATING THE EUROPEAN PILLAR OF SOCIAL RIGHTS: A BENEFIT-OF-THE-DOUBT APPROACH WITH COMMON WEIGHTS

[Laura Carosi](#); [Giovanna D'Inverno](#); [Davide Zucchini](#)

Wed | 15:30-17:00 | Jupiter – Agriculture 3

MANAGEMENT CONTROL SYSTEMS AND PRODUCTIVE PERFORMANCE OF SPANISH AGRI-FOOD SMES

[Beatriz García-Cornejo](#); [José Antonio Pérez-Méndez](#); [Alan Wall](#)

SENSITIVITY OF FARM RESILIENCE TO ALTERNATIVE DROUGHT THRESHOLDS: THE CASE OF SMALLHOLDER FARMING IN MALAWI

[Carlos Böke Pascual](#); [Fabian Frick](#); [Johannes Sauer](#)

ASSESSING CLIMATE CHANGE IMPACTS ON CEREAL PRODUCTION EFFICIENCY IN CATALONIA

Amer Ait-Sidhoum; [Bouali Guesmi](#); Khezri-nejad-gharaei Mahdieh; José Maria Gil

IDENTIFYING THE IMPACTS OF CLIMATE AND WEATHER ON ARABLE FARMS' PERFORMANCE

[Raushan Bokusheva](#)

Wed | 15:30-17:00 | Mars 1 – Energy 3

CARBON MITIGATION COST WITH MARKET DISTORTIONS: EVIDENCE FROM POWER PLANTS IN CHINA

[Chunbo Ma](#)

BALANCING OUTPUT GROWTH AND ENERGY EFFICIENCY GOALS IN INDIAN MANUFACTURING: SOME ALTERNATIVE SCENARIOS

[Kankana Mukherjee](#)

ENERGY CONSERVATION STRATEGIES AND FIRM-LEVEL ENERGY EFFICIENCY: EVIDENCE FROM HIGH-COMBUSTION INDUSTRIES IN INDIA

[Vipin Valiyattoor](#); Anuvinda Anuvinda; Tanmay Basu

INTEGRATING EXERGY INTO DEA: A THERMODYNAMICALLY CONSTRAINED EFFICIENCY BENCHMARK

[Anatoliy Goncharuk](#); Biresh Sahoo

Wed | 15:30-17:00 | Mars 2 – SFA Methods 3

INCORPORATING INTERMEDIATE OUTPUTS INTO SFA USING AN EQUATION SYSTEM APPROACH WITH APPLICATION TO TRANSPORT

Trang Tran; [Phill Wheat](#); Alexander Stead; Andrew Smith

TESTING SEPARABILITY AND THE SCALING PROPERTY IN STOCHASTIC FRONTIER MODELS

[Samuele Centorrino](#); Christopher Parmeter

HOMOTHETIC DATA GENERATED PRODUCTION METATECHNOLOGIES

[Antonio Peyrache](#)

THE COST OF REGULARITY: EMPIRICAL EVIDENCE ON MONOTONICITY, QUASI-CONCAVITY, AND FRONTIER FLEXIBILITY

[Pietro Sala](#); Maria Vracholi; Fabian Frick; Johannes Sauer

Wed | 15:30-17:00 | Venus 1– Sustainability/Eco-efficiency 2

HOW DOES RESTORATION SHIFT THE FRONTIER: THE ECO-EFFICIENCY OF SPECIES-RICH GRASSLANDS

[Moritz Leonhard Ptacek](#)

GREEN INVESTMENT, INEQUALITY AND MISALLOCATION

[Louis-Marie Harpedanne](#)

IS SPAIN'S ENERGY VOUCHER LIGHTING THE WAY FOR THE POOR? A MICROECONOMIC EVALUATION OF THE BONO SOCIAL ELÉCTRICO

[Ana Rodriguez](#); Manuel Llorca

DYNAMIC CONVERGENCE IN SUSTAINABLE DEVELOPMENT EFFICIENCY

Godwill Nunya Agordoh; Kwaku Ohene-Asare; Emily Asaa Addison

Wed | 15:30-17:00 | Venus 2– Regulation 2

**PRODUCTIVE INFRASTRUCTURE, GOVERNANCE AND STRUCTURAL TRANSFORMATION:
EMPIRICAL EVIDENCE FROM AFRICAN ECONOMIES**

Pierre Joubert Nguetse Tegoum

**REDUCING EXTREME TRADE-OFFS IN REGULATORY BENCHMARKING THROUGH FRONTIER
REFINEMENT**

Sara Kamali; Mohsen Afsharian; Heinz Ahn

**DO RECENT PUBLIC R&D FUNDING INCREASE SPANISH FIRMS' R&D? AN EMPIRICAL EVALUATION
USING MACHINE-LEARNING TECHNIQUES**

Dario Blanco Fernandez; Desiderio Romero Jordán; Inmaculada C. Álvarez; Luis Orea

PUBLIC SUBSIDY AND COST EFFICIENCY IN FINNISH THEATRES

Christopher Parmeter; Marta Zieba

THURSDAY JUNE 18th, 2026

Thu | 09:00-10:00 | Terra & Jupiter - Plenary 3

THE COST OF CAPITAL IN REGULATED NETWORKS: HAVE WE MADE ANY PROGRESS?

Christoph Kaserer, Dean of TUM School of Management and Professor of Finance, Technical University of Munich

Thu | 10:30-12:00 | Terra – DEA Methods 3

ENDOGENEITY IN NONPARAMETRIC PANEL DATA ESTIMATION: APPLICATION TO CONDITIONAL PRODUCTION FRONTIERS

Camilla Mastromarco; Léopold Simar; Anne Vanhems

SINGLE INDEX MODELS FOR NONPARAMETRIC CONDITIONAL FRONTIERS

Catherine Cazals; Jean-Pierre Florens; Léopold Simar

BEYOND STATIC EFFICIENCY: A DYNAMIC DEA MODEL FOR SUSTAINABLE MUTUAL FUNDS

Alfons Oude Lansink; Magdalena Kapelko; Albane Tarnaud

COMBINING MULTICRITERIA METHODS WITH EFFICIENCY ANALYSIS: A CONICAL FDH DIRECTIONAL LUENBERGER APPROACH INCLUDING TIME-VARYING PREFERENCES

Cinzia Daraio; Thyago Nepomuceno; Leopold Simar

Thu | 10:30-12:00 | Jupiter – Agriculture 4

CONSISTENT AGGREGATION AND DECOMPOSITION OF PRODUCTIVITY CHANGE: APPLICATION TO ENERGY PRODUCTIVITIES IN NORWEGIAN FISHERIES

Kenneth Løvold Rødset; Kristin Helen Roll; Timo Kuosmanen

ADOPTION OF CROP–LIVESTOCK INTEGRATION AND TECHNICAL EFFICIENCY IN SOYBEAN FARMING: EVIDENCE FROM SÃO PAULO, BRAZIL

Larissa Aparecida Lopes de Souza; Marcelo José Carrer; Marcela de Mello Brandão Vinholis; Aduino Brasilino Rocha Jr.; Larissa Gui Pagliuca; Rodrigo Damasceno

CAN PRICE INCENTIVES DRIVE LEGUME ADOPTION? A TECHNICAL AND ECONOMIC BEST PRACTICES STUDY FROM FRANCE

Jean-Philippe Boussemart; Maé Guinet; Salomé Kahindo; Munier-Jolain; Romain Nandillon; Raluca Parvulescu

IS BIO-INPUT ADOPTION ASSOCIATED WITH TECHNICAL EFFICIENCY? EVIDENCE FROM SOYBEAN FARMS IN BRAZIL

Rodrigo Damasceno; Marcelo José Carrer; Hildo Meirelles de Souza Filho; Marcelo de Mello Brandão Vinholis; Larissa Gui Pagliuca

Thu | 10:30-12:00 | Mars 1 – Productivity Analysis 3

NONLINEAR PANEL DATA MODELS WITH ROBUST CORRELATED RANDOM EFFECTS WITH APPLICATION TO THE PUBLIC CAPITAL PRODUCTIVITY PUZZLE

Daniel Henderson; Emma Kate Henry; Andros Kourtellos

AN INDUSTRY-LEVEL MEASURE OF QUALITY-ADJUSTED HUMAN CAPITAL IN THE EUROPEAN UNION

Juan Duran; Michelle Alicia Jordan; Iulia Siedschlag

NAVIGATING AN AGEING WORKFORCE AND PRODUCTIVITY IN AN ERA OF DIGITALIZATION AND AUTOMATION: AN ANALYSIS OF AUSTRIAN EMPLOYER-EMPLOYEE LINKED DATA

Bernhard Mahlberg

ANALYZING LABOR PRODUCTIVITY CHANGES IN THE GERMAN BREWING INDUSTRY

Giannis Karagiannis; Magnus Kellerman; Klaus Salhofer

Thu | 10:30-12:00 | Mars 2 – Sustainability/Eco-efficiency 3

PERSPECTIVES FOR BRAZILIAN SOCIOBIODIVERSITY PRODUCTION: A REGIONAL ANALYSIS FOR THE PERIOD 2008-2025

Luísa Fancelli Coelho; Humberto Francisco Silva Spolador

ECONOMIC AND ENVIRONMENTAL EFFICIENCY IN EUROPE: A BY-PRODUCTION DEA ACROSS INDUSTRY SECTORS.

Rodrigo Cestau; Pablo Arocena

PROBABILISTIC EFFICIENCY ANALYSIS USING INTERPRETABLE ARTIFICIAL INTELLIGENCE: ASSESSING THE ROLE OF ENVIRONMENTAL VARIABLES

Ricardo González-Moyano; Juan Aparicio Baeza; José Luis Zofío Prieto

ARE ENVIRONMENTAL EFFICIENCIES OF SWEDISH AGRICULTURE MORE TRANSIENT OR MORE PERSISTENT? HETEROGENEITY AND DETERMINANTS

Vivian Wei Huang

Thu | 10:30-12:00 | Venus 1 – Oxera 1 facilitated session:

Pushing the Frontier: Efficiency & Productivity Debates in German Energy Regulation

Presenters: TBA

Thu | 10:30-12:00 | Venus 2 – ACM 1 sponsored sessions: Regulatory challenges - Efficiency of energy networks in transition

REGULATORY SOLUTIONS FOR BALANCING INCENTIVES

Gert Brunekreeft

NEST (Networks. Efficient. Secure. Transforming)

Jean-Marc Behringer

RHO-3 (Revenues = Incentives + Innovation + Outputs)

Teresa Romano

Thu | 10:30-12:00 | Orion 1 – Health 2

IMPACT OF THE HOSPITAL READMISSION REDUCTION PROGRAM (HRRP) ON THE COST EFFICIENCY OF U.S. URBAN HOSPITALS

Gerald Granderson

MAPPING DIET EFFICIENCY GAPS: A SLACK-BASED BENCHMARKING APPROACH

Gabriel Rosero; Liesbeth Colen

MANAGERIAL PRACTICES AND ALTRUISM IN HEALTHCARE DELIVERY

David Contreras-Loya; Paul J. Gertler; Ada Kwan

EFFICIENCY OF BRAZILIAN PRIMARY HEALTH CARE UNITS: A DYNAMIC DEA APPROACH WITH SOCIODEMOGRAPHIC AND EPIDEMIOLOGICAL FACTORS

Ríchila Aquino; Luciano Sampaio; Raquel Sampaio; Anne Carvalho; Lucas Luz

Thu | 13:30-15:00 | Terra & Jupiter - Special plenary session in honor of Knox Lovell

Chair: Robin C. Sickles

COMMENTS ON KNOX LOVELL'S LIFE OF CONTRIBUTIONS TO OUR SCIENCE OF EFFICIENCY AND PRODUCTIVITY ANALYSIS

Presenters:

1. Peter Schmidt

ON THE ORIGINS OF AIGNER, LOVELL AND SCHMIDT, 1977 AND THE DEVELOPMENT OF STOCHASTIC FRONTIER ANALYSIS

2. Valentin Zelenyuk

A PRESENTATION OF KNOX LOVELL'S LAST PUBLICATION: MEASURING CLIMATE RISKS: A NEW MULTIDIMENSIONAL INDEX FOR GLOBAL VULNERABILITY AND RESILIENCE

by Johanna Fajardo-Gonzalez, C.A. Knox Lovell, Julie Lovell, Heidi Edmonds, Environmental Development, Volume 56, September 2025, 101227.

3. Jesús T. Pastor

INTERPRETING PROFIT-RELATED INEFFICIENCIES AS EUCLIDEAN DISTANCES IN THE CONTEXT OF DIRECTIONAL DISTANCE FUNCTIONS AND DATA ENVELOPMENT ANALYSIS

forthcoming in Journal of Productivity Analysis Special Issue in Memory of C. A. Knox Lovell

4. Emili Grifell Tatje

OUT OF THE FRYING PAN INTO THE FIRE: MARKUP AND PRODUCT DIFFERENTIATION IN THE U.S. AIRLINE INDUSTRY 2002-2022

forthcoming in Journal of Productivity Analysis Special Issue in Memory of C. A. Knox Lovell.

Thu | 15:30-17:00 | Terra – Sustainability/Eco-efficiency 4

MEASUREMENT, DECOMPOSITION AND DETERMINANTS OF GREENHOUSE GAS EMISSION EFFICIENCY: AN APPLICATION TO AUSTRIAN DAIRY FARMS

Andreas Eder

FARM-LEVEL ENVIRONMENTALLY SUSTAINABLE PRODUCTIVITY AND PRECISION AGRICULTURE

Maria Vrachioli; Dejana Golic; Tassos Haniotis; Tamas Krisztin

VALUING POLLUTION-GENERATING COMMODITIES: A SHADOW PRICING APPROACH.

Arnaud Abad; Walter Briec; Paola Ravelojaona

SHADOW PRICING ECOSYSTEM SERVICES IN BOREAL FORESTS

Moriah Bostian; Shuyi Wang; Tommy Lundgren

Thu | 15:30-17:00 | Jupiter – DEA Methods 4

FROM BENCHMARKING TO REDESIGN: A LOCATION-ROUTING FRAMEWORK FOR RATIONALIZING SERVICE NETWORKS

Payam Rostami; Mohsen Afsharian

GUIDING INTO THE NEW SPACE ERA: AN EFFICIENCY EVALUATION OF ITALIAN SPACE FIRMS

Pierluigi Toma; Anna Rita Dipierro

UNDERSTANDING HOW WELL COMMUNITIES LIVE AND HOW EFFICIENTLY THEY OPERATE: A COMPARATIVE MOORA AND DEA ANALYSIS

Chiara Colamartino; Pierluigi Toma; Francesco Manfredi; Vincenzo Calabrese

INVERSELY PROPORTIONAL OUTPUT REDUCTION STRATEGY FOR DEA RANKING MODEL

Kuo-chih Yuan

Thu | 15:30-17:00 | Mars 1 – Banking & Finance 2

CAN ESG IMPROVE THE TOTAL FACTOR PRODUCTIVITY GROWTH OF COMMERCIAL BANKS? EVIDENCE FROM CHINA

Ning Zhu; Biyin Ma; Zhiqian Yu

MICROFOUNDATIONS IN MEASUREMENT AND THEORY

Junyi Zhu

ASYMMETRIC PASS-THROUGH OF THE CENTRAL BANK'S POLICY RATE TO BANKS' RETAIL RATES: EVIDENCE FROM PAKISTAN'S BANK-LEVEL DATA

Alfred Haug; Dorian Owen; Syed Hussain

RISK-RETURN-ESG INEFFICIENCY OF EUROPEAN MUTUAL FUNDS: A BY-PRODUCTION APPROACH

Alfons Oude Lansink; Magdalena Kapelko; Albane Tarnaud

Thu | 15:30-17:00 | Mars 2 – Justice 1

ON MODELING PENDING CASES IN COURT EFFICIENCY ANALYSIS

Giannis Karagiannis; Stavros Kourtzidis; Panagiotis Ravanos

TAKING INTO ACCOUNT THE COURTS' OPERATING ENVIRONMENT: A CONDITIONAL NONPARAMETRIC APPROACH

Luiza Badin; Camilla Mastromarco; Angelo Zago

THE JUSTICE PRODUCTION TECHNOLOGY

Giannis Karagiannis; Antonio Peyrache; Angelo Zago; Osman Zaim

A HYBRID COST EFFICIENCY MODEL UNDER FIXED AND NON-FIXED PRICES: A CASE STUDY ON THE POLISH JUSTICE COURTS

Magdalena Kapelko; Dimitrios Sotiros; Sebastian Tomczak

Thu | 15:30-17:00 | Venus 1 – Oxera 2 facilitated session:

Efficiency & Productivity Analysis in Action: Current Debates in German Energy Regulation

Presenters: TBA

Thu | 15:30-17:00 | Venus 2 – ACM 2 sponsored sessions: Efficiency methods- Efficiency of energy networks in transition

METHODS/TECHNIQUES FOR MEASURING EFFICIENCY

TBC

REFERENCE NETWORK ANALYSIS (RNA)

Alexander Fuchs

PRODUCTIVITY INDEX NUMBERS (PIN)

Michael Cunningham

Thu | 15:30-17:00 | Orion 1 - Education 2

TO WHAT EXTENT CAN TUITION DISCOUNTING BE APPLIED IN LOW-TUITION REGIMES? A STOCHASTIC COST FRONTIER STUDY OF HIGHER EDUCATION INSTITUTIONS IN TAIWAN

Tsu-Tan Fu; Wei-Hsin Kong; Wen-Jen Tsay

A BI-OBJECTIVE OPTIMIZATION APPROACH FOR STRATEGIC BENCHMARKING IN INTERVAL SCALE DEA WITH AN APPLICATION TO THE NATIONAL STUDENT SURVEY (NSS) IN THE UK

Akram Dehnokhalaji; Nasim Nasrabadi; Banu Lokman

ECONOMIES OF SCALE AND SCOPE IN EUROPEAN HIGHER EDUCATION: THE ROLE OF SUBJECT MIX

Gaetano Francesco Coppeta; Tommaso Agasisti; Luigi Brighi

PERFORMANCE ASSESSMENT OF EUROPEAN EDUCATION SYSTEMS AT THE REGIONAL LEVEL: DECOMPOSING TEMPORAL TRENDS USING A ROBUST CONDITIONAL MALMQUIST INDEX

Fernando Osório; Ana Camanho; Flávia Barbosa; Giovanna D'Inverno

FRIDAY JUNE 19th, 2026

Fri | 09:00-10:30 | Terra & Jupiter - Life-time Achievement Award to Erwin Diewert

Erwin Diewert, Professor Emeritus, Vancouver School of Economics, University of British Columbia.

Invited speakers: **Paul Schreyer** (OECD); **Robert Hill** (University of Graz); **Chihiro Shimizu** (University of Tokyo).

Fri | 11:00-12:30 | Terra - DEA Methods 5

A SPATIAL SCAN STATISTIC FOR SECOND STAGE ANALYSIS OF BRAZILIAN DISTRIBUTOR SYSTEM OPERATORS

Tatielle Menolli Longhini; Marcelo Azevedo Costa; Bruno de Almeida Vilela

CHECKING THE CONVERGENCE OF BOOTSTRAP DEA AND IMPUTATION-PROPELLED DEA

Ardhana M. Prabhash; Vipin Valiyattoor

A CIRCULAR SLACKS-BASED METAFRONTIER PSEUDO-MALMQUIST INDEX FOR GROUP PERFORMANCE COMPARISON: APPLICATION TO GLOBAL PETROLEUM FIRMS

Kwaku Ohene-Asare; Emily Asaa Addison; Eric D. Ofosu-Hene

VISUALIZING AND ANALYZING TRADE-OFFS IN DATA ENVELOPMENT ANALYSIS USING GRAPH THEORY

Alexander Öttl; Mette Asmild

Fri | 11:00-12:30 | Jupiter - Agriculture 5

THE EFFECT OF EXTREME WEATHER ON AGRICULTURAL PRODUCTIVITY

Carina Ober; Johannes Sauer

PRODUCTIVE EFFICIENCY OF CHINESE CHESTNUT CULTIVARS: A WEATHER VARIABLE DEA

Jonathan Meinholz

DO BLAST-RESISTANT WHEAT VARIETIES ADOPTION IMPROVE COST EFFICIENCY AND GLOBAL COMPETITIVENESS? EVIDENCE FROM BANGLADESH

Khaled Hasan Bappy; Hasneen Jahan; Mohammad Ariful Islam; Pawan Kumar Singh

FROM SURVIVAL TO PROSPERITY: CLIMATE CHANGE ADAPTATION STRATEGIES AND ITS WELFARE IMPACT ON HOUSEHOLDS IN KENYA: A CASE STUDY OF SUBUKIA SUB-COUNTY

Peter Kipkorir; Leonard Karani

Fri | 11:00-12:30 | Mars 1 - Sustainability/Eco-efficiency 5

DO PUBLIC-PRIVATE PARTNERSHIPS IMPROVE ENVIRONMENTAL PRODUCTIVITY? EVIDENCE FROM JAPAN'S SEWAGE TREATMENT SECTOR

Takayoshi Nakaoka

ASSESSING THE INDIVIDUAL CONTRIBUTIONS OF INPUTS AND OUTPUTS TO ENVIRONMENTALLY SUSTAINABLE PRODUCTIVITY CHANGE

Paola Ravelojaona

A MULTILATERAL SUSTAINABILITY INDEX: THEORY, MEASUREMENT, AND DYNAMICS

Tebila Nakelse; Elliott Dennis

ENVIRONMENTAL TOTAL FACTOR PRODUCTIVITY AND THE COST-EFFECTIVENESS OF GHG EMISSION REDUCTION

Yang Liu; Maria Vrachioli; Johannes Sauer

Fri | 11:00-12:30 | Mars 2 - Education 3

BEYOND PERFORMANCE: PRODUCTIVITY AND EQUITY DYNAMICS ACROSS OECD EDUCATION SYSTEMS

Gabriela Sicilia; Giovanna D'Inverno; Rosa Simancas; Cristina Polo

EFFICIENCY ASSESSMENT OF THE QUALITY-RELATED RESEARCH (QR) FUNDING: THE CASE OF ENGLAND'S HIGHER EDUCATION

Boon Lee

CONSTRUCTION OF EUROPEAN EDUCATION POLICY: OUTLINING WAYSTATIONS BASED ON REGIONAL CAPACITY

Dovile Stumbriene; Jose Luis Ruiz; Inmaculada Sirvent

Fri | 11:00-12:30 | Venus 1 - Justice 2

NOT ALL CASES ARE CREATED EQUAL (OR WHY WEIGHT RESTRICTIONS ARE ESSENTIAL IN COURT EFFICIENCY STUDIES)

Mette Asmild; Alexander Öttl; Jonas Månsson

ADOPTION OF TECHNOLOGY AND ITS CONSEQUENCES FOR PERFORMANCE - SWEDISH DISTRICT COURTS

Jonas Månsson; Christopher O'Donnell; Anupama Unnikrishnan

IT'S A COMPLEX CASE: BENCHMARKING COURTS OF JUSTICE

Jaap Bos; Mette Asmild; Deborah Kaut

Fri | 11:00-12:30 | Venus 2 - Gender

GENDER EFFECTS ON MICROFINANCE SOCIAL EFFICIENCY: A ROBUST APPROACH INCORPORATING UNDESIRABLE OUTPUTS

Cinzia Daraio; Francois Seck Fall; Leopold Simar; Anne Vanhems

CHINA, USA AND GLOBAL EFFICIENCY FRONTIER: LIMITING INFLUENCES OF SOCIAL EXCLUSION: LESSONS FOR EMERGING MARKETS

Augustine Obiorah

GENDER, ICT ADOPTION AND TECHNICAL EFFICIENCY: A SELECTION-CORRECTED STOCHASTIC FRONTIER ANALYSIS OF INDIA'S UNINCORPORATED MANUFACTURING SECTOR

Mahak Vijay; Rama Pal

INVERTED SBM-VRS BENCHMARKING OF WORKFORCE RELATIONS STABILITY UNDER MODERN SLAVERY RISK PRESSURES

Isotilia Costa Melo; Paulo Nocera Alves Junior; Morteza Alaeddini; Isotilia Costa Melo

Fri | 14:00-15:30 | Terra - Organized session 4: Efficiency in system design

Efficiency-Driven Socio-Technical System Design

This organized session explores how efficiency analysis can inform the design, evaluation, and governance of complex socio-technical engineered systems. Moving beyond purely technical perspectives, the contributions explicitly integrate human behavior, organizational dynamics, and adaptive decision-making into performance assessment frameworks. Drawing on systems engineering, efficiency analysis, complexity science, and data analytics, the session presents conceptual advances, methodological innovations, and applied case studies. Empirical applications span transportation, healthcare, safety-critical operations, and adaptive organizational systems. Collectively, the session highlights how efficiency-driven design can support resilient, context-sensitive, and policy-relevant system performance.

EFFICIENCY-DRIVEN DESIGN OF SOCIO-TECHNICAL ENGINEERED SYSTEMS: AN OVERVIEW

Konstantinos Triantis; Joseph Godfrey; Yas Mashayekhy; Saman Mohsenirad; Leon Sobrie; Maria Tomai

UNDERSTANDING COMPLEX TRANSPORTATION SYSTEMS: RAILWAY DELAYS AND POLICY INTERVENTIONS FOR IMPROVED PERFORMANCE

Yas Mashayekhy; Konstantinos Triantis

A PROBLEM TYPE TAXONOMY USING DONABEDIAN'S STRUCTURE-PROCESS-OUTCOME MODEL

Joseph Godfrey; Leon Sobrie; Maria Tomai; Konstantinos Triantis

TRUST-BASED INPUT REGIMES AND CLIMATE RESILIENCE EFFICIENCY: A CROSS-COUNTRY META-FRONTIER DEA STUDY WITH ROBUST SIMULATION-BASED AUGMENTATION

Juan Carlos Franco; Konstantinos Triantis

Fri | 14:00-15:30 | Jupiter - Agriculture 6

AGRICULTURAL SERVICES AND RESOURCE ALLOCATION EFFICIENCY: EVIDENCE FROM CHINA

Ruizhi Pang; Xuejie Bai

PEER EFFICIENCY ANALYSIS FOR TARGETED EXTENSION TO IMPROVE PRODUCTIVITY AMONG UGANDAN DAIRY FARMERS

Elizabeth Ahikiriza; Guido Van Huylenbroeck; Ludwig Lauwers

EFFICIENCY AND PEER-TARGET ANALYSIS IN EUROPEAN BEEKEEPING: LEARNING FROM EACH OTHER

Ludwig Lauwers; Marie Van Espen; Wim Verbeke

THE EFFECTS OF ADVISORY SERVICES AND TECHNOLOGY CHANNELING ON FARM YIELDS AND TECHNICAL EFFICIENCY OF WHEAT FARMERS IN ETHIOPIA

Asresu Yitayew Mengie; Awudu Abdulai; Yigezu A. Yigezu

Fri | 14:00-15:30 | Mars 1 - Country Analysis 3

QUALITY PERFORMANCE OF WATER UTILITIES SERVICES IN SUB-SAHARAN AFRICA. A NON-PARAMETRIC ANALYSIS OF DRC

Jeannine Mwakw; Barnabé Walheer

INVESTMENT PERFORMANCE OF INDIAN FINANCIAL ASSETS UNDER MEAN-STANDARD DEVIATION VS. MEAN-SEMIDEVIATION MODEL: APPLICATION OF STOCHASTIC FRONTIER ANALYSIS

Anup Kumar Bhandari

CORPORATE TAX UNDER-REPORTING IN DEVELOPING COUNTRIES: EVIDENCE FROM ETHIOPIA

Fikru Kefyalew Alemayehu; Subal Kumbhakar; Soressa Jarra

MODELLING THE FISCAL–SERVICE–SATISFACTION CHAIN: A PANEL NETWORK DEA STUDY OF SPANISH MUNICIPALITIES

María Teresa Balaguer-Coll; Isabel Narbón-Perpiñá; Diego Prior; Emili Tortosa-Ausina

Fri | 14:00-15:30 | Mars 2 - Sustainability/Eco-efficiency 6

PERFORMANCE EVALUATION OF BUS LINES USING THE BENEFIT-OF-THE-DOUBT APPROACH

Gabriel Eduardo Cursino da Silva; Lucio Silva; Luann Bruno Vidal de Andrade; Thyago Nepomuceno

THE INFLUENCE OF ENVIRONMENTALLY FRIENDLY VEHICLES ON AIR POLLUTION

Maria Jose Perez-Villadoniga; Ana Rodriguez-Alvarez; David Roibas

PRODUCTIVE EFFICIENCY OF METRO DC: 2020-2025—A SPATIAL ANALYSIS APPROACH

Robert Mosheim; Carl Paruska

FROM BLIND FUNDING TO SMART ALLOCATION: OPTIMISING ECO-EFFICIENCY IN URBAN TRANSPORT SERVICES

Victor Giménez; Gemma Pérez López; Pablo Povedano Fernández; Diego Prior; José Luis Zafra Gómez

Fri | 14:00-15:30 | Venus 1 - Manufacturing 2

GVC UPSTREAMNESS AND FIRM PERFORMANCE: EVIDENCE FROM INDIAN MANUFACTURING

Melvin Vincent

THE ROLE OF SPATIAL DYNAMICS IN LABOR PRODUCTIVITY: A REGIONAL MULTIFACTOR PARTITIONING ANALYSIS OF MEXICO'S MANUFACTURING SECTOR: 1993-2018

Jesús Antonio López Cabrera; Miguel Alejandro Flores Segovia; Robin Sickles

PRODUCTIVITY DEVELOPMENT IN THE SWEDISH PROCESS INDUSTRY

Anupama Unnikrishnan; Jonas Månsson

BRIDGING THE TECHNOLOGY GAP: ABSORPTION, ADOPTION AND TFP GROWTH OF INDIAN MANUFACTURING FIRMS

Anuvinda Anuvinda; Vipin Valiyattoor

Fri | 14:00-15:30 | Venus 2 - Health 3

DIFFERENCES IN PERFORMANCE OF THE STATES OF INDIA DURING COVID-19 PANDEMIC IN THE POST-VACCINATION PHASE DEPENDING ON WHETHER THE VACCINES USED WERE DISTRIBUTED CENTRALLY OR NOT

Trishit Bandyopadhyay Fellow

THE MANAGERIAL USE OF EFFICIENCY INFORMATION IN PUBLIC HOSPITALS

Paul Rouse; Ajit Arulambalam

MEASURING SOCIAL BENEFIT-COST EFFICIENCY IN EUROPEAN SPORTS INDUSTRY USING DYNAMIC DEA

Pin-Hsuan Sung; Chin-Yi Fang

[Fri | 16:00-17:30 | Terra - Agriculture 7](#)

POLICY DISTORTIONS AND RESOURCE MISALLOCATION IN AGRICULTURE: EVIDENCE FROM ITALIAN CEREAL FARMS UNDER THE POST-2013 CAP REFORM

[Maria Alessandra Rossi](#); [Cristina Salvioni](#)

TRADE-OFFS BETWEEN GOOD AND BAD OUTPUTS IN GERMAN DAIRY FARMS

[Fabian Frick](#); [Johannes Sauer](#)

A PROXY-VARIABLE INPUT DISTANCE FUNCTION FOR MULTI-OUTPUT PRODUCTION: EVIDENCE ON FERTILIZER AND PESTICIDE REDUCTION IN EU AGRICULTURE

[Lukas Cechura](#); [Zdenka Zakova Kroupova](#); [Jiri Vacek](#); [Subal C. Kumbhakar](#)

IMPROVING AGRICULTURAL DATA: INPUT-OUTPUT DEVELOPMENT AND QUALITY ADJUSTMENTS

[Eric Njuki](#)

[Fri | 16:00-17:30 | Jupiter - SFA Methods 4](#)

BAYESIAN ESTIMATION OF PANEL STOCHASTIC FRONTIER MODELS WITH SPATIALLY AND TIME-VARYING INEFFICIENCY

[Rouven E. Haschka](#)

INDIRECT INFERENCE IN PANEL STOCHASTIC FRONTIER MODEL WITH ENDOGENOUS SWITCHING AND ENDOGENOUS INPUTS

[Hung-pin Lai](#)

SEMIPARAMETRIC PANEL DATA MODELS WITH INTERACTIVE FIXED EFFECTS

[Emma Kate Henry](#); [Daniel Henderson](#)

UNDER-REPORTING IN MACROECONOMIC OUTPUT AND INPUT DATA SERIES: A TWO-TIER STOCHASTIC FRONTIER APPROACH

[Alecos Papadopoulos](#)

[Fri | 16:00-17:30 | Mars 1 - Sustainability/Eco-efficiency 7](#)

TECHNOLOGY SPILLOVERS FROM FOREIGN DIRECT INVESTMENT ON THE GREEN INNOVATION PERFORMANCE OF LOCAL FIRMS

[Iulia Siedschlag](#); [Juan Duran](#)

MINING, MILLS, AND EMISSIONS: DECOMPOSING EMISSION-REDUCTION PATHWAYS IN GLOBAL STEEL SUPPLY CHAINS

[Erik Enstad](#); [Giacomo Benini](#); [Lars Jaffke](#)

SUSTAINABLE PRODUCTIVITY & SUSTAINABLE PROFITABILITY

[Arne Henningsen](#); [Frederic Ang](#); [Moriah Bostian](#); [Hervé Dakpo](#); [Maria Vrachioli](#)

PATHWAYS TO GREEN SUSTAINABLE PRODUCTION USING FRONTIER ANALYSIS: THE ROLE OF INNOVATION, ENERGY EFFICIENCY, AND CARBON FOOTPRINTS IN INDIAN MANUFACTURING

[Aswin Jayachandran](#)

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ADVANCED DIGITAL TECHNOLOGIES AND TOTAL FACTOR PRODUCTIVITY: EVIDENCE FROM SPANISH MANUFACTURING FIRMS

Dolores Añón Higón; Juan Máñez; Amparo Sanchis; Juan Sanchis

PRODUCTIVITY WITHOUT DEFORESTATION: EVIDENCE FROM OIL PALM PRODUCTION AND LAND-USE EFFICIENCY IN INDONESIA

Haura Azzahra Tarbiyah Islamiya; Niken Widoretno; Dyah Wulan Sari; Widya Sylviana; Muhammad Fawait; Rista Setyana

REVISITING TOTAL FACTOR PRODUCTIVITY IN CHINA: A DUAL-FRONTIER MEASUREMENT OF CATCH-UP AND RELATIVE COMPETITION EFFECTS

Zhiyang Shen; Michael Vardanyan

SPATIAL MISMATCH IN PRODUCTIVITY: ECONOMIC EFFECTS OF HOUSING SEGREGATION IN MEXICO

Jesús piet López-Cabrera; Diego Andrés Cardoso-López; Robin C. Sickles

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EFFICENCY ANALYSIS OF FIRST INSTANCE COURTS IN NORTH MACEDONIA: A POLICY PERSPECTIVE

Katerina Shapkova Kocevska

LOWERING THE BAR TO FILL THE BENCH: THE QUALITY-QUANTITY TRADE-OFF IN JUDICIAL LABOR MARKETS

Deborah Kaut; Armela Maxhelaku

DECONSTRUCTING THE CLEARANCE RATE AS A MEASURE OF COURT PERFORMANCE

Pablo Arocena; Daniel Santín

COMPARING COMMERCIAL COURTS IN IBERIAN PENINSULA

Maria Silva; Pablo Arocena; Diogo Dias

Fri | 16:00-17:30 | Venus 2 - Water 2

ANALYSING PRODUCTIVITY AND EFFICIENCY IN THE NORWEGIAN AQUACULTURE INDUSTRY: A METAFRONTIER DEA APPROACH

Yajie Liu

EFFICIENCY AS A PATHWAY TO SUSTAINABLE COASTAL DEVELOPMENT: EVIDENCE FROM EAST JAVA'S SMALL-SCALE FISHERIES

Dyah Wulan Sari; Muhammad Fawait; Widya Sylviana; Haura Azzahra Tarbiyah Islamiya; Rista Setyana