
Seminar in Economics (VWL, SS 2017)

LV 17ss-39082

“Behavioral Energy and Environmental Economics”

AIM AND SCOPE

Traditional economics considers decision makers as ‘optimizers’ who always make rational choices. Using insights from psychology, behavioral economics as a field provides an extensive body of evidence contradicting the notion of the *homo economicus* and identifying distinct limitations regarding attention, memory, and self-control that systematically have an effect on the choices we make. In this seminar, we will first consider some of these and further biases leading to deviations from rationality and study seminal works written in this expanding field.

We will further study situations in the energy and environmental domain, where some of these behavioral topics (e.g., different incentives, bounded rationality and choice architecture, information framing, pro-social and -environmental behavior, and time preferences) become relevant for the underlying decision-making processes. We will examine the literature that delves into how biases play a role when the decision-making concerns energy use and environmental behavior. Finally, we will discuss how these findings might inform energy and environmental policy.

ORGANIZATION

The seminar will take place in a blocked format on July 14 and 17 at the E.ON Energy Research Center, Mathieustraße 10.

This seminar targets at students studying in the B.Sc. programs in Business Administration and Economics. For participation, basic knowledge in microeconomics is required. We also welcome students from other disciplines with a sound background in economics. The maximum number of participants is restricted to 18. Registration for this seminar is compulsory, as is participation in the pre-meeting.

SEMINAR STRUCTURE

We will cover a list of research articles, consisting (a) of seminal papers in behavioral economics and (b) of new research articles written on the intersection of behavioral and energy and environmental economics. All students are required to read the article written by Allcott and Mullainathan (2010), who provide a broad review of behavioral economics and energy. Moreover, we expect students to read a selection of the three review books listed further below.

Students are required to **(i)** submit an essay two weeks before the seminar takes place, which summarizes the topic of an assigned paper. During the seminar, every student is expected to **(ii)** present this assigned paper and **(iii)** discuss another paper. A week after the seminar, students must hand in **(iv)** a short research proposal.

(i) The **essay** should give **more than just a simple summary** of the assigned paper. You should introduce and motivate your essay by discussing the relevance of the topic chosen, provide what the other studies in this thematic area have already done, and describe the original contribution of the assigned paper. In addition to this, you should deliver a summary of the main findings and include **your own critical** discussion - which can be either positive or negative (but constructive) - of the assigned paper.

(ii) The **presentation** should focus on the main results of the assigned paper and how it relates to the other relevant literature.

(iii) The **critical discussion** of a second paper should enable starting a general discussion, i.e., you might discuss the shortcomings and policy implications of the paper.

(iv) The **research proposal** should describe an independent research idea/question and should depict an outlook on the research design to address this research question.

Grading will be based on the items **(i)** through **(iv)** as well as **(v) active participation** in the discussions during the seminar. 50% of your final grade will be based on the written work **(i+iv)**, the other 50% on the remaining items.

We will discuss further details during the pre-meeting, which will likely take place on March 16 at 2:00 p.m. at the E.ON Energy Research Center (Room 00.24), Mathieustraße 10 (Campus Melaten).

LITERATURE

Compulsory Reading

Allcott, H. and S. Mullainathan (2010), 'Behavior and Energy Policy', *Science* 327 (5970), 1204.

Review Books

Ariely, D. (2008), *Predictably Irrational*, HarperCollins, New York, NY, U.S.A..

Thaler, R. H. and R. Sunstein Cass (2008), *Nudge: Improving Decisions about Health, Wealth, and Happiness*, Yale University Press, New York, NY, U.S.A..

Wilkinson, N. and M. Klaes (2012), *An Introduction to Behavioral Economics* (2nd ed.), Palgrave Macmillan, Basingstoke, Hampshire, U.K..

Seminar Articles

Social Norms and Different Incentives

1) Allcott, H. (2011). Social norms and energy conservation. *Journal of Public Economics*, 95(9), 1082-1095.

2) Allcott, H., & Rogers, T. (2014). The short-run and long-run effects of behavioral interventions: Experimental evidence from energy conservation. *The American Economic Review*, 104(10), 3003-3037.

3) Dolan, P., & Metcalfe, R. D. (2015). Neighbors, knowledge, and nuggets: Two natural field experiments on the role of incentives on energy conservation. Becker Friedman Institute for Research in Economics Working Paper No. 2589269.

4) Fehr, E., & Falk, A. (2002). Psychological foundations of incentives. *European Economic Review*, 46(4), 687-724.

5) Ferraro, P. J., Miranda, J. J., & Price, M. K. (2011). The persistence of treatment effects with norm-based policy instruments: Evidence from a randomized environmental policy experiment. *The American Economic Review: Papers & Proceedings*, 101(3), 318-322.

6) Ito, K., Ida, T., & Tanaka, M. (2015). *Moral suasion and economic incentives: Field experimental evidence from energy demand* (No. w20910). National Bureau of Economic Research. Forthcoming. *American Economic Journal: Economic Policy*.

7) Viscusi, W. K., Huber, J., & Bell, J. (2011). Promoting recycling: Private values, social norms, and economic incentives. *The American Economic Review: Papers & Proceedings*, 101(3), 65-70.

Beliefs and Consumer Choice

8) DellaVigna, S. (2009). Psychology and Economics: Evidence from the Field. *Journal of Economic Literature*, 47(2), 315-372.

9) Allcott, H. (2011). Consumers' perceptions and misperceptions of energy costs. *The American Economic Review: Papers & Proceedings*, 101(3), 98-104.

10) Anderson, S. T., Kellogg, R., & Sallee, J. M. (2013). What do consumers believe about future gasoline prices?. *Journal of Environmental Economics and Management*, 66(3), 383-403.

Time preferences (Time discounting)

11) Frederick, S., Loewenstein, G., & O'donoghue, T. (2002). Time discounting and time preference: A critical review. *Journal of economic literature*, 40(2), 351-401.

12) Newell, R. G., & Siikamäki, J. (2015). Individual time preferences and energy efficiency. *The American Economic Review: Papers & Proceedings*, 105(5), 196-200.

Nudging (Choice Setting)

13) Allcott, H., & Kessler, J. B. (2015). *The welfare effects of nudges: A case study of energy use social comparisons* (No. w21671). National Bureau of Economic Research.

14) Costa, D. L., & Kahn, M. E. (2013). Energy conservation "nudges" and environmentalist ideology: Evidence from a randomized residential electricity field experiment. *Journal of the European Economic Association*, 11(3), 680-702.

15) Kallbekken, S., & Sælen, H. (2013). 'Nudging' hotel guests to reduce food waste as a win-win environmental measure. *Economics Letters*, 119(3), 325-327.

16) Newell, R. G., & Siikamäki, J. (2014). Nudging energy efficiency behavior: The role of information labels. *Journal of the Association of Environmental and Resource Economists*, 1(4), 555-598.

Limited Attention

17) Allcott, H., & Taubinsky, D. (2015). Evaluating behaviorally motivated policy: Experimental evidence from the lightbulb market. *The American Economic Review*, 105(8), 2501-2538.

18) Palmer, K., & Walls, M. (2015). Limited attention and the residential energy efficiency gap. *The American Economic Review: Papers & Proceedings*, 105(5), 192-195.

19) Tiefenbeck, V., Goette, L., Degen, K., Tasic, V., Fleisch, E., Lalive, R., & Staake, T. (2016). Overcoming salience bias: How real-time feedback fosters resource conservation. *Management Science, Articles in Advance*, 1-19.

FURTHER INFORMATION

You will find further information at the FCN homepage (www.fcn.eonerc.rwth-aachen.de) and in the L2P eLearning platform. For the remaining questions related to the organization, please contact **Sabine Schill** via e-mail (post_fcn@eonerc.rwth-aachen.de) and for the questions related to the content **Ayşe Tugba Atasoy**, M.Sc. (tatasoy@eonerc.rwth-aachen.de).