

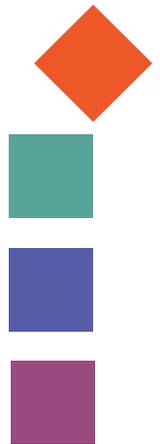


WASEDA University
Brussels Office

**WORKSHOP
SERIES**

Environmental Conservation Behaviors and Climate Policy Instrument

Tuesday 16th March 2021





Environmental Conservation Behaviors and Climate Policy Instrument

Tuesday 16th March 2021

Climate change is one of the most important and persistent challenges confronted by humanity in recent times.

The avoidance of climate change is possible through better conservation of the environment as well as the implementation of different climate policies. These policies and behaviours are likely to offer a feasible and cost-effect option to mitigate climate change in the near term. In this background, the workshop on “Environmental Conservation Behaviors and Climate Policy” plans to present different researches related to the individuals’ environmental conservation behaviour as well as the role of different behavioural traits on preference for climate policies in Europe and Japan. This workshop consists of collaborative research among researchers from the University of Kassel, Germany, Vrije Universiteit Amsterdam and Waseda University, Japan. This workshop is supported by the Environment Research and Technology Fund (JPMEERF20172007 and JPMEERF20202008).



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SCHEDULE

| | |
|--|--|
| 13:00 - 13:05 (CET) 21:00 - 21:05 (JST) | Welcome & Introduction |
| 13:05 - 13:20 | Prof. Andreas ZIEGLER, University of Kassel and ZEW – Leibniz Centre for European Economic Research «New Ecological Paradigm meets behavioral economics: On the relationship between environmental values and economic preferences» |
| 13:20 - 13:30 | Discussant: Prof. Miwa NAKAI, Fukui Prefectural University |
| 13:30 - 13:35 | Q & A |
| 13:35 - 13:50 | Prof. Julia BLASCH, Vrije Universiteit Amsterdam «Increasing the uptake of in-depth home-energy audits – A field-experiment with Dutch homeowners» (with Menusch Khadjavi and Giuliana Spadaro) |
| 13:50 - 14:00 | Discussant: Prof. Shigeru MATSUMOTO, Aoyama Gakuin University |
| 14:00 - 14:05 | Q & A |
| 14:05 - 14:20 | Prof. Toshi H. ARIMURA, Waseda University «Determinants of individual pro-environmental behaviors in Japan: Any Role of Non-state actors?» (with Riga Wu and Miwa Nakai) |
| 14:20 - 14:30 | Discussant: Prof. Elke GROH, University of Kassel |
| 14:30 - 14:35 | Q & A |
| 14:35 - 14:50 | Mriduchhanda CHATTOPADHYAY, Waseda University «Behavioral traits and support for climate policies: Study of Japanese households» (with Toshi H. Arimura) |
| 14:50 - 15:00 | Discussant: Prof. Andreas ZIEGLER, University of Kassel |
| 15:00 - 15:05 | Q & A |
| 15:05 - 15:10 (CET) 23:05 - 23:10 (JST) | Concluding words |



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March 16th
(Tuesday)
1.05 pm - 1.35 pm

Title **New Ecological Paradigm meets behavioral economics: On the relationship between environmental values and economic preferences**

Lecturer



Prof. Andreas ZIEGLER, University of Kassel and ZEW
– Leibniz Centre for European Economic Research

Contact
Information

Andreas Ziegler
E-mail: andreas.ziegler@uni-kassel.de

Abstract

This paper empirically examines whether environmental values are correlated with economic preferences from behavioral economics and considers possible consequences when independence is assumed. The data for this analysis stem from a large-scale computer-based survey among more than 3700 German citizens. Our indicators for environmental values are based on the New Ecological Paradigm (NEP), which is a standard instrument in social and behavioral sciences and increasingly common in economic studies. The econometric analysis with Generalized Poisson regression models reveals strong correlations between two NEP scales and several economic preferences, which are based on established experimental measures: While social preferences (measured in an incentivized dictator game) and positive reciprocity are significantly positively correlated, trust and (less robust) negative reciprocity are significantly negatively correlated with the NEP scales, respectively. Only risk and time preferences (also measured in an incentivized experiment) are not robustly significantly correlated with the NEP scales. These estimation results strongly recommend the additional inclusion of economic preferences in econometric analyses that use a NEP scale as explanatory factor of main interest for environmentally relevant behavior. In particular, not considering social preferences, trust, and positive and negative reciprocity can lead to strong distortions due to omitted variable biases. This conclusion is illustrated in an empirical example that reveals biased estimation results for the effect of a NEP scale on donation activities if not all relevant economic preferences are included as control variables.

Bio

Prof. Dr. Andreas Ziegler is professor for Empirical Economic Research at the University of Kassel since 2011. He is also research associate at ZEW in Mannheim. He studied economics (with focus on econometrics and statistics) at the University of Mannheim. From 1994 to 2001 he was researcher at the University of Mannheim, Department of Statistics.



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Bio In 2001 he received his PhD in economics about the simulated estimation and testing in multiperiod multinomial probit models from the University of Mannheim. Between 2001 and 2007 he was senior researcher and research fellow at ZEW, Department of Environmental and Resource Economics, Environmental Management. From 2006 to 2011 he was assistant professor (Oberassistent) and senior researcher at the University of Zurich and the ETH Zurich. His main field of research refers to empirical and particularly microeconomic studies in the field of climate and energy policy, environmental economics, and corporate social responsibility (CSR).



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Tuesday 16th March 2021

March 16th
(Tuesday)
1.35 pm - 2.05 pm

Title **Increasing the uptake of in-depth home-energy audits – A field-experiment with Dutch homeowners**

Lecturer Prof. Julia BLASCH, Vrije Universiteit Amsterdam



Contact Information Julia Blasch
E-mail: julia.blasch@vu.nl
<https://research.vu.nl/en/persons/julia-blasch>

Abstract Striving for climate-neutrality by 2050 urges all major economies, including the Netherlands, to make energy use in homes more sustainable. About 30% of total energy consumption in the Netherlands originates from the built environment, and according to the Dutch Climate Agreement, CO₂ emissions from the built environment need to be reduced by 3,4 Mt by 2030. This means that about 1,5 million Dutch homes have to undergo an energy efficient renovation during the coming 10 years. Yet, the current energy-efficient renovation rate is far too low to meet these ambitious goals. Several well-known barriers to taking up energy-efficient renovation measures persist, such as high upfront cost, a lack of trust in technologies and/or installers, large hassle cost, split incentives, bounded rationality and related behavioural biases such as present bias, risk aversion, loss aversion or status-quo bias, as well as the lack of opportunities to experience the co-benefits from energy-efficient renovations (e.g. comfort improvements).

The project therefore aims to test four price and non-price measures (framed messages/nudges) to stimulate the uptake of energy-efficient renovations and clean energy equipment among Dutch homeowners, by stimulating the uptake of detailed in-home energy audits in a first step. This will lead to a better understanding of the barriers to doing a detailed in-home energy audit, and how to overcome them by providing financial or motivational support.

We carry out a field experiment with the Dutch services provider De Energiebespaarders (DEB), who offers Dutch home owners advice and additional services towards implementing energy-efficient renovations and other clean energy investments. They offer their services as a “one stop”-shop, including a detailed energy audit, advice on which measures to implement, contacts to trusted installers as well as contacts to mortgage



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Abstract providers. Customers start their customer journey with a short online energy saving check, an online self-check to get insight into potential energy-saving measures in one's home. As part of the field experiment, we implement four different treatments on the results page of the DEB energy-saving check and observe whether they increase the share of purchases of detailed in-home energy audits. We include in our field experiment three non-price treatments (nudges) and one price treatment. The non-price treatments refer to testimonials of customers who successfully completed an energy-efficiency investment. Further, they include social comparison and environmental comparison. The price treatment takes the form of a discount on the cost of an in-home home energy audit. Participants are randomly assigned to one of the four treatments when starting the energy-saving check. The field experiment started in December 2020 and is still ongoing.

Bio Julia Blasch is an Assistant Professor in Environmental Economics at the Institute for Environmental Studies (IVM) at Vrije Universiteit Amsterdam, a Research Affiliate at the Centre for Energy Policy and Economics (CEPE), ETH Zurich, and a Research Fellow at RWI Leibniz Institute for Economic Research Essen. She is coordinating the H2020 project NEWCOMERS (New Clean Energy Communities in a Changing European Energy System). Before joining IVM, she worked as a Postdoctoral Researcher at CEPE, ETH Zurich.

Julia obtained her PhD degree in Environmental Economics from ETH Zurich in 2014 for her thesis on the determinants of consumer demand for voluntary carbon offsets. From 2014-2016 she was a member of the Swiss Competence Center for Research in Energy, Society and Transition (SCCER-CREST).

Her research covers applied environmental, energy and climate economics with a focus on pro-environmental behaviour and decision-making, using various experimental methods such as choice experiments, laboratory and field experiments.



Environmental Conservation Behaviors and Climate Policy Instrument

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Title **Determinants of individual pro-environmental behaviors in Japan: Any Role of Non-state actors?**

Lecturer



Prof. Toshi H. ARIMURA, Waseda University

Contact
Information

Toshi H. Arimura
E-mail: toshi.arimura@gmail.com

Abstract

This paper investigates the factors influencing individual pro-environmental behaviors in Japan. Among various factors, we scrutinized the role of non-state actors in promoting behaviors such as energy-saving, carrying eco-bags, purchasing refillable products, saving water at home, or purchasing environmentally friendly products. As non-state actors, we focused on labor union, neighborhood association and environmental organization. Using Japanese individual survey conducted in March 2020, we found that the membership of neighborhood association, labor union, and environmental organization are positively correlated with energy saving behaviors after controlling other socio economic characteristics. Further, the econometric analysis suggests that those memberships are positively associated with other environmental behaviors stated above. These results hint that non-state actors can play a positive role in promoting pro environmental behaviors. Further, our analysis suggests that fulltime workers are less likely to conduct pro-environmental behaviors. This suggests that pro-environmental behaviors needs time as an important input.

Bio

Prof. Toshi H. Arimura is a professor for School of Political Science and Economics and the director of the Research Institute for Environment Economics and Management at Waseda University in Tokyo, Japan. Prior to his current position, he was a professor at Sophia University in Tokyo as well as the director of the Center for Environment and Trade Research at the university. His research focuses on climate change and energy policies, particularly regulations for climate change air pollution, voluntary environmental actions, and innovation of environmental technology. He is a coauthor of *An Evaluation of Japanese Environmental Regulation: A Quantitative Approach from Environmental Economics* (Springer 2015), and his recent research project examined the economic impact of carbon pricing on Japanese economy. In 2005, he received an



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2.05 pm - 2.35 pm

Bio Abe Fellowship and was a visiting scholar at Resources for the Future and George Mason University from 2006 to 2008. Dr. Arimura holds his Ph.D. in economics from University of Minnesota, an MSc in environmental sciences from University of Tsukuba, and a B.A. in history of science from University of Tokyo. He has served on a number of Japanese government committees on environmental issues and on editorial boards of academic journals such as Review of Environmental Economics and Policy or Environmental Economics and Policy Studies.



Environmental Conservation Behaviors and Climate Policy Instrument

Tuesday 16th March 2021

Title **Behavioral traits and support for climate policies:
Study of Japanese householdsh**

Lecturer



Mriduchhanda Chattopadhyay, Waseda University

Contact
Information

Mriduchhanda Chattopadhyay,
E-mail: mriduchhanda29@gmail.com

Abstract

The Paris Agreement in 2015 provides a framework to combat climate change. Although many countries, in response, have pledged to reduce the greenhouse gas emissions, a widespread variation in the choice/ adoption of climate policies is often observed. This demands the necessity to explore the determinants of support for climate policies. A preliminary analysis of survey response from 1322 Japanese households shows that carbon tax has the highest public support in compared to the emission trading scheme and feed-in tariff policy. The econometric analysis of multivariate ordered probit model suggest that behavioural factors like pro-environmental view, personality traits and self-reported risk-taking attitude positively influence the individuals' support for environmental policies. In addition, individuals' political orientation, particularly identification with ecologically and liberally oriented policies, is likely to affect the individuals' support for environmental policies in a positive way. Apart from these behavioural factors, socio-demographic variables like age, gender, education, employment may also affect the support for climate policies. Interestingly, our analysis suggests that variation in support for environmental policies seem to be uniform across different regions of Japan

Bio

Mriduchhanda Chattopadhyay is a doctoral student at the Graduate School of Economics, Waseda University. She received her BA and MA degree in Economics from Department of Economics, Jadavpur University in 2012 and 2014 respectively. She is the recipient of the Monbukagakusha (MEXT, Japanese government) scholarship in 2015. Her research interest includes environmental economics, energy economics and behavioural economics with a focus on individuals' behaviour and perception towards decision-making in the context of environmental issues. She is currently working on empirical study on household air pollution issue in developing countries. She is a member of the Society for Environmental Economics and Policy Studies.