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Abstracts

Exponential-Growth Bias and Lifecycle Consumption

Matthew Levy, London School of Economics and Joshua Tasoff, Claremont Graduate University

Exponential-growth bias (EGB) is the tendency for individuals to partially neglect compounding of exponential growth. We develop a model wherein biased agents misperceive the intertemporal budget constraint, and derive conditions for overconsumption and dynamic inconsistency. We construct an incentivized measure of EGB in a US-representative population and find substantial bias, with approximately one-third of subjects estimated as the fully-biased type. The magnitude of the bias is negatively associated with asset accumulation, and does not respond to a simple graphical intervention. (JEL: D03, D11, D12, D14, D18, D91, E21)

Predicting Lotto Numbers: A Natural Experiment on the Gambler's Fallacy and the Hot Hand Fallacy

Sigrid Suetens, CentER, Tilburg University, Claus B. Galbo-Jørgensen, University of Copenhagen, and Jean-Robert Tyran, University of Vienna and University of Copenhagen

We investigate the 'law of small numbers' using a data set on lotto gambling that allows to measure players' reactions to draws. While most players pick the same set of numbers week after week, we find that those who do change, react on average as predicted by the law of small numbers as formalized in recent behavioral theory. In particular, players tend to bet less on numbers that have been drawn in the preceding week, as suggested by the 'gambler's fallacy', and bet more on a number if it was frequently drawn in the recent past, consistent with the 'hot-hand fallacy'. (JEL: D03, D81, D84)

Norms Make Preferences Social

Erik O. Kimbrough, Simon Fraser University and Alexander Vostroknutov, Maastricht University

We explore the idea that prosocial behavior in experimental games is driven by social norms imported into the laboratory. Under this view, differences in behavior across subjects is driven by heterogeneity in sensitivity to social norms. We introduce an incentivized method of eliciting individual norm-sensitivity, and we show how it relates to play in public goods, trust, dictator and ultimatum games. We show how our observations can be rationalized in a stylized model of norm-dependent preferences under reasonable assumptions about the nature of social norms. Then we directly elicit norms in these games to test the robustness of our interpretation. (JEL: C91, C92, D03)

The Quantitative Role of Child Care for Female Labor Force Participation and Fertility

Alexander Bick, Arizona State University

I document that the labor force participation rate of West German mothers with children aged zero to two exceeds the corresponding child care enrollment rate, while the opposite is true for mothers whose children are older than two but below the mandatory schooling age. These facts also hold for a cross-section of EU countries. I develop a life-cycle model that explicitly accounts for this age-dependent relationship by including various types of non-paid and paid child care. I calibrate this model to data for West Germany and use the calibrated model for policy analysis. Increasing the supply of subsidized child care for children aged zero to two generates an increase in the maternal labor force participation rate consistent with empirical evidence from other settings; however, this increase is too small to conclude that the lack of subsidized child care accounts for the low labor force participation rate of mothers with children aged zero to two. The response along the intensive margin does suggest that a large fraction of part-time working mothers would work full-time if they had greater access to subsidized child care. Finally, making subsidized child care available to more women does not achieve one of the commonly stated goals of such reforms, namely to increase the fertility rate. (JEL: D10, J13, J22)

A Mechanism Design Approach to Climate-Change Agreements
David Martimort, Paris School of Economics EHESS and Wilfried Sand-Zantman, Toulouse School of Economics and ESSEC Business School

We take a mechanism design perspective to investigate how environmental agreements should account for multilateral externalities, incentive compatibility, and voluntary participation by sovereign countries. The optimal mechanism involves a trade-off between a free rider problem in the effort provision of participating countries and the necessity of inducing countries to ratify the agreement. This mechanism can be approximated by a simple menu with attractive implementation and robustness properties. Limits on enforcement and commitment might nevertheless hinder the performance of this menu approach, making the ``business as usual'' scenario more likely. (JEL: Q54, D82, H23)

The Dynamics of Climate Agreements
Baard Hårstad, University of Oslo

This paper analyzes a framework in which countries over time pollute and invest in green technologies. Without a climate treaty, the countries pollute too much and invest too little, particularly if intellectual property rights are weak. Nevertheless, short-term agreements on emission levels then *reduce* every country's payoff, since countries invest less when they anticipate future negotiations. If intellectual property rights are weak, the agreement should be tougher and more long-term. Conversely, if the climate agreement happens to be short-term or absent, intellectual property rights should be strengthened or technological licensing subsidized. (JEL: Q54, Q55, D86, H87)

Managing Credit Bubbles
Alberto Martin, CREI, Universitat Pompeu Fabra and Barcelona GSE and Jaume Ventura, CREI, Universitat Pompeu Fabra and Barcelona GSE

We study a dynamic economy where credit is limited by insufficient collateral and, as a result, investment and output are too low. In this environment, changes in investor sentiment or market expectations can give rise to credit bubbles, that is, expansions in credit that are backed not by expectations of future profits (i.e. fundamental collateral), but instead by expectations of future credit (i.e. bubbly collateral). Credit bubbles raise the availability of credit for entrepreneurs: this is the crowding-in effect. But entrepreneurs must also use some of this credit to cancel past credit: this is the crowding-out effect. There is an “optimal” bubble size that trades off these two effects and maximizes long-run output and consumption. The equilibrium bubble size depends on investor sentiment, however, and it typically does not coincide with the “optimal” bubble size. This provides a new rationale for macroprudential policy. A credit management agency (CMA) can replicate the “optimal” bubble by taxing credit when the equilibrium bubble is too high and subsidizing credit when the equilibrium bubble is too low. This leaning-against-the-wind policy maximizes output and consumption. Moreover, the same conditions that make this policy desirable guarantee that a CMA has the resources to implement it. (JEL: E32, E44, O40)