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CURRENT: Assistant Professor of Business and Public Policy, The Wharton School, University of Pennsylvania
Faculty Research Fellow, National Bureau for Economic Research (since 3/03)
Visiting Scholar, Federal Reserve Bank of San Francisco (since 7/03)
Research Fellow, Institute for the Study of Labor (IZA, Germany) (since 11/04)
Hirtle, Callaghan & Co. Research Fellow, Rodney White Center for Financial Research

FIELDS: Labor Economics, Macroeconomics, Economics of the Family, Social Policy, Political Economy, Behavioral Economics

EDUCATION:

HARVARD UNIVERSITY (1997-2001)

Ph.D. in Economics, June 2001

A.M. in Economics, June 2000

Awards: GSAS Term-Time Fellowship; Fellow - MacArthur Network on Inequality and Social Interactions; Social Science Research Council Fellowship; Social Science Research Council - Small Grants Program; Fulbright Scholarship; Frank Knox Fellowship; RG Menzies Fellowship; Reserve Bank of Australia Post-Graduate Study Award

Multidisciplinary Training Program in Inequality and Social Policy

Doctoral Fellow, Wiener Center for Social Policy

UNIVERSITY OF SYDNEY (1991-1994)

Bachelor of Economics (University Medal and First Class Honors)

Majors in Economics, Law and Computer Science

Awards: Economics Society of Australia Prize; University of Sydney Medal (awarded to the top student in each graduating class); Dennison Miller Scholarship

RESEARCH: (Papers are available for download from www.nber.org/~jwolfers)

Published

Information (In)Efficiency in Prediction Markets

joint with Eric Snowberg and Eric Zitzewitz

Forthcoming in Williams, Leighton (ed.) *Information Efficiency in Betting Markets*, Cambridge University Press, 2005.

Prediction Markets

joint with Eric Zitzewitz; *Journal of Economic Perspectives* 18(2), Spring 2004.

We analyze the extent to which simple markets can be used to inform policy debates. Drawing together data from a range of prediction contexts, we show that market-generated forecasts are typically fairly accurate, and they outperform most moderately sophisticated benchmarks. Carefully designed contracts can yield insight into the market's expectations about not only probabilities, means and medians, and also uncertainty about these parameters. Moreover, conditional markets can effectively reveal the market's beliefs about regression coefficients, although we still have the usual problem of disentangling correlation from causation. We discuss a number of market design issues and highlight domains in which prediction markets are most likely to be useful for policymakers.

Prediction Markets: Does Money Matter?

joint with Emile Servan-Schreiber, David Pennock and Brian Galebach; Published *Electronic Markets*, 14(3), September 2004.

Disagreement About Inflation Expectations

joint with Ricardo Reis and Greg Mankiw; Published, *NBER Macroeconomics Annual*, 2003 (Vol. 18)

Analyzing 50 years of inflation expectations data from several sources, we document substantial disagreement among both consumers and professional economists about expected future inflation. Moreover, this disagreement shows substantial variation through time, moving with inflation, the absolute value of the change in inflation, and relative price variability. We argue that a satisfactory model of economic dynamics must speak to these important business cycle moments. Noting that most macroeconomic models do not endogenously generate disagreement, we show that a simple "sticky-information" model broadly matches many of these facts.

Moreover, the sticky-information model is consistent with other observed departures of inflation expectations from full rationality, including autocorrelated forecast errors and insufficient sensitivity to recent macroeconomic news.

Is Business Cycle Volatility Costly? Evidence from Surveys of Subjective Wellbeing

International Finance 6(1) 2003; Also in *Stabilizing the Economy* (Blackwell, forthcoming)

This paper analyzes the effects of business cycle volatility on measures of subjective wellbeing, including self-reported happiness and life satisfaction. I find robust evidence that inflation, and particularly unemployment, lower perceived wellbeing. Conditional on levels of unemployment and inflation, greater macroeconomic volatility undermines wellbeing. These effects are moderate but important: eliminating the business cycle would raise wellbeing by an amount roughly equal to that from lowering unemployment by a quarter of a percentage point. The effects of inflation volatility on wellbeing are less easy to detect and are likely smaller.

Three Tools for Forecasting Federal Elections: Lessons from 2001

joint with Andrew Leigh. Published, *Australian Journal of Political Science*, June 2002 (Lead Article).

How best to predict Australian federal elections— opinion polls, economic models, or betting odds? Historically, we find that opinion polls taken close to the election are quite accurate, while economic models provide better medium-run forecasts. The 2001 election largely follows this pattern, although the economic models provided more accurate projections than recorded through the 1990s. Against these, we compare betting odds, analyzing a rich data source from one of Australia's largest bookmakers, Centrebet. The betting market not only correctly forecast the election outcome, but also provided very precise estimates of outcomes in a host of individual electorates.

The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence

joint with Olivier Blanchard. Published, *Economic Journal*, March 2000.

Reprinted in *Monetary Policy and Unemployment*, edited by Willi Semmler

Two key facts about European unemployment must be explained: the rise in unemployment since the 1960s, and the heterogeneity of individual country experiences. While adverse shocks can potentially explain much of the rise in unemployment, there is insufficient heterogeneity in these shocks to explain cross-country differences. Alternatively, while explanations focusing on labor market institutions explain cross-country differences well, many of these institutions pre-date the rise in unemployment. Based on a panel of institutions and shocks for 20 OECD nations since 1960, we find that the interaction between shocks and institutions is crucial to explaining both stylized facts.

Under Review

Using Markets to Inform Policy: The Case of the Iraq War

joint with Eric Zitzewitz. This paper incorporates much of the work in Leigh, Wolfers and Zitzewitz, "What do Financial Markets Think of War in Iraq?", NBER Working Paper #9587, March 2003.

We exploit data from a market trading in contracts which paid off if Saddam was removed as leader of Iraq, to learn about financial market participants' expectations of the consequences of the 2003 Iraq war. We disseminated an initial analysis before the war, finding that a 10 percent increase in the probability of war was accompanied by a \$1 increase in spot oil prices that futures markets suggested was expected to dissipate quickly. Equity prices movements implied that the same shock led to a 1½ percent decline in the S&P 500. Further, the existence of widely-traded options allows us to back out the entire distribution of market expectations of the war's near-term effects, finding that these large effects reflected a negatively skewed distribution, with a substantial probability of an extremely adverse outcome. The flow of war-related news through our sample explains a large proportion of daily oil and equity price movements. Subsequent analysis suggests that these relationships continued to hold out-of-sample. We highlight the particular features of this case study that make it particularly amenable to this style of policy analysis, and discuss some of the issues in applying this method to other policy contexts.

Five Open Questions about Prediction Markets

Joint with Eric Zitzewitz.

We argue that the success of prediction markets will depend on developing answers to five open questions: 1) How to attract uninformed traders? 2) How to tradeoff interest and contractability? 3) How to limit manipulation? 4) Are markets well calibrated on small probabilities? 5) How to separate correlation from causation? We specific suggestions for how both "instrumental events" and "prediction IV's" can help identify causal parameters from prediction market data.

Bargaining in the Shadow of the Law: Divorce Laws and Family Distress

joint with Betsey Stevenson.

Over the past thirty years changes in divorce law have significantly increased access to divorce. The different timing of divorce law reform across states provides a useful quasi-experiment with which to examine the effects of this change. We analyze state panel data to estimate the effects of this change on indicators of family distress. We find a large, statistically significant, and econometrically robust decline in the number of women committing suicide following the introduction of unilateral divorce. A large decline in domestic

violence occurs, and there is suggestive evidence of a decline in females murdered by their partners. In sum, we find strong evidence that legal institutions have profound real effects on outcomes within families.

Did Unilateral Divorce Raise Divorce Rates? A Reconciliation and New Results

NBER Working Paper 10014, October 2003. Revise and resubmit, *American Economic Review*

Becker has argued that the rise in divorce rates over the last thirty years does not reflect liberalized divorce laws. His argument rests on a basic application of the Coase theorem to marital bargaining. Each iteration of the ensuing empirical literature has come to a different conclusion. This paper reconciles these various estimates, showing that differences reflect a failure to carefully consider both the political endogeneity of these decisions, and the dynamic response of divorce rates to a regime change. New estimates suggest that unilateral divorce laws led to a large increase in divorce rates that lasted about a decade, followed by a significant reversal.

Employment Protection and Job Flows: Evidence from Seasonal Cycles

Revise and resubmit, *Journal of the European Economic Association*

While theory implies that employment protection will decrease job destruction rates, cross-country comparisons (using annual data) find no discernible effect. A simple model reconciles these results, showing that employment protection does not significantly alter a firm's response to highly persistent shocks – such as those present in annual data. By contrast, firing costs are likely to be a decisive factor in deciding whether a transitory shock should lead to job destruction. These transitory shocks, including seasonal shocks, are only likely to be present in higher frequency job flow data. In the absence of a consistent set of cross-country set of high frequency job flows data with which to test this hypothesis, I manipulate available household survey data to construct a measure of job flows caused by the seasonal cycle. These data suggests that employment protection does indeed retard job creation and destruction.

Are Voters Rational? Evidence From Gubernatorial Elections

Stanford GSB Working Paper #1730. Winner, Milken Institute Award for Distinguished Economic Research. Submitted, *Review of Economic Studies*.

Standard agency theory suggests that rational voters will seek to re-elect politicians who deliver favorable outcomes. However, it makes little sense to re-elect politicians following good outcomes that do not reflect their competence. This paper measures the extent to which voters in state gubernatorial elections irrationally attribute credit to the state governor for good performance caused by the national business cycle, oil price shocks, and the weather. Simple tests of relative performance evaluation reveal that voters rationally evaluate their state's economic performance relative to the national economy. However, the standard of full rationality is more demanding, and evidence is found of systematic errors. Consonant with an emerging behavioral literature, this suggests that voters make systematic attribution errors and voters are best characterized as quasi-rational.

Work in progress (abstracts available on my homepage)

- *Five Open Questions about Prediction Markets (with Eric Zitzewitz)*
- *Economic Derivatives (with Refet Gurkaynak)*
- *Institutional Determinants of Inflation Expectations (joint with Greg Mankiw and Ricardo Reis)*
- *Do Financial Markets Discriminate?*
- *Point Shaving: Corruption in NCAA Basketball*
- *Event Futures (in preparation for the Handbooks in Finance)*
- *A Rational Explanation for the Favorite-Longshot Bias*
- *Understanding the Favorite-Longshot Bias: Risk Preferences versus Misperceptions*

Popular Writing

- “Experimental Political Betting Markets and the 2004 election”, *Economists' Voice* 1(2), October 12, 2004.
- “Pollsters at Odds with Simple Probabilities”, *Australian Financial Review*, October 7 2004.
- “Pricing Political Risks with Prediction Markets”, Stanford Institute for Economic Policy Research *Policy Brief*, June 2004.
- “The Best and Worst of the United States”, *Australian Quarterly: Journal of Contemporary Analysis*, September 2003
- “Lies and Statistics: Betting on Latham”, *Australian Financial Review*, December 19 2003.
- “Divorce is Hell, But so is a Bad Marriage”, *Sydney Morning Herald*, December 10, 2003.
- “The Furor Over ‘Terrorism Futures’”, *Washington Post (and others)*, July 31 2003.
- “Fasten Your Seatbelts – Its Going to be a Bumpy Economic Ride”, *Silicon Valley Biz Ink* July 2003.
- “Policy Improves by Putting Rhetoric on Trial”, *Sydney Morning Herald*, March 5 2003.
- “Inflation rate is critical in RBA strategy”, *Australian Financial Review*, 28 January 2003.
- “Economics, experiments and psychology”, *Quadrant*, Jan/Feb 2003.
- “Oil prices may make US voters swing”, *Canberra Times*, 5 November 2002.
- “To banish hatred we must understand it”, *Australian Financial Review*, November 1 2002.
- “Coverage of Bali tragedy shows how Australia misses bus in America”, *Sydney Morning Herald*, November 1 2002.
- “Train the politicians first”, *Canberra Times*, September 10, 2002.
- “Baseball could learn a few things from Australia”, *New York Times*, September 1 2002.
- “Numbers crunch salary cap's logic”, *Sydney Morning Herald*, 26 August 2002.

- “Family friendly?” *The West Australian*, June 20 2002.
- “Smaller classes become big issue”, *The Australian*, June 1 2002.
- “If that city’s where the boys are, then it has to be fabulous”, *Sydney Morning Herald*, 13 May 2002.
- “Recent downturn wasn’t your average recession”, *Sydney Morning Herald*, 13 April 2002; *The Age* 17 April 2002.
- “US recession puts us to the test”, *Sydney Morning Herald*, November 1 2001
- “Human touch emerges from dry economic theory”, *Sydney Morning Herald*, October 12 2001.
- “Winner takes all”, *Sydney Morning Herald*, September 29 2001.
- “Moving to Opportunity”, *Australian Quarterly: Journal of Contemporary Analysis*, September 2001.
- “Take the money and run... Or wrestle”, *Sydney Morning Herald*, May 15 2001.
- “A jobs miracle that has baffled the experts”, *Canberra Times*, March 5 2001.
- “Abortion and Crime in Australia”, *Australian Quarterly: Journal of Contemporary Analysis*, August 2000.
- “Howard dumbs down the policy debate”, *Australian Financial Review*, July 6 2000.
- “Unfair admissions index”, *Sydney Morning Herald*, December 13 1999.
- “Abortion’s secret legacy”, *The Melbourne Age*, November 11 1999.

TEACHING

The Governmental and Legal Environment of Business, Wharton Core Class (2005)

Strategy in the Business Environment, Stanford GSB Core Class (2002-2004)

Studying the interactions between business, government and lobby groups. Teaching rating: 4.3/5.0; 4.5/5.0

Business Ethics, Stanford GSB Core Class (2003)

Behavioral Finance, Stanford Executive Education, Financial Management Program (2003)

Heuristics and biases, behavioral finance, and prediction markets.

Finance, Behavioral Economics and Sports Betting, Stanford MBA Elective (2002, 2003)

Designed new class applying the lessons of behavioral finance to the sports betting market. Teaching rating: 4.9/5.0

CD-ROM: “Super Bowl Science: Sports Betting and Behavioral Finance”, *Harvard Business Online e-Learning Series*.

Economics of Marriage and Divorce, Harvard Economics Sophomore Tutorial (2000, 2001)

Designed new class analyzing family economics and social policy. Tutorial leader rating: 4.7/5.0 and 5.0/5.0

Non-resident Tutor & Sophomore Advisor, Dunster House, Harvard University (2000-2001)

Providing academic and career advice to Harvard undergraduates.

Introductory Macroeconomics, University of Sydney (1994)

PREVIOUS POSITIONS

Assistant Professor (2001-2004)	Stanford Graduate School of Business
Research Assistant (1998-2000)	Harvard University, MIT and NBER (Greg Mankiw, Olivier Blanchard)
Teaching Assistant (2001-2003)	Harvard University
Research Economist (1995-2001)	Reserve Bank of Australia (Labor market analysis)
Consulting economist (1995-1997)	Australian Council of Social Service (Volunteer position)
Board Director (1992-1994)	Treasurer and Board Director, University of Sydney Student Union

PROFESSIONAL INVOLVEMENT

- Professional presentations: NBER Economic Fluctuations Group meetings, (Fall 1999), Society of Labor Economists Annual Meetings (Spring 1999), MacArthur Network on Inequality and Social Interactions (Spring 2000), Harvard Labor Seminar (Fall 2000), Harvard Monetary and Fiscal Policy Seminar (Fall 2000), Chicago GSB (Winter 2001), John F. Kennedy School of Government (Winter 2001), Stanford GSB (Winter 2001), UC Berkeley (Winter 2001), Princeton (Winter 2001), Yale (Winter 2001), NYU (Winter 2001), Columbia Business School (Winter 2001), London School of Economics (Winter 2001), Michigan (Winter 2001), Harvard Business School (Winter 2001), Discussant – Wallis Conference on Political Economy (Spring 2001), American Economic Association meetings, (Winter 2002), Stanford Law School (Spring 2002), Discussant – Strategy and the Business Environment Conference (Spring 2002), University of Sydney (Spring 2002), Reserve Bank of Australia (Spring 2002), University of Melbourne (Spring 2002), International Finance – Council on Foreign Relations Macro Conference (Spring 2002), Johns Hopkins University (Fall 2002), Discussant – APPAM meetings (Winter 2002), New School Conference in Honor of Jim Tobin (Winter 2002),

Discussant – Econometric Society meetings (Winter 2002), Brigham-Young University (Spring 2003), UT-Austin (Spring 2003), UC Berkeley – Haas (Spring 2003), NBER Macro Annual (Spring 2003), San Francisco Fed (Spring 2003), Society of Labor Economists Annual meetings (Fall 2003), UC Berkeley (Fall 2003), NBER Behavioral Macro Conference (Fall 2003), Texas A&M (Fall 2003), U.Miami (Fall 2003), Chicago GSB (Fall 2003), NBER National Security Working Group (Fall 2003), John F. Kennedy School of Government (Fall 2003), Stanford Center for International Security and Cooperation (Fall 2003), AEA meetings (Winter 2004), Chicago (Winter 2004), Wharton (Winter 2004), Kansas (Winter 2004), New School (Winter 2004), Discussant – Stanford Conference on the Media and Economic Performance (Winter 2004), USC (Spring 2004), Society of Labor Economists (Spring 2004), Business Environment Conference – Philadelphia (Spring 2004), Chicago Quantitative Alliance (Spring 2004), Stanford Applied Micro Seminar (Spring 2004), Stanford Macro Seminar (Spring 2004), Yahoo Research Labs (Spring 2004), Global Association of Risk Professionals (Spring 2004), Stanford Math Seminar (Spring 2004), Society of Quantitative Analysts (Spring 2004), QWAFEFW San Francisco (Spring 2004), NBER Summer Institute (Summer 2004), University of Sydney/SUGUNA/Advance (Summer 2004), Institute for International Economic Studies, Stockholm (Visiting Scholar, Fall 2004), ESSLE (Fall 2004), Uppsala (Fall 2004), Columbia Financial Engineering Seminar (Fall 2004), ZEW Evaluation Conference (Fall 2004), Prudential Quantitative Finance Conference (Winter 2004), IZA Workshop on Labor Market Institutions (Fall 2004), RWI Essen seminar (Fall 2004), IZA-Bonn seminar (Fall 2004), Brookings-AEI Joint Center Conference on Prediction Markets (Spring 2005), DIMACS conference (Winter 2005), Cornell Economics (Spring 2005), International Society of Forecasters annual meeting (Spring 2005), International Seminar on Macroeconomics (Summer 2005), Yale Political Economy (Fall 2005).

- Winner, Milken Institute Award for Distinguished Economic Research (2002), for “Are Voters Rational...”
- Member, Council on Contemporary Families
- Program Committee, 9th World Congress of the Econometric Society (2005)
- University Service: Co-organizer, Wharton Applied Economics Seminar (since 9/2004). Organizer, Stanford GSB Political Economy Seminar (2001-2004), Recruiting (2001), Brazil Study Trip (2001), Ph.D Liaison (2002-2003), Cuba Study Trip (2002).
- In Australia: Member, Australian Public Policy Research Network; Columnist, *Online Opinion*
- At Harvard: Russell Sage Behavioral Economics Summer Institute (Summer 2000), Social Science Research Council Summer Workshop in Applied Economics (Summer 1998), Student Representative, Graduate Instruction Committee, Department of Economics (1997/98 and 1998/99), Organizing committee, Political Economy Lecture series, Harvard University (1998/99 and 1999/00)
- Referee: Journal of Political Economy, Quarterly Journal of Economics, American Economic Review, Econometrica, Journal of Political Economy, Review of Economic Studies, Review of Economics and Statistics, Journal of Public Economics, European Economic Review, Journal of the European Economic Association, Economic Journal, Journal of Labor Economics, Journal of Monetary Economics, Journal of Law and Economics, Economics Letters, Journal of Human Resources, Journal of Socio-Economics, Economic Record, Brunner-Routledge Press, Economic Modelling, National Science Foundation, Labour Economics, Journal of Law, Economics and Organization, Berkeley Electronic Press, Journal of Population Economics, Oxford Economic Papers, Canadian Journal of Economics, Industrial and Labor Relations Review, Electronic Markets., Australian Journal of Political Science, Scottish Journal of Political Economy, Cambridge-MIT Institute.

December 7, 2004