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Economic Theory Workshop

April, 16, 2021

Dept. Teoría e Historia Económica
Universidad de Málaga

All sessions will be on-line via Zoom. Login details will be sent by email. Please, contact any of the organisers if you plan to attend and you are not in the list of participants.

First session

9:00–9:40	*Electric Utility Mergers in the Presence of Distributed Renewable Energy* **Presenter:** Luis Gautier (UMA) **Chair:** Francisco Alvarez (UCM)
9:45–10:25	*Social Welfare Analysis for Ordered Response Data* **Presenter:** Ramses Abulnaga (UABDN&UMA) **Chair:** Miguel Ángel Meléndez (UMA)
10:30–11:10	*Stable and Efficient Task Assignment to Pairs* **Presenter:** Pietro Salmaso (UMA) **Chair:** Bernardo Moreno (UMA)
11:15–11:55	*Leniency Degree and Cartel (in)Stability in the Lab* **Presenter:** Adriana Alventosa (UMA) **Chair:** Socorro Puy (UMA)

Second session

15:30–16:10	*Preventing (Panic) Bank Runs* **Presenter:** Ismael Rodríguez-Lara (UGR) **Chair:** Javier Rodero (UMA)
16:15–16:55	*A Theory of Informational Alliances* **Presenter:** Raghul Venkatesh (UMA) **Chair:** Pablo Amorós (UMA)
17:00–17:40	*Network formation and heterogeneous risks* **Presenter:** Antonio Cabrales (UC3M) **Chair:** Antonio Morales (UMA)
17:45–18:25	*Estimating the Market Power of Banks in the EU: A Stochastic Frontier Approach with Environmental Variables* **Presenter:** Cristina Ortega (UMA) **Chair:** Ascensión Andina (UMA)

List of Participants

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Abstracts

9:00h

Electric Utility Mergers in the Presence of Distributed Renewable Energy

Luis Gautier (University of Texas at Tyler-Fulbright Scholar at UMA), Mahelet Fikru (Missouri University of Science and Technology)

Firm consolidation through mergers and acquisitions could be a strategic option for the electricity industry which has recently witnessed several transformations such as renewable integration and regulatory changes. This study examines the profitability of electric utility mergers in the presence of distributed renewable energy sources. We introduce two sector specific parameters that influence merger profitability: the rate at which renewable energy raises the marginal grid integration cost and the extent to which renewable energy reduces pollution intensity. Our model predicts that an increase in the first parameter discourages profitable mergers while an increase in the latter encourages profitable mergers. We find that due to the strategic substitutability between renewable and non-renewable energy, an increase in energy produced from distributed sources reduces the profitability of profitable mergers and reduces losses from unprofitable mergers. Furthermore, we show that the variability in electricity produced from renewable sources induces utilities to produce more exacerbating the extent that extra renewable energy affects merger profitability. Results from the theoretical model are illustrated by simulating a hypothetical merger among investor-owned utilities in the PJM market.

9:45

Social Welfare Analysis for Ordered Response Data

Ramses Abulnaga (Universidad de Aberdeen & Universidad de Málaga), Tarik Yalcin (formerly, *University of Lausanne*)

Consider the problem of measuring social welfare and inequality in relation to the ordered response data such as self-assessed health and happiness. Paretian transfers and Hammond equalizing transfers respectively capture society's preference for efficiency and equality, and the union of these relations produces a partial welfare ordering introduced by Gravel et al (2021 Econ. Th.) The aim of this paper is to generalize the Hammond transfers concept in order to accommodate different judgements about inequality aversion. We introduce a parametric class of social welfare orderings, of which first order stochastic dominance (FOSD) and the ordering of Gravel et al. are specific members. The family also embodies intermediate concepts of inequality aversion between FOSD and the ordering of Gravel et al., as well as more progressive concepts than the latter. The resulting methodology is illustrated in a comparison of the distribution of self-assessed health in eight countries from the Mediterranean region.

10:30

Stable and Efficient Task Assignment to Pairs

Antonio Nicoló (University of Padova), Pietro Salmaso (Universidad de Málaga-previously at University of Padova), Arunava Sen (Indian Statistical Institute), Sonal Yadav (Umea University)

11:15

Leniency degree and cartel (in)stability in the lab

Adriana Alventosa (UMA-previously at Universidad de Valencia), José Manuel Ordóñez de Haro (UMA), Javier Rodero Cosano (UMA)

In this paper we first develop a dynamic model on collusive behaviour. We propose a sequential-move game based on the centipede game. This model is used to study cartel formation and stability under different competition policy designs. Specifically, we consider that firms that incur in anticompetitive behaviour can apply for leniency by self-reporting. We then take the game to the lab in order to analyse whether cartel stability occurs as predicted under two leniency programs: (i) full leniency, where the first reporter has total immunity and (ii) partial leniency, where the first reporter pays a reduced penalty.

15:30

Preventing (Panic) Bank Runs

Hubert Janos Kiss (HAS, IEHAS and Corvinus University of Budapest), Ismael Rodriguez-Lara (University of Granada), Alfonso Rosa-Garcia (Universidad Católica San Antonio de Murcia)

We study experimentally how to prevent bank runs using a mechanism inspired in Andolfatto et al. (2017). They propose a mechanism that eliminates bank runs as a coordination problems among depositors (Diamond and Dybvig (1983)) by offering depositors the possibility to relocate their funds to a priority account. We implement this mechanism in an experimental environment and find that bank runs that occur because of coordination problems are prevented. Further, this mechanism eliminates panic bank runs a la Kiss et al. (2018) that occur when depositors can observe the action of others. While the theoretical prediction is that depositors will not use the priority account in equilibrium, we find that depositors relocate their funds to this account, especially if their choices are not observed by others.

16:15

A Theory of Informational Alliances

Raghul Venkatesh (UMA-previously at Univesity of Marseille)

We study incentives for investment (i.e., action sets) and information aggregation in an alliance. Within the alliance, i) players have private information; ii) actions exhibit substitutability; and iii) preferences over outcomes are heterogeneous. We first derive the conditions for information revelation given homogeneous action sets. Full information revelation ensues as long as players' biases are sufficiently cohesive with respect to the action set. We then derive precise conditions on the minimal action sets required for fully aggregating information. Our central result characterizes the equilibrium investment in action sets by players, conditional on full information revelation under any public communication protocol. Differences in investments across players is exacerbated by the distribution of individual biases and degree of interdependency in actions. The results are discussed in the context of decision-making in international climate change and military alliances, and multi-divisional organizations.

17:00

Network formation and heterogeneous risks

Antonio Cabrales (UC3M)

We study a new model to study the effect of contract externalities that arise through shock transmission. We model a financial network where Investors (Banks) enjoy direct and indirect benefits from linking with one another. Borrowers (Customers) benefit from having a connection with a Bank, but they are a cost to both direct and indirect connections. In efficient networks the Banks should form large connected components with few Customers attached. The equilibrium networks, on the other hand, have more Customers attached, they are core-periphery structures, and components are also smaller than the efficient ones. We tudy extensions with heterogeneous Customers, with diversity in the costs to Banks of linking with Customers, and with asymmetric information.

17:45

Estimating the Market Power of Banks in the EU: A Stochastic Frontier Approach with Environmental Variables

Cristina Ortega (UMA-previously at Universidad Carlos III de Madrid)

This study aims to provide a comprehensive analysis of the effect of environmental conditions on EU banks' market power. To the best of our knowledge, it is the first empirical research which develops an analysis of the effect of financial environment conditions on banks' market power, employing the stochastic frontier model of Kumbhakar (2012) for the EU banking market. To achieve this, we follow the econometric procedure of Batesse and Coelli (1995) to include a set of exogenous variables controlling for market concentration, monetary policy, banking regulation, degree of development of financial markets and institutions, as well as the effects of the global and debt crisis. The inclusion of environmental variables in the model provides a more refined estimation of market power, levelling up the playing field to make proper cross-country comparisons. Furthermore, a second contribution of this study is the employment of a broader in time dataset, spanning the period 2005-2019, compared to previous studies in this matter, which employed data up to 2015. Hence, we present in this study an updated analysis of the witnessed process of convergence in banks' market power across EMU members in recent years.