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Director's Report

The Social Systems Research Institute (SSRI) was founded in 1960. At that time it was envisioned as an umbrella organization to coordinate research in the social sciences. Initially, SSRI was funded with generous grants from the National Science Foundation, the Ford Foundation and the University of Wisconsin Graduate School which totaled approximately 2.3 million dollar in current dollars. The initial inflow of funds allowed the creation of a state of the art computer facility. SSRI was viewed at the time as the research wing of the Social Science Building that includes, besides Economics, Sociology, Rural Sociology, Anthropology, the Institute for Research on Poverty and the Center for Demography and Ecology.

Over time, each of the units that participated in SSRI found themselves requiring specific resources, and SSRI evolved into a loosely-knit coalition of (mostly) economists whose research is independently designed and directed but that, nevertheless have some common needs. SSRI provides support for this research. Our services include: publication of a working paper series distributed to numerous universities and research centers, maintenance of a home page in which recent working papers can be accessed at the URL <http://www.ssc.wisc.edu/econ/archive> , clerical and logistical support for workshops and conferences held on campus, assistance in preparation and submission of grant proposals, maintenance of an extensive library of unpublished working papers from other universities and research institutions, provision of a network of personal computers and printers, allocation of small grants to support junior faculty, allocation of grants to support various workshops, clerical and logistical support for short and long term visitors in the economics department, and general clerical assistance such as correspondence, faxes and phone calls. These services are provided by a small but very competent staff. Alisenne Sumwalt, is the full-time program manager. She is assisted by a varying number of part-time, work-study undergraduate students. The SSRI's office (6470 Social Science) houses equipment (computer, printer, scanner, fax, phones and copy machine), a supply room, and our library of working papers.

During the 1994-1997 period SSRI underwent several changes. First, it expanded to include all the faculty members in the department of economics. At the same time, the department established a research committee that gives guidance to the SSRI director on budget allocation issues. Second, SSRI joined the Social Science Computer Cooperative (SSCC). The SSCC consists of a network of computers and highly skilled support staff. As a member of the Coop, SSRI's members have access to the extensive a network of computers maintained by SSCC, can use the different data sets and software available in the network, and also benefit from the expertise of the SSCC in the set up and maintenance of desktop computers. Third, there has been a major change in financing of SSRI. In the recent past, SSRI relied mostly on contributions of its members and the College of Letters and Sciences to fund its operating expenses. Since external funding agencies such as the National Science Foundation decline to fund SSRI's expenses, members' contributions --about 60% of the operating budget-- were critical. A change in the budgetary status of the economics department that --effectively-- allows more flexibility in the allocation of funds, has substantially reduced the need of levying taxes on members to fund the institute. Currently, although members' contributions are still required, especially for special projects and conferences, most of the funding comes from the

Economics department. During the transition, SSRI was generously helped by the University of Wisconsin Graduate School grant to partially finance the costs of joining the SSCC, and by a National Science Foundation grant to Jim Walker that allowed purchases of computer equipment that was then allocated to the SSCC.

SSRI members are engaged in a wide variety of research projects. In what follows I provide a very brief summary of some of the major themes.

Econometrics: One topic focuses on the estimation of social interaction effects. The question is how is it possible to separate effects of peer or neighborhood groups from endogenous selection. Another on-going topic of research is the analysis of procedures for inference about the moments of smooth functions of out of sample predictions and prediction errors, when there is a long time series of predictions and realizations. The aim is to provide tools for analysis of predictive accuracy and efficiency, and, more generally, of predictive ability.

Economic Theory: A broad area that has received substantial attention is the study the processes by which economic agents coordinate the way they interact. This research, in the area of evolutionary game theory, tries to understand the emergence and effects of social norms. The basic results suggest that the nature of information available to agents about the consequences of their choices, the opportunities to observe and mimic the experience of others, and the uncertainty in payoffs are key determinants of equilibrium behavior.

Industrial Organization: One theme is the design of auctions when potential buyers are financially constrained, and the analysis of whether auctions are the “best scheme” for allocating indivisible goods. The study of auctions with resale opportunities and the estimation of auction models is another active research area. A third major topic of interest is the role of capacity precommitments made by incumbent firms as barriers to entry in some industries, and the effects of vertically integrated oligopolies in the diffusion of consumer durables.

International Economics: A very active, and quite important from a practical point of view, research area is the study of international trade agreements. Among the critical questions are: What are trade negotiators negotiating over? Are the existing GATT rules, in some sense, efficient? Can an understanding of how GATT rules work in the arena of tariff negotiations be useful in evaluating other areas of conflict? Another theme in international economics is the speed and nature of technology transfers through trade, and the nature of spillovers associated with trade in goods.

Labor Economics: One subject of continuing interests is how asymmetric information between unions and firms can result in strikes, and how are wages changed following a strike. Another area of study is the impact of welfare benefits and geographical wage differentials, on the migration decision of families. A third major area is the analysis of the impact of trade policies on the skill premium, that is, on the relative wage of high skill and low skill workers.

Macroeconomics: One area that continues to attract interest is the study of the economic determinants of the decision to hold inventories. Another research area is the study of the implications for theoretical models of alternative models of growth. The study of banking in some special environments is another area of current research. The impact of incomplete markets on the time profile of consumption and savings is yet another area. Finally, there has been --and this continues to be an active area-- a substantial amount of effort dedicated to understanding the relationship between public policies (basically, tax, spending and inflation) and economic growth.

Public Finance: In this field, there has been a significant amount of research on the determinants of education and childbearing decisions of young adults, and on estimation of the change in the level of well-being of elderly people. The effect of pollution regulations, and the impact of them on the choice of technologies is another theme in public finance. The study of information systems and database development is a third area of interest. Another topic is the nature and implications of statistical discrimination in labor markets. Finally, there is continuing work in the general area of altruism and charitable giving.

In the period 1994-1997, several SSRI members have left the department. Among those listed in the 1997 triennial report but that are no longer in the department are Wen-Ling Lin, John Rust, John Shea, Robert Baldwin and Glen Cain. In the last three years we have welcomed a number of new members. Mahmoud El-Gamal, Ed Feige, Phil Haile, Bob Haveman, Wolfgang Keller, Paula Voos and Barbara Wolfe have joined us.

In August 1997, after ending my two years as the Director of SSRI completing the three year term that Larry Samuelson started, I joined the rest of the faculty welcoming Robert Staiger as the new director. I have no doubts that Bob will be very successful, and will take SSRI into the next century, strengthening its effectiveness as an essential input in the research activities of the members of the Economics department.

Rody Manuelli
Professor of Economics
SSRI Director: July 1, 1995-June 30, 1997

RESEARCH SYNOPSES

JAMES ANDREONI

Selected References

- [1] "Tax Compliance," with B. Erard and J. Feinstein, *Journal of Economic Literature*, forthcoming 1998.
- [2] "Toward a Theory of Charitable Fundraising," *Journal of Political Economy*, forthcoming. (SSRI Working Paper No. 9712, UW-Madison, May 1997).
- [3] "An Econometric Analysis of Charitable Giving with Interdependent Preferences," with J.K. Scholz, forthcoming in a special issue of *Economic Inquiry* in honor of Gary Becker and James Coleman.
- [4] "Do Government Subsidies Increase the Private Supply of Public Goods?" with T.C. Bergstrom, *Public Choice*, 88(3-4), 1996, pp. 295-308.
- [5] "Cooperation in Public Goods Experiments: Kindness or Confusion?" *American Economic Review*, 85(4), September 1995, pp. 891-904.
- [6] "Auctions with Adaptive Artificial Agents," with J.H. Miller, special issue on Experimental Game Theory, in J. Ledyard and T. Palfrey, eds., *Games and Economic Behavior*, 10(1), 1995, pp. 39-64.
- [7] "Warm-Glow versus Cold-Prickle: The Effects of Positive and Negative Framing on Cooperation in Experiments," *Quarterly Journal of Economics*, 110(1), February 1995, pp. 1-21.
- [8] "Criminal Deterrence in the Reduced Form: A New Perspective on Ehrlich's Seminal Study," *Economic Inquiry*, 33(3), 1995, pp. 476-483.

Working Papers

- [1] "Fairness, Selfishness and Selfish Fairness: Experiments on Games with Unequal Equilibrium Payoffs," with P. Brown and L. Vesterlund, SSRI Working Paper No. 9726, UW-Madison, November 1997.
- [2] "Giving According to GARP: An Experimental Study of Rationality and Altruism," with J.H. Miller, October 1997.
- [3] "Which is the Fair Sex? Gender Differences in Altruism," with L. Vesterlund, October 1996.
- [4] "Charitable Contributions of Time and Money," with W.G. Gale and J.K. Scholz, July 1996.

WILLIAM A. BROCK

I am doing research with Cars Hommes of Amsterdam on evolutive dynamics. This work builds a general theory of expectation formation which nests rational expectations in an econometrically tractable system. S. Baak's UW PhD thesis has estimated one of these systems on cattle data. J. Chavas, at UW, has also recently estimated a related system. Both find evidence consistent with the presence of non-rational expectations.

They were forced to posit a very limited set of alternative predictors to the rational expectations predictor that the data could speak to. We are developing a general notion of a flexibly parameterized set of predictors from which profit seeking "economically natural" selection endogenously picks winning predictors, but where the data can speak to the functional form of the surviving predictors. We believe this modification will help deal with econometric nonrobustness problems caused by thrusting a, possibly false, functional form of predictor, upon the data. We are applying this idea in various settings including "generalized cobweb" models and financial models. We are particularly excited about the financial models because it offers what we believe is an economically sensible alternative to conventional rational expectations.

This is so because economic forces determine the functional form of surviving predictors which may end up being the rational expectations predictor, but doesn't have to be. Economically determined costs and benefits determine the surviving set of predictors in our framework, unlike frameworks where the functional form of the surviving predictor is thrust upon the data.

De Fontnouvelle and I revisited the old issue of neutrality of money using an adaptation of the above work to expectations formation in monetary models under governmental monetary interventions. We believe that our kind of performance-based "economic natural selection" approach to predictor selection is more responsive to the challenges raised in Lucas's Nobel Address than mechanical "backing off" from rational expectations. This is so because economic incentives play a direct role in determining the form of the "backing off" from rational expectations in an evolutive model.

Steven Durlauf and I are working on a book for Harvard University Press on Complex Systems modeling and Economics. Our joint paper which extends discrete choice modeling frameworks has been submitted. We are finally finishing up the draft of the econometrics sequel which shall be submitted soon. The econometrics part became very difficult because of substantive problems in constructing convincing econometric methods for separating "spurious" social interactions effects from "true" social interactions effects. Our methods exploit a combination of our own work which shows how "true" social interactions (those with a social multiplier) endogenously generates a different correlation structure in decision errors (conditional on agent characteristics including own past decisions) than recent models for panel data. Observational implications of this decision error structure on observed decisions gives us an additional tool to separate "true" social interactions from "spurious" social interactions in addition to tools from recent work on related problems by Chamberlain, Heckman, Honore', and Kryiazidou.

During 1997, I have been developing policy theory for coupled economic/ecological systems where the dynamics of the ecological part are unknown but may possess alternative stable states for certain parameter values. This possibility adds an additional layer of complexity on the usual "option value" type arguments in cost/benefit analysis of potentially irreversible acts.

Some Publications

- [1] "A Dynamic Structural Model for Stock Return Volatility and Trading Volume," with Blake LeBaron, *Review of Economics and Statistics*, 78(1), February 1996, pp. 94-110.
- [2] "Nonlinear Time Series, Complexity Theory, and Finance," with P. de Lima, in G. Maddala, and C. Rao, eds., *Handbook of Statistics Volume 14 Statistical Methods in Finance*, New York, North Holland, 1996.
- [3] "Asset Price Behavior in Complex Environments," in B. Arthur, S. Durlauf, and D. Lane, eds., *The Economy as An Evolving Complex System II*, Redwood City, California Addison-Wesley, 1997.
- [4] "A Rational Route to Randomness," with C. H. Hommes, *Econometrica*, September 1997.
- [5] "Models of Complexity in Economics and Finance," with C. H. Hommes, forthcoming in C. Heij et al., eds., *System Dynamics in Economic and Financial Models*, John Wiley and Sons, New York, 1997.
- [6] "A Test for Independence Based Upon the Correlation Dimension," with W. Dechert, J. Scheinkman, B. LeBaron, *Econometric Reviews*, 15(3), 1996, pp. 197-235.
- [7] "Principal-Agent Contracts in Continuous Time Asymmetric Information Models The Importance of Large Continuing Information Flows," with L. Evans, *Journal of Economic Behavior and Organization*, 29, 1996, pp. 523-535.
- [8] "Ideas on Quantification of Resilience-Based Management," *Environment and Development Economics*, (forthcoming), 1998.
- [9] "Whither Nonlinear?", Submitted to *Journal of Economic Dynamics and Control*, 1997.
- [10] "Heterogeneous Beliefs and Routes to Chaos in a Simple Asset Pricing Model," with C.H. Hommes, *Journal of Economic Dynamics and Control*, forthcoming, 1998.
- [11] "Expectational Diversity in Monetary Economics," with P. de Fontnouvelle, SSRI W.P. # 9624, submitted, 1996.

YEON-KOO CHE

My major research projects that I conducted in the past three years are along the following two topics: (1) Mechanism design in the presence of financially constrained agents and (2) the foundation of contract theory. Below, I present abstracts of two representative papers for each subject.

Mechanism design in the presence of financially constrained agents.

- [1] “Standard Auctions with Financially Constrained Bidders,” with Ian Gale, *Review of Economic Studies*, 65, 1998, pp. 1-21.

In many auctions of government licenses and private asset, bidders often face liquidity constraints because of financial market imperfections. In this paper, we develop a methodology for analyzing the revenue and efficiency implications of adopting different auction forms when buyers face liquidity constraints and moreover have private information about their willingness to pay as well as their liquidity constraints. We then apply the methodology to scenarios involving standard auction mechanisms. In the simplest case, where bidders face absolute spending limits, first-price auctions yield higher expected revenue and social surplus than second-price auctions. The revenue dominance of first-price auctions over second-price auctions carries over to the case where bidders have access to credit. These rankings are explained by differences in the extent to which financial constraints bind in different action forms.

- [2] “The Optimal Mechanism for Selling to Budget Constrained Buyers,” with Ian Gale, under revision for *Journal of Economic Theory*.

This paper finds an optimal mechanism for selling an indivisible good to consumers who may be budget-constrained. As in the first paper, the consumers have two-dimensional private information about their valuation of the good sold by the seller and their budget constraints. The seller has unlimited supply of the good, however. Unlike the case where buyers are not budget constrained, a single posted price is not typically optimal. An optimal mechanism generally consists of a continuum of lotteries indexed by the probability of consumption and the lump-sum fee. The optimal mechanism may additionally involve the use of bonding in case where the budgets and valuations do not satisfy the (weak) monotone likelihood ratio property.

Contract Theory

- [1] “Cooperative Investments and the Value of Contracting,” with Don Hausch, *American Economic Review*, forthcoming.

Several recent articles have shown that the efficient outcome for bilateral trade, even in the face of specific investments and incomplete contracting, can be supported with appropriately designed contracts. These studies have, for the most part, restricted attention to so called “selfish” investments that benefit the investor (e.g., the seller’s investment reduces her cost of producing the good). We find very different results for “cooperative” investments that directly benefit the investor’s partner

(e.g., the seller's investment improves buyer's value of the good). If the parties can commit not to renegotiate, schemes exist that can achieve the efficient outcome as a subgame perfect equilibrium. However, if such commitment is not possible and the investments have sufficiently cooperative elements, then not only is the efficient outcome unachievable (regardless of whether one or both parties invest), but the parties can do no better than to abandon contracting altogether in favor of ex post negotiation.

[2] "Contract Damages and Cooperative Investments," with T-Y Chung, revision submitted to *RAND Journal of Economics*.

This paper studies the alternative contract damage measures in the presence of the "cooperative investments." We find that, in the presence of cooperative investments, (i) the expectation damages perform very poorly, inducing no cooperative investment, (ii) the privately stipulated liquidated damages can achieve a better, albeit inefficient, outcome, and (iii) the reliance damages rule performs the best, achieving the efficient outcome if $\{it\ ex\ post\}$ renegotiation is possible. These rankings stand in contrast to those found in the existing literature but explain many observed contracting practices.

MARTIN H. DAVID

Statistical policy and measurement

During the last six years I have served as a member of the National Research Council Committee on National Statistics. The committee has sponsored numerous evaluative reports on different aspects of economic data and I served on two panels with extensive scientific responsibilities. The first undertook an evaluation of the Survey of Income and Program Participation and assessed opportunities for integrating data collections at the Census to improve the quality of income information on the US population. The second undertook to assess appropriate statistical policies for Federal statistical agencies to deal with the confidentiality of respondents' disclosures while permitting access to data for research and policy analysis. The panel reports are available from the National Research Council (Private Lives and Public Policies 1993 and The Future of the Survey of Income and Program Participation 1993).

I organized two workshops for the Committee that pertain to the US national accounts. Recommendations from a workshop on statistics on the not-for-profit sector of the economy appear in [1], together with background papers on different aspects of the underlying data collections and their strengths.

Related papers critique aspects of the US official statistical system. [2] discusses recommendations of the Committee's panel on microsimulation. The recommendations include many that strongly support the original objectives of the SSRI, namely, producing a microsimulation model of the US. I comment that adequate infrastructure for data and documentation is still lacking thirty years after the initiation of the simulation effort. [3] offers a legislative prescription to Congress for

mobilizing administrative data for broad information needs of the economy. [4] offers the views that security of data depends on appropriate education of the research community as well as institutions for supervising a secure environment. Those comments arise from the heavy investment made in developing a database for the Survey of Income and Program Participation that was used nationally via the SIPP ACCESS program which is explained below. [5] evaluates the choice of designs for SIPP, given its use to improve the operation of income transfer programs and provide a measure of the distribution of well-being in the US.

Database development and metadata

A distillation of the concepts used in developing SIPP ACCESS appears in [6], which was written for a computer science audience interested in integrated systems for modeling. (An earlier version of the paper written for a more general audience appears in [7].) The model in that paper is applied to aggregated data on corporations published by the Statistics of Income, Internal Revenue Service [8]. This second paper reveals why understanding of macroeconomic data is poor, and measures of error in macrodata are not systematically evaluated. All three papers emphasize the need for more comprehensive systems of documentation of the collection of scientific data and point to the capability of modern software to capture documentation as data are developed.

NSF requested experts in the field of computational economics to review the scientific implications of increasing computation in economics. I contributed the database section of that report, which appears in [9].

The concepts above were applied to thinking about assembling data on environmental damage, and environmental amenity values in [10]. The paper emphasizes that pooling of data from replicated measures on different samples is not possible in the absence of good documentation.

The SIPP ACCESS project is comprehensively evaluated in [11]. Important findings include the importance of e-mail communication to research problem-solving, the need for information tools for discovery about the scientific design producing the data, the cognitive fit between relational databases and the manipulations required for panel data analysis, and the importance of database design by researchers who understood the research questions that motivated investigators. The SIPP ACCESS project integrated a larger mass of social science data than had been attempted within a relational database system; it achieved access for researchers who produced a significant body of research at a cost that was low compared to prevailing rates for mini-computers. Embedding research in relational databases proved important to discovering errors in the data that were not located by the data disseminators, to providing integrity for the data transformation algorithms supplied by users, and provided a simple way to pre-test work and make modifications to research design at low cost when the data proved to have unexpected properties (undocumented codes, errors, or complex sampling properties).

Research using the Survey of Income and Program Participation

Collaborative work on the Food Stamps Program with Maurice MacDonald, Paul Hagstrom, and Christopher Bollinger has produced a multivariate model of labor supply and FS participation

[12], working papers on the impact of asset-testing on participation, and reestimation of that model using quasi-maximum likelihood techniques to eliminate bias from the response errors in reporting FS participation [13,14]. The bias in conventional estimators of the FS participation function proved to be substantial, with coefficients on expected earnings rates understated by 20% and the effect of home equity understated by more than 50%.

Additional work on modeling response error and its implications for modeling behavior from surveys is in progress.

References

- [1] Preface, with Courtenay Slater, *Voluntas* 4(4), 1994. Special issue on the not-for-profit sector of the economy: measurement and presentation in federal statistics. (Volume edited by the authors.)
- [2] Comments: *Improving Information for Social Policy Decisions*, The Report of the NRC Panel to Evaluate Microsimulation Models. Presented to the American Statistical Association 20 August, 1991.
- [3] A citizen's view. *Planning the next Census: Getting the most for our money in the 2000 Census: Hearing before the Subcommittee on Government information and Regulation of the Committee on Governmental Affairs, US Senate*. (102C. 2S, 26 June 1992) 68-71.
- [4] Discussion "Database Systems: Inferential security," *J. Official Statistics*, 2, 1993, pp.501-502.
- [5] "Alternative scientific designs for SIPP," *J. of Economic and Social Measurement* 18(1-4), 1992, pp. 5-23.
- [6] "Systems for metadata: documenting scientific databases," *Proceedings of the Twenty-Sixth Annual Hawaii International Conference on Systems Sciences*, 3, 1993, pp. 460-69.
- [7] "The science of data sharing: Documentation," in Joan Sieber (ed.) *Sharing social science data: Advantages and challenges*. Newbury Park, CA: Sage Publications, 1991, p p . 91-115.
- [8] "Metadata for establishment surveys: Corporation Statistics of Income," with John Czajka, *Proceedings of the International Conference on Establishment Data*. Alexandria VA: American Statistical Association, 1994.
- [9] "Research opportunities in computational economics," with David Kendrick and other Co-authors, *Computational Economics*, 6, 1993, pp. 257-314. (Abridged Report of the NSF workshop on computation, Center of Economic Research, Department of Economics, University of Texas, Austin, TX 78712 Report R-91-1.)

- [10] “Benefiting Benefit Transfer: Information Systems for Complex Scientific Data,” *Proceedings of the benefits transfer workshop of the Association of Environmental and Resource Economists*, Snowbird UT, 1992.
- [11] “Building New Infrastructures for the Social Science Enterprise,” with Alice Robbin, *Final Report to the National Science Foundation on the SIPP ACCESS Project, November 1984 - December, 1991*, Madison, WI: Institute for Research on Poverty. (2 Volumes, ca. 400 pp.) 1992.
- [12] “Married couples' Food Stamp participation and labor supply: An empirical model of joint decisions,” Paul A. Hagstrom, (unpublished Ph.D dissertation) Madison WI: University of Wisconsin, 1991.
- [13] “Modeling Food Stamp participation in the presence of reporting errors,” with Christopher Bollinger, *Census Annual Research Conference*, 1993.
- [14] “Modeling Food Stamp participation reported with error,”with Christopher Bollinger, *Proceedings of the Social Statistics Section of the American Statistical Association*, 1994.

RAYMOND DENECKERE

Selected References

- [1] “Competition over Price and Service Rate when Demand is Stochastic: A Strategic Analysis,” with J. Peck, *The RAND Journal of Economics*, 26(1), Spring 1995, pp. 148-162.
- [2] “Bertrand-Edgeworth Duopoly with Unit Cost Asymmetry,” with D. Kovenock, *Economic Theory*, 8(1), June 1996, pp. 1-25.
- [3] “Damaged Goods,” with P. McAfee, *Journal of Economics and Management Science*, 5(2), Summer 1996, pp. 149-174.

Current Working Papers

- [1] “Quotas and Tariffs with Endogenous Conduct,” with D. Kovenock and Y. Sohn, Institute for Research in the Behavioral, Economic, and Management Sciences, Discussion Paper No. 1006, Purdue University, March 1991.
- [2] “The Diffusion of Consumer Durables in a Vertically Differentiated Oligopoly,” with A. de Palma, The Center for Mathematical Studies in Economics and Management Science, Discussion Paper No. 1022, Northwestern University, revised December 1997.
- [3] “Capacity Precommitment as a Barrier to Entry: A Bertrand-Edgeworth Approach,” with B. Allen, T. Faith, and D. Kovenock, Social Systems Research Institute, Working Paper No. 9440, University of Wisconsin-Madison, revised January 1998.

STEVEN N. DURLAUF

My current work falls in three areas: theory and econometrics of interactions-based models, empirics of economic growth, and formal modeling of scientific activity.

The social interactions work is designed to explore the role of role model, peer group and related effects on inequality.

The economic growth work has primarily been concerned with understanding the implications of observed patterns of growth for different theoretical growth perspectives. The research on scientific activity has attempted to use formal modeling methods to understand debates in the philosophy and history of science literatures on the role of different factors in influencing scientific progress.

Relatively recent SSRI Working Papers associated with this work include:

- [1] “A Formal Model of Theory Choice in Science, with W. A. Brock,” #9707, April 1997.
- [2] “Rational Choice and the Study of Science,” #9709R, October 1997.
- [3] “The Memberships Theory of Inequality Ideas and Implications,” #9711R, August 1997.
- [4] “What Should Policymakers Know About Economic Complexity?” #9721, Sept. 1997.
- [5] “The New Empirics of Economic Growth, with D. Quah,” #9803, January 1998.

PHILIP A. HAILE

Ongoing research/work in progress:

Auctions with Resale Opportunities

I study bidding behavior and optimal selling strategies when auctions are followed by an opportunity for further trade in a secondary market. The focus is on the endogeneity of bidder valuations and on the effects of information linkages between primary and secondary markets. This project includes several theoretical components as well as an empirical analysis of bidding at U.S. Forest Service timber auctions, where resale opportunities appear to explain behavior which might otherwise appear to be inconsistent with rational bidding.

Structural Empirical Analysis of Auction Data

This work includes two projects addressing the potential bias from misspecification of structural models in very different ways. In the first project I propose and implement a new nonparametric structural econometric model of oral ascending bid auctions (the most common but least well understood type) that is robust to a wide range of processes generating the observed bids. The

second applies a parametric model which allows a much richer (and realistic) specification of bidders' private information than is permitted by standard models. In both cases, results are compared to those obtained with existing approaches in applications to timber auctions and offshore mineral lease auctions, respectively.

Selected References:

- [1] "Auctions with Private Uncertainty and Resale Opportunities," manuscript, December 1997.
- [2] "Auctions with Resale," manuscript, September 1996.
- [3] "Auctions with Resale Markets: An Application to U.S. Forest Service Timber Sales," manuscript, December 1996.
- [4] "Nonexistence of Efficient Bidding Equilibria in Auctions with Resale," manuscript, September 1996.
- [5] "Inpatient Complication Rates: Does Payer Source Matter?", with Rebecca Stein, manuscript, October 1996.

ROBERT HAVEMAN

Over the past year, and currently, I am working on three topics.

1. The use of 20 years of longitudinal data in studying the determinants of the education and childbearing decisions of young adults, emphasizing the individual, family, community and opportunity determinants of these choices in a structural model framework (joint with Barbara Wolfe).
2. Estimation of the changes in well-being of disabled and elderly people over the last decade, in comparison to changes for nondisabled and younger people, and the role of social insurance benefits in sustaining their well-being (joint with Barbara Wolfe and Karen Holden).
3. Estimation of the level and utilization of human capital by working-age males and females in the U. S. from 1985 to 1993. The earnings capacity measure has also been used as an indicator of economic status, and hence "poverty". I have estimated the level and trend of earnings capacity poverty over the period 1975 to 1996.

Working papers are circulating in each of these areas, and articles have recently been published from each of the projects.

I am also working a number of other papers and studies, including:

- [1] "The Economics of Disability and Disability Policy", with Barbara Wolfe. [This is a long review of the literature article, and will be published in the Handbook of Health Economics.]

- [2] "Potentials and Problems of a Pre-Post Design for State-Based Evaluation of National Welfare Reform" [This is a conference paper, and will be published in Research in Program Evaluation.
- [3] "Employment and Social Protection Are They Compatible?" [This is a paper prepared for a ministerial level conference on employment and welfare policy at the OECD. It was published in a volume by OECD.]
- [4] "Equity and Employment" [This is an essay that is derived from my OECD paper (above) and has been published in The Boston Review.]

DONALD HESTER

Since June 1994, I have been working in two broad areas: 1) Italian banking and 2) Instructional gaming. In addition work continues on market clearing and its relation to the design of monetary policy and on automated trading mechanisms. Progress on both of these latter projects has been slowed by the high rate of institutional change in financial markets.

Italian Banking

This is a continuing project with Giorgio Calcagnini of the University of Urbino. One paper, "Cambiamento istituzionale e redditività delle banche in Italia" [1997] (Regulatory Change and Bank Profitability in Italy, SSRI Working Paper 9515) has been published thus far. It uses statistical accounting techniques on large cross-section samples of banks that were available for the years 1988-94 to examine the profitability of banks which are experiencing deregulation and simultaneous rapid expansion of the number of branches. Interest rate and cost estimates varied over time, but appear to have been affected more by monetary policy and exchange rate fluctuations than deregulation. Evidence of economies of scale, an excessively large number of employees, and monopolistic quasi rents in local banking markets is reported. Apart from these exceptions, conventional measures of banking market efficiency were satisfied, in large part through the interbank funds market. After adjusting for scale effects and portfolio variations, no evidence of interregional variations in bank net income or interbank lending was found. However, banks in the North (South) had relatively high (low) gross income and expenses.

This project is continuing with Riccardo De Bonis of the Bank of Italy along several new lines. First, data have been collected for a large sample of banks' branches in each of 95 Italian provinces for each year from 1988 through 1996. For each bank, province, and year observation, data on loans and deposits are in hand. Second, data on economic activity and growth in each province are being assembled. Third, a merger history for all banks appearing in the data base has been constructed and data are being matched to those used in the statistical cost accounting study. This very rich data set will be used to model the process of structural change in Italian banking, which is being forced by deregulation, European integration, and the accompanying enhanced competition.

Instructional Gaming

An effort is underway to mount my MACROSIM software and accompanying instructional programs and simulation packages on the web. The first attempt at this was done in collaboration with an undergraduate, Jason Maxham; it translated my existing bank simulation program to a web format. I was unsuccessful in obtaining funding for a large server platform which is required and the project was abandoned. Recently, in response to a request from a commercial publisher, Calcagnini and I are in the early stages of mounting MACROSIM and its applications on the web.

Reference:

- [1] “Cambiamento istituzionale e redditività delle banche in Italia”, *Rivista di Politica Economica*, Gennaio, 1997, pp. 3-42.

WOLFGANG KELLER

Research in Progress

Research in the area of *international technological diffusion* tries to answer the question of the relative importance of international trade in the process of international technology diffusion. To come up with a number, especially when estimating at the same time the relative importance of mechanisms other than trade is a key issue which still has not been addressed satisfactorily. My papers “Trade Patterns, Technology Flows, and Productivity Growth” and “How Trade Patterns Affect Productivity Growth” try to make a contribution in this area. The “Trade Patterns...” paper contains an important departure from the dominant methodology in the area: Now I estimate parameters governing the process of international technology diffusion without a priori assuming any particular mechanism of technology transmission (like trade); from this, several important and plausible results emerge. I will be working on a revision March to around April 1998 when I hope that the paper can be credibly submitted to a high-quality journal. I also plan to write a NSF proposal for Summer 1998 which starts out from my existing work, finally estimating a both interesting as well as solvable model of trade and technological diffusion.

My work on international technology diffusion in the context of *Foreign Direct Investment* (FDI) and *multinational enterprises* (MNEs) consists now of two draft papers, “Foreign Direct Investment and Host Country Learning Effects” and “Multinational Enterprises and the Process of International Technology Diffusion”. The former (incomplete) models a situation where the MNE’s superior knowledge leaks out to host country firms through labor turnover.

The “Multinational Enterprises...” project (no complete paper yet) combines theory and empirics, the time-intensive data collection financed by WAGE and WARF grants. The paper develops a dynamic model of FDI, trade, technology diffusion, and growth, with the key idea to use patent royalty payment data (between multinational parent and subsidiary) as a direct measure on international technology diffusion.

Another strand of my research analyzes the *volume of trade* between countries. The paper “On Theories Explaining the Success of the Gravity Equation” (joint with Simon Evenett) examines which inferences are possible in a situation where several models imply the same reduced-form volume-of-trade equation (the so-called “Gravity Equation” of trade). Such identification problems have rarely if ever been convincingly addressed in the trade literature. We propose a novel solution to the model identification problem for the case where different structural models are neither tested nor can one directly estimate different structural parameters. Because some of these models build on perfect competition and constant returns, and others rely on product differentiation and increasing returns, the paper also addresses the empirical relevance of increasing returns to scale in the patterns of world production and the volume of international trade. The paper “Gravity Models of Trade without Specialization in Production across Countries” contains some new results on volume of trade predictions, part of which will be incorporated in the revision of “On Theories...”.

JOHN KENNAN

Selected References

- [1] “Repeated Contract Negotiations with Private Information,” *Japan and the World Economy*, 7, 1995, pp. 447-472.
- [2] “The Elusive Effects of Minimum Wages,” *Journal of Economic Literature*, December 1995, pp. 1949-1965.
- [3] Review of *Labor Demand*, by Daniel S. Hamermesh, *Journal of Economic Literature*, September 1995, pp. 48-49.
- [4] “Repeated Bargaining with Persistent Information,” SSRI Working Paper No. 9708, UW-Madison, April 1997; http://www.ssc.wisc.edu/~jkennan/research/cyc_ab.htm
- [5] “Informational Business Cycles,” mimeo, November 1996, revised December 1997.
- [6] “Geographical Wage Differentials, Welfare Benefits and Life-Cycle Migration,” with J. R. Walker, presented at the Winter Meetings of the Econometric Society, New Orleans, January 1997.

BLAKE LEBARON

Selected References

- [1] “A Bootstrap Evaluation of the Effect of Data Splitting on Financial Time Series,” with A. Weigend, *IEEE Transactions on Neural Networks*, forthcoming 1998.

- [2] “Technical Trading Rules and Regime Shifts in Foreign Exchange,” in *Advanced Trading Rules*, E. Acar and S. Satchell, Butterworth-Heinemann, 1998.
- [3] “Asset Pricing Under Endogenous Expectations in an Artificial Stock Market,” with W.B. Arthur, J.H. Holland, R. Palmer, and P. Tayler, in W. B. Arthur, S. Durlauf and D. Lane, eds., *The Economy as an Evolving Complex System II*, Addison-Wesley, 1997.
- [4] “A Fast Algorithm for the BDS Statistic,” *Studies in Nonlinear Dynamics and Econometrics*, 2, 1997, pp. 53-59.
- [5] “A Test for Independence Based on the Correlation Dimension,” with W. A. Brock, W. D. Dechert, and J. A. Scheinkman, *Econometric Reviews*, 15, 1996, pp. 197-235.
- [6] “A Dynamic Structural Model for Stock Return Volatility and Trading Volume,” with W. A. Brock, *Review of Economics and Statistics*, 78, 1996, pp. 94-110.
- [7] “Chaos and Nonlinear Forecastability in Economics and Finance,” *Philosophical Transactions of the Royal Society of London (A)*, 348, 1994, pp. 397-404.
- [8] “Artificial Economic Life: A Simple Model of a Stock Market,” with R.G. Palmer, W.B. Arthur, J.H. Holland and P. Taylor, *Physica D*, 75, 1994, pp. 264-274.

Working Papers

- [1] “Predictability and Dynamic Trading Strategies in Foreign Exchange Markets,” December 1997.
- [2] “An Evolutionary Bootstrap Method for Selecting Dynamic Trading Strategies,” SSRI Working Paper No. 9805, UW-Madison, December 1997.
- [3] “The Time Series Properties of an Artificial Stock Market,” with W.B. Arthur and R. Palmer, SSRI Working Paper No. 9725, UW-Madison, November 1997.
- [4] “An Evolutionary Bootstrap Approach to Neural Network Pruning and Generalization,” SSRI Working Paper No. 9718, UW-Madison, August 1997.
- [5] “Experiments in Evolutionary Finance,” SSRI Working Paper No. 9528, UW-Madison, November 1995.
- [6] “Technical Trading Rule Profitability and Foreign Exchange Intervention,” SSRI Working Paper No. 9445R, UW-Madison, revised March 1996.

ARIK LEVINSON

Economics of Local Environmental Regulations

Differences among states or countries in the stringency or their environmental regulations present opportunities for empirical analysis as well as complicated problems for theorists. Empirical work in local environmental regulations depends on the quality of the data describing regulatory stringency. In "An Industry-Adjusted Index of State Environmental Regulatory Stringency" [10], I have developed a new index of state regulatory stringency from 1977 to 1992, facilitating comparisons both among states and within states over time. In "Environmental Regulations and Manufacturers' Location Choices" [6], I use such an index, along with data from the Census of Manufactures to examine the effect of differences in the stringency of state environmental regulations on establishment location choice. I use a conditional logit model of plant location choice to show that interstate differences in environmental regulations do not systematically affect the location choices of most manufacturing plants. In contrast, in "NIMBY Taxes Matter" [8], I show that hazardous waste taxes are a significant deterrent to interstate waste transport, that taxes are being imposed by large-capacity and large-import states, and that therefore these taxes have had a decentralizing effect on the national pattern of hazardous waste transport and disposal. I use panels of data on interstate waste shipments and state taxes, and I employ four approaches to deal with the potential endogeneity of taxes: a "natural experiment" based on the retaliatory nature of some state tax laws, a fixed-effects model, a two-stage least squares estimator, and a reinterpretation of the coefficient on the distance among states.

In "Factoring the Environmental Kuznets Curve" [1], I switch from states to nations as the unit of analysis, and examine the common observation that pollution follows an inverse-U or "environmental Kuznets curve" with respect to national income. The paper describes the relationship between automotive lead emissions and national income for 48 countries over 20 years, and draws three principal conclusions. First, lead emissions can be shown to follow such an inverse-U. Second, the peak of this curve is sensitive to both the functional form estimated and the time period considered. Third, automotive lead pollution is the product of two separate factors, lead per gallon of gasoline (pollution intensity) and gasoline consumption (polluting activity), and the declining portion of the curve depends critically on reducing gasoline lead content, not gasoline use.

On the theoretical side, in "A Note On Environmental Federalism" [4], I reconcile some conflicting interpretations of recent literature on interjurisdictional environmental regulatory competition. Some economists have modeled competition to attract investment by lowering environmental standards leading to a Pareto-optimal equilibrium. Others have modeled such competition resulting in a suboptimal Nash equilibrium. This paper reconciles the different results by showing that they depend in large part on monopoly profits and tax exporting, not the nature of the pollution externality or environmental federalism.

Other Areas of Research: Fiscal Constraints and Health Economics

In "Balanced Budgets and Business Cycles" [9], I present evidence that stringent balanced budget requirements enforced in some U.S. states have exacerbated business cycles in those states.

The effect is not apparent directly. However, among states theoretically more able to implement countercyclical fiscal policy (large states), the difference in volatility between states with lenient and strict balanced budget rules is larger (more negative or less positive) than among states less able to implement fiscal policy (small states). Two implications are suggested: (1) states' fiscal policies have real macroeconomic consequences, and (2) strict balanced budget requirements have economic costs in the form of increased business cycle volatility.

In a very different line of research, with coauthor Frank Ullman of the Urban Institute, in "Medicaid Managed Care and Infant Health" [2], I provide estimates of the effects of Medicaid managed care on prenatal care adequacy and infant birthweights, using a census of 1994 Medicaid births in Wisconsin, where some Medicaid recipients were enrolled in fully capitated HMOs while others remained in traditional fee-for-service systems. The results indicate that while Medicaid patients enrolled in managed care programs may be more likely to receive adequate prenatal care, birth outcomes under managed care are not significantly different from those under fee-for-service financing systems. We conclude that cost savings generated by Wisconsin Medicaid managed care are not coming at the expense of maternity patients' or infants' welfare.

Selected References

- [1] "Factoring the Environmental Kuznets Curve: Evidence From Automotive Lead Emissions," with F.G. Hank Hilton, *Journal of Environmental Economics and Management*, forthcoming.
- [2] "Medicaid Managed Care and Infant Health," with Frank Ullman, *Journal of Health Economics*, forthcoming.
- [3] "Why Oppose TDRs?: Transferable Development Rights Can Increase Overall Development," *Regional Science and Urban Economics*, 27(3), 1997.
- [4] "A Note on Environmental Federalism: Interpreting Some Contradictory Results," *Journal of Environmental Economics and Management*, 33(3), July 1997.
- [5] "Environmental Tax Competition: The Race to the Top in State Hazardous Waste Disposal Taxes," in *Proceedings of the 89th Annual Conference on Taxation*, National Tax Association, 1997.
- [6] "Environmental Regulations and Manufacturers' Location Choices: Evidence from the Census of Manufactures," *Journal of Public Economics*, 61(1), 1996.
- [7] "Environmental Regulations and Industry Location: International and Domestic Evidence," in Jagdish Bhagwati and Robert Hudec, eds., *Fair Trade and Harmonization: Prerequisite for Free Trade?* MIT Press, 1996.
- [8] "NIMBY Taxes Matter: State Taxes and Interstate Hazardous Waste Shipments," NBER Working Paper #6314, October 1997.

- [9] "Balanced Budgets and Business Cycles: Evidence from the States," mimeo, November 1997.
- [10] "An Industry-Adjusted Index of State Environmental Regulatory Stringency," mimeo, December 1997.

RODY MANUELLI

Over the last three years my research has concentrated on the topic of the impacts of public policies on economic performance. However, specific research can be categorized in several sub-topics.

Monetary Policy and Economic Performance

In a series of papers, I studied the impacts of high inflation policies on growth. From a qualitative point of view, it is clear that increases in inflation are detrimental to growth. However, from a quantitative perspective, it is unclear how large an impact is predicted by standard models. This is an important issue because empirical (largely atheoretical) studies of the impact of inflation on growth tend to find a substantial effect. Of course, in the absence of a model it is impossible to interpret this correlation as causation. In this sense, quantitative models can help measure the independent contribution of inflation, since they are designed to capture just this effect.

The basic result is that reasonable models of the relationship between inflation and growth predict a negative but very small impact of inflation. Depending on the details of the model, the "predicted" coefficient is somewhere between 10 to 50 times smaller than the coefficient estimated from the data. If, in addition to monetary aspects, the models are extended to include the effects of inflation on financial intermediaries, the predicted effect increases but it is still several times smaller than the estimated coefficient.

One interpretation of the differences between model and data is that the data are contaminated in the sense that countries that "choose" high inflation probably also choose a variety of other "bad" policies, which are hard to measure. Thus, in empirical work, the full effect of the distortionary policies is assumed to be due to inflation, an incorrect inference.

Another possibility is that it is not mean inflation but, rather, its variability that matters. Currently I am involved in a project that tries to understand how variable policies can affect the value of the variable "information about the realization of the policy variable." This information, in turn, affects economic agents' bargaining power. So far, I have worked on an application to monetary policy in which the information structure is endogenous, and I am in the process of working out the dynamic implications and the effects on inventories.

Optimal Taxation and Spending

Another important public policy issue is the optimal (from the point of view of social welfare) structure of taxes and spending. One of the most important results in the literature on optimal factor

(i.e. capital and labor) taxation is that, in the long run, capital income taxes should be zero. As part of my research on the topic I tried to understand the nature of the result, and the situations, if any, in which this policy would not be optimal. It turns out that if the tax authority is limited in the set of taxes that it can use (for example, it cannot tax away all pure profits) then the optimal long run tax code does involve positive taxation of capital income. It turns out to be a quantitative issue, how high the tax rate should be. For a series of special cases, it has been estimated that long run capital income taxes should be about 7% when depreciation is not allowed, and could be as high as 25% depending on the true estimate of physical depreciation.

As important as physical capital is current thinking attaches more importance to the accumulation of human capital. This poses a problem: should human capital be taxed more like physical capital (that is at low rates) or more like raw labor (which theory predicts should be taxed at higher rates). Some of my research indicates that the answer is far from obvious. In reasonable cases it can be shown that the optimal long run tax rate on human capital income is zero. However, whenever governments invest in education, theory predicts a complex combination of taxes and subsidies to private and public education, as well as student time depending on whether these factors complement or compete with each other.

Stochastic Growth

This ongoing project studies the impact of uncertainty --both exogenous and policy uncertainty-- on the growth rate of the economy. Includes a theoretical component and extensive numerical analysis as well as a more traditional estimation of an endogenous growth model using international panel data.

Endogenous Public Policy and Growth

This is a project that studies how collective decision making influences the long run performance of the economy. So far the emphasis has been on environmental policy, and studies how voting mechanisms select environmental taxes and the kind of technologies that are allowed to be used. In a separate project I am studying the choice between markets and political decision making mechanisms and the implications for growth.

LARRY SAMUELSON

Norms of social behavior have often been taken to be both outside the purview of economic analysis and of little importance for understanding economic phenomena. More recently, it has been recognized that economic activity is often governed by social norms. In particular, one readily finds situations where small numbers of economic agents interact, with each agent's payoff depending on the actions of all other agents. Bargaining problems, whether between a union and a firm, a regulated firm and a regulatory agency, a supplier and a purchaser of an intermediate good or service, or between firms, are obvious examples. These strategic interactions, modelled as "noncooperative games", allow a wide range of equilibrium behavior. For example, it can be an equilibrium for a supplier to be an aggressive bargainer if the buyer is not, and vice versa. In the presence of such

multiple equilibria, social norms of behavior arise to coordinate outcomes and avoid costly impasses that can occur when agents mistakenly choose strategies belonging to different equilibria.

An important observation is that social norms will evolve in such environments to facilitate the ways in which agents interact. Such norms can greatly affect an economy's efficiency. For example, social norms concerning workplace effort can determine a firm's profitability. However, many different norms can potentially evolve. One sees this in the fact that different social norms appear in different geographical areas and in different contexts. More recently, this dependence has been observed in laboratory bargaining experiments. After finishing such experiments, subjects are highly likely to report as "fair" that solution which they actually achieved in the experiment.

My work in the past three years has examined the process by which economic agents coordinate on one of the many possible equilibria in their interactions, with social norms appearing to accomplish and preserve this coordination. The research models the process by which agents learn to choose successful strategies in a strategic interaction. The tools for this modelling have recently been provided by evolutionary game theory. My research indicates that key features in the determination of behavioral norms include the information available to agents about the consequences of their strategy choices, the opportunities to observe and possibly mimic the experience of others, and the extent to which outcomes and payoffs are stochastic. The resulting learning processes are examined, both theoretically and via computer analysis, to determine which social norms are likely to appear, which are robust, and how one social norm might displace another.

More specifically, this work begins by constructing a model of the process by which individuals learn to interact in noncooperative environments. One then extracts from this model the dynamic process that describes how behavior evolves over the course of repeated trials, where this process is represented as a differential or stochastic differential equation. The limiting outcomes of this dynamic system, and the implications of these outcomes for the appearance of conventions of behavior or social norms, are then studied. Perhaps the most exciting aspect of this work is the finding that the limiting outcome can be quite sensitive to even arbitrarily small perturbations in the dynamic system. This sensitivity arises because the dynamic forces shaping behavior become very weak whenever the system approaches a component of multiple equilibria, with agents being indifferent over which equilibrium governs behavior. Even very small perturbations can then have a large effect on the evolution of the system. This observation in turn holds out the prospect that we can construct a dynamic theory of equilibrium and social norm determination, with a key element of this theory being a model of the random shocks introduced into the play of a game by the environment within which it is played. Work on this theory is in its early stages, and is presently proceeding at a highly abstract level. Some technical advances are required before the abstract model is completed, and then further work is required to bridge the gap between this model and a concrete theory of social norms.

Our understanding of the evolution and robustness of social norms may hold the key to addressing a wide variety of such problems. The key in each case may be policies that are temporary in the sense that they induce people to coordinate on activities that will be self-supporting once they become established as social norms.

References

- [1] "Drift," with Ken Binmore, *European Economic Review*, 38, 1994, pp. 859-867.
- [2] "An Economist's Perspective on the Evolution of Norms," with Ken Binmore, *Journal of Institutional and Theoretical Economics*, 150, 1994, pp. 45-63. Reprinted in Horst Hanusch, ed., *The Economic Legacy of Joseph Schumpeter*, Edward Elgar Publishing Ltd., 1997.
- [3] "Rationalizing Backward Induction," with Ken Binmore, in Mark Perlman, ed., *Proceedings of the 1993 Turin Conference on Game Theory*, forthcoming.
- [4] "Bounded Rationality and Game Theory," *Quarterly Review of Economics and Statistics*, 36, 1996, pp. 17-36.
- [5] "Endogenous Interactions," with George Mailath and Avner Shaked, in Ugo Pagano and Antonio Nicita, eds., *The Evolution of Economic Diversity*, Routledge, forthcoming.
- [6] "Learning to be Imperfect: The Ultimatum Game," with Ken Binmore and John Gale, *Games and Economic Behavior*, 8, 1995, pp. 56-90.
- [7] "Musical Chairs: Modelling Noisy Evolution," with Ken Binmore and Richard Vaughan, *Games and Economic Behavior*, 11, 1995, pp. 1-35.
- [8] "Correlated Equilibria and Local Interactions," with George Mailath and Avner Shaked, *Economic Theory*, 9, 1997, pp. 551-556..
- [9] "A Dynamic Model of Equilibrium Selection in Signaling Markets," with Georg Nöldeke, *Journal of Economic Theory*, 73, 1997, pp.118-156.
- [10] *Evolutionary Games and Equilibrium Selection*, MIT Press, 1997.
- [11] "How Proper is Sequential Equilibrium," with George Mailath and Jeroen Swinkels, *Games and Economic Behavior*, 18, 1997, pp. 193-218. Erratum, *Games and Economic Behavior*, 19, 1997, p. 249.
- [12] "Muddling Through: Noisy Equilibrium Selection," with Ken Binmore, *Journal of Economic Theory*, 74, 1997, pp. 235-265.
- [13] "Altruists, Egoists and Hooligans in a Local Interaction Model," with Ilan Eshel and Avner Shaked, *American Economic Review*, forthcoming.
- [14] "Evolutionary Stability in Alternating-Offers Bargaining Games," with Ken Binmore and Michele Piccione, *Journal of Economic Theory*, forthcoming.

JOHN KARL SCHOLZ

Do Saving Incentives Work?

In recent years, the U.S. has experimented with a variety of tax-preferred saving incentives such as Individual Retirement Accounts and 401(k) plans. This paper examines whether saving incentives raise private and national savings. Several tests using different data sets show that, at best, only a small proportion of contributions to saving incentive plans have represented increases in private saving. Coupled with the revenue losses created by tax-deductible contributions, our results indicate that saving incentives have not appreciably increased and may have reduced national saving. We also present results from a stochastic life-cycle simulation model that are consistent with the empirical findings for short and medium terms (0-30 years). The simulation results suggest that over longer horizons, saving incentives can raise the national saving rate.

IRAs and Household Saving

This paper examines the effects of Individual Retirement Accounts (IRAs) on private and national saving. We construct a formal model of dynamic utility maximization that generates closed-form equations for IRA and other saving. Our empirical estimates indicate that raising the annual IRA contribution limit between 1983 and 1986 would have resulted in little, if any, increase in national saving. Results from extensive sensitivity analysis imply substantially smaller effects on national saving than most previous researchers have estimated. Our results are consistent with new evidence we present indicating considerable potential among IRA holders to shift taxable forms of saving into IRAs.

The Participation Rate of the Earned Income Tax Credit

This paper examines the participation rate of the earned income tax credit (EITC). After examining a variety of data sources on EITC reciprocity, my preferred estimates indicate that 80 to 86 percent of eligible taxpayers received the credit in 1990, which implies fewer than 2.1 million taxpayers entitled to the credit failed to receive it. I then examine factors correlated with nonparticipation and find that many are consistent with rational or voluntary explanations for nonparticipation. The paper concludes with a discussion of the labor market incentives and antipoverty effectiveness of the credit before and after the August 1993 expansion of the EITC.

Intergenerational Transfers and the Accumulation of Wealth

This paper provides evidence on the role of intergenerational transfers as a source of wealth. We use household-level data on transfers to provide direct estimates of transfer wealth, and distinguish between intended transfers (for example, gifts to other households) and possibly unintended transfers (bequests). We estimate that intended transfers account for at least 20% of net worth, and possibly significantly more. Thus, a significant portion of U.S. wealth accumulation cannot be explained by the life-cycle model, even when the model is augmented to allow for bequests. We also show, contrary to many studies of transfers that focus only on bequests, that transfers between living persons are an important component of aggregate transfers.

Personal Bankruptcy Exemptions and the Demand and Supply for Credit

This paper examines the degree to which cross-state variation in personal bankruptcy laws affects the demand and supply of credit. There is large variation across states in the amounts households can shield from creditors in the event of Chapter 7 and Chapter 13 bankruptcy. In Texas, for example, a household declaring bankruptcy can keep any house and up to 200 acres of land outside city limits and up to an acre of land inside city limits and \$30,000 in personal property. In Rhode Island there is no homestead exemption, and a household can keep only \$500 of tools and \$1,300 in personal property (including 300 books). The purpose of this project is to examine: (1) whether lenders reduce the amount they are willing to lend to otherwise similar borrowers who live in states that have high exemption levels, and (2) whether borrowers' demand for credit is higher than otherwise similar borrowers in states where the exemption level is high. The primary data for this study come from the 1983 Survey of Consumer Finances (SCF), which provides detailed information on liabilities, assets, incomes, and demographic characteristics for a sample of roughly 3,800 households. I have supplemented the 1983 SCF with information on individual states' bankruptcy exemptions.

"Charitable Contributions of Time and Money" develops a framework for thinking about the joint determination of charitable contributions and volunteer labor. We then confront the implications and assumptions of our framework using a rich new dataset collected by the Gallup Organization for a consortium of non-profit organizations.

ROBERT STAIGER

Much of my research over the past three years has focused on developing elements of an economic theory of international trade agreements. My approach has been to identify "problems" which economic theory suggests could be "solved" with a trade agreement, and then to consider whether the central features of existing trade agreements -- such as the General Agreement on Tariffs and Trade (GATT) and now its successor institution, the World Trade Organization -- can be understood as attempts to solve these problems.

In developing this line of research, I have first asked a basic question: What are trade negotiators negotiating over? As governments take part in trade negotiations voluntarily, it is natural that each will gain as a result of those negotiations, and this is possible only if there exists an inefficiency that negotiations can correct. What, then, is the source of the inefficiency that a trade agreement can correct? I have found that in a broad class of models which posit political as well as economic motivations for governments, the efficiency gains made possible by trade negotiations come from eliminating the terms-of-trade motivations for trade policy intervention. Thus, my research suggests that the terms-of-trade effects of unilateral policy choices are in fact the fundamental source of inefficiency that governments can correct through international negotiations, and contending with the terms-of-trade motives of governments is placed at center stage in the economic theory of international trade agreements which I am developing.

Of course real governments rarely discuss in any explicit way such abstract notions as the terms-of-trade consequences of their decisions, and the attraction these governments have to international trade negotiations seems in any event to have less to do with enhancing efficiency than with a simple mercantilist desire for export markets. Does this mean that my theory is incapable of capturing the underlying forces at work in actual trade negotiations? Many economists have rejected terms-of-trade based theories on exactly these grounds, but I believe that, with some slight reinterpretation of the terms-of-trade effects of policy choices, these rejections can be seen to be unwarranted. In fact, the terms-of-trade effects of a government's policy choices refer simply to its ability to shift the costs of its policies onto trading partners. This cost-shifting will occur, provided only that some of the incidence of a government's policies are borne by foreign exporters. Thus, for example, when a domestic government offers protection to an import-competing industry, some of the costs of that protection will be shifted abroad if foreign exporters accept lower export prices for their sales in the domestic market. When such cost-shifting does occur, it is quite natural to expect that governments will be led to distort their policy choices, as they do not bear the whole cost of their decisions. Consequently, when viewed from the perspective of cost-shifting, terms-of-trade effects can be seen to represent a natural source of inefficiency associated with unilateral policy decisions. At the same time, these effects can also help to provide an economic explanation for the mercantilist orientation of actual negotiations, as they imply that each government is right to pin its hopes for a beneficial outcome of negotiations on its ability to gain enhanced access for its exporters to the markets of its trading partner.

Having identified a fundamental "problem" that can be "solved" with the creation of a trade agreement, a second question can then be posed. Can the existing rules of GATT be understood in light of the "terms-of-trade problem" that economic theory suggests a trade agreement should solve? It turns out that, from this vantage point, a number of GATT's central features can be interpreted and understood as facilitating efficient multilateral outcomes. For example, my research suggests that GATT's core principles of "reciprocity" and "non-discrimination" can be interpreted within this light. Consider first the principle of reciprocity, under which one government would respond to the changes in market access of its trading partner with "reciprocal," i.e. equal-trade-volume, market access changes of its own. It is easy to show that the principle of reciprocity serves to neutralize the terms-of-trade effects of a country's trade policy decisions in a two country setting. Therefore, in a two-country world, reciprocity works well as a principle with which to undo the terms-of-trade driven restrictions in trade and, as terms-of-trade motives are the source of inefficiency, reciprocity guides governments to negotiate trade agreements which achieve efficient trade volumes. In a many-country setting, reciprocity accomplishes this if and only if tariffs are also restricted to be "non-discriminatory," i.e., a country can not grant differential access to its markets based on exporter-country-of-origin. Hence, my research suggests that GATT's two pillars of reciprocity and non-discrimination can be viewed as simple rules that work in tandem to guide governments to efficient trade agreements. On the other hand, not all of the features of the existing multilateral trading system can be seen to promote efficient multilateral outcomes. For example, one implication of the finding that reciprocity requires non-discrimination to deliver efficient outcomes is that preferential agreements such as NAFTA and the European Union -- which constitute an important exception to GATT's non-discrimination rule -- pose a threat to the existing multilateral

trading system, as they interfere with the efficiency properties of the trade agreements that GATT could otherwise deliver.

Finally, my most recent work is beginning to focus on a third question: Can an understanding of how GATT's principles have worked to deliver efficient outcomes in the traditional arena of tariff negotiations be extended to the host of "new" issues which GATT currently faces? In particular, there is a belief in some circles that GATT's success in facilitating tariff liberalization over the past 50 years has created an incentive for governments to distort their "domestic" policies as disguised protection. As a result, GATT-member governments are currently considering proposals for a new round of negotiations that would move beyond GATT's existing focus on trade barriers and cover traditionally domestic issues such as labor and environmental standards and regulatory reform. My research suggests that, while direct negotiations over traditionally domestic policy issues is certainly one way to achieve efficient outcomes, a slight modification and extension of GATT's existing rules would allow governments to achieve efficient outcomes under tariff negotiations alone, without the need to engage in direct negotiations over domestic policy instruments. Hence, GATT's existing rules may provide a path to global efficiency consistent with maximal national sovereignty.

PAULA VOOS

My work has fallen in three major areas over the past three years (1) U.S. labor organization and collective bargaining, (2) employee involvement, gainsharing, and other forms of workplace innovation, and (3) the public policy implications of changes in both domains.

The volume which I edited in 1994 on private sector collective bargaining detailed developments in thirteen major industries in the 1980s and early 1990s. In my introduction, I reflected on the implications of the case studies for our understanding of the impact of the economic context on collective bargaining, of the reasons for the decline in union membership in this period, and of the appropriate public policy responses. This book made the American Library Association's Choice Magazine list of Outstanding Academic Books for 1995 and is now in its second printing. These themes have also informed a series of articles which I have written on collective bargaining (see my 1998 vita for a list of articles). In other work in the collective bargaining area, I have examined the relationship between union density and the wages received by union members, and examined the rates paid to letter-carriers under the particular form of interest arbitration used by the U.S. postal service.

I have also written extensively on employee involvement, gainsharing, and other forms of workplace innovation, with a dual focus: understanding how those human resource initiatives interact with collective bargaining and understanding their relationship to labor law. It is alleged that unions hinder these programs and that the National Labor Relations Act needs to be amended to give management more flexibility in instituting particular innovations. In contrast, I argue, based on my own research and that of others, that in fact these programs are more common (for a variety of reasons) in unionized workplaces, that organization actually helps programs be successful when the union supports the effort, and that NRLA does not hinder innovation.

My work in both areas is in some respects a continuation of an earlier research focus on union organizing and employee involvement programs, and a reflection of my service (1993-94) on the Commission on the Future of Worker-Management Relations, U.S. Departments of Labor and Commerce, known as the Dunlop Commission. Experience on that Commission convinced me of the importance of continuing to write on legal aspects of these problem, as well as on economic aspects. This explains the number of articles which I have authored on labor law and other public policies needed to promote both collective bargaining and employee involvement.

JAMES R. WALKER

Conference participation (with SSRI assistance)

1996 Canadian Meetings (June)

“Welfare Benefits and Migration by Low-Income Households.”

1996 Population of America Association (June)

“Welfare Benefits and Migration by Low-Income Households.”

1997 Econometrica Society Winter Meetings (January)

“Geographical Wage Differentials, Welfare Benefits and Life-Cycle Migration,” joint with John Kennan.

1998 National Academy of Science Meeting (January)

“Social Interactions and Fertility Dynamics,” joint with Steven Durlauf.

Research Focus

I am interested in life cycle decision making processes connected to migration and fertility choices. My early work on migration has concentrated on low-income populations and investigates the effect of locally determined welfare payments on migration of the poor. Although simple models give unambiguous predictions and imply that welfare benefits should inhibit outmigration and increase in-migration, my research indicates that such effects are quantitatively small. A limitation of this research is that it does not fully incorporate wages into the analysis. My more recent work (joint with John Kennan) does this and attempts to assess the relative effect of benefits and wages. Using the National Longitudinal Survey of Youth, our results indicate that individuals leave low-wage areas, but are not drawn to high wage localities. We hope to address this conundrum in future research.

My other research focus continues my long standing interest in fertility dynamics. My joint work with Steven Durlauf investigates the role of social interactions on fertility behavior. The perspective attempts to integrate the insights on the role of incentives (e.g., price and wealth effects) from economics with insights on the influence of social groups (e.g., family) from sociology to understand fertility behavior.

KEN WEST

I have done research in empirical macroeconomics and time series econometrics. Publications from 1994 to the present include:

[1] "Inventories," with Valerie A. Ramey. We review and interpret recent work on inventories, emphasizing empirical and business cycle aspects. We begin by documenting two empirical regularities about inventories. The first is the well-known one that inventories move procyclically. The second is that inventory movements are quite persistent, even conditional on sales.

To consider explanations for the two facts, we present a linear-quadratic model. The model can rationalize the two facts in a number of ways, but two stylized explanations have the virtue of relative simplicity and support from a number of papers. Both assume that there are persistent shocks to demand for the good in question, and that marginal production cost slopes up. The first explanation assumes as well that there are highly persistent shocks to the cost of production. The second assumes that there are strong costs of adjusting production and a strong accelerator motive.

Research to date, however, has not reached a consensus on whether one of these two, or some third, alternative provides a satisfactory explanation of inventory behavior. We suggest several directions for future research that promise to improve our understanding of inventory behavior and thus of business cycles.

[2] "Another Heteroskedasticity and Autocorrelation Consistent Covariance Matrix Estimator." A \sqrt{T} consistent estimator of a heteroskedasticity and autocorrelation consistent covariance matrix estimator is proposed and evaluated. The relevant applications are ones in which the regression disturbance follows a moving average process of known order. In a system of ℓ equations, this "MA- ℓ " estimator entails estimation of the moving average coefficients of an ℓ -dimensional vector. Simulations indicate that the MA- ℓ estimator's finite sample performance is better than that of the estimators of Andrews and Monahan (1992) and Newey and West (1994) when cross-products of instruments and disturbances are sharply negatively autocorrelated, comparable or slightly worse otherwise.

[3] "Business Fixed Investment and the Recent Business Cycle in Japan," with Nobuhiro Kiyotake. To analyze business fixed investment in Japan, which has been unusually volatile in recent years, we develop and apply a loglinear flexible accelerator model. We find that movements in business fixed investment are consistent with movements in output and the tax-adjusted cost of capital, both on average during our entire 1961-94 sample and during the recent 1986-94 business cycle.

[4] "Asymptotic Inference About Predictive Ability." This paper develops procedures for inference about the moments of smooth functions of out of sample predictions and prediction errors, when there is a long time series of predictions and realizations. The aim is to provide tools for analysis of predictive accuracy and efficiency, and, more generally, of predictive ability. The paper

allows for nonnested and nonlinear models, as well as for possible dependence of predictions and prediction errors on estimated regression parameters. Simulations indicate that the procedures can work well in samples of size typically available.

[5] "A Comparison of Alternative Instrumental Variables Estimators of A Dynamic Linear Model." We compare the out-of-sample forecasting performance of univariate homoskedastic, GARCH, autoregressive and nonparametric models for conditional variances, using five bilateral weekly exchange rates for the dollar, 1973-1989. For a one week horizon, GARCH models tend to make slightly more accurate forecasts. For longer horizons, it is difficult to find grounds for choosing between the various models. None of the models perform well in a conventional test of forecast efficiency.

[6] "The Predictive Ability of Several Models of Exchange Rate Volatility," with Dongchul Cho. We compare the out-of-sample forecasting performance of univariate homoskedastic, GARCH, autoregressive and nonparametric models for conditional variances, using five bilateral weekly exchange rates for the dollar, 1973-1989. For a one week horizon, GARCH models tend to make slightly more accurate forecasts. For longer horizons, it is difficult to find grounds for choosing between the various models. None of the models perform well in a conventional test of forecast efficiency.

[7] "Inventory Models." Econometric aspects of recent research on inventory models are surveyed. The discussion emphasizes issues relevant to instrumental variables estimation of a first order condition of the Holt et al. (1960) linear quadratic inventory model, including choice of instruments, covariance matrix estimation, methods for testing, and implications of unit root nonstationarity. The paper also briefly discusses estimation of a decision rule implied by the model, and, finally, the implications for inventory models of some stylized facts about inventories.

[8] "Automatic Lag Selection in Covariance Matrix Estimation," with Whitney K. Newey. We propose a nonparametric method for automatically selecting the number of autocovariances to use in computing a heteroskedasticity and autocorrelation consistent covariance matrix. For a given kernel for weighting the autocovariances, we prove that our procedure is asymptotically equivalent to one that is optimal under a mean squared error loss function. Monte Carlo simulations suggest that our procedure performs tolerably well, although it does result in size distortions.

[9] "Estimation and Inference in the Linear-Quadratic Inventory Model," with David W. Wilcox. We summarize some recent work of ours on estimation and hypothesis testing on the parameters of the linear-quadratic inventory model. For some data generating processes calibrated to estimates from some existing studies, this work uses (1) asymptotic theory to compare alternative estimators on the basis of the asymptotic efficiency of parameter estimates, (2) asymptotic theory and simulations to consider how likely one will be to get sharp estimates of the parameters of the model, and (3) simulations to see how accurately sized are hypothesis tests about the parameters of the model.

[10] "Some Evidence on the Finite Sample Behavior of an Instrumental Variables Estimator of the Linear Quadratic Inventory Model," with David W. Wilcox. We evaluate some aspects of the finite sample distribution of an instrumental variables estimator of a first order condition of the Holt et al. (1960) linear quadratic inventory model. We find that for some but not all empirically relevant data generating processes and sample sizes, asymptotic theory predicts a wide dispersion of parameter estimates, with a substantial finite sample probability of estimates with incorrect signs. For such data generating processes, simulation evidence suggests that different choices of left hand side variables often produce parameter estimates of opposite sign. More generally, while the asymptotic theory often provides a good approximation to the finite sample distribution, sometimes it does not.

BARBARA L. WOLFE

Selected References

- [1] "Market Work, Wages, and Men's Health," with R. Haveman, B. Kreider, and M. Stone, *Journal of Health Economics*, 13, 1994, pp. 163-182.
- [2] "The Effect of Health on the Work Effort of Single Mothers," with S. Hill, *Journal of Human Resources*, 30(1), 1995, pp. 42-62.
- [3] "The Loss of Earnings Capability from Disability/Health Limitations: Toward a New Social Indicator," with R. Haveman, L. Buron, and S. Hill, *Review of Income and Wealth*, Series 41, no. 3, September 1995, pp. 289-308.
- [4] "The Determinants of Children's Attainments: A Review of Methods and Findings," with R. Haveman, *Journal of Economic Literature*, 33, December 1995, pp. 1829-1878.
- [5] "The Window Problem' in Studies of Children's Attainments: A Methodological Exploration," with R. Haveman, D. Ginther, and C.B. An, *Journal of the American Statistical Association*, September 1996.
- [6] "Testing the HMO Competitive Strategy: An Analysis of Impact on Medical Care Resources," with S. Hill, *Journal of Health Economics*, 16, June 1997, pp. 261-286.
- [7] "Nonmarket Outcomes of Schooling," with S. Zuvekas, *International Journal of Education Research*, 27(6), 1997.
- [8] "External Benefits of Education," in T. Husen and T. N. Postlewaite, eds., the *International Encyclopedia of Education*, Second Edition, 4, Pergamon Press, 1994.
- [9] "Reform of Health Care for the Nonelderly Poor," in S. Danziger, G. Sandefur and D. Weinberg, eds., *Confronting Poverty: Prescriptions for Change*, Cambridge MA: Harvard University Press, 1994.

- [10] “The Implications of Demographic Changes from Public Finance: An Overview,” in B.L. Wolfe, ed., *On the Role of Budgetary Policy During Demographic Changes*, Proceedings of the 48th Congress of the International Institute of Public Finance, 1992, Public Finance/Finances Publiques, Supplement, 48, 1993. (Published in 1994).
- [11] “Health Policy for Children of AFDC Families: Economic Issues,” in P. Lindsay Chase-Lansdale and J. Brooks-Gunn, eds., *Escape from Poverty: What Makes a Difference for Poor Children?*, New York NY: Cambridge University Press, 1995, pp. 170-185.
- [12] “Outcomes for Teens and Young Adults of Adolescent Parents,” with R. Haveman and E. Peterson in R. Maynard, ed., *Kids Having Kids: Economic Costs and Social Consequences of Teen Pregnancy*, Washington DC: The Urban Institute Press, 1997, pp. 257-284.
- [13] “Teen Children’s Health and Health Care Use,” with Maria Perozek in R. Maynard, ed., *Kids Having Kids: Economic Costs and Social Consequences of Teen Pregnancy*, Washington, DC: The Urban Institute Press, 1997, pp. 181-204.
- [14] “Childhood Poverty and Adolescent Schooling & Fertility Outcomes: Reduced Form and Structural Estimates,” with R. Haveman and K. Wilson in J. Brooks-Gunn and G.J. Duncan, eds., *Consequences of Growing Up Poor*, New York: Russell-Sage Foundation, 1997, pp.419-460.
- [15] “Health Indicators for Preschool Children,” with J. Sears in B. Brown, W. Prosser and R. Hauser eds., *Indicators of Children’s Well-Being*, New York: Russell-Sage Foundation, 1997, pp. 76-94.

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Blake LeBaron
Arik Levinson
Charles F. Manski
Rodolfo Manuelli
Donald Nichols
John Rust
Larry Samuelson
John Karl Scholz
John Shea
Kenneth West

Vilas Foundation

William A. Brock (Professorship)
Prajit Dutta (Associate)
Arthur S. Goldberger (Professorship)
Rodolfo E. Manuelli (Associate)
Blake LeBaron (Associate)

Wisconsin Alumni Research Foundation

Larry Samuelson
Robert Staiger
Kenneth West

GUEST SPEAKERS IN WORKSHOPS

<u>DATE</u>	<u>SPEAKER</u>	<u>AFFILIATION</u>	<u>TITLE</u>
9/22/94	Sharon Kozicki	Federal Reserve Board of Governors	"An Empirical Study of Yield Curve Dynamics"
9/23/94	Mats Bergman	Honorary Fellow UW-Madison & Univ. of Umeå	"Strategic Investments & Excess Capacity"
9/24/94	Andres Rodriguez-Clare	Chicago Business School	"Multinationals, Linkages and Economic Development"
10/03/94	James A. Brander	Univ. of British Columbia	"International Trade and Open Access Renewable Resources: The Small Open Economy Case"
10/05/94	Mats Bergman	UW-Madison & Univ. of Umeå	"Measuring Oligopsony Power"
10/06/94	Hamid Davoodi	World Bank	"Fiscal Decentralization & Growth"
10/12/94	Andre de Palma	University of Geneva	"Product Diversity in Asymmetric Oligopoly: Is the Quality of Consumer Goods too Low?"
10/14/94	Ennio Stachetti	University of Michigan	"Multidimensional Mechanism Design for Actions with Externalities"
10/17/94	Robert Drago	UW-Milwaukee	"Incentive for Helping on the Job: Theory and Evidence"
10/21/94	Scott Thompson	Univ. of Minnesota (Visiting Professor at UW-Madison)	"Efficient Method of Moments Estimation with Highly Correlated Errors"
11/02/94	Lars Stole	University of Chicago	"Escalation of Commitment and Economic Analysis of Behavioral Decision Making Rules"
11/04/94	Faruk Gul	Northwestern University	"Recent Developments in Mechanism Design"
11/11/94	Charles Goodhart	London School of Economics	"One Day in June, 1993: A Study of the Working of Reuters 2000-2 Electronic Foreign Exchange Trading System"
11/14/94	Burton Weisbrod	Northwestern University	"Does Institutional Form Matter? Comparing Behavior of Private Firms, Church-Related Nonprofits, and Other Nonprofits"
11/15/94	Ed Leamer	UCLA Graduate School of Mgt.	"Models of the Transition in Eastern Europe"
11/16/94	Victor Tremblay	Oregon State University and UW-Madison	"Advertising, Price and Welfare: Evidence from the US Brewing Industry"

11/18/94	John van Huyck	Texas A&M University	“Does Economics Make Sense?”
11/28/94	Derek Neal	University of Chicago	“The Role of Pre-Market Factors in Black-White Wage Differences”
12/1/94	Joe Beaulieu	Federal Reserve Board of Governors	“The Effects of General Inflation and Idiosyncratic Cost Shocks on Within Commodity Price Dispersion: Evidence from Micro Data”
12/2/94	Jeff Dominitz	University of Michigan	“Using Expectations Data to Study Subjective Income Expectations”
12/5/94	Robert Hall	Stanford University	“One the Sources of Economic Fluctuations”
12/7/94	Kyle Bagwell	Northwestern University	“The Diamond Paradox: A Dynamic Resolution”
12/8/94	Richard Porter	Board of Governors of the Federal Reserve System	“The Location of Currency”
12/9/94	Tomas Philipson	University of Chicago	“A General Theory of Subject Determined Treatment Evaluation”
12/12/94	Robert Hall	Stanford University	“On the Sources of Economic Fluctuations”
12/13/94	Phil Levy	Yale University	Title To Be Announced
12/14/94	Russell Cooper	Boston University	“Machine Replacement and the Business Cycle: Lumps and Bumps”
12/16/94	Margaret Meyer	Oxford University and Yale	“Performance Comparisons and Dynamic Incentives”
12/16/94	Paul Klemperer	Oxford University and Yale	“An Equilibrium Theory of Rationing”
1/23/95	Carol Tremblay	Oregon State University and UW-Madison	“Job Requirements, Risk of Death, and the Gender Composition of Occupations”
1/25/95	Kaivan Munshi	MIT	Title To Be Announced
1/26/95	Allan Drazen	University of Maryland	“Capital Account Liberalization as a Signal”
1/27/95	Martin Pesendorfer	Northwestern University	“A Study of Collusion in First-Place Auctions Part I: Cartel Agreements and Part II: Cartel Bidding Behavior”
2/24/95	John van Huyck	Texas A & M University	“On the Origins of Conventions”
2/27/95	Hugo Hopenhayn	University of Rochester	“Optimal Unemployment Insurance”
3/1/95	Georg Noldeke	University of Bonn	“Optimal Contracts and Renegotiation: A Solution to the Holdup Problem”
3/7/95	Robert Stern	University of Michigan	“Computational Analysis of Goods and Services Liberalization in the Uruguay

			Round”
3/9/95	Steven Williamson	University of Iowa	“Discount Window Lending and Deposit Insurance”
3/20/95	Lawrence Mishel	Economic Policy Institute	“Is the Technology Black Box Empty?: An Empirical Study Examination of the Impact of Technology on Wage Inequality and the Employment Structure”
3/22/95	Anne Gron	Northwestern and Chicago	“Collusion, costs or capacity? Evaluating theories of Insurance Cycles”
3/28/95	Hilary Hoynes Orazio Attanasio	UC-Berkeley Stanford	“Differential Mortality and Wealth Accumulation”
3/28/95	John Campbell	Harvard University	“By Force of Habit: A Consumption-Based Explanation of Aggregate Stock Market Behavior”
3/29/95	Faruk Gul	Northwestern University	“Competition and Strategic Equilibria in Auction Environments”
3/31/95	Dan Friedman	UC-Santa Cruz	“Learning Liability Rules”
4/4/95	John R. Lott, Jr.	Universities of Chicago & Pennsylvania	“Do Campaign Donations Alter How a Politician Votes?”
4/7/95	Dongchul Cho	Texas A&M University	“An Alternative Interpretation of Conditional Convergence Results”
4/14/95	Debraj Ray	Boston University	“Cooperative Norms without Information Flows”
4/19/95	Tai-Yeong Chung	University of Western Ontario	“Incomplete Contracts and Cooperative Investment”
4/27/95	Alan Manning	London School of Economics	“Labor Markets with Company Wage Policies”
4/28/95	Fernando Vega-Redondo	University of Alicante and UC-San Diego	“Industrial Dynamics, Path Dependence and Technological Change”
5/1/95	Costas Azariadis	University of California, Los Angeles	“Discretionary Policy and Economic Volatility”
5/2/95	Len Burman	CBO	“Incremental Investment Tax Credits”
5/4/95	Joel Horowitz	University of Iowa	“Bootstrap Methods in Econometrics”
5/5/95	Donald J. Brown	Yale University	“Nonparametric Estimation of Random Utility Functions”
5/8/95	Michael Keane	University of Minnesota	“The Career Decisions of Young Men”
5/9/95	William Gale	The Brookings Institution	“The Effects of Pensions on Wealth: A Re-

evaluation of Theory and Evidence”

5/10/95	Steve Gjerstad	Iowa State University	“A Behavioral Theory of Price Formation in Double Auctions”
5/12/95	Tim Kehoe	University of Minnesota	“Capital Flows and the North American Free Trade Agreement”
9/19/95	Kyle Bagwell	Northwestern University	“Reciprocal Trade Liberalization”
10/2/95	David J. Zimmerman	Williams College	“An Empirical Analysis of the Welfare Magnet Debate Using the NLSY”
10/6/95	George Mailath	University of Pennsylvania	“Bargaining and Investment in a Two-Sided Matching Model”
10/11/95	Ioannis Tournas	Northwestern University	“Tapered Integration and Informational Efficiency”
10/13/95	Garey Ramey	University of California-San Diego	“Calculation, Adaptation and Rational Expectations”
10/20/95	Christopher Bollinger	Georgia State University	“On the Errors-In-Variables Bias of Nonparametric Regression”
11/1/95	Ken Binmore	University of London	“Does Minimax Work? An Experimental Investigation”
11/3/95	John Roemer	University of California-Davis	“Equality of Opportunity: Theory and Examples”
11/10/95	Charles Kahn	University of Illinois	“Multiunit Auctions”
11/13/95	Jonathan Eaton	Boston University	“International Patenting and Technology Diffusion”
11/14/95	Ted Bergstrom	University of Michigan	“Economics in a Family Way”
11/15/95	Rafael Rob	University of Pennsylvania	“The Frequency and Pricing of Product Innovations”
11/17/95	Herman Bierens	Southern Methodist University	“Nonparametric Cointegration Analysis”
11/17/95	Peyton Young	University of Maryland	“Evolution and Justice”
11/21/95	Alan Deardorff	University of Michigan	“Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World?”
11/27/95	Ennio Stachetti	University of Michigan	“English Auctions with Multiple Goods”
11/30/95	Joel Watson	University of California San Diego	“Building a Relationship”
12/6/95	Jim Dana	Northwestern University	“Advance Purchase Discounts and Price Discrimination in Imperfectly Competitive Markets”

12/8/95	Michelle Piccione	Northwestern University and University of British Columbia	“On the Interpretation of Decision Problems with Imperfect Recall”
12/11/95	Ariel Rubinstein Alberto Trejos	Tel Aviv University Northwestern University	“Optimal Sectoral Shifts”
12/14/95	Nobuhiro Kiyotaki	University of Minnesota	“Credit Chains”
1/29/96	John Kim-Ho Quah	University of CA-Berkeley	“The Monotonicity of Individual and Market Demand”
1/29/96	Philip R. De Jong Jeo J. M. Aarts	Erasmus University, Rotterdam & Leiden University Leiden University	“European Experiences with Disability Policy”
1/31/96	John Duggan	Cal Tech	“An Extensive Form Solution to the Adverse Selection Problem in Principal/Multi-agent Environments”
2/1/96	John Morgan	Penn State	“Financing Public Goods by Means of Lotteries”
2/2/96	Bruce Weinberg	University of Chicago	“The Effects of Long-Run Industry Demand Shocks on Wages and Employment with Specific Human Capital Investment”
2/5/96	Leora Friedberg	MIT	“The Labor Supply Effects of the Social Security Earnings Test”
2/7/96	Robert Shimer	MIT	“Do Good Guys Come in First? Wage Determination and the Ranking of Job Applicants”
2/12/96	Sven Rady	London School of Economics	“Optimal Experimentation in a Changing Environment”
2/13/96	Eugene Canjels	Northwestern University	“Sharecropping in Modern U.S. Agriculture”
2/22/96	Thomas Aronsson and Karl Lofgren	Umea University	“Nuclear Power, Externalities and Non- Standard Pigouvian Taxes: A Dynamic Analysis under Uncertainty”
3/18/96 Eighties:	Chris Taber	Northwestern University	“The Rising College Premium in the Return to College or Return to Ability?”
3/20/96	Larry Ausubel	Maryland	“Multiple Unit Auctions”
4/1/96	Tom Holmes	University of Minnesota	“The Effects of State Policies on the Location of Industry: Evidence from State Borders”
4/3/96	Michael H. Riordan	Boston University	“Anticompetitive Vertical Integration by a Dominant Firm”
4/11/96	Dan McFadden	UC Berkeley	“Analysis of ‘Intercept & Follow’ Surveys”

4/12/96	Roger Myerson	Northwestern University	“Dual Reduction in Normal Form Games”
4/15/96	Howard Chernick	Hunter College and City University of NY	“Fiscal Effects of Block Grants for the Needy: A Review of the Evidence”
4/23/96	Ernst Fehr	University of Zurich	“Does Social Exchange Increase Voluntary Cooperation?”
4/25/96	Robert Eisner	Northwestern University	“A New View of NAIRU”
4/26/96	Ed Prescott	University of Minnesota	“Monopoly as a Barrier to Riches”
4/29/96	Truman Bewley	Yale University	“A Field Study of Wage Rigidity and Unemployment”
5/1/96	Luis Cabral	Universidade Nova de Lisboa	“On the Evolution of Firm Size Distribution: Facts and Theories”
5/3/96	Dee Dechert	University of Houston	“Dynamic Asset Pricing: Computational Methods and Simulations”
5/6/96	Donal O’Neill	Maynooth College	“The Persistence of Poverty in Britain: Evidence from Patterns of Intergenerational Mobility”
5/7/96	Don Fullerton	University of TX-Austin	“Policies for Green Design”
9/10/96	Simon J. Evenett	University of Michigan	“Bilateral Trade Flows: One Prediction of Several Theories Estimated in Nine Thousand and Two Samples”
9/19/96	Nobuhiro Kiyotaki	University of Minnesota	“Business Fixed Investment and the Recent Business Cycle in Japan”
9/20/96	Jeroen Swinkels	Northwestern University	“Information Aggregation in Auctions”
10/4/96	Dan Kovenock	Purdue University	“The Pattern of Exit on Declining Industries”
10/7/96	Audra Bowlus	University of Western Ontario	“A Search Interpretation of Male-Female Wage Differentials”
10/11/96	Bart Lipman	University of Western Ontario and Northwestern University	“Possibility Correspondences Preclude Unawareness”
10/15/96	Christoph Badelt	Vienna University of Economics and Business Administration	“Care Allowances for the Frail Elderly: First Experiences in Germany and Austria”
10/25/96 Moral	Hyung Bae	Dongguk University	“A Signal-Jamming Model of Reported Hazard”
11/6/96	Steve Wiggins	Texas A&M	“Information Cascades and Contractual Incompleteness in Natural Gas Markets”

11/7/96	Peter J. Klenow	University of Chicago	"Quantifying Variety Gains from Trade Liberalization"
11/8/96	Yan Chen	University of Michigan	"Learning and Incentive Compatible Mechanisms for Public Goods"
11/15/96	Matthew Jackson	Northwestern University	"Dynamic Efficiency and Implementation in Markets with Repeated Pairwise Bargaining"
11/18/96	Gary Solon	University of Michigan	"Correlations Between Neighboring Children in Their Socioeconomic Status as Adults"
11/19/96	Robert C. Feenstra	UC-Davis and NBER	"The Exact Measurement of Productivity, Outsourcing and Its Impact on Wages: Estimates of the U.S., 1972-1990"
11/19/96	Michael Hurd	SUNY-Stony Brook and Rand	"The Empirical Validity of the Subjective Probability of Survival in the HRS"
11/20/96	Ken Judd	Hoover Institution	"The Optimal Taxation of Physical and Human Capital"
11/20/96	Madjid Amir	University of Karlsruhe	"Learning and Equilibrium Selection in Games"
11/22/96	Gary King	Harvard University	Title To Be Announced
11/25/96	Kevin Hallock	University of Illinois	"Layoffs, Top Executive Pay, and Firm Performance"
11/27/96	Andre de Palma	University of Cergy-Pontoise	"Firm Pricing When Consumers Have Imperfect Discrimination Power"
12/02/96	Dale Belman	UW-Milwaukee	"Public Sector Earnings Comparability: The Case of the Postal Service"
12/03/96	Jon Haveman and David Hummels	Purdue University University of Chicago	"Gravity, What is it Good For? Theory and Evidence on Bilateral Trade"
12/03/96	John James and Mark Thomas	University of Virginia	"Have Working-Class Americans Always Been Low-Savers? The Distributions of Saving and Wealth Before the Advent of Social Insurance in the United States"
12/09/96	Ken Hendricks	University of British Columbia	"Joint Bidding and Entry in Federal Offshore Oil and Gas Lease Auctions"
12/10/96	Samuel Kortum	Boston University and NBER	"Technology and Bilateral Trade"
12/11/96	Alessandra Casella	Columbia University	"The Role of Market Size in the Formation of Jurisdictions"
12/12/96	Stephen Cecchetti	Ohio State University	"Are Asset Returns Too Good to be True?"
12/13/96	Larry Blume	Cornell University	"Optimal and Natural Selection in Markets"
02/25/97	Gordon H. Hansen	University of Texas and NBER	"Illegal Immigration, Border Enforcement,

			and Relative Wages: Evidence from Apprehensions at the U.S.-Mexico Border"
02/28/97	George Mailath	University of Pennsylvania	"Enforcement of Social Norms"
03/11/97	Dani Rodrik	Kennedy School/Harvard Univ.	"Trade, Social Insurance, and the Limits to Globalization"
03/13/97	Guido Imbens	Harvard University	"Combining Panels with Attrition and Refreshment Samples"
03/17/97	Jonathan Parker	University of Michigan	"Consumption Over the Life Cycle"
03/18/97	James Levinsohn	University of Michigan	"Voluntary Export Restraints on Automobiles: Evaluating a Strategic Trade Policy"
03/18/97	Cecilia Elena Rouse	Princeton University and NBER	"Private School Vouchers and Student Achievement: An Evaluation of the Milwaukee Parental Choice Program"
03/19/97	Bart Lipman	University of Western Ontario and Carnegie Mellon University	"An Expected Utility Representation of Unforeseen Contingencies"
03/20/97	V.V. Chari	University of Minnesota	"Sticky Price Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?"
04/03/97	Marty Eichenbaum	Northwestern University	"Modelling Money"
04/07/97	Gary Hansen	University of California Los Angeles	"Unanticipated Money Growth and the Business Cycle"
04/14/97	Chinhui Juhn	University of Houston	"Labor Market Dropouts, Selection Bias, and Trends in Black and White Wages"
04/18/97	Boyan Jovanovic	New York University	"Obsolescence of Capital"
04/18/97	Jacques Robert	University of Montreal	"Implementing the Optimal Auction"
04/22/97	Satya P. Das	Indian Statistical Institute	"Trade and Relative Wages: The Role of Supervisory Function by Skilled Workers"
04/23/97	Judy Chevalier	University of Chicago	"Mutual Fund Managers"
04/24/97	Ellen McGrattan	Minneapolis FED	"The Poverty of Nations"
04/25/97	Matthew Rabin	University of California Berkeley	"Doing it Now or Later"
04/29/97	Edward M. Gramlich	University of Michigan School of Public Policy	"The Public Policy Analyst as Professional: How to Foster Recognition of Public Policy Analysis as a Profession"
04/30/97	Martin Pesendorfer	Yale University	"Retail Sales: A Study of Pricing Behavior in Supermarkets"
04/30/97	Stephen Coate	University of Pennsylvania	"Political Determination of Policies and the

		The Wharton School	Case for Government Intervention"
05/01/97	Luis Cabral	London Business School	"Entry Mistakes Happen"
05/05/97	Garey Ramey	University of California San Diego	"Contractual Fragility, Job Destruction and Business Cycles"
05/06/97	David Figlio	University of Oregon	"School Choice and Student Performance: Are Private Schools Really Better?"
05/07/97	Dirk Bergeman	Yale University	"Market Diffusion with Two-Sided Learning"
05/09/97	Yuichi Kitamura	UW-Madison and the University of Minnesota	"GNP-Optimal Tests for Moment Restrictions"
05/12/97	Sherwin Rosen	University of Chicago	"The Engineering Labor Market"

*No workshops are held during the summer months.

Program for NSF/CEME Conference on Microeconometrics

Department of Economics
University of Wisconsin
Room 8415/17
1180 Observatory Drive
Madison, Wisconsin

June 25- 27, 1995

(Organized by Charles Manski and John Rust)

Sunday June 25, 1995

11:30-12:45 *Latent Separability: Grouping Goods without Weak Separability* by Richard Blundell, University College London and Jean-Marc Robin, INRA/CREST/INSEE

12:45-1:00 Break

1:00-2:15 *Unknown Heterogeneity, the EC-EM Algorithm, and Large T Approximation* by Mahmoud El-Gamal and David Grether. California Institute of Technology

2:15-2:30 Break

2:30-3:45 *Quantile Regression Model with Unknown Censoring Point* by Moshe Buchinsky, Yale University and Jinyong Hahn, University of Pennsylvania

3:45-4:00 Break

4:00-5:15 *Maximum Likelihood Estimation and Specification Test of the Proportional Hazard Model Using Grouped Durations* by Keunkwan Ryu, Seoul National University and UCLA

5:15-6:15 Free time

6:30-9:30 Dinner at Chuck Manski's house, 2135 Chamberlain Av. (Within walking distance from the Ivy Inn).

Monday, June 26, 1995

8:30-8:45 Coffee and donuts

8:45-10:00 *Hierarchical Modeling of Consumer Heterogeneity: An Application to Target Marketing* by Peter Rossi and Robert McCulloch, Graduate School of Business, University of Chicago

10:00-10:15 Break

10:15-11:30 *Moment Conditions in Dynamic Decision Models with Corner Solutions: Estimating a Model of Price and Inventory Decisions* by Victor Aguirregabiria. University of Western Ontario

11:30-1:00 Lunch

1:00-2:15 *Health Survey Design: A Principal Investigator - Agent Approach* by Tomas Philipson, University of Chicago

2:15-2:30 Break

2:30-3:45 *Deriving an Estimate of the Optimal Reserve Price: An Application to British Columbian Timber Sales* by Harry Paarsch, University of Western Ontario

3:45-4:00 Break

4:00-5:15 *Estimation of Nonparametric Functions in Simultaneous Equations Models with an Application to Consumer Demand* by Donald Brown, Yale University and Rosa Matzkin, Northwestern University

Tuesday June 27

8:30-8:45 Coffee and donuts

8:45 -10:00 *Non-Parametric Characterization of Selection Bias Using Experimental Data: A Study of Adults Males in JTPA* by James Heckman, University of Chicago and Hide Ichimura, University of Minnesota, Jeff Smith, University of Western Ontario and Petra Todd

10:00-10:15 Break

10:15-11:30 *Semiparametric Applications of Bayesian Inference* by Gary Chamberlain and Guido Imbens, Harvard University

11:30-1:00 Lunch

1:00-2:15 *Nonparametric Adaptive Learning with Feedback* by Xiaohong Chen, University of Chicago and Halbert White, University of California - San Diego

2:15-2:30 Break

2:30-3:45 *Information-Theoretic Approaches to Inference in Moment Condition Models* by Guido Imbens and Phillip Johnson, Harvard University, and Richard Spady, Oxford University

3:45-4:00 Break

4:00-5:15 *Bargaining Over Governments in a Stochastic Environment* by Antonio Merlo, University of Minnesota

Conference on Meritocracy and Inequality

Convened by **Kenneth Arrow, Samuel Bowles and Steven Durlauf**

Friedrick Center, University of Wisconsin at Madison

Schedule

Friday, December 1, 1995

- 9:30 Welcome and Introduction
- 10:00 Amartya Sen, Department of Economics, Harvard University: "Justice in Meritocratic Environments," Discussant: Michael Walzer, Institute for Advanced Study
- 11:00 Coffee Break
- 11:30 Samuel Bowles and Herbert Gintis, Department of Economics, University of Massachusetts at Amherst: "Agency Theory and Inequality," Discussant: Charles Manski, Department of Economics, University of Wisconsin
- 12:30 Lunch
- 1:30 John Roemer, Department of Economics, University of California at Davis: "Equality of Opportunity and Affirmative Action," Discussant: Steven Durlauf, Department of Economics, University of Wisconsin
- 2:30 Coffee Break
- 3:30 Glenn Loury, Department of Economics, Boston University: "Race and Inequality," Discussant: Christopher Jencks, Department of Sociology, Northwestern University
- 4:30 Arthur Goldberger, Department of Economics, University of Wisconsin: "Ability and Inequality," Discussant: Sanders Korenman, Humphrey Institute of Public Affairs, University of Minnesota
- 6:30 Dinner at The Second Story Restaurant, 508 State Street, Madison WI, 256-2434

Saturday, December 2, 1995

- 9:00 Robert Hauser, Department of Sociology, University of Wisconsin: "Social Mobility," Discussant: Elaine McCrate, Department of Economics, University of Vermont, (visiting, Department of Women's Studies, University of Michigan)

- 10:00 James Flynn, Department of Political Studies, University of Otago, Dunedin, New Zealand: "Meritocracy: Partially Falsified and Challenged," Discussant: Robert Haveman, Department of Economics, University of Wisconsin
- 11:00 Coffee Break
- 11:30 Cecilia Rouse and Orley Ashenfelter, Department of Economics, Princeton University: "Schooling, Intelligence, and Income in America: Cracks in the Bell Curve," Discussant: Barbara Wolfe, Department of Economics, University of Wisconsin
- 12:30 Lunch
- 1:30 James Heckman, Department of Economics, University of Chicago: "Testing," Discussant: Robert Moffitt, Department of Economics, Johns Hopkins University
- 2:30 Marcus Feldman, Department of Biology, Stanford University: "Inequality, Culture, and Biology," Discussant: Herbert Gintis, Department of Economics, University of Massachusetts at Amherst
- 3:30 Coffee Break
- 4:00 Robert Mare, Department of Sociology, University of Wisconsin: "Demography and the Evolution of Inequality," Discussant: Christopher Winship, Department of Sociology, Harvard University
- 6:30 Dinner at the home of Steven Durlauf and Susan Nelson, 5799 Verde View Road, Fitchburg WI, 276-8256

Sunday, December 3, 1995

- 9:00 Shelly Lundberg and Richard Startz, Department of Economics, University of Washington: "Inequality and Race: Models and Policy," Discussant: Steven N. Durlauf, Department of Economics, University of Wisconsin
- 10:00 Coffee Break
- 10:30 Roland Benabou, Department of Economics, New York University: "Efficiency and Meritocracy," Discussant: Suzanne Cooper, Kennedy School of Government, Harvard University
- 11:30 William Brock and Steven Durlauf, Department of Economics, University of Wisconsin: "Self-Similar Income Distributions," Discussant: John Kennan, Department of Economics, University of Wisconsin
- 12:30 Adjournment and Lunch

PROGRAM FOR MIDWEST ECONOMETRICS GROUP MEETING
Friday-Saturday November 1 & 2, 1996

UNIVERSITY OF WISCONSIN - MADISON
DEPARTMENT OF ECONOMICS / SSRI
ROOM 8417 (PARALLEL SESSION ROOM 6104)
1180 OBSERVATORY DRIVE
MADISON WI 53706

(Organized by Charles F. Manski and Arthur S. Goldberger)

Friday, November 1

1:00 - 1:30 WELCOME & INTRODUCTION Room 8417

1:30 - 3:00 ECONOMETRIC THEORY I Room 8417(Chair: Hyungtaik Ahn)

JOEL HOROWITZ (Iowa), "Bootstrap methods for median regression models"

ROGER KOENKER (Illinois) & Stephen Portnoy (Illinois), "The Gaussian hare and the Laplacean tortoise"

GAUTAM TRIPATHI (Northwestern), "Semiparametric efficiency bounds under shape restrictions"

3:00 - 3:30 BREAK Room 8417

3:30 - 5.30 PARALLEL SESSIONS:

A. MACROECONOMICS Room 8417(Chair: Ken West)

Georgios Karras (Illinois-Chicago) & HOUSTON H. STOKES (Illinois-Chicago), "Why are the effects of money-supply shocks asymmetric? Evidence from prices, consumption, and investment"

Nathan S. Balke (SMU) & MARK E. WOHR (Nebraska-Omaha), "Nonlinear dynamics and covered interest rate parity"

DAVID M. MANDY (Missouri) & Carlos Martins-Filho (Oregon State), "Optimal IV estimation of systems with stochastic regressors and VAR disturbances with applications to dynamic systems"

I. N. LOBATO (Iowa) & N. E. Savin (Iowa), "Real and spurious long-memory properties of stock market data"

B. MICROECONOMICS

Room 6104(Chair: Chuck Manski)

DONNA K. GINTHER (SMU) & K. Patrick Lampani (FRB), "Industry specific human capital and wage inequality"

Stephen G. Donald (Boston U.), David A. Green (British Columbia), & HARRY J. PAARSCH (Iowa), "Differences in earnings and wage distributions between Canada and the United States: an application of a semi-parametric estimator of distribution functions with covariates"

GEORGE M. DELTAS (Illinois), "Small sample structural econometric analysis of bidding for heterogeneous contracts: a two-stage procedure"

LAWRENCE C. MARSH (Notre Dame), "An econometric method of determining market efficiency when buyers and sellers have reservation prices"

FRIDAY EVENING DINNER AND TALK, Wisconsin Center, 702 Langdon Street, Campus

SATURDAY, NOVEMBER 2

8:30 - 10:00 INDEPENDENCE

Room 8417(Chair: Don Hester)

DOUGLAS J. MILLER (Iowa State), "Recovering joint densities from marginal information"

Bryan W. Brown (Rice) & XING MING (Indiana), "Semi- and nonparametric tests of independence of random variables"

ANIL K. BERA (Illinois) & Sang-Whan Kim (Illinois), "Testing the constancy of correlation coefficient"

10:00 - 10:30 BREAK

Room 8417

10:30 - 12:00 PARALLEL SESSIONS:

A. TIME SERIES

Room 6104

(Chair: Buz Brock)

YIUCHI KITAMURA (Minnesota), "Empirical likelihood methods with weakly dependent processes"

CARMELA QUINTOS (Washington U.), "Stability tests in error correction models"

KASING MAN (Georgetown) & George C. Tiao (Chicago), "Limiting structures of the aggregates of fractionally differenced processes"

B. COUNT DATA

Room 8417(Chair: Jim Walker)

PARTHA DEB (Indiana-Purdue at Indianapolis), "The demand for medical care by the elderly: a finite mixture approach"

SHIFERAW GURMU (Virginia), "Semiparametric estimation of hurdle regression models with an application to medicaid utilization"

A. COLIN CAMERON (UC-Davis) & Per Johansson (Umea), "Count data regression using series expansions: with applications"

12:00 - 1:30 LUNCH

Room 8417

1:30 - 3:00 PANEL DATA

Room 8417(Chair: Mahmoud El-Gamal)

Bo E. Honore' (Princeton) & EKATERINI KYRIAZIDOU (Chicago), "Panel data discrete choice models with lagged dependent variables"

Anil K. Bera (Illinois), WALTER SOSA-ESCUADERO (Illinois), & Mann Yoon (Illinois), "Tests for the error component model in the presence of local misspecification"

CHRISTOPHER R. TABER (Northwestern), "Semiparametric identification and heterogeneity in dynamic programming discrete choice models"

3:00 - 3:30 BREAK

Room 8417

3:30 - 4:30 ECONOMETRIC THEORY II

Room 8417(Chair: Art Goldberger)

XIAOHONG CHEN (Chicago) and Xiaotong Shen (Ohio State), "Asymptotic properties of sieve extremum estimates for weakly dependent data with applications"

Siddharta Chib (Washington U.), EDWARD GREENBERG (Washington U.), & Rainer Winkelmann (Canterbury NZ), "Posterior simulation and Bayes factors in panel count data models"

CLOSE OF PROGRAM

THE 1997 NORTH AMERICAN WINTER MEETING OF THE ECONOMETRIC SOCIETY

New Orleans , Louisiana
January 4th - January 6th, 1997

Professor John Rust served as the Program Committee Chair for this meeting. He moved from Wisconsin in July of 1996 after accepting an offer at Yale. One of the committee members, Professor Rody Manuelli, Director of SSRI, generously allowed Professor Rust to use SSRI secretarial and student hourly resources to provide logistical support in the way of entering the submission data into the database.

For the complete meeting agenda and report of the Program Chair visit the Econometric Society web page at the URL: <http://www.econometricsociety.org/em97/index.html> .

SSRI EXPENDITURES FOR FISCAL YEARS 1995, 1996 and 1997

EXPENDITURES	Fiscal Year 1995 7/1/94 to 6/30/95	Fiscal Year 1996 7/1/95 to 6/30/96	Fiscal Year 1997 7/1/96 to 6/30/97
Conference	\$ 2,146	\$ 1,935	\$ 813
Copier	5,567	8,393	3,182
Equipment (not capitalized)	-	199	516
External Services	125	70	114
Freight (FedEx, UPS, etc.)	376	521	888
Internal Services	27	34	55
Postage	2,022	7,828	8,420
Printing Services	757	526	478
Salary (staff, student, LTE)	26,429	23,842	27,363
Software	30	508	301
SSCC (Computer Co-Op)	-	35,000	35,000
Supplies	3,350	3,100	4,245
Telephone & Fax	973	746	608
TOTAL	\$ 41,802	\$ 82,702	\$ 81,983