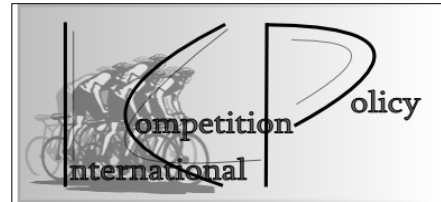


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Der Lehrstuhl VWL 8 „Internationale Wettbewerbsökonomik“ bietet im Wintersemester 2019/20 ein Seminar für Bachelor-Studierende in den Studiengängen Economics, Internationale Wirtschaft und Entwicklung, Wirtschaftsmathematik und Philosophy & Economics zu dem Thema

## **Verhaltensökonomische Maßnahmen für umwelt- und gesundheitsbewusstes Verhalten**

an.

In diesem Seminar behandeln wir theoretische sowie experimentelle Forschung, die untersucht, ob und mit welchen Instrumenten Menschen zu einem umwelt- und gesundheitsbewussteren Verhalten bewegt werden können. Ausgehend von Erkenntnissen der Verhaltensökonomik über Selbstkontrollprobleme und kognitive Verzerrungen werden sowohl „traditionelle“ staatliche Marktinterventionen wie Steuern oder Standards als auch weniger verzerrende „Nudges“ betrachtet. Dabei zeigt sich, dass häufig bereits einfache Maßnahmen wie geeignete Default-Regeln, die Erinnerung an soziale Normen oder eine bestimmte Präsentation von Auswahloptionen ausreichen, um Entscheidungen im eigenen langfristigen Interesse bzw. im Interesse des Gemeinwohls zu fördern.

Einige der im Seminar behandelten Papiere verwenden verhaltensökonomische und industrieökonomische Modelle. Daher ist eine vorherige erfolgreiche Teilnahme an den Veranstaltungen „Verhaltensökonomik“ sowie „Markt und Wettbewerb“, „Wettbewerbstheorie und -politik“ oder „Spieltheorie“ hilfreich, aber nicht zwingend erforderlich.

Es stehen insgesamt 20 Seminarplätze zur Verfügung. Übersteigt die Anzahl der Interessenten die verfügbaren Seminarplätze, so werden die Seminarplätze nach der Reihenfolge der Anmeldungen vergeben. Die **Seminarleistung** besteht aus einer **Seminararbeit** (10 - 12 Seiten) und einem **Vortrag** (inklusive Foliensatz) der eigenen Arbeit sowie in der Beteiligung an der allgemeinen Diskussion. Die Seminarnote ergibt sich als gewichtetes Mittel aus den Leistungen wie folgt: 70% Hausarbeit, 30% Vortrag.

- Bachelor-Studierende aus dem Studiengang Philosophy & Economics können das Seminar im E6/Ö6-Bereich (5 LP) anrechnen.
- Economics-Bachelor-Studierende können das Seminar als „Seminar zu Institution und Governance“, „Mikrotheoretisches Seminar“ oder im „Individuellen Schwerpunkt“ anrechnen (5 LP, neue PO). Gemäß alter PO kann das Seminar als „GVWL 2-Seminar“ (GVWL II 5 oder GVWL II 6) eingebracht werden (5 LP).
- IWE-Studierende können das Seminar im „Individuellen Schwerpunkt“ (Spezialisierung IGME oder VET) anrechnen (5 LP).

### **Anmeldung:**

Um sich für das Seminar anzumelden, schreiben Sie bitte eine E-Mail an [magdalena.helfrich@uni-bayreuth.de](mailto:magdalena.helfrich@uni-bayreuth.de). Bitte geben Sie Ihren Namen, Ihre Matrikelnummer und Ihren Studiengang sowie drei Themenwünsche an.

Die Zuteilung der Themen erfolgt bis **Freitag, 25. Oktober 2019**. Sie werden per E-Mail über die Annahme zum Seminar und die Themenzuteilung benachrichtigt. Die Seminaranmeldung gilt ab diesem Tag als **verbindlich**. Die **Seminaranmeldung ist ab sofort** möglich.

### **Organisatorisches und Termine:**

- Vorbesprechung: **Mittwoch, 16. Oktober 2019**, 10 Uhr, S 52 (RW II)
- Anmeldeschluss: **Mittwoch, 23. Oktober 2019**
- Blockseminar: **Freitag und Samstag, 29. und 30. November 2019** (9-18 Uhr), Ort: Universität Bayreuth (Raum wird noch bekannt gegeben)
- Abgabe der Seminararbeit: bis **Montag, 16. Dezember 2019** (gedruckt und per E-Mail als ein PDF-Dokument)
- Ansprechpartnerin: Magdalena Helfrich M. Sc. ([magdalena.helfrich@uni-bayreuth.de](mailto:magdalena.helfrich@uni-bayreuth.de))

- Vortragssprache: deutsch
- Leitfaden zum Erstellen einer wissenschaftlichen Arbeit: [https://www.icp.uni-bayreuth.de/en/teaching/BA\\_MA\\_WiwiZ-Theses/index.html](https://www.icp.uni-bayreuth.de/en/teaching/BA_MA_WiwiZ-Theses/index.html)

### Empfohlene Literatur

- Dhami, S. (2016): *The Foundations of Behavioral Economic Analysis*, Oxford University Press.
- Thaler, R. H. und C. R. Sunstein (2008): *Nudge – Improving decisions about health, wealth and happiness*, Penguin Books.

### Themen

Im Seminar werden folgende Themenblöcke besprochen:

- „Traditionelle“ staatliche Marktinterventionen
- Nudging zum Energiesparen
- Nudging zu nachhaltiger Ernährung
- Selbstkontrollprobleme und Commitment
- Rebound-Effekte

Weitere Themen können auf Anfrage vergeben werden.

#### a) „Traditionelle“ staatliche Marktinterventionen

1. O'Donoghue, T. und M. Rabin (2006): “Optimal sin taxes”, *Journal of Public Economics*, Vol. 90, 1825-1849.

We investigate “sin taxes” on unhealthy items, such as fatty foods, that people may (by their own reckoning) consume too much of. We employ a standard optimal-taxation framework, but replace the standard assumption that all consumers have 100% self-control with an assumption that some consumers may have some degree of self-control problems. We show that imposing taxes on unhealthy items and returning the proceeds to consumers can generally improve total social surplus. Because such taxes counteract over-consumption by consumers with self-control problems while at the same time they naturally redistribute income to consumers with no self-control problems (who consume less), such taxes can even create Pareto improvements. Finally, we demonstrate with some simple numerical examples that even if the population exhibits relatively few self-control problems, optimal taxes can still be large.

2. Réquillart, V., L.-G. Soler und Y. Zang (2016): "Quality standards versus nutritional taxes: Health and welfare impacts with strategic firms", *Journal of Health Economics*, Vol. 50, 268-285.

The goal of this paper is to better understand firms' strategic reactions to nutritional policies targeting food quality improvements and to derive optimal policies. We propose a model of product differentiation, taking into account the taste and health characteristics of products. We study how two firms react to alternative policies: an MQS policy, linear taxation of the two goods on the market, and taxation of the low-quality good. The MQS and the taxation of the low-quality product are the preferred options by a social planner. If taste is moderately important, the MQS policy is chosen by a populist and a paternalist social planner. If taste is a major component of choice, the populist planner chooses to tax the low-quality product whereas the paternalist planner prefers the MQS policy. Finally, for a paternalist social planner, an MQS-based policy always allows for higher levels of welfare than an information policy alone.

## **b) Nudging zum Energiesparen**

3. Allcott, H. (2011): "Social norms and energy conservation", *Journal of Public Economics*, Vol. 95, 1082-1095.

This paper evaluates a series of programs run by a company called OPOWER to send Home Energy Report letters to residential utility customers comparing their electricity use to that of their neighbors. Using data from randomized natural field experiments at 600,000 treatment and control households across the United States, I estimate that the average program reduces energy consumption by 2.0%. The program provides additional evidence that non-price interventions can substantially and cost effectively change consumer behavior: the effect is equivalent to that of a short-run electricity price increase of 11 to 20%, and the cost effectiveness compares favorably to that of traditional energy conservation programs. Perhaps because the treatment included descriptive social norms, effects are heterogeneous: households in the highest decile of pre-treatment consumption decrease usage by 6.3%, while consumption by the lowest decile decreases by only 0.3%. A regression discontinuity design shows that different categories of "injunctive norms" played an insignificant role in encouraging relatively low users not to increase usage.

4. Asensio, O.I. und M. Delmas (2016): "The dynamics of behavior change: Evidence from energy conservation", *Journal of Economic Behavior & Organization*, Vol. 126, 196-212.

Little is known about the effect of message framing on conservation behavior over time. In a randomized controlled trial with residential households, we use advanced metering and information technologies to test how different messages about household energy use impact the dynamics of conservation behavior down to the appliance level. Our results, based on 374 million panel observations of kilowatt-hour (kWh) electricity consumption

for 118 households over 9 months, show that differences in behavioral responses due to message framing become more significant over time. We find that a health-based frame, in which households consider the human health effects of their marginal electricity use, induced persistent energy savings behavior of 8–10% over 100 days; whereas a more traditional cost savings frame, drove sharp attenuation of treatment effects after 2 weeks with no significant savings versus control after 7 weeks. We discuss implications for the design of effective information campaigns to engage households in conservation behavior.

5. Harding, Matthew und A. Hsiaw (2014): “Goal setting and energy conservation”, *Journal of Economic Behavior & Organization*, Vol. 107, 209-227.

This paper develops a theoretical model of consumer demand for an energy conservation program that involves non-binding, self-set goals. We present evidence from a Northern Illinois goal-setting program, aimed at reducing residential electricity consumption, which is difficult to reconcile with standard preferences and is broadly consistent with a model of present-biased consumers with reference-dependent preferences. We find that the need for commitment is correlated with program adoption, higher pre-adoption consumption, and lower responsiveness to goals. Consumers choosing realistic goals persistently save substantially more, achieving savings of nearly 11%, than those choosing very low or unrealistically high goals.

### c) Nudging zu nachhaltiger Ernährung

6. Kurz, V. (2018): “Nudging to reduce meat consumption: Immediate and persistent effects of an intervention at a university restaurant”, *Journal of Environmental Economics and Management*, Vol. 90, 317-341.

Reducing meat consumption is considered to have great potential to mitigate food-related greenhouse gas (GHG) emissions. I conducted a field experiment with two restaurants to test if nudging can increase the consumption of vegetarian food. At the treated restaurant, the salience of the vegetarian option was increased by changing the menu order and enhancing the visibility of the vegetarian dish. The other restaurant served as a control. Daily sales data on the three main dishes sold were collected from September 2015 until June 2016. Results show that the nudge increased the share of vegetarian lunches sold by on average 6 percentage points, and that the treatment effect increased over time. The change in behavior is partly persistent, as the share of vegetarian lunches sold remained 4 percentage points higher after the intervention ended than before the experiment. The intervention reduced GHG emissions from food sales by around 5 percent.

7. Campbell-Arvai, V., J. Arvai und L. Kalof (2014): “Motivating Sustainable Food Choices: The Role of nudges, Value Orientation, and Information Provision”, *Environment and Behavior*, Vol. 46 (4), 453-475.

Small, everyday changes in people’s behavior can have significant positive environmental impacts. To this end, the research reported here focused on the role of an asymmetric

intervention (a “nudge”) in motivating choices with positive environmental outcomes. The context of this research was motivating proenvironmental food choice in campus dining halls. An experiment was conducted in which a default menu, presenting only appealing or unappealing meat-free meal options, was compared with more conventional menu configurations. The use of a default menu increased the probability that study participants would choose a meat-free meal option, and this probability increased when appealing default meal options were provided. Neither the provision of information on the menus nor the proenvironmental value orientation and worldview of participants contributed to the logistic model. These results suggest that default-based interventions can be important tools in motivating proenvironmental behavior and can serve to complement information and education efforts over the long term.

8. Demarque, C., L. Charalambides, D. J. Hilton und L. Waroquier (2015): “Nudging sustainable consumption: The use of descriptive norms to promote a minority behavior in a realistic online shopping environment”, *Journal of Environmental Psychology*, Vol. 43, 166-174.

Our research examined effective ways of presenting true descriptive norm information about sustainable consumption in a realistic online shopping environment, even when the current norms for purchasing green products are low. In Experiment 1, participants presented with both “strong” and “weak” formulations of descriptive norms purchased more eco-labeled products and spent more money in comparison with a control condition. Using a different population, Experiment 2 confirmed these results for strong norms, but not for weak ones, and eliminated product salience and differential recall of norms as explanations for these effects. Overall, these findings suggest that even though current levels of green consumption may be relatively low, they can be truthfully described in ways that promote sustainable consumption in a shopping environment with real incentives. These methods can be easily adopted by supermarket chains and department stores.

9. Garnett, E. E., A. Balmford, C. Sandbrook, M. A. Pilling und T. M. Marteau (2019): “Impact of increasing vegetarian availability on meal selection and sales in cafeterias”, *Proceedings of the National Academy of Science of the United States of America*, 30. September 2019, <https://doi.org/10.1073/pnas.1907207116>.

Shifting people in higher income countries toward more plant-based diets would protect the natural environment and improve population health. Research in other domains suggests altering the physical environments in which people make decisions (“nudging”) holds promise for achieving socially desirable behavior change. Here, we examine the impact of attempting to nudge meal selection by increasing the proportion of vegetarian meals offered in a year-long large-scale series of observational and experimental field studies. Anonymized individual-level data from 94,644 meals purchased in 2017 were collected from 3 cafeterias at an English university. Doubling the proportion of vegetarian meals available from 25 to 50% (e.g., from 1 in 4 to 2 in 4 options) increased vegetarian meal sales (and decreased meat meal sales) by 14.9 and 14.5 percentage points in the observational study (2 cafeterias) and by 7.8 percentage points in the experimental study (1 cafeteria), equivalent to proportional increases in vegetarian meal sales of 61.8%,

78.8%, and 40.8%, respectively. Linking sales data to participants' previous meal purchases revealed that the largest effects were found in the quartile of diners with the lowest prior levels of vegetarian meal selection. Moreover, serving more vegetarian options had little impact on overall sales and did not lead to detectable rebound effects: Vegetarian sales were not lower at other mealtimes. These results provide robust evidence to support the potential for simple changes to catering practices to make an important contribution to achieving more sustainable diets at the population level.

#### **d) Selbstkontrollprobleme und Commitment**

10. Wertenbroch, K. (1998): "Consumption Self-Control By Rationing Purchase Quantities of Virtue and Vice", *Marketing Science*, Vol. 17 (4), 317-337.

Consumers' attempts to control their unwanted consumption impulses influence many everyday purchases with broad implications for marketers' pricing policies. Addressing theoreticians and practitioners alike, this paper uses multiple empirical methods to show that consumers voluntarily and strategically ration their purchase quantities of goods that are likely to be consumed on impulse and that therefore may pose self-control problems. This paper provides experimental evidence of the operation of consumer self-control and empirically illustrates its direct implications for the pricing of consumer goods. Moreover, the paper develops a conceptual framework for the design of empirical tests of such self-imposed constraints on consumption in consumer goods markets.

11. Jain, S. (2012): "Marketing of Vice Goods: A Strategic Analysis of the Package Size Decision", *Marketing Science*, Vol. 31 (1), 36-51.

Consumers are often unable to resist the temptation of overconsuming certain products such as cookies, crackers, soft drinks, alcohol, etc. To control their consumption, some consumers buy small packages or abstain from purchasing the product altogether. Other consumers, however, still purchase large packages and overconsume. From a strategic perspective, firms have the option of introducing small packages or only offering large packages. We use the literature on hyperbolic discounting to model consumers' self-control problems and examine conditions under which firms will offer small packages to help consumers combat their self-control problem, and how this offering in turn affects prices, profits, consumer, and social welfare. Our results show that introducing small packages can increase firms' profits only when a small fraction of consumers have overconsumption problems or when small packages can bring in new customers. Additionally, we find that competition can sometimes reduce the incentives for firms to introduce small packages. This is particularly true when a large fraction of consumers is attracted to small packages. We also find that firms' profits can sometimes decrease if they produce healthier alternatives of their goods. Our analysis of consumer welfare reveals that small packages enhance consumer and social welfare, even though they sometimes increase the consumption of vice goods.

12. Christensen, E. G. B. und J. Nafziger (2016): „Packaging of sin goods – Commitment or exploitation?“, *Journal of Behavior & Organization*, Vol. 122, 62-74.

We consider the shopping and consumption decision of an individual with a self-control problem. The consumer believes that restricting the consumption of a sinful product (such as chips) is in his long-run interest. But when facing the actual decision he is tempted to overeat. We ask how firms react to such self-control problems, and possibly exploit them, by offering different package sizes. In a competitive market, either one or three package sizes are offered. In contrast to common intuition, the large, and not the small package might be a commitment device. The latter may serve to exploit the naive consumer.

#### e) Rebound-Effekte

13. Dorner, Z. (2019): “A behavioral rebound effect”, *Journal of Environmental Economics and Management*, Vol. 98, 102257, <https://doi.org/10.1016/j.jeem.2019.102257> .

Pro-environmental behaviors are an important avenue for mitigating environmental impacts. Technological improvements are also a vital tool for reducing environmental damage from consumption. However, their benefits are partially offset by the direct rebound effect, whereby a consumer rationally responds to an increase in resource use efficiency by consuming more. This paper investigates whether technological improvement might also reduce behaviorally motivated mitigation of environmental damage. A behavioral rebound effect operates through two channels. First, pro-environmental effort is reduced after a decrease in marginal environmental damage. Second, moral licensing reduces pro-environmental effort further when technological change is endogenous. I develop a novel real effort laboratory experiment to identify these behaviors. I find a positive behavioral rebound effect. I also find evidence consistent with moral licensing, which is strongest among subjects with a higher degree of pro-environmental attitudes and beliefs. Subjects’ baseline level of pro-environmental effort is driven by beliefs about social norms.