

**Abstracts**

**Irrigation and Autocracy**

*Jeanet Sinding Bentzen, University of Copenhagen, Nicolai Kaarsen, University of Copenhagen, and Asger Moll Wingender, University of Copenhagen*

Irrigated agriculture makes societies more likely to be ruled by authoritarian regimes. Ancient societies have long been thought to follow this pattern. We empirically show that irrigation affects political regimes even in the present. To avoid endogeneity, we use geographical and climatic variation to identify irrigation dependent societies. We find that countries whose agriculture depended on irrigation are about six points less democratic on the 21-point polity2-scale than countries where agriculture has been rainfed. We find qualitatively similar results across regions within countries. We argue that the effect has historical origins: irrigation allowed landed elites in arid areas to monopolize water and arable land. That made elites more powerful and better able to oppose democratization. Consistent with this conjecture, we show that irrigation dependence predicts land inequality both at the country level, and in premodern societies surveyed by ethnographers. (JEL: O11, N50, Q15)

**Historical Frontiers and the Rise of Inequality. The Case of the Frontier of Granada**

*Daniel Oto-Perallás, University of St Andrews and Diego Romero-Ávila, Universidad Pablo de Olavide*

This paper explores the political economy that leads frontier regions to be unequal. By focusing on the presence of a stable frontier between Castile and the Nasrid Kingdom of Granada in the late Middle Ages, our analysis shows how a historical border may generate differences in inequality that can become extremely persistent. We argue that the dynamics of being a militarily insecure frontier region created the conditions on the Castilian side for a high concentration of economic and political power. Through the application of a border specification and a spatial regression discontinuity design to municipal-level data, we find that municipalities on the Castilian side have a significantly higher percentage of landless workers, a greater accumulation of wealth, and more jurisdictional rights among the privileged orders, as measured in the eighteenth century. We use current indicators of land inequality and development to show that the effect of the frontier of Granada persists even today. (JEL: C14, N2, N9, O1)

**Fungibility, Labels, and Consumption**

*Johannes Abeler, University of Oxford and Felix Marklein, German Ministry of Finance*

Fungibility of money is a central assumption in the theory of consumer choice: any unit of money is substitutable for another. This implies that the composition of income or wealth is irrelevant for consumption. We find that even in a simple, incentivized setup many subjects do not treat money as fungible. When a label is attached to a part of their budget, subjects change consumption according to the label. We first provide suggestive evidence from the field and then use a laboratory experiment to show this result in a tightly controlled environment. In the lab, subjects with lower cognitive abilities are more likely to violate fungibility. The findings lend support to behavioral models of narrow bracketing and mental accounting. One implication of our results is that in-kind benefits distort consumption more strongly than usually assumed. (JEL: D01, H31, I38)

### **Experimentation in Two-Sided Markets**

*Martin Peitz, University of Mannheim, Sven Rady, University of Bonn, and Piers Trepper, University of Munich*

We study optimal experimentation by a monopolistic platform in a two-sided market. The platform provider is uncertain about the strength of the externality each side is exerting on the other. Setting participation fees on both sides, it gradually learns about these externalities by observing actual participation levels. This provides an informational rationale for introductory pricing, with the platform provider charging a fee below the myopically optimal level on at least one side of the market. If the externality that the other side exerts is sufficiently well known and weaker than the externality it experiences, the platform provider extracts surplus from that side by charging it a fee above the myopically optimal level. This interplay between learning and surplus extraction is crucial to the market outcome and its dynamics. (JEL: D42, D83, L12)

### **Self-Image and Willful Ignorance in Social Decisions**

*Zachary Grossman, University of California, Santa Barbara and Joël J. Van der Weele, CREED/Department of Economics, University of Amsterdam*

Avoiding information about adverse welfare consequences of self-interested decisions, or *willful ignorance*, is an important source of socially harmful behavior. We analyze a Bayesian signaling model of an agent who cares about self-image and has the opportunity to learn the social benefits of a personally costly action. We show that willful ignorance can serve as an excuse for selfish behavior by obfuscating the signal about the decision maker's preferences, and help maintain the idea that the agent would have acted virtuously under full information. We derive several behavioral predictions that are inconsistent with either outcome-based preferences or social-image concern and conduct experiments to test them. Our findings, as well as a number of previous experimental results, offer support for these predictions and thus, the broader theory of self-signaling. (JEL: D83, C72, C91)

### **A High Frequency Assessment of the ECB Securities Markets Programme**

*Eric Ghysels, University of North Carolina, Julien Idier, Banque de France & European Central Bank, Simone Manganelli, European Central Bank, and Olivier Vergote, European Central Bank*

Policy impact studies often suffer from endogeneity problems. Consider the case of the ECB Securities Markets Programme: If Eurosystem interventions were triggered by sudden and strong price deteriorations, looking at daily price changes may bias downwards the correlation between yields and the amounts of bonds purchased. Simple regressions of daily changes in yields on quantities often give insignificant or even positive coefficients and therefore suggest that SMP interventions have been ineffective, or worse counterproductive. We use high frequency data on purchases of the ECB Securities Markets Programme and sovereign bond quotes to address the simultaneity and endogeneity issues. We propose a VAR framework estimated at several frequencies to better measure the SMP impact and its persistence. Our results show that SMP interventions have been effective in reducing yields of government bonds for the countries under the programme. (JEL: E52 E44 G12 C58)