

A photograph of a snowy winter landscape. In the foreground, several dried, spiky plant stalks, likely from a species of Asteraceae, stand against a backdrop of snow-covered ground. The stalks are dark and have a radial, star-like structure. In the background, a bright, low sun or moon is visible through bare trees, creating a warm, golden glow. The overall scene is a mix of cold, blue-toned snow and the warm, yellowish light of the sun.

CERE

2016

2016

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books

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reports

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seminars

44

journal articles

723

unique visitors on web each month

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Research Directors Welcome

Time to summarize another CERE year, certainly the most active in terms of PhD defenses. Philip Kofi Adom spent only 18 months to compile and defend his thesis “Energy Demand Management in Selected African Countries”, an empirical study of energy challenges in five African countries, focusing on energy demand management. Philip now has a university position University of Professional Studies, Ghana. Oben Bayrak defended his thesis entitled “Preference Cloud Theory”, a contribution to our understanding of human behavior under risk. Oben is now a Wallander grant holder at SLU. Matilda Eriksson defended her thesis “The Role of the Forest in Climate Policy”, unravelling the important role forests can play at a global scale in climate policy. Matilda now has a visiting researcher position at Georgia State University, US. Shanshan Zhang defended her thesis “Energy Efficiency and Firm Performance”, which also looks at energy and climate issues, but from a different perspective. Shanshan accepted a research position at the prestigious Xiamen University in China. Katarina Östberg wrapped up a very busy spring by defending her thesis “Non-market valuation of coastal ecosystem services” in the beginning of June. Her work focuses on preferences and how to measure the value of environmental improvements.

As a result, we have also been active on the market for new and promising younger researchers. We thus also welcomed, Klarizze Puzon and Erlend Sandorf. Erlend’s expertise is in valuation methods, an area in which we have a lot of experience. Klarizze and returnee Oben have substantial interest in experimental methods, a more uncharted area for us.

The seminar program has been particularly lively, and we are grateful for the financial support given by Handelsbankens research funds. Professor Christopher Böhringer has been a guest-professor at CERE and adjunct professor Martin Hill an associated member. Moreover, our PhD-courses have attracted a lot of foreign students and most of the courses have been overbooked.

The CERE board and the CERE advisory board are instrumental in shaping our center into an even stronger research unit, and I am very grateful for their support and strong commitment. 2017 will be an exciting year for several reasons, including the search for a successor to Sören Wibe, at the forest economics department. We believe that this Chair will be instrumental in developing the strengths of CERE further.

Bengt Kriström



From the left: Oben Bayrak, Mathilda Eriksson, Katarina Östberg, Philip Kofi Adom and Shanshan Zhang.



photos: Mona Bonta Bergman

About CERE

Umeå Campus has for decades been one of the national and international nodes for research and education in environmental and natural resource economics, mainly revolving around two academic departments that have worked in close cooperation with each other, the Department of Forest Economics at the Swedish University of Agricultural Sciences (SLU), and the Department of Economics, Umeå School of Business and Economics (USBE), at Umeå University (UmU). After many years of consideration, it was finally decided in 2009, to further strengthen this collaboration by joining these two separate, but interlinked, research groups in resource and environmental economics by creating a research centre.

The main objectives of CERE are to:

Link research groups from different departments and the two universities

Provide seminars and workshops within the field of environmental, energy and resource economics

Establish a platform for a creative and strong research environment within the field

Develop higher education in environmental, energy and resource economics

The creation of CERE, the Centre for Environmental and Resource Economics, was achieved by pooling researchers from the two above mentioned departments, along with economic historians who have focused their research on the historical aspects of resource usage and environmental impacts, from the Department of Geography and Economic History,

UmU. Together, the researchers at CERE embrace research areas as diverse as non-market valuation, climate policy, forest economics, environmental and energy efficiency analysis, and historical analysis of sustainable development, to mention a few examples of recent research.

CERE is headed by its two founders: research director Professor Bengt Kriström, who is also head of the Department of Forest Economics, SLU Umeå, and deputy research director Professor Runar Brännlund, USBE, Umeå University. The scientific secretary is Professor Tommy Lundgren, employed both at the Department of Forest Economics, SLU Umeå and, USBE, Umeå University. Over the course of the year; 6 professors, 3 CERE associates, 2 associate professors, 14 assistant professors or post-docs, 16 graduate students, and one communication officer – in total 42 persons belonged to CERE. About 44 % of the CERE personnel are employed by SLU, the remainder being employed by UmU.

Important external funding sources for CERE have been Elforsk - Swedish Electrical Utilities' R&D Company, the Swedish Environmental Protection Agency, the Swedish Energy Agency, Formas - The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, the Swedish Agency for Marine and Water Management and Mistra – The Swedish Foundation for Strategic Environmental Research. Recruitment of post-doc's, PhD's and CERE's guest researcher program, has been generously funded by Handelsbanken Research Foundations.



photo: Mona Bonta Bergman

CERE Meetings

CERE organises two meetings each year in accordance with the CERE main objectives. That is, to link research groups, provide seminars and workshops within the field, constitute a platform for a creative and strong research environment, and develop higher education.

The Ulvön Conference

An international conference on Environmental Economics, always held adjacent to the Swedish midsummer celebration in June. The key purpose of the annual conference is to allow PhD students to present their work and to create a forum for research in environmental economics. The conference is always held at Ulvön, a small old fishing hamlet located at the Swedish east-coast, about 40 km south of Örnsköldsvik. The island has about 40 around the year residents, but is a popular travel destination for tourists during the summer.

The 23rd Ulvön Conference proved a challenge due to a strike amongst airline personnel but still hosted 30 participants. Keynote speakers included Erik Nævdal who talked about Catastrophic Risk in Resource Economics and some Stuff You Didn't Know About Fish. Magnus Lindmark gave a talk about The Role of Energy for the Emergence of Modern Economic Growth, while Bengt Kriström gave a talk about CBA: A Review of some Old, some New and some Wild Ideas.

In contrast to problems related to the strike, the weather gods were on our side and contributed to a beautiful first evening with barbeque and many economics related discussions. Another conference tradition, that was upheld also this year, is the tasting of the Swedish delicacy of

fermented herring. As usual, the fermented herring was well appreciated by some, whilst others are not likely to try it again. The conference received financial support from the Wallander foundation and Luleå Technical University. We look forward to the midsummer week of 2017 and the 24th Ulvön conference.

The Ammarnäs Winter Workshop

For the seventh consecutive year, CERE held its internal winter meeting in the alpine scenery of the small village of Ammarnäs, situated in the Swedish mountains. The 2016 meeting was a meeting where our PhD students, newly hired researchers and Post Doc's were given the opportunity to present their research along with the eminent guest speaker Peter Berck from University of California, Berkeley. Peter gave a talk about waste management in the US and California.

As usual, the meeting was held at Vindelfjällens Research Station. Apart from being located at a nice spot, the research station provides an opportunity for researchers from various disciplines to gather and thereby build a creative meeting place. The long term aim with our meeting here is to build a knowledge centre for people interested in the relationship among environmentally related issues and developments in society.

The weather was also this year suitable for outdoor activities such as snowmobile and horseback riding, as well as downhill and cross-country skiing. Snowmobiling has become a fast favorite among our staff, partly due to the opportunity to get closer to the summits.



photo: Alejandro Egúez



photo: Alejandro Egúez

A Journal Article

Residential End-use Electricity Demand and the implications for Real-time Pricing in Sweden

Efficient pricing of electricity is important from a policy perspective. Efficiently priced electricity can lead to many benefits, including reducing system cost and allowing lower cost integration of variable sources of energy like wind. Despite much research on different pricing mechanisms, in most countries household retail prices have been varying only at a monthly level. Recently, there has been a serious reconsideration of earlier ideas regarding “real time” pricing (RTP) i.e. allowing the retail price of electricity to be determined by the wholesale (spot market) price, which varies at the hourly level for the Nordic countries, on the Nord pool market.

Our study considers the case of Sweden in the context of efficient pricing, where the government and regulators have been quite positive about the potential for real time pricing for households. Nonetheless, there is little empirical evidence about the practicability of such schemes, and virtually none for Sweden. In understanding the potential for real time pricing to shift demand over the day, it is important to have a clear idea of two factors: how consumers currently consume electricity at the hourly level and, what the potential benefit to the consumers and retailers is, of different shifts of the daily load profile. Ours is the first empirical study to answer these questions for Sweden. The perspective taken in this study is, essentially, of a thought experiment in a counter-factual world wherein system prices are exogenously determined and load shifts are feasible.

Using unique data from a study carried out by Sweden’s Energy Agency, our study estimates

hourly end-use load profiles, conditional on household characteristics. These load profiles are not only important in themselves. They indicate how consumers actually use electricity during the day, but also provide an opportunity to understand the potential for RTP. That is when used with the spot price data—upon which any real-time price will likely be based—and specified shifts of the load profile (e.g. shifts two hours ahead), it is possible to compute potential cost savings for both retailers and consumers. Our study indicates relatively intuitive facts about the daily load profile: heating is the largest part of load in winter, and there are two peaks in demand corresponding respectively to the pre-office hours in the morning and the post-return-to-home hours in the evening. It also indicates that the daily cost savings to consumers and retailers is not large; even with maximum variation in price, daily cost reductions for the average consumer are smaller than 5% for a very unlikely five-hour-ahead shift in the daily load profile.

Overall, our results indicate that, in the short-run, when technology is fixed, and with domestic load being only a small part of total system load, the economic benefits of RTP in reality are likely to be rather small. These results call for a careful re-evaluation of the Swedish government’s thrust on RTP, and demand flexibility in general, to bear a share of the task of balancing load variability in load. Our results are also consistent with the general lack of interest shown by Swedish retailers in offering, and consumers in wanting, real-time contracts (which are available by law in Sweden).

Vesterberg, M and Krishnamurthy, C. K. B
(2016), Energy Journal 37 (4)

A CERÉ Working Paper

Explaining the Interplay of Three Markets: Green Certificates, Carbon Emissions and Electricity

The European Union's Emissions Trading System (EU ETS) and the Swedish-Norwegian Tradable Green Certificate System (Swedish-Norwegian TGC system) are two market-based instruments that have the overlapping goal to mitigate greenhouse gas emissions by shifting economies to cleaner energy sources. The EU-ETS puts a "cap" on the total amount of greenhouse gas emissions that can be emitted and the cap is then reduced over time. The Swedish-Norwegian TGC system is specifically targeted at increasing the electricity production from renewable energy sources. Understanding the price signals and interactions of these two newly created markets is essential for all decisions makers - regulators and direct market participants - who aim to reach the predefined environmental policy goals in the most efficient manner.

The interaction between these policy instruments has been widely examined from the theoretical perspective. This research contributes to the literature by empirically examining the interplay between the prices of three markets: (1) the price of tradable green certificates in the Swedish-Norwegian TGC system, (2) the price of carbon in the EU ETS and (3) the price of electricity in Nord Pool. We use a multivariate vector-autoregression (VAR) approach to take into account the endogenous relationships between these prices. Some theoretical literature argues that adding a system like the Swedish-Norwegian TGC could in fact counteract EU-ETS. With added green certificates the relative profitability of renewable electricity could increase and with it its production, making the carbon price drop to the benefit

of emission-intensive electricity. However, the empirical results in this paper found no indication on that being the case, on the contrary. The results show that increases in carbon prices positively affect green certificate prices at least in the short-run. This finding could be inherent to the specific features of the Swedish-Norwegian TGC system in which the targeted share of renewable electricity is met through the percentage requirement. This implies that demand for TGC is a derived demand stemming from demand for electricity meaning that any factors potentially affecting demand for TGC are already captured by demand for electricity.

An immediate policy implication from our finding is that, to date, the EU ETS and the Swedish-Norwegian TGC system do not interfere with each other's price formation. When it comes to price signals, the two systems do not obstruct the goal to reduce greenhouse gas emissions and increase the share of renewable electricity. For producers aiming to expand the capacity of renewable electricity or for new producers aiming to enter the market our results imply that these markets support investment into renewable electricity. In the near future, these kinds of investment should be further supported by the tighter cap on the EU's greenhouse gas emissions and the increasing targeted share of renewable electricity.

Sandra Schusser and Jūratė Jaraitė-Kažukauskė
CERE WP #2016-10



photo: Mona Bonta Bergman

Selection of Ongoing Projects

Energy Taxation in Sweden

(Energiforsk - the Swedish Energy Research Centre)

The project highlights how existing incentive structures, such as taxes and subsidies, comprehensively affects electricity usage and production. Our theoretical model aims to answer how spillover effects should be handled within a Cost-Benefit analysis of a compulsory green certificate change. It also gives a formula that can easily be applied to approximate both small adjustments of the certificate scheme as well as scrapping it all together. With our General Equilibrium model, we simulate “downsizing” Swedish nuclear power by 2030. The model provides detailed results for different sectors, not least for the competitive, energy intensive industry and the electricity market. Several macroeconomic indicators are also analyzed. We make a sensitivity analysis with regard to the cost for renewable alternatives and to what extent fossil alternatives are available for development.

Conditions for Green Structural Change. The Evolution of the Environmental Goods and Service Sector in Sweden 1970-2015

(Swedish Research Council)

Mirroring the need to achieve green economic growth, the Environmental Goods and Service Sector (EGSS) has become a new European statistical standard. Sweden has, together with the Netherlands, been one of the first countries to produce statistics on the EGSS. As the first estimates of the Swedish EGSS were published, it was evident that the sector was a sizeable one, with a turnover of 220 billion SEK. Later historical reconstructions of the sector showed that it was large already in 2002, which indicates that the

EGSS must have started to grow earlier. The purpose of this project is to explore the growth of the environmental goods and service sector, EGSS, in Sweden 1970-2014 from a perspective of long-term economic structural change. We do so by combining macro and micro perspectives through methodologies from economic history and business history as well as further extension of data from Statistics Sweden. Specifically, we will analyze the growth of the EGSS by focusing on: a) its growth characteristics in relation to other sectors since the 1970s b) the development of entrepreneurship and key innovations within the sector and c) the importance of governmental policies and market drivers behind start-ups and scaling up of the firms within this sector.

Recreational Fishing in Sweden: Scope, Benefits, and Costs

(Swedish Agency for Marine and Water Management)

The objective with this project is threefold; (1) to provide a picture of the extent of recreational fishing in Sweden in terms of number of people, where they go fishing, which species are caught, and what type of gear is being used, (2) to estimate societal value from recreational fishing, and how it varies over space and time, (3) to develop analytical tools that can be used as an aid in recreational fishery management and in evaluations and benefit-cost analysis, ex-ante and ex-post, of regulations that may have impacts on recreation values. The workhorse in the project is the survey of recreational fishing that is managed by the Swedish Agency for Marine and Water Management. The survey is sent out three times a year since 2013 to a random sample of the Swedish (adult) population, asking about fishing habits and more.



photo: Mona Bonta Bergman

Board Members

Board of Directors

The Board of Directors oversees the Centre's activities and review the Strategic Plan. It consists of researchers from across the environmental science and economic disciplines in Umeå. The Board meets every six months to discuss the overall strategic vision and CERE's on-going activities.

Chair: Sofia Lundberg (Rector at Umeå School of Business and Economics, Umeå University)

Ove Nilsson (Professor, Department of Forest Genetics and Plant Physiology, SLU Umeå and Director of Umeå Plant Science Centre)

Carina Keskitalo (Professor, Department of Social and Economic Geography, Umeå University)

Hans Lundqvist and subsequently **Göran Ericsson** (Professor, and Head of Department of Wildlife, Fish and Environmental Studies, SLU Umeå)

Johan Fransson (Associate Professor, and Head of Department of Forest Resource Management, SLU Umeå)

Research Director of CERE: Bengt Kriström (Professor, and Head of Department of Forest Economics, SLU Umeå) (Adjunct board member)

Deputy Research Director of CERE: Runar Brännlund (Professor, USBE, Umeå University) (Adjunct board member)

Scientific Secretary of CERE: Tommy Lundgren (Professor, USBE, Umeå University and Department of Forest Economics, SLU Umeå) (Adjunct board member)

Our Advisory Board for Strategic Issues

The Advisory Board provides invaluable knowledge, experience and advice from their respective industries and areas of expertise. Industries and areas very much relevant to CERE's research. They visit biannually.

Professor Lars Bergman - Former President, Stockholm School of Economics

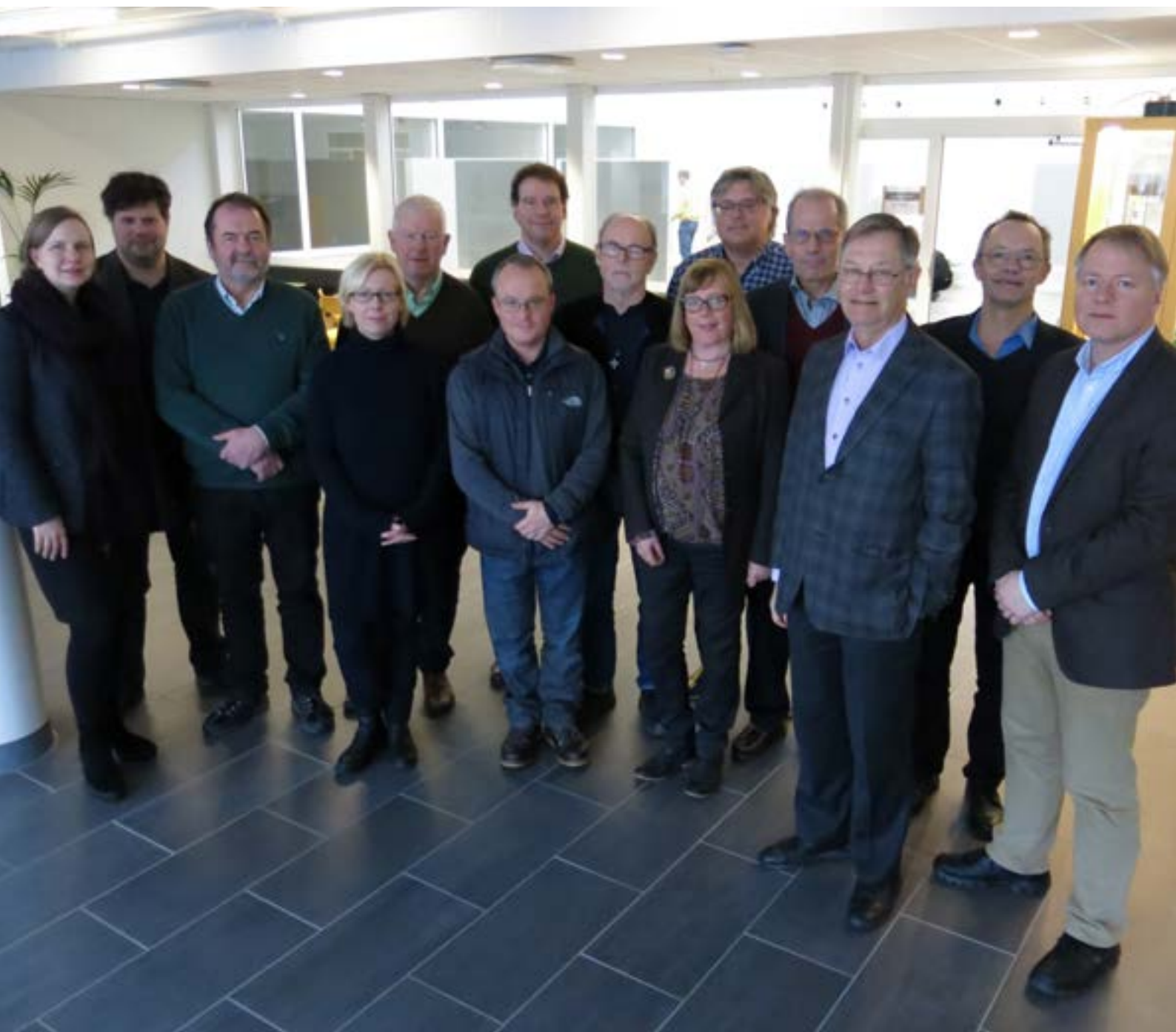
Professor Torbjörn Fagerström - Former CEO, Swedish Foundation for Strategic Research

Yvonne Fredriksson - Former Director General, Swedish Energy Markets Inspectorate

Kjell Jansson - Former CEO, Swedenergy

Anders Kristoffersson - Former Senior Advisor, Ministry of Finance

Mårten Larsson - Head of Industrial Policy Department, Swedish Forest Industries Federation



Personnel and Visitors

Professors

Runar Brännlund
Peichen Gong
Bengt Kriström
Magnus Lindmark
Tommy Lundgren
Karl-Gustaf Löfgren

Associate Professors

Ann-Kristin Bergquist
Göran Bostedt

Other Researchers

Maria Arvaniti
Thomas Broberg
Kelly de Bruin
Ola Carlén
Örjan Furtenback
Jurate Jaraite
Santosh Joshi
Amin Karimu
Andrius Kazukauskas
Chandra Kiran B Krishnamurthy
Lars Persson
Klarizze Puzon
Erlend Dancke Sandorf
Camilla Widmark

Graduate Students

Philip Kofi Adom
Golnaz Amjadi
Victoria S Ayubu
Oben Kurtulus Bayrak
Brian Danley
Alejandro Egüez
Mathilda Eriksson
Jinggang Guo
Aemiro Melkamu
Mattia Luigi Ratti

Sandra Schusser
Tharshini Thangavelu
Anders Vesterberg
Mattias Vesterberg
Shanshan Zhang
Katarina Östberg

Communication

Mona Bonta Bergman

CERE Associates

Professor Chris Böhringer
Professor Shawna Grosskopf
Professor Per-Olov Johansson
Doctor Martin Hill
Assistant Professor Anton Paulrud

CERE Visitors

Peter Berck
University of California, Berkeley, April
Finn Førsund
Department of Economics, University of Oslo, December
Luis Orea
Oviedo Efficiency Group, December
Stefano Verde
European University Institute, November
Aleksandar Zaklan
German Institute for Economic Research DiW, November
Karine Nyborg
Oslo University, September
Rimvydas Baltaduonis
Gettysburg Lab for Experimental Economics (GLEE), June
Vladimir Tikhomirov
Mech-Math Dept. of Lomonosov Moscow State University, May
John Hey
University of York, May
Shunsuke Managi
Kyushu University, April
Maria di Corrado
University of East Anglia, March



photo: Alejandro Egúez

Publications and Activities 2015-2016

Professors

Runar Brännlund

Journal articles

Brännlund, R., Karimu, A. and Söderholm, P. (Published online June 29, 2016) Convergence in Carbon Dioxide Emissions and the Role of Growth and Institutions: A Parametric and Nonparametric Analysis. *Environmental Economics and Policy Studies*, DOI: 10.1007/s10018-016-0162-5

Brännlund, R., Lundgren, T. and Söderholm, P. (2015) Convergence of Carbon Dioxide Performance Across Swedish Industrial Sectors: An Environmental Index Approach. *Energy Economics* 51, 227-235

Brännlund, R., Nordström, J., Stage, J. and Svedin, D. (Published online April 26, 2016) Foreign Ownership and its Effects on Employment and Wages: The Case of Sweden. *IZA Journal of European Labor Studies* 5 (8), 1-17, DOI 10.1186/s40174-016-0058-1

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (Published online August 3, 2016) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics*, DOI.org/10.1016/j.eneco.2016.07.017

Mannberg, A., Brännlund, R., Jansson, J., Lindgren, U. and Pettersson, T. (2015) Påverkar skatteundantag hushållens benägenhet att köpa miljöbilar? En studie av Stockholms trängselskatt. *Ekonomisk Debatt* 43 (1), 32-39

Book

Riera, P., Garcia, D., Krström, B., and Brännlund, R. (2016) *Manual de Economía Ambiental y de los Recursos Naturales*. Madrid: Paraninfo

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T., Brännlund, R., Kazukauskas, A., Persson, L. and Vesterberg, M. (2015) *An Electricity Market in Transition Demand Flexibility and Preference Heterogeneity*. Swedish Energy Market Inspectorate, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M., Brännlund, R. and Lundgren, T. (2016) *Pricing Forest Carbon: Implications of Asymmetry in Climate Policy*. Working Paper 2016:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A. and Brännlund, R. (2015) *Energy efficient R&D investment and Aggregate Energy Demand: Evidence from OECD Countries*. Working Paper 2015:14, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Newspaper articles

Aronsson, T., Brännlund, R., Carlén, B., Gren, I.-M., Kriström, B., Leck, C., Löfgren, K-G., Marklund, P-O., Sahlén Östman, L., Samakovlis, E. and Söderholm, P. Minska miljöpåverkan i stället för att gå i cirklar (June 24, 2015), *Dagens Nyheter*, Debatt, Reply

Brännlund, R., Lundgren, T. and Lundberg, S. Fyra genomtänkta steg för en effektiv klimatpolitik. (November 12, 2015) *Västerbottenskuriren*

Samakovlis, E., Brännlund, R., Aronsson, T., Gren, I.-M., Leck, C., Mickwitz, P. and Söderholm, P. Sverige måste få ned bilarnas utsläpp. (December 10, 2015) *Svenska Dagbladet*, Debatt

Conferences

6th *Ammarnäs Meeting on Environmental Economics*, Organizer, 2015

22nd *Ulvön Conference on Environmental Economics*, Organizer, 2015

Invited speaker at Energiföretagen Sveriges seminar *Hur stabil är elsektorn som skattebas?* Almedalen, July 2016

Invited speaker at Energiföretagen Sveriges seminar *Lyser fortfarande lamporna 2025?* Almedalen, July 2016

Invited speaker at Energimarknadsinspektionens seminar *Är kunden lösningen för en framtida fungerande elmarknad?* Almedalen, July 2015

Invited speaker at Skogsindustrierna, Jernkontoret, SweMin, IKEM – Innovations- och kemiindustrierna, EFAs seminar *Hur långt före kan vi gå? En klimatkussion med industriperspektiv.* Almedalen, July 2015

Invited speaker at Svensk Energis seminar *Hur ser morgondagens elmarknad ut?* Almedalen, July 2015

External activities

Board member of the Marcus Wallenberg Foundation for International Scientific Collaboration

Board member of the Swedish Research Council FORMAS Scientific Council, 2010-2015

Board member of the Umeå School of Business and Economics

Board member of Trafikverket (Swedish Transport Administration), 2010-2016

Chairman for the Scientific Council in Environmental Economics at the National Institute for Economic Research, (Konjunkturinstitutets Vetenskapliga Råd i Miljöekonomi) 2012-

Chairman of IVA project "Vägval EI"

Deputy Research Director of CERES, 2009-

Editor in chief: *Journal of Forest Economics*, Elsevier. 2011-

Elected member of the Royal Swedish Academy of Engineering (IVA), 2009-

Elected member of the The Royal Skyttean Society (Kungliga Skytteanska Samfundet), 2011-

Faculty opponent on the doctoral thesis *Essays on Energy Demand and Renewable Natural Resource Management*, by Justice Tei Mensah, Swedish University of Agricultural Sciences, January 2016.

Peichen Gong

Journal articles

Bostedt, G., Mustonen, M. and Gong, P. (2016) Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives. *Scandinavian Journal of Forest Research* 31 (3), 314-322

Felton, A. et al. (2016) Replacing Monocultures with Mixed-species Stands: Ecosystem Service Implications of two Production Forest Alternatives in Sweden, *Ambio* 45 (2), 124-139

Gong, P. and Löfgren, K.G. (2016) Could the Faustmann Model have an Interior Minimum Solution? *Journal of Forest Economics* 24, 123-129

Guan, Z. and Gong, P. (2015) The Impacts of International Efforts to Reduce Illegal Logging on China's Forest Products Trade Flow. *China Agricultural Economic Review* 7 (3), 467-483

Skonhoft, A. and Gong, P. (2016) Maximum Sustainable Yield Harvesting in an Age-structured Fishery Population Model. *Natural Resource Modeling* 29, 610–632

Report

Bostedt, G., Mustonen, M. and Gong, P. (2015) *Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives*. Working Paper 2015:5, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Guo, J. and Gong, P. (2016) Economic Potential of Forestry Options for Carbon Sequestration in Sweden. *Scandinavian Society of Forest Economics 2016 Biennial meeting*. Oscarsborg, Norway, May 25-27, 2016

Guo, J. and Gong, P. (2016) Impacts of Increased Bioenergy Demand on Timber Markets: An Intertemporal Optimization Perspective. *The Fifth International Faustmann Symposium*, Beijing, China, October 18-21, 2016

External activities

Editor in chief: *Journal of Forest Economics*, Elsevier. 2010-

Opponent: Miriam Münnich Vass's PhD thesis. Department of Economics, SLU, December 4th, 2015

Research stay abroad

Visiting Researcher at Beijing Forestry University, South China Agricultural University, April 2015

Bengt Krström

Journal articles

Bayrak, O. and Krström, B (2016) Is There a Valuation Gap? The Case of Interval Valuations. *Economics Bulletin*, 36 (1), 218-236

Belyaev, Y. and Krström, B. (2015) Analysis of Survey Data Containing Rounded Censoring Intervals. *Informatics and Applications* 9 (3), 2-16

Krishnamurthy, C. K. B. and Krström, B. (2015) A Cross-country Analysis of Residential Electricity Demand in 11 OECD Countries. *Resource and Energy Economics* 39, 68-88

Krishnamurthy, C. K. B. and Kriström, B. (2016) Determinants of the Price-premium for Green Energy: Evidence from an OECD Cross-section. *Environmental and Resource Economics* 64 (2), 173-204

Krishnamurthy, C. K. B. and Kriström, B. (2015) How Large is the Owner Renter Divide? Evidence from an OECD Cross Section. *Energy Journal* 36 (4), 63-82

Johansson, P.-O. and Kriström, B. (Published online November 30, 2015) Economic Valuation Methods for Non-market Goods or Services. *Oxford Bibliographies*

Johansson, P.-O. and Kriström, B. (2015) On the Social Cost of Water-related Disasters. *Water Economics and Policy* 1 (3), 1550015-1-26

Books

Johansson, P.-O. and Kriström, B. (2015) *Cost-Benefit Analysis for Project Appraisal*. Cambridge: Cambridge University Press

Riera, P., Garcia, D., Kriström, B., and Brännlund, R. (2016) *Manual de Economía Ambiental y de los Recursos Naturales*. Madrid: Paraninfo

Book chapters

Haltia, E., Kriström, B. and Ranneby, B. (2015) On the Treatment of Non-response in Contingent Valuation. Research note. In: Haltia, E. *Contingent Valuation and Choice Experiment of Citizens' Willingness to Pay for Forest Conservation in Southern Finland*. Manuscript IV in Doctoral Thesis, Helsinki: University of Helsinki, Faculty of Agriculture and Forestry

Johansson, P.-O. and Kriström, B. (2015) Hydropower Management: Electricity versus Other Values. In: Dinar, A. and Schwabe, K. (Eds.) *Handbook of Water Economics* 162-180, Cheltenham: Edward Elgar Publishing Limited

Reports

Bayrak, O.K. and Kriström, B. (2015) *Is There a Valuation Gap? The Case of Interval Valuations*. Working Paper 2015:13, Centre for Environmental and Resource Economics, Umeå, Sweden

Kriström, B. (2016) *A General Equilibrium Cost-benefit Rule for Green Certificates*. Working Paper 2016:19, Centre for Environmental and Resource Economics, Umeå, Sweden

Newspaper article

Aronsson, T., Brännlund, R., Carlén, B., Gren, I.-M., Kriström, B., Leck, C., Löfgren, K.-G., Marklund, P.-O., Sahlén Östman, L., Samakovlis, E. and Söderholm, P. Minska miljöpåverkan i stället för att gå i cirklar (June 24, 2015), *Dagens Nyheter*, Debatt, Reply

Conferences

6th *Ammarnäs Meeting on Environmental Economics*, Organizer, 2015

22nd *Ulvön Conference on Environmental Economics*, Organizer, 2015

Lucotte, E. et al (2016) A Pilot Choice Experiment Among French Nuclear Specialists to Measure the Intangible Value of Territories. *13th International Conference on Probabilistic Safety Assessment and Management (PSAM 13)*. Seoul, Korea, October 2-7, 2016

External activities

Board Member, Faculty Recruiting and Hiring Search Committee, SLU, 2013-2016

Board Member, Scientific Council Transport Analysis, Stockholm

Board Member, The Swedish National Road and Transport Research Institute

Board Member, Vindelfjällens forskningsällskap

Elected Working Member, The Royal Skyttean Society, 2013-

Elected Member, Swedish Society for Energy Economists 2013-

Head, Department of Forest Economics 2001-2009, 2010-

Director, CERE 2009-

Elected Member of The Royal Swedish Academy of Agriculture and Forestry, 2011 -

Expert, Scientific Council of Trafikanalys, 2011-

Magnus Lindmark

Journal articles

Acar, S. and Lindmark, M. (2016) Periods of Converging Carbon Dioxide Emissions from Oil Combustion in a pre-Kyoto Context. *Environmental Development* 19, 1-9

Bergquist, A-K. and Lindmark, M. (2016) Sustainability and Shared Value in the Interwar Swedish Copper Industry, *The Business History Review* 90 (2), 197-225

Lindmark, M. and Andersson, L.F. (2016) A Historical Wealth Assessment – Measuring the Swedish National Wealth for the Nineteenth and Twentieth Centuries. *Scandinavian Economic History Review* 64 (2), 122-137

Book chapter

Lindmark, M. and Andersson, L.F. (2015) Growth Performance and Organisational Forms: The Case of Swedish Life Insurance 1890 to 1950 In: Pearson, R. and Yoneyama, T. (Eds.) *Corporate Forms and Organisational Choice in International Insurance* 243-262, Oxford: Oxford University Press

Report

Lindmark, M. and Acar, S. (2015) *Periods of Converging Carbon Dioxide Emissions from Oil Combustion 1973-2004*. Working Paper 2015:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Swedish Association for Energy Economics (SAEE) conference, 2016

23rd *Ulvön Conference on Environmental Economics*, 2016

External activities

Chairman of The Swedish Economic History Association, 2013-2015

Consultant for Swedish Agency for Growth Policy Analysis, 2016

Faculty opponent: Johan Brolund, (Lic-thesis). Luleå Tekniska Universitet mars 2016

Magnus Lindmark (2016) "Rethinking the environmental state: An Economic History of the Swedish Environmental Kuznets Curve for carbon", presented at the 'Good' Energy Policy seminar, Energy@Cambridge, Centre for Science and Policy, Judge Business School, University of Cambridge, February 23, 2016

Member of book committee on insurance history Oslo School of Economics BI, 2015

Organizer of the 11th Swedish Economic History Meeting, 2015

Tommy Lundgren

Journal articles

Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2016) Environmental Investment and Firm Performance: A Network Approach. *Energy Economics* 57, 243-255

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T. and Weber, W. (Published online September 26, 2016) Time Substitution for Environmental Performance. *Empirical Economics*, DOI:10.1007/s00181-016-1180-7

Brännlund, R., Lundgren, T. and Söderholm, P. (2015) Convergence of Carbon Dioxide Performance Across Swedish Industrial Sectors: An Environmental Index Approach. *Energy Economics* 51, 227-235

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (Published online August 3, 2016) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics*, DOI.org/10.1016/j.eneco.2016.07.017

Lundgren, T. and Marklund, P-O. (2015) Climate Policy, Environmental Performance, and Profits. *Journal of Productivity Analysis* 44 (3), 225-235

Lundgren, T., Marklund, P-O., Samakovlis, E. and Zhou, W. (2015) Carbon Prices and Incentives for Technological Development. *Journal of Environmental Management* 150, 393-403

Lundgren, T., Marklund, P-O., and Zhang, S. (2016) Industrial Energy Demand and Energy Efficiency - Evidence from Sweden. *Resource and Energy Economics* 43, 130-52

Lundgren, T., Zhang, S. and Zhou, W. (2016) Energy Efficiency in Swedish Industry - A Firm-level Data Envelopment Analysis. *Energy Economics* 55, 42-51

Book

Färe, R., Grosskopf, G., Lundgren, T., Marklund, P-O. and Wenchao, Z. (2016) The Impact of Climate Policy on Economic and Environmental Performance – Evidence from Sweden. London: Routledge

Book chapter

Lundgren, T. (2015) A Micro-economic Model of CSR (Metroeconomica). In the collection of papers: McWilliams, A. and Elgar, E. (Eds) *Economics of CSR*, the International Library of Critical Writings in Economics 296

Reports

Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2015) *Environmental Investment and Firm Performance: A Network Approach*. Working Paper 2015:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T., and Weber, W.L. (2016) *Time Substitution for Environmental Performance*. Working Paper 2016:3, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M., Brännlund, R. and Lundgren, T. (2016) *Pricing Forest Carbon: Implications of Asymmetry in Climate Policy*. Working Paper 2016:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Lundgren, T. (2015) *CSR ur ett nationalekonomiskt perspektiv*. SNS Analys

Lundgren, T. and Marklund, P-O. (2016) *An Analysis of the Swedish CO2 Tax and its Impact on Firm Performance*. Working Paper 2016:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Zhang, S., Lundgren, T. and Zhou, W. (2015) *Environmental Investment and Firm Performance: A Panel VAR Approach*. Working Paper 2015:12, Centre for Environmental and Resource Economics, Umeå, Sweden

Newspaper articles

Brännlund, R., Lundgren, T. and Lundberg, S. Fyra genomtänkta steg för en effektiv klimatpolitik. (November 12, 2015) *Västerbottenskuriren*

Interviewed on strategic CSR. (March 2015) *Entreprenör*

Conferences

Amjadi, G., T. Lundgren, L. Persson, S. Zhang. (2017) The Rebound Effect in Swedish Heavy Industry. *The 23rd Ulvö Environmental Economics meeting*, June 2016

Assessing the Societal Impacts of Intensive Forest Management and Increased Use of Bioenergy – a Cost-benefit Analysis. *The Umeå Renewable Energy Meeting (UREM)* March 2015

Environmental Investments and Firm Performance: A Network Approach. *IAEE meeting* Antalya, Turkey, May 2015

Environmental Investments and Firm Performance: A Network Approach. *Ulvön Conference on Environmental Economics*, Sweden, June 2015

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) Energy Intensity and Convergence in Swedish industry: A Combined Econometric and Decomposition Analysis. *SAEE 2016*, August 2016, Luleå, Sweden

Lundgren, T., Wenchao, Z. and Zhang, S. (2015) Environmental Investments and Firm Performance: A Panel VAR approach. *IAEE Asian meeting*, Perth, Australia, February 2016

Lundgren, T., Wenchao, Z. and Zhang, S. (2015) Environmental Investments and Firm Performance: A Panel VAR approach. *The Bergen Economics of Energy and Environment Research (BEEER) Conference*, NHH, Bergen, Norway, May 2015

23rd *Ulvön Conference on Environmental Economics*, Organizer (together with T. Broberg and L. Persson), 2016

External activity

Researcher/consultant, National Institute of Economic Research, Environmental Economics Unit, October 2015 - January 2016

Research stay abroad

Groningen University. Collaboration with Lammertjan Dam and Bert Scholtens on common project. January 2015

Karl-Gustaf Löfgren

Journal articles

Gong, P. and Löfgren, K.G. (2016) Could the Faustmann Model have an Interior Minimum Solution? *Journal of Forest Economics* 24, 123-129

Li, C-Z and Löfgren, K-G. (2015) A Dynamic Price Index Theory for Deflating Green Net National Product: An Illustrative Application Using Data from the United States. *Environmental Economics* 2

Report

Johansson, P-O. and Löfgren, K-G. (2015) *Studentens Ultimata Guide till Cost-Benefit-Analys*. Working Paper 2015:15, Centre for Environmental and Resource Economics, Umeå, Sweden

Newspaper article

Aronsson, T., Brännlund, R., Carlén, B., Gren, I-M., Kriström, B., Leck, C., Löfgren, K-G., Marklund, P-O., Sahlén Östman, L., Samakovlis, E. and Söderholm, P. Minska miljöpåverkan i stället för att gå i cirklar (June 24, 2015), *Dagens Nyheter*, Debatt, Reply

Conferences

22nd *Ulvön conference of Environmental Economics*, Ulvön Sweden, (2015)

External activities

Chairman of the Institute of Labour Market - and Human Capital Evaluations (IFAU)

Member of Energiutskottet (The Energy Committee) Kungliga Vetenskaps Akademien (KVA)

Member of the Editorial Board of International Yearbook of Environmental and Resource Economics 1995 -

Member of the Editorial Board of The German Economic Review 1999-

Member of the Editorial Board of The Open Forest Science Journal 2008-

Member of the European Economic Association 1986 -

Member of the Royal Academy of Agriculture and Forestry 1996 -

Member of the Royal Academy of Science 1999-

Member of the Royal Skytteanum Foundation 1995 -

Member of the Scandinavian Society of Forest Economics 1979 -

Associate Professors

Ann-Kristin Bergquist

Journal articles

Andersson, L-F., Bergquist, A-K. and Eriksson, R. (2016) Profits, Dividends and Industry Restructuring: The Swedish Paper and Pulp Industry 1945s-1980s. *Scandinavian Economic History Review* 64 (3), 278–296

Bergquist, A-K. and Keskitalo, C. (2016) Regulation versus Deregulation. Policy Divergence between Swedish Forestry and the Swedish Pulp and Paper Industry after the 1990s. *Forest Policy and Economics* 73, 10-17

Bergquist, A-K. and Lindmark, M. (2016) Sustainability and Shared Value in the Interwar Swedish Copper Industry. *Business History Review* 90 (2), 197-225

Bergquist, A-K. and Söderholm, K. (2016) Sustainable Energy Transition: the Case of the Swedish Pulp and Paper Industry 1973-1990. *Energy Efficiency* 9 (5), 1179-1192

Bergquist, A-K. and Söderholm, K. (2015) Transition to Greener Pulp. Regulation, Industry Responses and Path Dependency in Sweden in Contrast to the U.S. *Business History* 57 (6), 862-884

Report

Bergquist, A-K. and Söderholm, K. (2015) *Transition Towards Renewable Energy Co-ordination and Technological Strategies in the Swedish Pulp and Paper Industry 1973-1990*. Working Paper 2015:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Bergquist, A-K. and Näsman, M. Safe before Green? Environmental Strategies in Volvo Car Corporation and the Importance of the U.S. Market, 1970s-1990s. *Business History Conference*, Portland, the United States, March 31- April 2, 2016

Bergquist, A-K. and Söderholm, K. Transition to Cleaner Technologies: the Swedish Pulp and Paper Industry in Comparative Perspective. *1st World Congress in Business history/20th Congress of the European Business History Association*, Bergen, Norway August 25-27, 2016

Göran Bostedt

Journal articles

Bostedt, G., Hörnell, A. and Nyberg, G. (2016) Agroforestry Extension and Dietary Diversity – An Analysis of the Importance of Fruit and Vegetable Consumption in West Pokot, Kenya. *Food Security* 8, 271-284

Bostedt, G., Mustonen, M. and Gong, P. (2016) Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives. *Scandinavian Journal of Forest Research* 31, 314-322

Bostedt, G., Widmark, C., Andersson, M. and Sandström, C. (2015) Measuring Transaction Costs incurred by Pastoralist Users in Multiple Land-use Situations: The Case of Reindeer Husbandry in Northern Sweden. *Land Economics* 91 (4), 704-722

Håkansson, C., Östberg, K. and Bostedt, G. (2016) Estimating Distributional Effects of Environmental Policy in Swedish Coastal Environments – A Walk along Different Dimensions. *Journal of Environmental Economics and Policy* 5 (1), 49-78

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Mustonen, M. and Gong, P. (2015) *Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives*. Working Paper 2015:5, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013 Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Bostedt, G. (2015) Agroforestry Extension and Dietary Diversity– An Analysis of the Importance of Fruit and Vegetable Consumption West Pokot. At the *The 3rd Triple L (Land, Livestock and Livelihood) workshop*, Kitale, Kenya, November 2015

Håkansson, C., Östberg, K. and Bostedt, G. (2016) Estimating Distributional Effects of Environmental Policy in Swedish Coastal Environments – A Walk along Different Socio-economic Dimensions. *The 4th Workshop On Non-market Valuation (WONV)*, Bordeaux, France, June 2016

Saving for a Dry, not Rainy, Days - Saving and Borrowing Behavior among Agropastoralists in West Pokot County, Kenya. *The 4th Triple L (Land, Livestock and Livelihood) Workshop*, Kitale, Kenya, November 2016

External activities

Board member, Centre for Sami Research (CeSam), Umeå University, 2014 -

Faculty opponent, Kristoffer Bäckström's licentiate thesis, Department of Economics, Luleå University of Technology, April 17, 2015

Faculty opponent, Marit Widman's PhD thesis, Department of Economics, SLU, Uppsala, October 16, 2015

Grading committee member, Ryan G Wagner's PhD thesis, Department of Global Health, Umeå University, June 2, 2016

Member of Editorial Board, Journal of Forest Economics, 2016-

Member of the Committee for Sustainable Development (responsible for ISO14001 certification), Umeå School of Business and Economics, Umeå University, 2013-2016

Member of the Equal Opportunities Committee, Faculty of Forest Sciences, SLU, 2014-2016

Member of the International Committee, Faculty of Forest Sciences, SLU, 2009-

Scientific evaluator, Eugene Ezebilo's associate professor lecture, SLU, June 8, 2015

Substitute member of the Associate Professorship Board, Faculty of Forest Sciences, SLU, 2016-

Research stay abroad

Visiting researcher, October 24-28, 2016, Bern University of Applied Sciences, on invitation by assistant professor Astrid Zabel von Felten

Assistant Professors

Maria Arvaniti

Reports

Arvaniti, M. (2016) Uncertainty, Extreme Outcomes and Climate Change: a Critique. Working Paper 2016:11, Centre for Environmental and Resource Economics, Umeå, Sweden

Arvaniti, M. and Carvajal, A. (2016) *When Financial Imperfections are not the Problem, but the Solution*. Working Paper 2016:15, Centre for Environmental and Resource Economics, Umeå, Sweden

Thomas Broberg

Journal articles

Broberg, T. and Kažukauskas, A. (2015) Inefficiencies in Residential Use of Energy - A Critical Overview of Literature and Energy Efficiency Policies in EU. *International Review of Environmental and Resource Economics* 8, 225-279

Broberg, T. and Persson, L. (2016) Is Our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market. *Energy Economics* 54, 24-32

Broberg, T., Berg, C. and Samakovlis, E. (2015) The Economy-wide Rebound Effect from Improved Energy Efficiency in Swedish Industries – A general Equilibrium Analysis. *Energy Policy* 83, 26-37

Reports

Broberg, T., Brännlund, R., Kazukauskas, A., Persson, L. and Vesterberg, M. (2015) *An Electricity Market in Transition Demand Flexibility and Preference Heterogeneity*. Swedish Energy Market Inspectorate, Sweden

Broberg, T. and Kazukauskas, A. (2016) Perception and Inattention in Private Electricity Consumption. Working Paper 2016:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T. and Persson, L. (2015) *Is our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market*. Working Paper 2015:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

23rd *Ulvön Conference on Environmental Economics*, Organizer (together with T. Lundgren and L. Persson), 2016

Energidagene, Oslo, Norway

Smarts grid conference, Trondheim, Norway

External activity

ESO: Grön tillväxt (Green growth), Expert

Kelly de Bruin

Reports

Baarsch, F., de Bruin, K., Schaeffer, M., Granadillos, J.R., Krapp, M., Amegble, K.D., Balaghi, R., and Hare, B. (2016) *Economic Growth, Development and Climate Change in Africa*. UNEP, Nairobi, Kenya

Baarsch, F., Lissner, T., Schleussner, C.-F., Granadillos, J., de Bruin, K., Perrette, M., Schaeffer, M. and Hare, B. (2015) *Impacts of Low Aggregate INDCs Ambition: Research commissioned by Oxfam*. Climate Analytics, November 2015, Berlin

Bahn, O., de Bruin, K.C. and Fertel, C. (2015) *Will Adaptation Delay the Transition to Clean Energy Systems?* Working Paper 2015:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Hanks et al. (2015) *Let them Eat Coal: Why the G7 Must Stop Burning Coal to Tackle Climate Change and Fight Hunger*. Oxfam

OECD. (2015) *The Economic Consequences of Climate Change*. OECD Publishing, Paris. DOI.org/10.1787/9789264235410-en

UNEP (2016) *Adaptation Gap report 2016*. UNEP, Nairobi, Kenya

Ola Carlén

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Jūratė Jaraitė

Journal articles

Jaraitė, J. and Di Maria, C. (2016) Did the EU ETS make a Difference? An Empirical Assessment using Lithuanian Firm-level Data. *Energy Journal*, 37 (1)

Jaraitė, J., Karimu, A. and Kažukauskas, A. (Published online 2016) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *The Energy Journal*, DOI.org/10.5547/01956574.38.5.jjar

Jaraitė, J. and Kažukauskas, K. (2015) Do Transaction Costs Influence Firm Trading Behaviour in the European Emissions Trading System? *Environmental and Resource Economics* 62 (3), 583-613

Reports

Jaraitė, J. and Coria, J. (2015) *Carbon Pricing: Transition Costs of Emissions Trading vs. Carbon Taxes*. Working Paper 2015:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Jaraitė, J., Karimu, A., Kažukauskas, A. and Kažukauskas, P. (2015) *Renewable Energy Policy, Economic Growth and Employment in EU Countries: Gain without Pain?* Working Paper 2015:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Jaraitė, J. and Schusser, S. (2016) *Explaining the Interplay of Three Markets: Green Certificates, Carbon Emissions and Electricity*. Working Paper 2016:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Conference

Jaraitė, J. and Coria, J. (2015) Carbon Pricing: Transition Costs of Emissions Trading vs. Carbon Taxes. *The 21st Annual Conference of the European Association of Environmental and Resource Economists (EAERE)*, Helsinki, June 24-27, 2015

Research stays abroad

Visiting Researcher, Université Grenoble Alpes and Grenoble Applied Economic Laboratory (Grenoble, FR), May 2015

Visiting Researcher, University of Gothenburg, Department of Economics (SE), August 2015

External activity

Oben Bayrak's PhD defence committee member

EAERE 2016 Programme Committee member

Santosh Ram Joshi

Journal article

Santosh R. Joshi, Vielle M., Babonneau F., Edwards N.R., and Holden P.B. (2016) Physical and Economic Consequences of Sea-level Rise: A Coupled GIS and CGE Analysis under Uncertainties. *Environmental and Resource Economics* 65 (4), 813-839

Conference

Santosh R. Joshi (2015) Capacity Remuneration Mechanism, Renewable Energy Sources and Cross Border Effect: A CGE Analysis for Nordic Region. *PECE Workshop*, NREL, Golden, Colorado, USA, 27th – 28th August

Amin Karimu

Journal articles

Brännlund, R., Karimu, A. and Söderholm, P. (Published online June 29, 2016) Convergence in Carbon Dioxide Emissions and the Role of Growth and Institutions: A Parametric and Nonparametric Analysis. *Environmental Economics and Policy Studies*, DOI: 10.1007/s10018-016-0162-5

Jaraitė, J., Karimu, A. and Kažukauskas, A. (Published online 2016) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *The Energy Journal*, DOI.org/10.5547/01956574.38.5.jjar

Karimu, A. (2015) Cooking Fuel Preferences Among Ghanaian Households: An Empirical Analysis. *Energy for Sustainable Development* 27, 10-17

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (Published online August 3, 2016) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics*, DOI.org/10.1016/j.eneco.2016.07.017

Karimu, A. and Mensah, J.T. (2015) Climate Change and Electricity Consumption in Sub-Saharan Africa: Assessing the Dynamic Responses to Climate Variability. *OPEC Energy Review* 39 (3), 322-345

Reports

Karimu, A. and Brännlund, R. (2015) *Energy Efficient R&D Investment and Aggregate Energy Demand: Evidence from OECD Countries*. Working Paper 2015:14, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Mensah, J.T. and Adu, G. (2016) *Who Adopts LPG as the Main Cooking Fuel and Why? Empirical Evidence on Ghana Based on National Survey*. Working Paper 2016:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Jaraitė, J., Karimu, A., Kažukauskas, A. and Kažukauskas, P. (2015) *Renewable Energy Policy, Economic Growth and Employment in EU Countries. Gain Without Pain?* Working Paper 2015:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Conference

Karimu, A. and Brännlund, R. (2015) *Energy Efficient R&D Investment and Aggregate Energy Demand: Evidence from OECD Countries. The Economics of Energy and Climate Change*, Toulouse, September 8-9

Andrius Kazukauskas

Journal articles

Broberg, T. and Kažukauskas, A. (2015) Inefficiencies in Residential Use of Energy - A Critical Overview of Literature and Energy Efficiency Policies in EU. *International Review of Environmental and Resource Economics* 8 (2), 225-279

Jaraitė, J., Karimu, A. and Kažukauskas, A. (Published online 2016) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *The Energy Journal*, DOI.org/10.5547/01956574.38.5.jjar

Jaraitė, J. and Kažukauskas, A. (2015) Do Transaction Costs Influence Firm Trading Behaviour in the European Emissions Trading System? *Environmental and Resource Economics* 62 (3), 583-613

Reports

Broberg, T., Brännlund, R., Kazukauskas, A., Persson, L. and Vesterberg, M. (2015) *An Electricity Market in Transition Demand Flexibility and Preference Heterogeneity*. Swedish Energy Market Inspectorate, Sweden

Broberg, T. and Kazukauskas, A. (2016) Perception and Inattention in Private Electricity Consumption. Working Paper 2016:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Jaraitė, J., Karimu, A., Kažukauskas, A. and Kažukauskas, P. (2015) *Renewable Energy Policy, Economic Growth and Employment in EU Countries: Gain without Pain?* Working Paper 2015:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Kažukauskas, A. and Broberg, T. (2015) Perceptions and Inattention in Private Electricity Consumption. *The 21th Annual Conference of the European Association of Environmental and Resource Economists (EAERE)*, Helsinki, Finland, June 24-27, 2015

Kažukauskas, A. and Broberg, T. (2015) Perceptions and Inattention in Private Electricity Consumption. *The lunch seminar series at the Swedish Energy Agency*. Eskilstuna, Sweden, November 9, 2015

External activity

Speaker, Public lectures on "Topics in Energy Economics in EU". Vaasa University, Vaasa, Finland, September 22, 2015

Research stay abroad

Visiting Researcher, Research laboratory GAEL (Grenoble Applied Economics Laboratory), Université Pierre Mendès, France, May 2015

Chandra Kiran B Krishnamurthy

Journal articles

Cioffi, F., Lall, U., Rus, E. and Krishnamurthy, C.K.B. (2015) Space-time Structure of Extreme Precipitation in Europe over the last Century, *International Journal of Climatology* 35 (8), 1749-1760

Krishnamurthy, C. K. B. and Kriström, B. (2015) A Cross-country Analysis of Residential Electricity Demand in 11 OECD Countries. *Resource and Energy Economics* 39, 68-88

Krishnamurthy, C. K. B. and Kriström, B. (2016) Determinants of the Price-premium for Green Energy: Evidence from an OECD Cross-section. *Environmental and Resource Economics* 64 (2), 173-204

Krishnamurthy, C. K. B. and Kriström, B. (2015) How Large is the Owner Renter Divide? Evidence from an OECD Cross Section. *Energy Journal* 36 (4), 63-82

Vesterberg, M. and Krishnamurthy, C.K.B. (2016) Residential End-use Electricity Demand: Implications for Real Time Pricing in Sweden. *Energy Journal* 37

Lars Persson

Journal articles

Broberg, T. and Persson, L. (2016) Is Our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market. *Energy Economics* 54, 24-32

Persson, L. (2015) Incentives Underlying Tax Policies in a Decentralized Federation with Horizontal Leadership and Transboundary Environmental Damage. *Letters in Spatial and Resource Sciences* 8, 77-88

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T., Brännlund, R., Kazukauskas, A., Persson, L. and Vesterberg, M. (2015) *An Electricity Market in Transition Demand Flexibility and Preference Heterogeneity*. Swedish Energy Market Inspectorate, Sweden

Broberg, T. and Persson, L. (2015) *Is our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market*. Working Paper 2015:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Ek, K. and Persson, L. (2016) *Priorities and Preferences in the Implementation of the European Water Framework Directive – A Case Study of the River Alsterån*. Working Paper 2016:18, Centre for Environmental and Resource Economics, Umeå, Sweden

Ek, K. and Persson, L. (2016) *The Economics of the European Water Framework Directive – A Retrospective Remark Focusing on Sweden*. Working Paper 2016:16, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Broberg, T. and Persson, L. (2015) Is Our Everyday Comfort for Sale - Preferences for Demand Management on the Electricity Market. *38th IAEE International Conference*, Antalya, Turkey, May 2015

Broberg, T. and Persson, L. (2015) Is Our Everyday Comfort for Sale - Preferences for Demand Management on the Electricity Market. *33rd USAEE/IAEE North American Conference*. Pittsburgh, USA, October 2015

Ek, K. and Persson, L. (2016) The European Water Framework Direktive – Cost effectiveness, burden and PPP. *Havs- och vattenforum Gothenburg*, May 24-25, 2016

23rd *Ulvön Conference on Environmental Economics*, Organizer (together with T. Broberg and T. Lundgren), 2016

External activity

Invited speaker to the Royal Swedish Academy of Engineering Sciences (IVA) *EI på beställning – kunden i focus?* Stockholm, Sweden, 2015

Klarizze Puzon

Journal articles

Boucekkine, R., Prieur, F., and Puzon, K. (2016) On the Timing of Political Regime Changes in Resource-dependent Economies. *European Economic Review* 85, 188-207

Puzon, K. and Willinger, M. (2016) Malevolent Governance, Intra-group Conflict and the Paradox of the Plenty: An Experiment. *Games* 7 (1)

Report

Muller, C. and Puzon, K. (2016) On the Number of Social Reforms in MENA Economies. AMSE Working Papers 1623, Aix-Marseille School of Economics, Marseille, France

Conferences

Puzon, K. and Willinger, M. (2016) Resource Abundance and Participatory Governance in the Commons: An Experiment. *7th Atlantic Workshop on Energy and Environmental Economics*, A Toxa, Spain, June 27-28, 2016

Puzon, K. and Willinger, M. (2016) Resource Abundance and Participatory Governance in the Commons: An Experiment. *Seminario: Faculdade de Ciencias Empresariais e Turismo*, Ourense, Spain, June 10, 2016

Research stay abroad

Visiting Researcher Department of Applied Economics, University of Vigo, Spain, May to July, 2016

Camilla Widmark

Journal article

Danley, B. and Widmark, C. (2016) Evaluating Conceptual Definitions of Ecosystem Services and their Implications. *Ecological Economics* 126, 132-138

Conferences

Widmark, C. (2016) Swedish Non-industrial Forest Owners Attitudes toward Environmental Consideration. *The Biennial Meeting of the Scandinavian Society of Forest Economics*. Oslo, May 25-27, 2016

Widmark, C. (2016) Bargaining Situations in Common Pool Resource Situations and Transaction Costs - The case of Reindeer Husbandry and Forestry in Sweden. *Aktasne - Together 2016 New concepts and methodologies on Saami Studies*, Umeå, Sweden, 9-11 March, 2016

External activity

Grading Committee Member (deputy), Ulrika Widman's doctoral thesis. Department of Political Sciences, Umeå University, November 25, 2016

Graduate Students

Golnaz Amjadi

Conferences

Amjadi, G., Lundgren, T., Persson, L. and Zhang, S. The Rebound Effect in Swedish Heavy Industry. *Association for Energy Economics Conference*, Luleå, Sweden, 23-34 August, 2016

Amjadi, G., Lundgren, T., Persson, L. and Zhang, S. The Rebound Effect in Swedish Heavy Industry. *23rd Ulvön Conference on Environmental Economics*, Sweden, 15-17 June, 2016

Oben Bayrak

Journal articles

Bayrak, O. and Hey, J. D. (Published online September 29, 2016) Expected Utility Theory With Imprecise Probability Perception: Explaining Preference Reversals. *Applied Economics Letters*, DOI.org/10.1080/13504851.2016.1240332

Bayrak, O. and Kriström, B (2016) Is There a Valuation Gap? The Case of Interval Valuations. *Economics Bulletin*, 36 (1), 218-236

Book

Bayrak, O (2016) *Preference Cloud Theory: Modelling Imprecise Preferences and a New Theory for Decision under Risk*. Doctoral Thesis, Umeå: SLU, Department of Forest Economics

Reports

Bayrak, O. K. (2016) Another Solution for Allais Paradox: Preference Imprecision, Dispersion and Pessimism. Working Paper 2016:12, Centre for Environmental and Resource Economics, Umeå, Sweden

Bayrak, O. K. (2015) Note: Imprecise Preferences, Preference Cloud Theory, Multiple Selves and Intrapersonal Planner Approach. Available at SSRN

Bayrak, O. K. and Hey, J. D. (2015) *Preference Cloud Theory: Imprecise Preferences and Preference Reversals*. Working Paper 2015:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Bayrak, O.K. and Kriström, B. (2015) *Is There a Valuation Gap? The Case of Interval Valuations*. Working Paper 2015:13, Centre for Environmental and Resource Economics, Umeå, Sweden

Brian Danley

Journal article

Danley, B. and Widmark, C. (2016) Evaluating Conceptual Definitions of Ecosystem Services and their Implications. *Ecological Economics* 126, 132-138

Conference

Private Contributions to Biodiversity in Swedish Commercial Forestry: Linking Tree Retention to Environmental Offsetting. 23rd *Ulvön Conference on Environmental Economics*, 2016

Alejandro Egüez

Conference

Broberg, T. and Egüez, A. Ownership and Energy Efficiency in Multi-dwelling Buildings – A Swedish Case Study. *The Swedish Association for Energy Economics Conference*, Luleå, Sweden, 23-34 August, 2016

Mathilda Eriksson

Journal article

Eriksson, M. (2015) The Role of the Forest in an Integrated Assessment Model. *Climate Change Economics* 6 (3), 1550011-1-1550011-29

Book

Eriksson, M. (2016) *The Role of the Forest in Climate Policy*. Doctoral Thesis, Umeå: Umeå School of Business Economics

Reports

Eriksson, M. (2016) *Mitigating Climate Change with Forest Climate Tools*. Working Paper 2016:5, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M., Brännlund, R. and Lundgren T. (2016) *Pricing Forest Carbon: Implications of Asymmetry in Climate Policy*. Working Paper 2016:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M. and Vesterberg, A. (2016) *When Not in the Best of Worlds: Uncertainty and Forest Carbon Sequestration*. Working Paper 2016:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Research stay abroad

Visiting Student Researcher, Paris School of Economics, Fall 2014 - Spring 2015

Jinggang Guo

Conferences

Guo, J. and Gong, P. (2016) Economic Potential of Forestry Options for Carbon Sequestration in Sweden. *Scandinavian Society of Forest Economics 2016 Biennial meeting*. Oscarsborg, Norway, May 25-27, 2016

Guo, J. and Gong, P. (2016) Impacts of Increased Bioenergy Demand on Timber Markets: An Intertemporal Optimization Perspective. *The Fifth International Faustmann Symposium*, Beijing, China, October 18-21, 2016

Philip Kofi Adom

Journal articles

Adom, P.K. (2015) Asymmetric Impacts of the Determinants of Energy Intensity in Nigeria. *Energy Economics* 49, 570-580

Adom, P.K. (2015) Business Cycle and Economic-wide Energy Intensity: the Implications for Energy Conservation Policy in Algeria. *Energy* 88, 334-350

Adom, P.K. (2015) Determinants of Energy Intensity in South Africa: Testing for Structural Effects in Parameters. *Energy* 89, 334-346

Adom, P.K. (2016) The Transition Between Energy Efficient and Energy Inefficient States in Cameroon. *Energy Economics* 54, 248-262

Adom, P.K., Amakye, K., Barnor C., Quartey P. and Bekoe, W. (2016) Shift in Demand Elasticities, Road Energy Forecast and the Persistence Profile of Shocks. *Economic Modelling* 55, 189–206

Book

Adom, P.K. (2016) *Energy Demand Management in Selected African Countries*. Doctoral Thesis. Umeå: SLU, Department of Forest Economics

Sandra Schusser

Report

Jaraité, J. and Schusser, S. (2016) *Explaining the Interplay of Three Markets: Green Certificates, Carbon Emissions and Electricity*. Working Paper 2016:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Schusser, S. and Jaraite, J. (2016) Explaining the Interactions of Three Markets: Green Certificates, Electricity and Carbon Emission Allowances In The Swedish-Norwegian Green Certificate System. *The EAERE Conference*, Zürich, Switzerland, June 24-26, 2016

Schusser, S. and Jaraite, J. (2016) Explaining the Interactions of Three Markets: Green Certificates, Electricity and Carbon Emission Allowances In The Swedish-Norwegian Green Certificate System. *SAEE*, Luleå, Sweden, August 23-24, 2016

Anders Vesterberg

Report

Eriksson, M. and Vesterberg, A. (2016) *When Not in the Best of Worlds: Uncertainty and Forest Carbon Sequestration*. Working Paper 2016:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Mattias Vesterberg

Journal articles

Vesterberg, M. (2016) The Hourly Income Elasticity of Electricity. *Energy Economics* 59, 188-197

Vesterberg, M. and Krishnamurthy, C.K.B. (2016) Residential End-use Electricity Demand: Implications for Real Time Pricing in Sweden. *Energy Journal* 37

Report

Broberg, T., Brännlund, R., Kazukauskas, A., Persson, L. and Vesterberg, M. (2015) *An Electricity Market in Transition Demand Flexibility and Preference Heterogeneity*. Swedish Energy Market Inspectorate, Sweden

Conferences

6th *Ammarnäs Meeting on Environmental Economics*, 2015

22nd *Ulvön Conference on Environmental Economics*, 2015

Research stay abroad

Visiting scholar, University of California, Berkely, Fall 2015

Shanshan Zhang

Journal articles

Lundgren, T., Marklund, P.-O. and Zhang, S. (2016) Industrial Energy Demand and Energy Efficiency - Evidence from Sweden. *Resource and Energy Economics* 43, 130-152

Zhang, S., Lundgren, T. and Zhou, W.C. (2016) Energy Efficiency in Swedish Industry: A Firm-level Data Envelopment Analysis. *Energy Economics* 55, 42-51

Report

Zhang, S., Lundgren, T. and Zhou, W. (2015) *Environmental Investment and Firm Performance: A Panel VAR Approach*. Working Paper 2015:12, Centre for Environmental and Resource Economics, Umeå, Sweden

Book

Zhang, S. (2016) *Energy Efficiency and Firm Performance*. Doctoral Thesis. Umeå: SLU, Department of Forest Economics

Katarina Östberg

Journal article

Håkansson, C., Östberg, K. and Bostedt, G. (2016) Estimating Distributional Effects of Environmental Policy in Swedish Coastal Environments – A Walk along Different Dimensions. *Journal of Environmental Economics and Policy* 5 (1), 49-78

Book

Östberg, K. (2016) *Non-Market Valuation of Coastal Ecosystem Services*. Doctoral Thesis. Umeå: SLU, Department of Forest Economics

Associates of CERE

Professor Chris Böhringer

Journal articles

Böhringer, C., Anger, N., Asane-Otoo E., and Oberndorfer, U. (2015) Public Interest versus Interest Groups: A Political Economy Analysis of Allowance Allocation under the EU Emissions Trading Scheme. *International Environmental Agreements: Politics, Law and Economics*, 1-18

Böhringer, C.; Anger, N. and Lange, A. (2015) The Political Economy of Energy Tax Differentiation across Industries: Theory and Empirical Evidence. *Journal of Regulatory Economics* 47 (1), 78-98

Böhringer, C. and Behrens, M. (2015) Interactions of Emission Caps and Renewable Electricity Support Schemes. *Journal of Regulatory Economics* 48 (1), 74-96

Böhringer, C. and Bortolamedi, M. (2015) Sense and No(n)-Sense of Energy Security Indicators. *Ecological Economics* 119, 359-371

Böhringer C., Bortolamedi, M., Keller, A. and Rahmeier Seyffarth, A. (2016) Good Things do not Always come in threes: On the Excess Cost of Overlapping Regulation in EU Climate Policy. *Energy Policy* 94, 502-508

Böhringer, C., Carbone, J.C., and Rutherford, T.F. (2016) The Strategic Value of Carbon Tariffs”, *American Economic Journal: Economic Policy* 8 (1), 1-25

Böhringer, C., Müller, A. and Schneider, J. (2015) “Carbon Tariffs Revisited. *Journal of the Association of Environmental and Resource Economists* 2 (4), 629-672

Böhringer, C., Rivers, N. and Yonezawa, H. (2016) Vertical Fiscal Externalities and the Environment. *Journal of Environmental Economics and Management* 77, 51-74

Böhringer, C., Rivers, N., Rutherford, T.F. and Wigle, R. (2016) Sharing the Burden for Climate Change Mitigation in the Canadian Federation, *Canadian Journal of Economics* 48 (4), 1350-1380

Böhringer, C., Rutherford, T.F., Tarr, D.G. and Turdyeva, N. (2015) Market Structure and the Environmental Implications of Trade Liberalization: Russia's Accession to the World Trade Organization. *Review of International Economics* 23 (5), 897-923

Professor Shawna Grosskopf

Journal articles

Ball, E., Färe, R., Grosskopf, S. and Margaritis, D. (2015) The Role of Energy Productivity in U.S. Agriculture. *Energy Economics*, 460-471

Barnhardt, B., Bostian, M., Whittaker, G., Färe, R. and Grosskopf, S. (2016) Prioritizing Conservation for the Reduction of Gulf Hypoxia using an Environmental Performance Index. *Ecological Indicators*, 235-241

Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2016) Environmental Investment and Firm Performance: A Network Approach. *Energy Economics* 57, 243-255

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T. and Weber, W. (Published online September 26, 2016) Time Substitution for Environmental Performance. *Empirical Economics*, DOI:10.1007/s00181-016-1180-7

Färe, R., Fukuyama, H., Grosskopf, S. and Zelenyuk, V. (2015) Decomposing Profit Efficiency using a Slack-Based Directional Distance Function. *European Journal of Operational Research* 247 (1), 335-337

Färe, R. Grosskopf, S., Fukuyama, H. and Zelenyuk, V. (2016) Cost Decompositions and the Efficient Subset. *Omega* 123-130

Färe, R., Grosskopf, S., Karagiannis, G. and Margaritis, D. (Published online November 3 2015) Data Envelopment Analysis and its Related Linear Programming Models. *Annals of Operations Research*, 1-7, DOI: 10.1007/s10479-015-2042-y

Färe, R., Grosskopf, S. and Margaritis, D. (2015) Directional Distance Functions and Their Estimation for Applied Work. *Data Envelopment Analysis Journal* 1 (2), 57-79

Färe, R., Grosskopf, S., Maudos, J. and Tortosa-Ausina, E. (2015) Revisiting the Quiet Life Hypothesis in Banking using Nonparametric Techniques. *Journal of Business Economics*, 159-187

Färe, R., Grosskopf, S. and Pasurka, C. (2016) Technical Change and Pollution Abatement Costs. *European Journal of Operational Research* 248 (2), 715-724

Färe, R., Grosskopf, S. and Vincent, C. (2016) A Translation Invariant Pure DEA Model. *European Journal of Operational Research* 715-724

Färe, R., Grosskopf, S. and Walden, J. (2015) Productivity Change and Fleet Restructuring after Transition to Individual Transferable Quota. *Marine Policy* 62, 318-325

Färe, R. Grosskopf, S. and Weber, W.L. (2016) Pricing Nonmarketed Outputs with an Application to Community Colleges. *Public Finance Review*, 197-219

Grosskopf, S., Hayes, K., Taylor, L.L. and Weber, W.L. (2015) Centralized or Decentralized Control of Resources? A Network Model. *Journal of Productivity Analysis*, 43 (2), 139-150

Grosskopf, S., Hayes, K., Taylor, L. and Weber, W. (Published online November 11, 2015) Would Weighted-Student Funding enhance Intra District Equity in Texas? A Simulation using DEA. *Journal of the Operational Research Society*, DOI:10.1057/jors.2015.93

Whittaker, B.W., Barnhard, B.L., Färe, R. and Grosskopf, S. (2015) Application of Index Number Theory to the Construction of a Water Quality Index; Aggregated Nutrient Loadings related to the Areal Extent of Hypoxia in the Northern Gulf of Mexico. *Ecological Indicators* 49, 162-168

Whittaker, G., Färe, R., Grosskopf, S., Barnhart, B. and Bostian, M. (Published online January 27, 2016) Spatial Targeting of Agri-Environmental Policy using Bilevel Evolutionary Optimization. *Omega*, doi.org/10.1016/j.omega.2016.01.007

Books

Färe, R., Grosskopf, S. and Margaritis, D. (2015) *Advances in Data Envelopment Analysis*. Singapore: World Scientific - Now Publishers Series in Business, Volume 8

Färe, R., Grosskopf, G., Lundgren, T., Marklund, P-O. and Wenchao, Z. (2016) *The Impact of Climate Policy on Economic and Environmental Performance – Evidence from Sweden*. London: Routledge

Reports

Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2015) *Environmental Investment and Firm Performance: A Network Approach*. Working Paper 2015:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T., and Weber, W.L. (2016) *Time Substitution for Environmental Performance*. Working Paper 2016:3, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Färe, R. and Grosskopf, S. Workshop on Topics in DEA Modeling and Application. *Asia Pacific Productivity Conference*, Tianjin, China, 2016

Grosskopf, S. Performance Measurement and Modeling of Good and Bad Outputs with a Network Application. *Workshop on Environmentally Adjusted Productivity and Efficiency*, University of Sydney, Australia, February 22, 2016

Grosskopf, S. (and coauthors). Time Substitution and Some Applications. *Asia Pacific Productivity Conference*, Tianjin, China, July 7-10, 2016

Research stays abroad

Visiting Scholar, University of Auckland, March 2016

Visiting Scholar (and Adjunct Professor), CERE, June, 2016

Professor Per-Olov Johansson

Journal articles

Johansson, P.-O. and Kriström, B. (Published online November 30, 2015) Economic Valuation Methods for Non-market Goods or Services. *Oxford Bibliographies*

Johansson, P.-O. and Kriström, B. (2015) On the Social Cost of Water-related Disasters. *Water Economics and Policy* 1 (3), 1550015-1-26

Book

Johansson, P.-O. and Kriström, B. (2015) *Cost-Benefit Analysis for Project Appraisal*. Cambridge: Cambridge University Press

Book chapter

Johansson, P.-O. and Kriström, B. (2015) Hydropower Management: Electricity versus Other Values. In: Dinar, A. and Schwabe, K. (Eds.) *Handbook of Water Economics* 162-180, Cheltenham: Edward Elgar Publishing Limited

Reports

Johansson, P.-O. (2016) *On the Treatment of Emissions Trading and Green and White Certificates in Cost-Benefit Analysis*. 2016:13, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P.-O. (2015) *Tradable Permits in Cost-benefit Analysis*. Working Paper 2015:11, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P.-O. (2016) *Tradable Permits in Cost-Benefit Analysis. A Numerical Illustration*. 2016:14, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P.-O. (2015) *Tradable Permits in Cost-benefit Analysis*. SSE Working Paper Series in Economics, Stockholm School of Economics, No. 2015:3

Johansson, P.-O. and Löfgren, K-G. (2015) *Studentens Ultimata Guide till Cost-Benefit-Analys*. Working Paper 2015:15, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P.-O. and de Rus, G. (2015) *On the Treatment of Foreigners and Foreign-Owned Firms in Cost–Benefit Analysis*. Fundación de Estudios de Economía Aplicada (fedea), Madrid, Documento de Trabajo 2015-13

External activities

Consultant for European Investment Bank, Luxembourg, on the how to handle tradable permits in economic evaluations, September–November, 2015

Member of Scientific Committee for a project on R&D at Università degli Studi di Milano financed by the European Investment Bank, 2013–

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