18th BiGSEM Workshop on Economics and Management

List of Speakers

Monday, December 4th 2023

Session 1: Impact Evaluation

Casemiro Campos, *Goethe University Frankfurt*

The Oscars of Education: The Effects of a Tournament Between Public Schools

Despite discussions and implementations of performance-related incentive pay for teachers, limited research exists on the medium-term effects of combining financial and non-pecuniary group incentives within the public school system. This study focuses on a yearly rank-order tournament among schools in Brazil and presents quasi-experimental evidence. By exploring the timing and eligibility criteria of the tournament, a differences-in-discontinuities design is implemented and reveals substantial improvements in student performance when their school is eligible for the prize. These effects primarily stem from schools at both ends of the performance spectrum, indicating the varying levels of incentives generated by the tournament. Furthermore, by exploring an exogenous cutoff that defines the prize winners, I document significant impacts on future scores upon receiving the prize, aligned with the incentives designed by the prize. Moreover, awarded teachers, on average, change their reported beliefs regarding the students, and awarded principals report temporarily higher levels of interaction with parents and perceived support by the community.

Yu Pan, *University of Zurich*

The Halo on the Pitch: Unmasking the Superstar Effect in Football Performance Perception

This study investigates the evaluative biases in rating superstar athletes within professional football, juxtaposing the "Superstar Effect" with the psychological "Halo Effect." Using a novel experimental approach, we analyze audience ratings of football players' performances in both blurred and unblurred video highlights. Our findings indicate that superstars, contrary to expectations, receive lower performance ratings than non-superstars, a disparity that diminishes when their identities are recognizable. This reversal highlights a pronounced halo effect, where recognition amplifies perceived performance. The study not only contributes to sports economics by revealing the complex interplay between talent, popularity, and perception but also underscores broader implications in professional evaluations, suggesting a pervasive bias in how recognition and prior achievements can influence appraisal across various fields.

Session 2: Inequality

Franziska Riepl, *Goethe University Frankfurt*

Does a Passport Get You a Degree? Citizenship Reform and Educational Achievement

Obtaining citizenship is often considered a crucial step in the lives of second-generation immigrants. While some countries have a long-standing tradition of birthright citizenship, many nations still enforce restrictive application procedures that pose significant administrative and personal hurdles. In recent years ever more countries are considering opening additional avenues to citizenship for the children of immigrants. We study how the introduction of birthright citizenship in Germany shaped the educational trajectories of second-generation immigrants, allowing them to integrate into German society more easily and access various social and economic benefits. Our identification strategy exploits the design of the reform, which restricted birthright citizenship to children of immigrants born after 2000 and whose parents fulfilled certain eligibility criteria. Using data from two panel surveys and one census-like dataset, we show that the reform contributes to closing the gaps between natives and second-generation immigrants in age at primary school enrolment and track choice. We expand the existing literature by highlighting longer-term effects on completed degrees and university entrance, and by shedding light on the underlying mechanisms. Aside from the traditional explanation that the prospects of permanent access to the German labor market and to restricted occupations increases incentives to invest in human capital, we find an important role for an identification effect: students' educational performance improves due to an ameliorated sense of belonging and subsequent improvements in scholastic motivation and interaction with natives. The findings have important implications for policymakers promoting immigrant integration and the closing of educational achievement gaps.

Fabian Reutzel, *Paris School of Economics*

Income Opportunities Across the Lifecycle: Earnings Profiles and Inequality of Opportunity

NA

Session 3: Mathematical Finance

Beatrice Ongarato, *Università degli Studi di Padova*

Semi-Static Variance-Optimal Hedging with Self-Exciting Jumps

The aim of this work is to study a hedging problem in an incomplete market model where the underlying log-asset price is driven by a diffusion process with self-exciting jumps of Hawkes type. More precisely, we aim at hedging a claim at time T > 0, using a basket of available contingent claims, so that we minimize the variance of the residual hedging error at time T. In order to minimize the error and targeting perfect replication even in incomplete markets, we look for a hybrid hedging strategy, namely for a semi-static one: one part has to be dynamic (i.e., continuously rebalanced) and another one will be static (i.e., buy-and-hold).

Giacomo Lanaro, *Università degli Studi di Padova*

Weak Equilibria of a Mean-Field Game Model with Asymmetric Information

In financial markets, quantifying the information possessed by an agent trading an asset is a crucial task, especially when there is no homogeneity between the amount of information that can be accessed by every player. Our purpose is to study the behaviour of an equilibrium price ϖ determined by the market clearing condition (i.e. the match between the demand and the supply) between financial agents who can observe different amounts of information. We focus on a market with one asset that is traded by N less informed agents and one major agent. We prove the existence of a mean-field solution to the equation for the price process ϖ when $N \to \infty$. We justify the construction of the price process in the mean-field limit, showing that this price process satisfies a weak form of the market clearing condition.

Tuesday, December 5th 2023

Session 4: Game Theory

Patrick Blank, *Goethe Universität Frankfurt*

Optimal Decentralization with Uninformed Voters

Political scientists claim that clear lines of responsibility generate higher welfare when voters are imperfectly informed about the degree of intergovernmental cooperation in federal systems. We introduce bounded rationality into a Holmström-type, multi-task, and multi-agent career concerns model (1999) to show that the governmental complexity of federalism can impair electoral accountability: Although incorrect voter beliefs tend to strengthen (weaken) accountability when the value of information is initially low (high), differences in the incentive structure that emerge under rationality remain dominant and determine the welfare ranking of federal systems even if voters deviate from rational expectations. Our predictions support the hypothesis that federalism is not harmful per se, but weakens electoral accountability if the responsibility for managing the economy is ambiguous.

Sarah Kühn, *Paderborn University*

Non-Induced Preferences in Matching Experiments

As a matching takes the preference lists of the agents as input, the preferences have a leading role in matching experiments. However, the experimenters rely on induced preferences to simulate real-world applications. We investigate participants' behavior in matching experiments given induced and non-induced preferences. Building on the experiment by Chen and Sönmez (2006), we investigate the most frequently used school choice mechanisms (Boston school choice mechanism, Deferred Acceptance mechanism and Top Trading Cycles mechanism). In our experiment, the monetary incentives are supplemented by incentivizing participants via own preferences. As a main contribution our paper demonstrates how induced and non-induces preferences change the participants behavior (e.g. truth-telling and understanding) given different mechanisms.

Session 5: Game Theory II

Vitus Bühl, *FernUniversität in Hagen*

Diversity May Complicate Matters - Asymmetric Countries Facing a Climate Tipping Point

In this paper we analyze the impact of asymmetry between countries on the formation of climate coalitions. We use a simple non-cooperative model in a static time-setting with a tipping-point as the threshold when a climate-damage is triggered. The analysis looks at two model-cases, one with a finite number of countries and one with a continuum of countries. In each of these cases there will be a distinction which asymmetry type appears. Either asymmetry regarding the abatement cost parameter or regarding the impact-severity of climate change. We can show that certain asymmetry constellations will destabilize the grand coalition so that only a subset of countries forms the climate coalition but the catastrophe will still be avoided with certainty, but not cost-efficient.

Andrea Marietta Leina, *University of East Anglia*

Cooperation in the Helping Game: Image Scoring or Good Standing?

Using a lab experiment, we examine which of the reputation-based mechanisms proposed in the theoretical literature perform better in the decision to help strangers in two conditions of the helping game. We compare the "good standing", a binary score with a recursive feature, and the "image scoring", a numerical score that take into account past actions. We argue that the "good standing" (GS) mechanism creates an incentive to discriminate between subjects who do not help someone that did not help in the past ('justified punishers') and subjects who did not help without a justification ('unjustified non-helpers'). Therefore, thanks to its recursive mechanism, it allows a 'club of helpers' to form.

Session 6: Econometrics and Machine Learning

Vivian Yvonne Nastl, *ETH Zurich*

Causal Inference Under Treatment Competition

In this paper, we study the issue of interference between multiple treatments, in the context of causal inference. In particular, we tackle the setting of multiple treatments that may be received in a random order by a user. The position at which a user sees a treatment may affect the estimation of its effect (for example, in the setting of multiple advertisers competing for a user's attention, a user may be less likely to click on the second ad than the first ad). We term such an effect the position bias of a treatment, and build estimators that can accurately measure the effect of a treatment in the presence of interference due to position bias. A model that captures this kind of interference among treatments is proposed, as well as a natural estimator based on the Horvitz-Thompson estimator. Asymptotic theory for the estimator is developed, pointing to the fact that for some specifications it is asymptotically optimal to disregard data points observed at a lower rank in estimation. We support our theoretical findings through analyzing both synthetic data and real data collected from the New Yorker Caption Contest and advertising data from a search engine provided by the KDD Cup 2012 Track 2. We are also currently conducting a study on Google Ads is in order to test the applicability of the proposed model and estimator in practice.

Christian Fröhlich, *Universität Tübingen*

Tailoring to the Tails: Risk Measures for Fine-Grained Tail Sensitivity

Expected risk minimization (ERM) is at the core of many machine learning systems. This means that the risk inherent in a loss distribution is summarized using a single number – its average. In this paper, we propose a general approach to construct risk measures which exhibit a desired tail sensitivity and may replace the expectation operator in ERM. Our method relies on the specification of a reference distribution with a desired tail behaviour, which is in a one-to-one correspondence to a coherent upper probability. Any risk measure, which is compatible with this upper probability, displays a tail sensitivity which is finely tuned to the reference distribution. As a concrete example, we focus on divergence risk measures based on f-divergence ambiguity sets, which are a widespread tool used to foster distributional robustness of machine learning systems. For instance, we show how ambiguity sets based on the Kullback-Leibler divergence are intimately tied to the class of subexponential random variables. We elaborate the connection between divergence risk measures and rearrangement invariant Banach norms.

Session 7: Macroeconomics

Giovanni Cirigliano, *Università Cattolica del Sacro Cuore*

Monetary Policy in a New-Keynesian Model with Financial Frictions and Behavioral Heterogeneity

In this paper I extend the standard version of the New Keynesian model by introducing imperfect substitutable assets of different maturities, short-term and long-term bonds, in order to study the role of segmentation in financial markets on the stability of the model. The goal of the paper is twofold: first of all, analysing the determinacy of the rational expectations equilibria in order to examine the stability of the economy incorporating financial frictions à la Andrés et al. (2004); second, studying how stability conditions change in a framework with heterogeneous and boundedly rational expectations. Heterogeneity and bounded rationality in expectations are introduced by adopting the Adaptive Belief System à la Brock and Hommes (1997), and this allows to capture the behavior of the macroeconomic variables when agents switch between different types of expectations rules varying in the degree of rationality. The results from the calibrated model suggest that, under the rational representative agent hypothesis, a more restrictive government sector might compromise the efficacy of monetary policy leading a greater area of indeterminacy. When boundedly rational agents are considered, the system exhibits a quasi-chaotic dynamics of the main variables whenever agents switch toward what they perceive to be the best performing predictor.

Ali Tariq, *Erfurt University*

Alleviating Poverty by Examining the Interactions between Pro-Poor Policies and Institutions

There is growing evidence that economic growth has failed to benefit the poor and in some cases has even increased the poverty gap. To reduce poverty, it becomes paramount to understand the nature and context of growth but more importantly to realize that economic growth alone is not sufficient to ensure sustained prosperity for all. In this paper, I carefully examine the relationship between anti-poverty reforms and poverty rate being conditioned by governance and social values. The theoretical model examines the interaction between poverty reducing policies on the one hand, and analyses how the policy measures in other areas, for example property rights impact the effectiveness of poverty reducing programs. Additionally, I analyze the interaction between pro-poor reforms with social values and cultural norms. From the results, I confirm that mitigating poverty requires complementary support of good governance and social values that builds trust in individuals as well as institutions.