ABSTRACTS OF WORKING PAPERS IN ECONOMICS

This section contains abstracts and complete bibliographic information for current working papers, listed alphabetically by primary author. Brief entries appear for secondary authors, cross-referenced to the primary author. For more recent as well as historical information, consult the AWPE DATABASE, available on magnetic media from Cambridge University Press. (Call 212-924-3900)

Abouchar, Alan

PD January 1990. **TI** From Marshall's Cost Analysis to Modern Orthodoxy: Throwing Out the Baby and Keeping the Bath. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9003; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 28. **PR** no charge. **JE** 022, 031. **KW** Price Theory. Marshall. Cost Analysis.

AB Marshall's cost analysis has often been criticized for ambiguity and diffuseness and it is generally believed today that the Modern Microeconomic Cost Framework (MMCF) represents a substantial advance over his efforts. But the MMCF builds on the concepts of long-run and short-run and so deals with only one very limited set of questions, "drawing-board" alternatives when technological alternatives (including different plant sizes) are known. It handles badly the most fundamental and natural economic issues, such as those which deal with chronological time: the distinction between time-incremental fixed cost and capital investment in fixed factors (buildings and machinery); time related consumption of capital; output related consumption of capital; and provision for capital which is non-consumable with respect either to time or to output per unit time ("isochronic" costs)..

PD February 1990. **TI** Perestroika and Soviet Price Restructuring. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9006; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 22. **PR** no charge. **JE** 124, 027, 053. **KW** Perestroika. Prices. Price Theory. Soviet Union. Economic System.

AB Perestroika has been expected by many western observers to bring with it new ideas and approaches to Soviet price setting, mainly increased reliance on western price theory and market oriented pricing procedures. However, a review of the essential characteristics of western price theory (presented more fully in other critiques), suggests that western theory is applicable at best to a highly simplified institutional setting incapable of representing descriptively or normatively any real world economy, capitalist or otherwise, and the numerous pricing imperfections which do exist in fact suggest that the western economy is far from appropriate as the ideal model.

Abowd, John M.

PD October 1989. **TI** Does Performance-Based Managerial Compensation Affect Subsequent Corporate Performance?. **AA** Cornell University. **SR** National Bureau of Economic Research Working Paper: 3149; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** $2.00. **JE** 824, 512, 514. **KW** Compensation. Wages. Fringe Benefits. Corporations.

AB An effective performance based compensation system must increase the probability of high performance corporate outcomes in order to justify the incremental expense relative to a straight salary system. A positive relation between current performance and current compensation indicates that the pay system is performance-based in practice, if not explicitly. This study considers whether increasing the sensitivity of current compensation to current performance is associated with higher performance in the future.

PD October 1989. **TI** The Effects of Human Resource Management Decisions on Shareholder Value. **AU** Abowd, John M.; Milkovich, George T.; Hannon, John M. **AA** Cornell University. **SR** National Bureau of Economic Research Working Paper: 3148; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $2.00. **JE** 511, 514, 313. **KW** Stock Market. Decision Theory. Shareholders.

AB We examine the effects of selected human resource management decisions on the abnormal change in total shareholder return. Announcements of human resource decisions are classified into five types--general HR system announcements, compensation and benefits, staffing, shutdowns and relocations, and miscellaneous. Using an event study methodology we investigate whether any of these HR decisions had a discernible effect on either the level or variation of abnormal total shareholder return.

Abraham, Katharine G.

PD November 1989. **TI** Job Security and Work Force Adjustment: How Different are U.S. and Japanese Practices?. **AU** Abraham, Katharine G.; Houseman, Susan N. **AA** Abraham: National Bureau of Economic Research and University of Maryland, College Park. Houseman: W. E. Upjohn Institute for Employment Research. **SR** National Bureau of Economic Research Working Paper: 3155; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 631, 824, 131. **KW** Manufacturing. Employment. Labor Input. Production.

AB This paper compares employment and hours adjustment in Japanese and U.S. manufacturing. In contrast to some previous work, we find that adjustment of total labor input to demand changes is significantly greater in the United States than in Japan; adjustment of employment is significantly greater in the United States, while that of average hours is about the same in the two countries. Although workers in Japan enjoy greater employment stability than do U.S. workers, we find considerable variability in the adjustment patterns across groups within each country. In the United States, most of the adjustment is borne by production workers. In Japan, female workers, in particular, bear a disproportionate share of adjustment.

Acton, Jan Paul

PD 1989. **TI** Understanding Superfund: A Progress Report. **AA** Rand Corporation. **SR** Rand Report: R-3838; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 65. **PR** not available. **JE** 722, 613, 322. **KW** Hazardous Wastes. Pollution.

AB The Superfund program, established by Congress in 1980 and eauthorized in 1986, is intended to handle emergencies arising rom the release of hazardous wastes, to provide long-term leanup for a limited number of sites, and to encourage more esponsible disposal of hazardous wastes in the future. This eport provides an overview of the Superfund program, its legal asis, and its sources of funds; presents a concise description f funds; presents a concise description of incentives and the ajor indicators of program effect based on public data available rom the Environmental Protection Agency and other selected ources; presents a short interpretation of some of the most nteresting or puzzling findings; and outlines statistics and ttempts to capture costs and activities for each of the major roups participating in the Superfund process.

PD February 1990. **TI** Telephone Demand Over the Atlantic: Evidence from Country-Pair Data. **AU** Acton, Jan Paul; Vogelsang, Ingo. **AA** Rand Corporation. **SR** Rand Report: R-3715; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 48. **PR** not available. **JE** 635, 613, 442. **KW** Telecommunications. Communication. Telephones.

AB This report examines the determinants of international calling, both theoretically and empirically. It centers particularly on the role of prices to and from the United States and explains the volume of calling across the North Atlantic market. This market is important for economic and policy reasons, since the governments play a role in setting prices and terms of access; the net impact of calling affects the balance of payments between country pairs. The study is based on recent data on call use, along with detailed information about pricing structures. The period of analysis was one of rapid expansion in calling, important price changes, and deregulation of services in some countries. Consequently, these recent price estimates may be particularly relevant for contemporary policy deliberations.

Adelman, Irma

PD January 1990. **TI** Adjustment Under Different Trade Strategies: A Mean-Variance Analysis with a CGE Model of the Yugoslav Economy. **AU** Adelman, Irma; Berck, Peter; Labus, Miroljub; Vujovic, Dusan. **AA** Adelman and Berck: University of California at Berkeley. Labus and Vujovic: University of Belgrade. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 523; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 32. **PR** $6.40. **JE** 422, 411, 121, 112. **KW** Trade Strategies. Commercial Policy. Economic Development. Developing Countries. International Trade.

AB A major focus of Bela Balassa's research since the mid-seventies has been on the comparative performance of economies pursuing different trade strategies under external shocks. Using data from different economies over various periods of time, he has demonstrated that, on the average, economies that have engaged in export oriented growth have adjusted better to the two oil shocks than economies that have engaged in import substitution policies. He has therefore argued that the proper policy response by developing countries to the more variable and slower growing international environment of the 1970s and 1980s is to shift to open development strategies and export their way out of the debt crisis. In this paper, we investigate the transition from import substitution to an export-oriented strategy in the context of a single economy, Yugoslavia.

PD April 1990. **TI** Measuring Income Mobility with Census Data. **AU** Adelman, Irma; Morley, Samuel; Schenzler, Christoph; Warning, Matthew. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 534; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 41. **PR** $8.20. **JE** 226, 921. **KW** Mobility. Income Distribution. Economic Development. Growth Model.

AB In recent years an increasing amount of attention has been focused on what happens to the distribution of income and to the incomes of key groups such as the poor during the development process. Our knowledge about the links between growth and distribution are based on comparisons of snapshots of income distributions at different points in time. In this paper we will describe a method by which such inferences can be made using successive cross section household censuses. The method permits us to estimate mobility over time between different parts of the income pyramid, as well as to determine the influence of economic growth on upward mobility.

Aghion, Phillippe

PD January 1990. **TI** A Model of Growth Through Creative Destruction. **AU** Aghion, Phillippe; Howitt, Peter. **AA** Aghion: Massachusetts Institute of Technology. Howitt: University of Western Ontario. **SR** National Bureau of Economic Research Working Paper: 3223; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 48. **PR** $2.00. **JE** 111, 621, 023. **KW** Endogenous Growth. Technology. R&D. Innovations. Growth Theory.

AB This paper develops a model based on Schumpeter's process of creative destruction. It departs from existing models of endogenous growth in emphasizing the obsolescence of old technologies induced by the accumulation of knowledge and the resulting process or industrial innovations. This has both positive and normative implications for growth. In positive terms, the prospect of a high level of research in the future can deter research today by threatening the fruits of that research with rapid obsolescence. In normative terms, obsolescence creates a negative externality from innovations, and hence a tendency for laissez-faire economies to generate too many innovations, i.e too much growth. This "business-stealing" effect is partly compensated by the fact that innovations tend to be too small under laissez-faire.

Ahmad, Ziauddin

PD September 1989. **TI** Public Finance in Islam. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/68; International Monetary Fund, Washington, DC 20431. **PG** 53. **PR** no

charge. **JE** 321, 921, 322. **KW** Fiscal Policy. Public Finance. Income Distribution. Government Spending.
AB The paper analyzes the bearing of Islamic teachings on the conduct of fiscal policy. It is shown that Islamic teachings do not prescribe any rigid system of public finance. The major emphasis is on the state's responsibility to assure at least a basic minimum standard of living for all citizens. The paper deals with issues related to evolution of fiscal policies best suited to achieve this and other Islamic socio-economic objectives in the specific framework of Islamic teachings. The implications of such a system for growth, monetary stability, resource allocation, and pattern of income distribution are also examined.

Ahuja, Ravindrak

PD December 1989. **TI** Some Recent Advances in Network Flows. **AU** Ahuja, Ravindrak; Magnanti, Thomas L.; Orlin, James B. **AA** Ahuja: Indian Institute of Technology. Magnanti: Massachusetts Institute of Technology and Universite Catholique de Louvain. Orlin: Massachusetts Institute of Technology. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8936; Universite Catholique de Louvain, Voie de Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 66. **PR** not available. **JE** 213, 214. **KW** Network. Flow Problems. Algorithms.
AB The literature on network flow problems is extensive, and over the past 40 years researchers have made continuous improvements to algorithms for solving several classes of problems. However, the surge of activity on the algorithmic aspects of network flow problems over the past few years has been particularly striking. Several techniques have proven to be very successful in permitting researchers to make these recent contributions: (i) scaling of the problem data; (ii) improved analysis of algorithms, especially amortized average case performance and the use of potential functions; and (iii) enhanced data structures. In this survey, we illustrate some of these techniques and their usefulness in developing faster network flow algorithms. Our discussion focuses on the design of faster algorithms from the worst case perspective and we limit our discussion to the following fundamental problems: the shortest path problem, the maximum flow problem, and the minimum cost flow problem.

Alesina, Alberto

PD October 1989. **TI** Public Confidence and Debt Management: A Model and a Case Study of Italy. **AU** Alesina, Alberto; Prati, Alessandro; Tabellini, Guido. **AA** Alesina: Harvard University, CEPR and NBER. Prati: Bank of Italy and University of California, Los Angeles. Tabellini: CEPR, NBER and University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 3135; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 322, 311. **KW** Debt Crisis. Debtor Nation. Public Debt. Government Debt.
AB High debt countries may face the risk of self-fulfilling debt crises. If the public expects that in the future the government will be unable to roll over the maturing debt, they may refuse to buy debt today and choose to hold foreign assets. This lack of confidence may then be self-fulfilling. This paper argues that under certain conditions, the occurrence of a confidence crisis is more likely if the average maturity of the debt is short. On the contrary, a long and evenly distributed maturity structure may reduce such a risk. We consider the recent Italian experience from this perspective. In particular we ask whether recent developments in the market for government debt show signs of unstable public confidence, and of a risk premium.

Alexander, Lewis S.

PD April 1990. **TI** The Global Economic Implications of German Unification. **AU** Alexander, Lewis S.; Gagnon, Joseph E. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 379; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 32. **PR** no charge. **JE** 423, 122, 431, 112, 111. **KW** Economic Integration. Current Account. Economic Development. Growth Model. Investment.
AB This paper uses a multi-country econometric model to assess the global impact of rapid economic integration of the two Germanys. The fundamental assumptions are that East Germany brings relatively more labor than capital to the union than does West Germany, and that the economic structure of a united Germany is essentially identical to that of pre-unification West Germany. In all of the simulations economic union leads to an acceleration of growth and investment in Germany, a real appreciation of the Deutschemark, and a reduction in Germany's current account surplus. The impact of German economic unification on other countries is relatively modest, as the additional investment demand is not large relative to global investment and a disproportionate share of that investment demand is met by domestic German savings.

Allen, Polly Reynolds

PD November 1989. **TI** The Dynamics of the Real Exchange Rate, Foreign Debt and Capital Intensity. **AU** Allen, Polly Reynolds; Stein, Jerome L. **AA** Allen: University of Connecticut. Stein: Brown University. **SR** Brown University Department of Economics Working Paper: 89-32; Department of Economics, Brown University, Providence, RI 02912. **PG** 22. **PR** no charge. **JE** 431, 441, 111. **KW** Exchange Rates. Balance of Payments. Capital Flows. Debt.
AB We examine the medium to long term response of the fundamental equilibrium real exchange rate to finance social consumption or social investment. Our conclusion is that how an increase in the capital inflow affects the trajectory of the real exchange rate depends upon the reason for borrowing from foreigners. A debt financed increase in social consumption, (for example a rise in the structural budget deficit), will initially appreciate the real exchange rate but the cumulative effect is to depreciate it below its initial level. In contrast if the borrowing finances a rise in the marginal efficiency of investment, the capital stock increases more than its debt to foreigners.

PD March 1990. **TI** Capital Market Integration. **AU** Allen, Polly Reynolds; Stein, Jerome L. **AA** Allen: University of Connecticut. Stein: Brown University. **SR** Brown University Department of Economics Working Paper: 90-11; Department of Economics, Brown University, Providence, RI 02912. **PG** 20. **PR** no charge. **JE** 441, 423, 411. **KW** Capital Mobility. Economic Integration. Capital Flows. Capital Market. Growth Model.
AB Liberalization in the EC in 1992 should produce perfect capital market integration. To show the short and long run

effects of perfectly integrated capital markets, we develop a tractable growth model where investment flows to earn the highest rate of return. The economy first goes through potential, and then actual, integration, before and after rates of return are equalized. We show relative changes of capital intensities, outputs per capita, rates of return and the real exchange rate during both states of integration.

Altonji, Joseph G.

PD September 1989. **TI** The Effects of Immigration on the Labor Market Outcomes of Natives. **AU** Altonji, Joseph G.; Card, David. **AA** Altonji: Northwestern University. Card: Princeton University. **SR** National Bureau of Economic Research Working Paper: 3123; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 823, 851, 824. **KW** Labor Market. Labor Mobility. Immigration. Human Capital.

AB This paper examines the effects of immigration on the labor market outcomes of less-skilled natives. Working from a simple model of a local labor market, we show that the effects of immigration can be estimated from the correlations between the fraction of immigrants in a city and the employment and wage outcomes of natives. The size of the effects depend on the fraction and skill composition of the immigrants. We go on to compute these correlations using city-specific outcomes for individuals in 120 major SMSA's in the 1970 and 1980 Censuses. We also use the relative industry distributions of immigrants and natives to provide a direct assessment of the degree of labor market competition between them.

Amihud, Yakov

PD December 1989. **TI** Corporate Control and the Choice of Investment Financing: The Case of Corporate Acquisitions. **AU** Amihud, Yakov; Lev, Baruch; Travlos, Nickolaos G. **AA** Amihud: New York University and Tel Aviv University. Lev: University of California, Berkeley. Travlos: Boston College. **SR** New York University Salomon Brothers Center Working Paper: 545; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 15. **PR** not available. **JE** 522, 511, 521. **KW** Debt. Corporations. Business Finance. Investment.

AB We test the proposition that corporate control considerations motivate the means of investment financing-cash (and debt) or stock. Corporate insiders who value control will prefer financing investments by cash or debt rather than by issuing new stock which dilute their holdings and increase the risk of losing control. Our empirical results support this hypothesis: In corporate acquisitions, the larger the managerial ownership fraction of the acquiring firm the more likely the use of cash financing. Also, the previously observed negative bidders' abnormal returns associated with stock financing are mainly in acquisitions made by firms with low managerial ownership.

Anderson, Patricia M.

PD March 1990. **TI** The Effect of a Reemployment Bonus with the Possibility of Recall: Experimental Evidence from New Jersey. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 263; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 33. **PR** $1.50. **JE** 822, 824, 821. **KW** Unemployment. Unemployment Insurance. Reemployment Bonus. Search Model. Employment.

AB This paper analyzes the results of the New Jersey Unemployment Insurance Reemployment Demonstration Project (NJUIRDP) and presents a framework for understanding the effects of the reemployment bonus and Job Search Assistance (JSA) aspects of the program. A simple search model which allows the possibility of recall leads to predictions about the time pattern of the effects of a bonus offer on a new job finding. The experimental nature of the NJUIRDP allows the effect of the bonus to be isolated, and evidence is found for a positive effect early in the bonus period. This is consistent with the model. Evidence is also found that initial expectation of recall has a negative effect on the new job finding rate, but that this effect disappears over time.

Andrews, Donald W. K.

PD March 1990. **TI** An Improved Heteroskedasticity and Autocorrelation Consistent Covariance Matrix Estimator. **AU** Andrews, Donald W. K.; Monahan, J. Christopher. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 942; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 35. **PR** no charge. **JE** 211, 132. **KW** Asymptotic Theory. Covariance Matrix. Heteroskedasticity. Kernel Estimator. Nonparametric Estimator. Vector Autoregression.

AB This paper considers a new class of heteroskedasticity and autocorrelation consistent (HAC) covariance matrix estimators. The estimators considered are prewhitened kernel estimators with vector autoregressions employed in the prewhitening stage. The paper establishes consistency, rate of convergence, and asymptotic truncated mean squared error (MSE) results for the estimators when a fixed or automatic bandwidth procedure is employed. Conditions are obtained under which prewhitening improves asymptotic truncated MSE. Monte Carlo results show that prewhitening is very effective in reducing bias, improving confidence interval coverage probabilities, and reducing over-rejection of t-statistics constructed using kernel-HAC estimators. On the other hand, prewhitening is found to inflate variance and MSE of the kernel estimators. Since confidence interval coverage probabilities and over-rejection of t-statistics are usually of primary concern, prewhitened kernel estimators provide a significant improvement over the standard non-prewhitened kernel estimators.

PD April 1990. **TI** Tests for Parameter Instability and Structural Change with Unknown Change Point. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 943; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 78. **PR** no charge. **JE** 211. **KW** Asymptotic Theory. Parametric Models. Multiplier Tests. Structural Change.

AB This paper considers tests of parameter instability and structural change with unknown change point. The results apply to a wide class of parametric models including models that satisfy maximum likelihood type regularity conditions and models that are suitable for estimation by generalized method of moments procedures. The paper considers likelihood ratio and likelihood ratio like tests, as well as asymptotically equivalent Wald and Lagrange multiplier tests. Each test implicitly uses an estimate of change point. Tests of both "pure" and "partial" structural change are discussed.

TI Further Evidence on the Great Crash, the Oil Price Shock, and the Unit Root Hypothesis. **AU** Zivot, Eric; Andrews, Donald W. K.

Anstreicher, Kurt M.

PD December 1989. **TI** A Combined Phase I-Phase II Scaled Potential Algorithm for Linear Programming. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8939; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 14. **PR** not available. **JE** 213, 214. **KW** Linear Programming. Algorithm.

AB We develop an extension of the "affinely scaled potential function" algorithm which simultaneously obtains feasibility and optimality in a standard form linear program, without the addition of any "M" terms. The method, and its lower-bounding procedure, are particularly simple compared with previous interior algorithms not requiring feasibility.

PD December 1989. **TI** On the Performance of Karmarkar's Algorithm Over a Sequence of Iterations. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8934; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 11. **PR** not available. **JE** 213, 222, 214. **KW** Linear Programming. Computer Algorithm.

AB We consider Karmarkar's projective algorithm for linear programming with real arithmetic and exact linesearch of the potential function. We show that for every n greater than or equal to 3 there is a linear program, with n variables, such that the algorithm obtains a potential reduction of about 1.3 on each iteration. For the same problems the algorithm requires O(ln(n)) iterations to reduce the objective gap by a given factor. We thus prove that in the worst case the convergence of Karmarkar's algorithm, with exact linesearch, cannot be independent of n, and moreover potential reduction may be a poor indicator of algorithm performance.

Atkeson, Andrew

TI A Specification Test for a Model of Engel's Law and Saving. **AU** Ogaki, Masao; Atkeson, Andrew.

Auerbach, Alan J.

PD October 1989. **TI** Demographics, Fiscal Policy, and U.S. Saving in the 1980s and Beyond. **AU** Auerbach, Alan J.; Kotlikoff, Laurence J. **AA** Auerbach: National Bureau of Economic Research and University of Pennsylvania. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3150; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 43. **PR** $2.00. **JE** 841, 221, 321, 131. **KW** Savings. Fiscal Policy. Economic Fluctuations. Demographics. Population.

AB This paper focuses on U.S. saving, demographics, and fiscal policy. We use data from the Consumer Expenditure Surveys of the 1980s to consider the effect of demographic change on past and future U.S. saving rates. Our findings indicate that demographic change may significantly alter the U.S. rate of national saving and current account position over the next 50 years. The gradual aging of the population is predicted to lead to higher saving rates over the next three decades with declines in the rate of saving thereafter. While demographics is a potentially very important factor in explaining savings, it does not appear to explain the drop in the U.S. saving rate in the 1980s. What happened to U.S. saving in the 1980s remains an intriguing puzzle.

Bacchetta, Phillipe

TI National Saving and International Investment. **AU** Feldstein, Martin; Bacchetta, Phillipe.

Bachem, Achim

PD February 1989. **TI** On the Complexity of the Farkas-Property of Oriented Matroids. **AU** Bachem, Achim; Reinhold, Andrea. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89.65; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** no charge. **JE** 213. **KW** Matroids. Oriented Matroids.

AB In this paper we extend results of Hausmann and Korte to oriented matroids showing how Basis-, Circuit-, Span-, Minty- and Farkas-oracle computationally relate to each other.

PD March 1989. **TI** A Guided Tour through Oriented Matroid Axioms. **AU** Bachem, Achim; Kern, Walter. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89.64; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 24. **PR** no charge. **JE** 213. **KW** Oriented Matroid.

AB Oriented Matroids arise as a natural combinatorial abstraction of linear algebra and geometry. As with matroids, oriented matroids can be developed from many different axiom systems. In this survey we shall concentrate on some of the more important ones and show how one system can be deduced from the other. Moreover in section 3 we show how these axiom systems computationally relate to each other, proving that none of them can be used to check one side of the well known Farkas' Lemma. In section 4 we collect most of the relevant literature on oriented matroids. These references cover all aspects of oriented matroids currently under research.

Bagnoli, Mark

PD November 1989. **TI** Stock Price Manipulation Through Takeover Bids. **AU** Bagnoli, Mark; Lipman, Barton L. **AA** Bagnoli: University of Michigan. Lipman: Carnegie Mellon University. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-9; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 16. **PR** not available. **JE** 514, 511, 313. **KW** Takeovers. Stock Prices. Stock Market. Shareholders.

AB When a takeover bid is announced, when someone announces the acquisition of a substantial position in a firm, or when a major stockholder announces his or her views on how the company should be operated, one generally observes significant changes in the firm's stock price. It is clear that the announcer is aware of this effect and may make the announcement because of this effect. For example, many observers were concerned that Trump's bid for AMR was not really serious, that he was interested in taking advantage of the announcement effect. In fact, Trump recognized this possibility and made additional announcements designed to alleviate this skepticism. The possibility that a takeover bid is designed solely to allow the bidder to drive up the stock price, sell his holdings at the higher price and drop the bid has not been studied nor incorporated into analyses of takeovers. The purpose of this paper is to explore the viability of this type of manipulation and its effects on takeover attempts.

Bagwell, Kyle

PD January 1990. **TI** Risky R&D in Oligopolistic Product Markets. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: Stanford University and NBER. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 872; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 36. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 022, 621, 611. **KW** Competition. R&D. Technology. Oligopoly. Product Market.

AB Recent work has established that firms select excessively risky R&D strategies. We argue that this conclusion is sensitive to the assumptions that the winner takes all and that consumers receive no surplus. We relax these assumptions and assume instead that firms compete as oligopolists after the completion of R&D. Our finding is that too little risk-increasing R&D occurs. This is because investment which increases the riskiness of the distribution of a firm's production costs or product characteristics induces a positive externality to both consumers and rival firms. These results are robust across several standard models of product market competition.

PD February 1990. **TI** The Sensitivity of Strategic and Corrective R&D Policy in Battles for Monopoly. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: Stanford University. **SR** Stanford Hoover Institute Working Paper in Economics: E-90-2; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 52. **PR** not available. **JE** 422, 621, 522, 323, 411. **KW** R&D. Trade Policy. Exports. Subsidies.

AB We characterize the strategic and corrective role for R&D subsidies in an export market where R&D is an uncertain process and where the winner of the R&D competition monopolizes the market. Investments in R&D are assumed to induce either first order or mean-preserving second order shifts in the distribution of (i) a firm's costs, with the low cost firm then monopolizing the product market or, under a reinterpretation of the model, (ii) a firm's discovery dates, with the first firm to make the discovery enjoying patent protection of infinite duration. We show that, regardless of which form uncertainty takes in the R&D process, a national strategic incentive to subsidize R&D exists, but must be balanced against a national corrective incentive to tax R&D whenever a country has more than one firm involved in the R&D competition.

Bai, Jun

PD December 1989. **TI** Estimating the Percentiles of Some Misspecified Non-Nested Distributions. **AU** Bai, Jun; Jakeman, Anthony J.; McAleer, Michael. **AA** Australian National University. **SR** Australian National University Working Paper in Economics and Econometrics: 193; Australian National University, GPO Box 4, Canberra, ACT 2601, AUSTRALIA. **PG** 13. **PR** no charge. **JE** 211. **KW** Gamma Distribution. Maximum Likelihood. Non-Nested Models. Misspecification. Lognormal Distribution.

AB In this paper we assess the effects of misspecification in estimating the percentiles of the 2- and 3-parameter gamma, Weibull and lognormal distributions. In the experiments, the true model is either a 2- or 3-parameter distribution, the estimated quantities are the maximum observed value or the ninety-eighth percentile value, the performance criteria are the BIAS and RRMSE associated with the estimated quantities, and four misspecified non-nested alternative distributions are estimated. The 2- and 3-parameter versions of two non-nested distributions are estimated to examine the consequences of misspecifying the true distribution, namely estimating the 2- or 3-parameter distribution when a 2- or 3-parameter version of a non-nested distribution is correct.

Baigent Nick

PD December 1989. **TI** Topological Social Choice. **AU** Baigent Nick; Huang, Peter. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 89-127; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 15. **PR** $3.50. **JE** 025. **KW** Impossibility Theorem. Topology. Preferences. Social Choice.

AB For topological social choice models introduced by Chichilinsky, the issue of what is an economically meaningful topology on the space of individual preferences is discussed. Le Breton and Uriarte's results on the robustness of the topological approach to social choice are reexamined. Their choice of the topology of closed convergence, due to its long-standing tradition in general equilibrium theory, is critical evaluated. Using a nontopological, finite framework for studying the continuity of social choice is proposed.

Baldwin, John R.

PD January 1990. **TI** The Contribution of the Competitive Process to Productivity Growth: The Role of Firm and Plant Turnover. **AU** Baldwin, John R.; Gorecki, Paul K. **AA** Baldwin: Queen's University. Gorecki: Economic Council of Canada. **SR** Queen's Institute for Economic Research Discussion Paper: 769; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 57. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 226, 631, 611. **KW** Productivity. Firm Turnover. Manufacturing. Market Share.

AB This paper estimates the contribution that producer turnover made to productivity growth in the Canadian manufacturing sector in the 1970s. It first summarizes the extent to which market share is transferred from growing to declining plants. This includes both entering and exiting plants as well as expansion and contraction in continuing plants. Then, the relative productivity of the components of the turnover process are measured. Exiting plants were found to be less productive than average; entrants more productive than average. Plants that gained market share had a greater increase in productivity than losing market share. The paper then investigates the different ways in which the contribution of turnover to productivity growth can be measured.

PD January 1990. **TI** Intra-Industry Mobility in the Canadian Manufacturing Sector. **AU** Baldwin, John R.; Gorecki, Paul K. **AA** Baldwin: Queen's University.

Gorecki: Business and Labor Market Analysis Group Statistics Canada. **SR** Queen's Institute for Economic Research Discussion Paper: 768; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 30. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 611, 631. **KW** Firm Mobility. Firm Turnover. Market Structure. Industrial Organization. Manufacturing.

AB Firm turnover occurs both because of entry and exit and because of expansion and contraction in continuing firms. This paper develops measures of change in the incumbent population and compares them to the entry and exit process. In the first case, measures of employment growth and decline are used. Rates of change are measured both in the short and long run. Contrary to the case for entry and exit, where the annualized value of the long-run cumulative rates were about the same as the short-run rates, for continuing firms the short-run rates were much higher than the long-run rates. A larger percentage of short-run growth and decline in the continuing sector is transitory and is reversed in the long-run. Nevertheless, over a ten year period, both entry and exit and continuing firm change lead to a substantial cumulative increase or decrease in employment.

PD January 1990. **TI** Firm Entry and Exit in the Canadian Manufacturing Sector. **AU** Baldwin, John R.; Gorecki, Paul K. **AA** Baldwin: Queen's University. Gorecki: Economic Council of Canada. **SR** Queen's Institute for Economic Research Discussion Paper: 767; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 38. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 611, 631. **KW** Firm Entry. Firm Exit. Manufacturing. Industrial Organization. Market Structure.

AB While the entry and exit of firms is an important component of many economic models, measures of the importance of the associated firm turnover have been lacking. Using a specially constructed data base from the Canadian Census of Manufactures that allows firms and establishments to be followed over time, this paper presents basic data on the importance of entry and exit. It discusses the conceptual, theoretical, and empirical issues involved in measuring entry and exit and in building a longitudinal data set for this purpose. It then presents measure of entry and exit in the 1970s and 1980s. In doing so, it focuses both on the size of entrants at birth and also on their cumulative effect. It describes the transition path of entrants as they move from a stage of infancy to early adolescence. This is done by presenting the exit rates of births, their length of life and the growth path of entrants.

PD February 1990. **TI** Mergers and the Competitive Process. **AU** Baldwin, John R.; Gorecki, Paul K. **AA** Baldwin: Queen's University. Gorecki: Economic Council of Canada. **SR** Queen's Institute for Economic Research Discussion Paper: 773; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 57. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 611, 631. **KW** Merger. Firm Turnover. Diversification. Productivity. Profitability. Market Share. Manufacturing.

AB This paper uses a longitudinal data base of establishments and firms taken from the Canadian Census of Manufactures to measure the intensity of mergers and to compare them to other changes that lead to firm turnover. The importance of mergers is placed in the context of the plant and firm turnover process by comparing the amount of each merger type to alternate forms of expansion. Horizontal merger activity is compared to the creation of new plants by continuing firms. Entry by diversification is compared to entry by plant birth.

Baldwin, Richard

PD November 1989. **TI** Measuring 1992's Medium-Term Dynamic Effects. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3166; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 423, 411. **KW** Economic Integration. Output. Capital Stock.

AB This paper presents an explicit model of the link between the 1992 market liberalization and the aggregate marginal productivity of EC capital. We show that the liberalization is likely to lead to a ceteris paribus rise in capital's marginal product and thereby raise the steady-state capital-labor ratio. The comparative steady-state impact of 1992 on output is roughly quantified.

Balestra, Pietro

PD February 1990. **TI** A General Kronecker Formula for the Moments of the Multivariate Normal Distribution. **AU** Balestra, Pietro; Holly, Alberto. **AA** Balestra: Universite de Geneve. Holly: Universite de Lausanne. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 9002; Departement d'Econometrie et d'Economie Politique, Universite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne / SWITZERLAND. **PG** 17. **PR** no charge. **JE** 211. **KW** Normal Distribution.

AB This paper provides a direct derivation in matrix notation of multivariate moments of any order of a multivariate normal distribution. The method of derivation is mainly based on properties of permutations in Kronecker form of Kronecker products of any order of matrices, and on a concept of interchangeability. A general expression for the 2s-moment of a central multivariate normal distribution, as well as a recursive formula for calculating these 2s-moments are given. Also, general expressions for both the even and odd moments of a noncentral normal distribution are derived. The general formula obtained in this paper are illustrated by the calculation of the even moments up to order 8 for the central case, and of all the moments up to order 6 in the noncentral case.

Ball, Laurence

PD January 1990. **TI** Why Does High Inflation Raise Inflation Uncertainty?. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 3224; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 134, 311, 133. **KW** Inflation. Monetary Policy.

AB This paper presents a model of monetary policy in which a rise in inflation raises uncertainty about future inflation. When inflation is low, there is a consensus that the monetary authority will try to keep it low. When inflation is high, policymakers face a dilemma: they would like to disinflate, but fear the recession that would result. The public does not know the tastes of future policymakers, and thus does not know whether disinflation will occur.

Banerjee, Abhijit

PD October 1989. **TI** Risk-Bearing and the Theory of Income Distribution. **AU** Banerjee, Abhijit; Newman,

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

Andrew F. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 877; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 50. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 022, 111. **KW** Income Distribution. Growth Theory. Incomplete Markets. Dynamic Model. Risk.

AB This paper develops a stochastic theory of distribution by introducing a class of dynamic models focusing on the role of incomplete markets in generating inequality. Without complete markets, there is no possibility of perfect insurance against risk; variability in income is therefore attributable to the nature of available contracts rather than to differences in preferences or endowments. Unlike that of previous models, this approach takes explicit account of the reason for market incompleteness in modeling agents' behavior; in particular, the amount of risk borne by agents is endogenous.

Bar-Ilan, Avner

PD February 1990. **TI** Aversion to Price Variability and the Optimal Degree of Wage Indexation. **AU** Bar-Ilan, Avner; Zanello, Alessandro. **AA** Bar-Ilan: Tel Aviv University. Zanello: Dartmouth College. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 4-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 13. **PR** no charge. **JE** 133, 131, 824. **KW** Prices. Wages Determination. Wages. Demand Shocks.

AB In this paper we explore possible explanations for the observed low amount of wage indexation. We first consider the notion that the stochastic structure of the economy may offer a rationalization for this observation, and argue that this does not seem likely. We next suggest that a preference for price stability may play a role in wage determination. A low degree of indexation is chosen because it reduces the variability of prices.

PD February 1990. **TI** Nominal Budgeting as a Stabilization Rule: The Optimal Degree of Indexation of Public Spending. **AU** Bar-Ilan, Avner; Zanello, Alessandro. **AA** Bar-Ilan: Tel Aviv University. Zanello: Dartmouth College. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 3-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 21. **PR** no charge. **JE** 321, 322, 133, 824. **KW** Fiscal Policy. Government Spending. Demand Shocks. Labor Contracts.

AB In this paper we analyze a novel instrument of fiscal policy, the amount of adjustment of public spending to price surprises. This can be used as an automatic stabilizer. We find that, contrary to conventional modelling which assumes pegged real government spending, partial reliance on nominal budgeting is usually the optimal course of action as far as output stabilization goes. We establish that, unlike what emerges in wage indexation literature, the more pronounced the relative importance of demand shocks, the stronger the case for lack of indexed public spending, all else equal. We also find that a low degree of indexation in labor contracts may be rationalized as an optimal response to government budgets that are not cast in real terms.

Barany, I.

PD February 1990. **TI** A Colored Version of Tverberg's Theorem. **AU** Barany, I.; Larman, D. G. **AA** Barany: Yale University. Larman: University College London. **SR** Yale Cowles Foundation Discussion Paper: 936; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 12. **PR** $2.00. **JE** 213. **KW** Geometry.

AB The main result of this paper is that given n red, n white, and n green points in the plane, it is possible to form n vertex-disjoint triangles in such a way that the ith triangle has one red, one white, and one green vertex for every i = 1, ..., n and the intersection of these triangles is nonempty.

Barbera, Salvador

PD May 1990. **TI** Voting by Committees. **AU** Barbera, Salvador; Sonnenschein, Hugo; Zhou, Lin. **AA** Barbera: Universitat Autonoma de Barcelona. Sonnenschein: University of Pennsylvania. Zhou: Yale University. **SR** Yale Cowles Foundation Discussion Paper: 941; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 19. **PR** no charge. **JE** 025. **KW** Social Choice. Voting. Committees.

AB Problems of social choice frequently take the following form. There are n voters and a set K = {1, 2,...,k} of objects. The voters must choose a subset of K. We define a class of voting schemes called voting by committees. The main result of the paper is a characterization of voting by committees, which is the class of all voting schemes that satisfy voter sovereignty and non-manipulability on the domain of separable preferences. This result is analogous to the literature on the Groves and Clarke scheme in that it characterizes all of the non-manipulable voting schemes on an important domain.

Barsky, Robert B.

PD November 1989. **TI** Bull and Bear Markets in the Twentieth Century. **AU** Barsky, Robert B.; De Long, J. Bradford. **AA** Barsky: University of Michigan. De Long: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3171; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $2.00. **JE** 313. **KW** Stock Market. Stock Prices. Dividends.

AB The major bull and bear markets of this century have suggested to many that large decade-to-decade stock market swings reflect irrational "fads and fashions" that periodically sweep investors. We argue instead that investors have perceived significant shifts in the long-run mean rate of future dividend growth, and that stock prices depend sufficiently sensitively on expectations about the underlying future growth rate that these perceived shifts would plausibly generate large swings like those of the twentieth century. We go on to document that analysts who have often been viewed as "smart money" held assessments of fundamental values based on their perceptions of future economic growth and technological progress: the judgments of these analysts, like the assessments of fundamentals we generate from simple dividend growth forecasting rules, track the major decade-to-decade swings in the market rather closely.

Battacharya, Dilip K.

PD December 1989. **TI** Testing Hypotheses About Regression Coefficients in Misspecified Models. **AU** Battacharya, Dilip K.; Kmenta, Jan. **AA** Battacharya: University of Leicester, England. Kmenta: University of

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-5; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 22. **PR** not available. **JE** 211, 132. **KW** Linear Regression. Omitted Variables. Least Squares Estimator. Monte Carlo Model. Misspecification.

AB If in a classical regression model y=Xb+Za+u the values of Z are omitted, the least squares estimator of b is biased (unless X'Z= 0) and the conventional tests of significance concerning b are not valid. The purpose of this paper is to propose a method for estimating the noncentrality parameters of the F distribution involved in testing hypotheses about b when there is no information about Za. The estimated noncentrality parameters can be used to approximate the true size of the tests. Further uses of the estimates include choosing the most suitable proxies for Z and ranking competing models according to their proximity to the true model. Our theoretical results are supported by a suitably designed Monte Carlo experiment.

Batten, D.

PD July 1989. **TI** The Instruments and Operating Procedures for Conducting Monetary Policy in the Group of Five Countries. **AU** Batten, D.; Blackwell, M.; Kim, I.; Nocera, Simon E.; Ozeki, Y. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/57; International Monetary Fund, Washington, DC 20431. **PG** 59. **PR** no charge. **JE** 311, 431. **KW** Monetary Policy. Exchange Rates. Interest Rates. Developed Countries.

AB This paper examines and compares the instruments and procedures currently employed by the central banks of France, Germany, Japan, the United Kingdom, and the United States for implementing monetary policy in the short run. The analysis indicates that the monetary authorities of these five countries focus on influencing certain short-term interest rates in implementing monetary policy. Thus, to the extent that interest rate developments affect the behavior of exchange rates, this analysis facilitates ascertaining changes in monetary policies in the G-5 countries and their exchange rate implications.

Bayoumi, Tamim

PD August 1989. **TI** Saving - Investment Correlations: Immobile Capital, Government Policy or Endogenous Behavior?. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/66; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** no charge. **JE** 423, 441, 433, 113. **KW** Government Policy. Saving. Investment.

AB This paper analyzes reasons for the high post-war correlations of saving and investment, both across countries and over time. It is concluded that the main reason for the observed high correlations over the recent period is probably government policy.

Bean, Charles

PD November 1989. **TI** Endogenous Growth and the Procyclical Behavior of Productivity. **AA** London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 369; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 14. **PR** no charge. **JE** 226, 825, 133, 132. **KW** Endogenous Growth. Productivity. Human Capital. Growth Theory.

AB In this paper a model with endogenous growth is used to explain the procyclical behavior of productivity. Periods when the marginal return to goods production is high are associated with low levels of human capital formation and other investment-like activities. In particular, the model successfully explains the surges in productivity exhibited in the UK during wartime and the apparently permanent effect of the level of defense spending on the growth of total factor productivity.

Begg, Iain

PD December 1989. **TI** Urban Europe Beyond the Year 2000. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 8917; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 20. **PR** $4.00; checks payable to University of Cambridge. **JE** 931. **KW** Europe. Urban Economics. Cities.

AB The aim of this commissioned article was to explore the causes of recent changes in urban Europe and to speculate on how the European urban system would develop into the next millennium. Many of Europe's large cities owe their past prosperity to their advantages as locations for particular types of economic activity. Various forms of structural and technological change have, however, combined to undermine the attractiveness of cities as locations, while many newer forms of economic activity have shunned the large industrial cities. The consequences of such changes and of the parallel structural transformations of the European economy could lead to significant developments in the European urban system.

Bekker, P. A.

PD October 1988. **TI** Albert's Theorem Applied to Problems of Efficiency and MSE Superiority. **AU** Bekker, P. A.; Neudecker, H. **AA** Bekker: University of Groningen. Neudecker: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 13/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 13. **PR** no charge. **JE** 211. **KW** Efficiency. Mean Squared Error.

AB Albert's theorem, which is closely related to general results on Schur complements can be successfully applied to statistical problems. In the present paper a concise proof for a slightly more general version of the theorem will be given. Two applications on efficiency and a structured overview of results on MSE superiority are then presented. They are the main statistical results of this self-contained paper.

Benhabib, Jess

PD December 1989. **TI** Externalities and Growth Accounting. **AU** Benhabib, Jess; Jovanovic, Boyan. **AA** New York University. **SR** National Bureau of Economic Research Working Paper: 3190; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 51. **PR** $2.00. **JE** 111, 023. **KW** Externalities. Knowledge. Growth Theory. Capital Stock.

AB We reexamine several bodies of data on the growth of output, labor, and capital, within the context of a model that admits the possibility of an externality to the capital input. The model is an augmented version of Paul Romer's (1987) reformulation of the Solow model. Unlike Romer, however, we find no evidence of an externality to capital. This finding implies nothing about the size of possible spillovers in the creation of knowledge because in our model, causality runs exclusively from knowledge to capital.

Bennett, Elaine

PD April 1990. **TI** Folk Theorems for the Proposal-Making Model. **AA** University of California, Los Angeles and University of Kansas. **SR** University of California at Los Angeles Department of Economics Working Paper: 587; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 13. **PR** $2.50. **JE** 026. **KW** Game Theory. Bargaining Theory. Noncooperative Model. Folk Theorems.

AB A companion paper (UCLA WP 586) introduces the proposal making model, a noncooperative bargaining model for characteristic function games without sidepayments, and characterizes its stationary subgame perfect outcomes. The present paper shows that in the absence of stationarity, "anything" can be a bargaining outcome of the proposal making model.

PD June 1990. **TI** Multilateral Bargaining Problems. **AA** University of Kansas. **SR** University of California at Los Angeles Department of Economics Working Paper: 594; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 38. **PR** $2.50. **JE** 026. **KW** Bargaining. Coalitions. Cooperative Games. Reservation Price.

AB In many situations, there are gains from forming coalitions but conflict over which coalitions to form and how the gains should be distributed. The distribution of gains presents each potential coalition with a bargaining problem, but the presence of conflicts over which coalitions to form means that these bargaining problems cannot be treated in isolation. This paper presents an approach to such multilateral bargaining problems. A solution to such a multilateral bargaining problem consists of an agreement in each coalition which is consistent with the bargaining process in every coalition. We show that, under mild conditions, solutions exist and are determined by reservation prices, and characterize the range of possible solutions.

Berck, Peter

TI Adjustment Under Different Trade Strategies: A Mean-Variance Analysis with a CGE Model of the Yugoslav Economy. **AU** Adelman, Irma; Berck, Peter; Labus, Miroljub; Vujovic, Dusan.

Berger, Allen N.

PD December 1989. **TI** Some Evidence on the Empirical Significance of Credit Rationing. **AU** Berger, Allen N.; Udell, Gregory F. **AA** Berger: Board of Governors of the Federal Reserve System. Udell: New York University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 105; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 34. **PR** no charge. **JE** 315, 521. **KW** Credit Rationing. Collateral. Loans. Credit. Banking.

AB This paper examines the credit rationing debate using detailed contract information on over 1,000,000 commercial bank loans from 1977 to 1988. While commercial loan rates are "sticky," consistent with rationing, this stickiness varies with loan contract terms in ways that are not predicted by rationing theory. In addition, the proportion of new loans issued under commitment increases only slightly when credit markets are tight, despite the fact that borrowers without commitments can be rationed while commitment borrowers are contractually insulated from rationing. Overall, the data suggest that rationing is not likely to be a significant macroeconomic phenomenon.

PD January 1990. **TI** The Dominance of Inefficiencies over Scale and Product Mix Economies in Banking. **AU** Berger, Allen N.; Humphrey, David B. **AA** Berger: Board of Governors of the Federal Reserve System. Humphrey: Federal Reserve Bank of Richmond. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 107; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 37. **PR** no charge. **JE** 312, 613. **KW** Banking. Regulation. Economies of Scale.

AB This study analyzes inefficiencies in banking using 1984 data for all U.S. banks. Using a "thick frontier" approach, inefficiencies on the order of 25 percent are found, which dominate measured scale and product mix economies. Most inefficiencies are operational, involving overuse of physical inputs, rather than financial, involving overpayment of interest. These results suggest that competitive pressures from deregulation will be focused on banks that do not control costs, not on those of particular size or product mix. A secondary finding is that inefficiencies do not appear to bias most conventional scale and product mix economy measures significantly.

Bergman, Yaacov Z.

PD November 1989. **TI** Opportunistic Behavior in Debt Renegotiations. **AU** Bergman, Yaacov Z.; Callen, Jeffrey L. **AA** Bergman: Brown University. Callen: The Hebrew University, Israel. **SR** Brown University Department of Economics Working Paper: 89-36; Department of Economics, Brown University, Providence, RI 02912. **PG** 33. **PR** no charge. **JE** 522, 511, 514. **KW** Bargaining. Shareholders. Renegotiation. Debt. Bankruptcy.

AB This paper models debt renegotiation as a sequential bargaining process between shareholders and debtholders, in which the former use their discretion over the investment decisions of the firm as a bargaining device. It is shown that shareholders can credibly threaten to let the firm deteriorate thus forcing concessions from the bondholders. It is found that if the value of the firm falls below a certain cutoff level, shareholders will force a partition of the value of the firm by renegotiating the debt. The partition allocates to shareholders, at the expense of the bondholders, approximately half the potential damage the former can cause. Remarkably, the shareholders can beneficially trigger the renegotiation process even when the firm is not financially distressed. The model is shown to have empirical implications to the structure of debt contracts and to settlement amounts in debt renegotiations, as well as to formal bankruptcy reorganizations.

Bernanke, Ben S.

PD March 1990. **TI** U.S. Corporate Leverage: Developments in 1987 and 1988. **AU** Bernanke, Ben S.; Campbell, John Y.; Whited, Toni M. **AA** Bernanke and Campbell: Princeton University. Whited: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

Series: 113; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 16. **PR** no charge. **JE** 521, 315. **KW** Corporate Leverage. Corporate Debt. Corporations. Debt Crisis.

AB This paper updates the 1988 Brookings paper "Is There A Corporate Debt Crisis." The subject of that earlier paper is an assessment of the condition of corporate capital structure. This update contains some interesting new results. They are particularly persuasive since we take into consideration major accounting definitional changes that could potentially bias the 1988 figures. We find that in 1987 and 1988, debt-asset and interest coverage ratios continued to increase among the most indebted firms, even though the mean and median ratios fell slightly. We have also looked more carefully at the industry breakdown of debt. It has been alleged by several people that debt is concentrated in cyclically insensitive industries, particularly non-durable manufacturing. We find no evidence for this claim.

Bernhardt, Dan

PD June 1989. **TI** Skill Profiles, Observability and Firm Hierarchies: A Theory of Promotion and Compensation. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 764; Department of Economics, Queens University, Kingston, Ontario, CANADA K7L 3N6. **PG** 44. **PR** $3.00 Canada; $3.50 U.S. and Foreign. **JE** 821, 824, 851. **KW** Wages. Promotions. Human Capital. Labor Productivity.

AB Within a hierarchical firm structure, this paper details how the composition of a worker's skills and the (non) observability of a worker's ability affect wage and promotion paths. Promotion-based compensation schemes derive naturally from the worker's asymmetrically observed ability. Promotion takes place over time and is not efficient as employers seek to exploit their inside information about a worker's ability. The firm specific productivity gains to having an able worker efficiently placed must exceed the value of this private information for the firm to promote. Explanations for fast track promotion plans, the lack of demotion of poor managers, and other empirical regularities are provided.

TI Barter and Money, and the Optimality of Legal Restrictions. **AU** Engineer, Merwan; Bernhardt, Dan.

Bernstam, Mikhail S.

PD April 1990. **TI** The Wealth of Nations and the Environment. **AA** Stanford University. **SR** Stanford Hoover Institute Working Paper in Economics: E-90-12; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 71. **PR** not available. **JE** 721, 722, 111. **KW** Economic Growth. Natural Resources. Environment. Conservation.

AB This paper shows how economic growth can reduce environmental degradation.

Bertaut, Carol

TI Why Do So Few Hold Stocks? The View From Asset Pricing Theory. **AU** Haliassos, Michael; Bertaut, Carol.

Bhandari, Jagdeep S.

PD June 1989. **TI** Growth, External Debt and Sovereign Risk in a Small Open Economy. **AU** Bhandari, Jagdeep S.; Haque, Nadeem; Turnovsky, Stephen J. **AA** Bhandari and Haque: International Monetary Fund. Turnovsky: University of Washington. **SR** International Monetary Fund Working Paper: WP/89/54; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** no charge. **JE** 443, 431, 411, 023. **KW** Sovereign Risk. Public Debt. Government Deficit. Open Economy.

AB This paper constructs and analyzes an optimizing model of a highly indebted small open economy. An important innovation in the model is the incorporation of sovereign risk through the specification of an upward-sloping foreign debt supply function. The model is used to examine the interaction between external debt and growth in response to various policies and exogenous disturbances. It is shown that structural policies intended to reduce the fiscal deficit or increase productivity can lead to tradeoffs in their effect on capital accumulation and the stock of debt.

Bikhchandani, Sushil

PD January 1990. **TI** Stochastic Dominance Under Bayesian Learning. **AU** Bikhchandani, Sushil; Segal, Uzi; Sharma, Sunil. **AA** Bikhchandani and Sharma: University of California, Los Angeles. Segal: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9002; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 51. **PR** no charge. **JE** 022, 026. **KW** Stochastic Dominance. Bayesian Learning. Search Model.

AB The concept of first-order stochastic dominance defined on distributions is inadequate in models with learning. We extend this concept to the space of distributions on distributions. The question we ask is under what conditions do one person's beliefs regardless of what they both observe. We obtain sufficient conditions for this partial order, and show that the sufficient conditions are also necessary provided that the underlying distributions satisfy an additional assumption. These conditions can be verified without taking any observations. Applications to search models and to bandit problems are discussed.

Binmore, Kenneth

PD December 1989. **TI** Bargaining Theory Without Tears. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-10; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 15. **PR** not available. **JE** 026, 022. **KW** Bargaining. Noncooperative Games. Subgame Perfect Equilibrium.

AB The purpose of this article is two-fold. The primary aim is to provide a simple proof of a version of Rubinstein's bargaining theorem in a setting that is sufficiently general to cover the situations that typically arise in applications. In particular, the feasible set is not assumed to be convex and a reasonably general view is taken of the manner in which disagreement may arise The secondary aim pursues some points made in Binmore/Rubinstein/Wolinsky. A detailed analysis of subgame perfect equilibria in a complicated noncooperative bargaining model is unnecessary for most applications. Much heavy computation can be short circuited by applying certain simple principles directly rather than deriving them anew each time they are required. The methodology is illustrated in section 8 for a model of decentralized price formation.

PD May 1990. **TI** Noncooperative Models of Bargaining.

AU Binmore, Kenneth; Osborne, Martin J.; Rubinstein, Ariel. **AA** Binmore: University of Michigan. Osborne: McMaster University. Rubinstein: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 12-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 69. **PR** no charge. **JE** 026, 022. **KW** Noncooperative Games. Coalitions. Bargaining. Game Theory.

AB This paper surveys the literature on Noncooperative Models of Bargaining. It includes a discussion of the alternating sequential bargaining model and its relationship with the Nash bargaining solution. In addition, the paper presents models of pairwise bargaining with few agents, noncooperative bargaining models for coalitional games, models of bargaining with markets, bargaining models with incomplete information and a discussion of the relationship between the noncooperative bargaining literature and the mechanism design literature.

Blackburn, Keith

PD January 1990. **TI** Inflation? Taxation and Cooperation Under Fixed Exchange Rates. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9001; Department of Economics, University of Southampton, Southampton, 509 5NH, ENGLAND. **PG** 31. **PR** no charge. **JE** 431, 311, 321, 411. **KW** Exchange Rates. Policy Coordination. Fiscal Policy. Monetary Policy. Intertemporal Model.

AB There is a strong presumption that a fixed exchange rate regime exerts a discipline on monetary and fiscal policies. For this reason, such a regime is widely regarded as one form of desirable institutional arrangement for restricting the discretion of a government in the face of time inconsistency problems. The present paper both illustrates and challenges this view. It does so by focusing on the degree of policy coordination between member countries of a fixed rate regime. Depending upon whether countries cooperate or not. It is shown how problems of credibility, excessive budget deficits and inflationary biases may be just as likely here as under a floating rate system. The analysis is presented in terms of a two-country intertemporal optimizing model with representative agents and benevolent governments.

Blackburn, McKinley L.

PD November 1989. **TI** The Declining Economic Position of Less-Skilled American Males. **AU** Blackburn, McKinley L.; Bloom, David E.; Freeman, Richard B. **AA** Blackburn: University of South Carolina. Bloom: Columbia University. Freeman: Harvard University. **SR** National Bureau of Economic Research Working Paper: 3186; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $2.00. **JE** 824, 851. **KW** Wage Differentials. Education. Human Capital. Wages. Employment.

AB This paper documents the substantial decline in the economic position of less-skilled American males that has occurred since the early 1970's. The paper also explores a variety of potential explanations for the widening of earnings differentials between more- and less-educated white males. On the basis of these analyses, we draw four main conclusions. First, our analysis indicates that industrial shift and deunionization account for non-negligible portions of the overall increase in educational wage differentials that occurred in the 1980's. Second, our analysis achieves greater success when we focus our aim on explaining the change in the growth rate of wage differentials between the 1970's and 1980's. Third, our analysis suggests that the 1970's and 1980's differed importantly in ways not captured by our analyses. Fourth, we find little evidence that the recent widening of wage gaps across educational groups is due to (1) the 1980's decline in the real value of the minimum wage, (2) the increased pace of technological change, (3) changes in the labor supply of white males below age 25 and of women in different educational groups, or (4) changes over time in the quality of less-educated workers.

Blackwell, M.

TI The Instruments and Operating Procedures for Conducting Monetary Policy in the Group of Five Countries. **AU** Batten, D.; Blackwell, M.; Kim, I.; Nocera, Simon E.; Ozeki, Y.

Blanchard, Olivier Jean

PD November 1989. **TI** The Aggregate Matching Function. **AU** Blanchard, Olivier Jean; Diamond, Peter. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3175; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 824, 821. **KW** Labor Market. Wages. Unemployment.

AB We present a picture of the labor market, one with large flows of jobs and workers, and matching. We develop a consistent approach to the interaction among those flows and the stocks of unemployed workers and vacant job, and to the determination of wages. We estimate the matching function, using both aggregate data and data from manufacturing and find evidence of a stable matching process in the data. We examine the joint movements in unemployment, vacancies and wages, the Beveridge and Phillips curve relations, in the light of our model. We conclude that aggregate activity shocks rather than reallocation shocks dominate the movement of unemployment.

PD November 1989. **TI** Two Tools for Analyzing Unemployment. **AA** National Bureau of Economic Research and Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3168; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $2.00. **JE** 824, 131. **KW** Unemployment. Wages. Labor Market.

AB This paper shows how one can interpret the joint movements of wages, unemployment and vacancies in the Phillips and Beveridge spaces to learn about the origins of the movements in unemployment. The view of the labor market underlying the conceptual framework emphasizes flows, matching, and Nash bargaining determination of wages. The approach is used to analyze the movements in unemployment in the US, in the UK and in Germany over the last twenty years.

Blanchflower, David G.

PD November 1989. **TI** The Wage Curve. **AU** Blanchflower, David G.; Oswald, Andrew J. **AA** Dartmouth College. **SR** National Bureau of Economic Research Working Paper: 3181; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 824, 133. **KW** Unemployment. Wages.

AB This paper, which follows in an LSE tradition begun by Phillips and Sargan, examines the role of unemployment in shaping pay. In contrast to most of the literature, it: 1) uses microeconometric data on individuals and workplaces, 2) examines a variety of data sets as a check on the robustness of results, and 3) studies the effects of unemployment on the real wage level (not on the rate of change of pay or prices). The paper finds evidence, on British and US data, of a wage curve. The curve has a negative gradient at low levels of unemployment, but becomes horizontal at relatively high levels of unemployment.

PD November 1989. **TI** Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J. **AA** Blanchflower and Oswald: Dartmouth College. Millward: Department of Employment, London. **SR** National Bureau of Economic Research Working Paper: 3180; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 831, 824. **KW** Trade Unions. Wages. Employment.
AB Although there exists a large literature on the effects of trade unions upon wages, there is no published work that uses microeconomic data to examine the employment consequences of unionization. The paper addresses this issue with a new British data set and shows that, even after the addition of a substantial set of control variables, there is a strong association between poor employment performance and the presence of trade unions. The union employment growth differential is estimated at approximately -3% per annum.

PD November 1989. **TI** Insider Power in Wage Determination. **AU** Blanchflower, David G.; Oswald, Andrew J.; Garrett, Mario D. **AA** Blanchflower and Oswald: Dartmouth College. Garrett: London School of Economics. **SR** National Bureau of Economic Research Working Paper: 3179; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 45. **PR** $2.00. **JE** 824, 821, 832. **KW** Wage Determination. Wages. Unemployment.
AB The paper argues that wage determination is best seen as a kind of rent sharing in which workers' bargaining power is influenced by conditions in the external labor market. It uses British establishment data from 1984 to show that pay depends upon a blend of insider pressure (including the employer's financial performance and oligopolistic position) and outsider pressure (including external wages and unemployment). Lester's feasible "range" of wages appears typically to be between 8% and 22% of pay. Estimates of the unemployment elasticity of the wage lie in a narrow band around -0.1.

Blomstrom, Magnus

PD October 1989. **TI** Multinational Corporations and Productivity Convergence in Mexico. **AU** Blomstrom, Magnus; Wolff, Edward N. **AA** Blomstrom: Stockholm School of Economics. Wolff: New York University. **SR** National Bureau of Economic Research Working Paper: 3141; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $2.00. **JE** 442, 226, 631. **KW** Multinational Corporations. Manufacturing. Productivity.
AB This paper examines the impact of the operations of foreign-owned multinational firms on the productivity growth of Mexican manufacturing industries, 1965-1984. It investigates both the extent to which the penetration of a sector by foreign-owned firms affects the productivity of local firms in that sector and whether there is any evidence of convergence between that industry's productivity level and that of the United States. The main results can be summarized as follows: First, productivity levels of locally-owned firms in Mexico have converged to those of foreign-owned firms. Second, both the rate of productivity growth of local firms and their rate of catch-up to the multinationals are positively related to the degree of foreign ownership of an industry.

PD October 1989. **TI** What Do Rich Countries Trade With Each Other? R&D and the Composition of U.S. and Swedish Trade. **AU** Blomstrom, Magnus; Lipsey, Robert E.; Ohlsson, Lennart. **AA** Blomstrom: Stockholm School of Economics. Lipsey: Queens College and NBER. Ohlsson: Federation of Swedish Industries. **SR** National Bureau of Economic Research Working Paper: 3140; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 621, 411, 421. **KW** International Trade. Technology.
AB A long tradition in international economics explains comparative advantage by differences between countries in their stage of development, or their endowments of land, labor and capital, and suggests that universal development will reduce the importance of trade. Sweden and the United States possess similar factor endowments and have converged in overall productivity, but their bilateral trade has grown. The example of these two countries suggests that mutual technological progress may promote trade, with the new basis for specialization being the different technology levels or R&D intensities of the goods being traded, rather than the initial endowments.

Bloom, David E.

TI The Declining Economic Position of Less-Skilled American Males. **AU** Blackburn, McKinley L.; Bloom, David E.; Freeman, Richard B.

Bonanno, Giacomo

PD June 1990. **TI** Knowledge and Beliefs in Extensive Games. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 361; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 33. **PR** no charge. **JE** 026. **KW** Extensive Game. Subgame Perfect Equilibrium. Game Theory. Perfect Information.
AB The alternative definitions of players' knowledge in extensive games are put forward. Both definitions tell us what player i knows at every node of the game tree, including the nodes which belong to another player. A player's belief at a node is then defined as a probability distribution over the set representing that player's knowledge at the same node. The notion of rational (Bayesian) belief system is then introduced and it is proved that in games of perfect information there is a one-to-one correspondence between the set of (degenerate) rational belief systems and the set of (pure-strategy) subgame perfect equilibria. This result provides a new characterization of subgame perfect equilibria.

PD June 1990. **TI** Imperfectly Observable Commitment. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 363; Department of Economics, University of California at

Davis, Davis, CA 95616. **PG** 14. **PR** no charge. **JE** 026. **KW** Commitment. Deterrence. Game Theory.
AB We examine the issue of imperfect observability of commitment and notice the following phenomenon. When a player is able to pre-commit, she is less likely to do so against an opponent who is aware of the availability of commitment than against an opponent who is not aware. We also show that both players are better off in the case where the opponent is aware that the first player had the option to commit than in the case where he is not aware. Moreover, these two results hold in every situation in which commitment would be chosen with certainty if it were perfectly observable.

Bordo, Michael D.

PD December 1989. **TI** The Long-Run Behavior of Velocity: The Institutional Approach Revisited. **AU** Bordo, Michael D.; Jonung, Lars. **AA** Bordo: Rutgers University. Jonung: Stockholm School of Economics. **SR** National Bureau of Economic Research Working Paper: 3204; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 53. **PR** $2.00. **JE** 131, 133, 132. **KW** Velocity. Business Cycle. Economic Fluctuations. Forecasting.
AB In this paper we provide evidence using annual data for the period 1880 to 1986 that institutional variables are significant determinants of velocity in the United States, United Kingdom, Canada, Sweden and Norway. This evidence supplements our earlier findings (Bordo and Jonung, Cambridge University Press, 1987) for annual data ending in the early 1970s. We present evidence that several proxies for institutional change in the financial sector are significant determinants of the long-run velocity function; that for the majority of countries the long-run velocity function incorporating institutional determinants has not undergone significant change over the last 10 to 15 years; and that out of sample forecasts over the last 10 to 15 years based on our institutional hypothesis are superior to those based on a benchmark long-run velocity function for a number of countries.

Borensztein, Eduardo

PD September 1989. **TI** Debt Overhang, Credit Rationing and Investment. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/74; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** no charge. **JE** 443, 433, 315, 411. **KW** Public Debt. Growth Model. Credit. Investment.
AB This paper evaluates the effect of foreign debt on investment in a heavily-indebted country, using numerical simulations of a simple rational expectations growth model. Two particular effects are distinguished. First, the effect due to "debt overhang" of past accumulated debts; and second, the effect of "credit rationing" or inability to obtain new financing. The results from the simulations indicate that credit rationing may be a powerful disincentive to investment. This suggests that in order to maximize the impact on productive investment, debt reduction plans need to be accompanied by additional foreign lending.

Boswijk, H. P.

TI Joint Prediction of Automobile Ownership and Mileage by a Cross-Section Model. **AU** de Jong, G. C.; Boswijk, H. P.; Cramer, J. S.

Boughton, James M.

PD September 1989. **TI** Commodity Prices and Inflation: Evidence from Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca. **AA** Branson: Princeton University. Boughton and Muttardy: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/72; International Monetary Fund, Washington, DC 20431. **PG** 58. **PR** no charge. **JE** 134, 227, 133, 122. **KW** Developed Countries. Inflation. Manufacturing. Prices.
AB A two-country theoretical model is presented, showing the effects of monetary, fiscal, and supply-side disturbances on prices of primary commodities and manufactured goods, and on exchange rates. If monetary shocks dominate, then commodity prices should lead general price movements, and the level of commodity prices should be correlated with the general inflation rate. Country- specific commodity price indexes are developed for the major industrial countries. Several empirical tests broadly support the conclusions of the model. Commodity price levels tend to be cointegrated with consumer-price inflation rates.

PD November 1989. **TI** Commodity Prices and Inflation: Evidence From Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca. **AA** Boughton and Muttardy: International Monetary Fund. Branson: Princeton University. **SR** National Bureau of Economic Research Working Paper: 3158; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** $2.00. **JE** 227, 134, 131, 133. **KW** Commodities. Inflation. Commodity Prices. Exchange Rates.
AB This paper examines the relationships between movements in primary commodity prices and changes in inflation in the large industrial countries. It begins by developing a two-country model in order to examine the theoretical effects of monetary, fiscal and supply side disturbances on commodity and manufactures prices and on exchange rates. It is shown that if monetary shocks dominate, then commodity prices should lead general price movements, and the level of commodity prices should be correlated with the general inflation rate. Nonmonetary shocks generally weaken these relationships, but such disturbances may cancel out for broad indexes covering a wide range of commodities.

Bousba, Choaib

PD June 1989. **TI** Finding Minimum Cost Directed Trees with Demands and Capacities. **AU** Bousba, Choaib; Wolsey, Laurence A. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8913; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 18. **PR** not available. **JE** 213. **KW** Integer Programming. Directed Graph.
AB Given a directed graph, we consider the problem of finding a rooted directed tree (or branching) satisfying given demands at all the nodes and capacity constraints on the arcs. Various integer programming formulations are compared, including flow and multi-commodity flow formulations and two partitioning type formulations involving directed subtrees. Computational results concerning an application to the design of a low voltage electricity network are given. For the class of problems considered, one of the partitioning formulations allows us to solve problems with up to 100 nodes and several

hundred arcs.

Bovenberg, A. Lans

PD October 1989. **TI** Promoting Investment Under International Capital Mobility: An Intertemporal General Equilibrium Analysis. **AU** Bovenberg, A. Lans; Goulder, Lawrence H. **AA** Bovenberg: International Monetary Fund. Goulder: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3139; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 441, 323, 313, 431. **KW** Capital Flows. Taxation. Taxes. Capital Investment.

AB This paper uses a dynamic computable general equilibrium model to compare, in an economy open to international capital flows, the effects of two U.S. policies intended to promote domestic capital formation. The two policies--the introduction of an investment tax credit (ITC) and a reduction in the statutory corporate income tax rate--differ in their treatment of old (existing) and new capital. The model features adjustment dynamics, intertemporal optimization by U.S. and foreign households and firms endowed with model-consistent expectations, imperfect substitution between domestic and foreign assets in portfolios, an integrated treatment of the current and capital accounts of the balance of payments, and industry disaggregation in the United States.

Bradley, Michael G.

PD January 1990. **TI** The Treasury Yield Curve as a Cointegrated System. **AU** Bradley, Michael G.; Lumpkin, Stephen A. **AA** Bradley: Department of the Treasury. Lumpkin: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 106; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 16. **PR** no charge. **JE** 313, 311, 132. **KW** Treasury Yield Curve. Term Structure. Securities. Interest Rates.

AB This paper examines the temporal relationship between interest rates on Treasury securities ranging in maturity from three months to 30 years. We find strong empirical support that the seven Treasury rates selected are conintegrated, a conclusion that is insensitive to the normalization chosen. In particular, the hypothesis of noncointegration is rejected decisively regardless of the rate selected as the dependent variable in the cointegrating equation. To determine whether this information can be used to improve forecasts of Treasury rates, the seven rates are forecasted with a corresponding error-correction model that is shown to outperform an unrestricted VAR that ignores the cointegration of the rates. The results are consistent with the belief that arbitrage limits the extent to which rates on different maturities of a given security diverge. In addition, the results confirm the appropriateness of imposing a common stochastic process for interest rates in equilibrium models of the term structure.

Brandenburger, Adam

TI Common Knowledge of an Aggregate of Expectation. **AU** Nielsen, Lars Tyge; Brandenburger, Adam; Geanakoplos, John; McKelvey, Richard; Page, Talbot.

Branson, William H.

TI Commodity Prices and Inflation: Evidence from Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca.

TI Commodity Prices and Inflation: Evidence From Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca.

Brayton, F.

PD May 1990. **TI** Here's Looking at You: Modelling and Policy Use of Auction Price Expectations. **AU** Brayton, F.; Kan, W.; Tinsley, P. A.; von zur Muehlen, P. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 126; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 59. **PR** no charge. **JE** 134, 132, 131, 311. **KW** Inflation. Commodity Prices. Monetary Policy. Auctions. Expectations.

AB Indexes of asset prices have been suggested as nominal anchors for monetary policy, in place of conventional monetary aggregates. This paper explores issues in modelling and policy simulations of expectation models of auction prices. Long-run (cointegrating) and short-run relationships are estimated for the prices or yields of long-term bonds, equity, and several primary commodity groups, using autoregressive approximations of agents' expectations of future interest and inflation rates. The incremental value of information on agents' inflation expectations provided by direct measurements of primary commodity prices is evaluated by stochastic simulation experiments with the FRB/MPS quarterly model of the U.S. economy.

Brekk, Odd Per

TI Monetary Control Procedures and Financial Reform: Approaches, Issues, and Recent Experiences in Developing Countries. **AU** Johnston, R. Barry; Brekk, Odd Per.

Brennan, Geoffrey

PD January 1990. **TI** Bicameralism and Stability. **AU** Brennan, Geoffrey; Hamlin, Alan. **AA** Brennan: Australian National University. Hamlin: University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9002; Department of Economics, University of Southampton, Southampton, 5O9 5NH, ENGLAND. **PG** 23. **PR** no charge. **JE** 025. **KW** Social Choice. Political Economics. Majority Rule. Democratic.

AB Bicameralism is a widely observed and frequently advocated aspect of democratic institutions, but the exact benefit associated with bicameralism, and the mechanism by which bicameralism secures that benefit, are unclear in traditional political theory. We provide a public choice theoretic analysis that offers a novel account of bicameralism as an institutional structure capable of overcoming the general instability of democratic, majoritarian decision making, and characterize the conditions under which bicameralism ensures the existence of stable and Pareto optimal political equilibria. We also connect our account, where possible, with more traditional discussions of bicameralism.

Brito, Dagobert L.

PD September 1989. **TI** Dynamic Optimal Income Taxation With Government Commitment. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.;

Stiglitz, Joseph E. **AA** Brito: Rice University. Hamilton and Slutsky: University of Florida. Stiglitz: Stanford University. **SR** University of Florida Working Paper in Economics: 89-8; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 29. **PR** no charge. **JE** 323, 321. **KW** Income Tax. Taxation. Taxes. Government Policy.

AB The optimal income taxation problem has been extensively studied in one period models. This paper analyzes optimal income taxation when consumers work for many periods. We analyze whether information about abilities that the government learns in one period can be used in later periods to attain more redistribution than is possible in a one period world. When the government can commit itself to future tax schedules, intertemporal nonstationarity of tax schedules could relax the self-selection constraints and lead to Pareto improvements. The effect of nonstationarity is analogous to that of randomization in one period models.

PD October 1989. **TI** Randomization in Optimal Income Tax Schedules. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E. **AA** Brito: Rice University. Hamilton and Slutsky: University of Florida. Stiglitz: Stanford University. **SR** University of Florida Working Paper in Economics: 89-6; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 43. **PR** no charge. **JE** 323. **KW** Income Tax. Taxes. Taxation.

AB The optimal income tax problem, since it requires self-selection constraints which define nonconvex feasible sets, is one of the many problems in economics for which randomization in the solution may be desirable. For a two-class economy, we characterize the optimal random tax schedules and we present necessary and sufficient conditions for the desirability of local randomization. The standard single-crossing restriction on preferences is not required for these results. We also show that randomization can be beneficial without violating (ex post as well as ex ante) horizontal equity. Lastly, we give an example to demonstrate that the gains from randomization may be large.

Bruce, Neil

PD February 1990. **TI** Time Consistent Policy and the Structure of Taxation. **AA** Queen's University and University of Colorado, Boulder. **SR** Queen's Institute for Economic Research Discussion Paper: 777; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 23. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 323, 921. **KW** Overlapping Generations Model. Government Policy. Taxation. Taxes. Households.

AB It is now well known that "optimal" government policies may not be time consistent--that is, ex post optimal. Time consistency considerations can be shown to reverse the conclusions about the relative merits of different tax structures that are drawn from Ramsey type analysis. In this paper I show with the help of a simple overlapping generations model that this is the case for the "presumption" that direct taxes, for which tax rates can be made contingent on household characteristics, weakly dominate indirect taxes, which are levied on transactions. The ability of the government, with direct taxation, to levy different tax rates on households in different periods of their life cycle introduces a time consistency problem that is not present with the "anonymous" tax rates levied under indirect taxation.

Bruno, Michael

PD November 1989. **TI** Economic Analysis and the Political Economy of Policy Formation. **AA** Bank of Israel. **SR** National Bureau of Economic Research Working Paper: 3183; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 44. **PR** $2.00. **JE** 321, 011, 113. **KW** Economic Policy. Political Economy. Economic Theory.

AB The first part of the paper analyzes the various components (as well as likely failures) in the complex two-way market chain that links the supply of economic theories with the design, sale and implementation of workable economic policies. Among other aspects of this link two points are stressed. One is the relative contribution to knowledge of economists inside the government machine, which by nature is often not diffused to the profession at large. Another very major point is the advancement of knowledge through the reverse link from policies that have worked in practice, often without prior theoretical grounding, to their subsequent rigorous theoretical formulation and empirical testing.

Bufman, Gil

PD March 1990. **TI** Consumption and Asset Returns under Non-Expected Utility: Some New Evidence. **AU** Bufman, Gil; Leiderman, Leonardo. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 5-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 9. **PR** no charge. **JE** 311, 313. **KW** Asset Pricing Model. Expected Utility. Consumption. Asset Returns.

AB This paper implements on quarterly time series data for Israel the orthogonality conditions derived from an intertemporal consumption-based asset pricing model with non-expected utility. The model's restrictions are not rejected by the sample information and there is evidence against the commonly used expected-utility formulation.

Buiter, Willem H.

PD November 1989. **TI** The "Gold Standard Paradox" and Its Resolution. **AU** Buiter, Willem H.; Grilli, Vittorio U. **AA** Yale University. **SR** National Bureau of Economic Research Working Paper: 3178; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 46. **PR** $2.00. **JE** 431. **KW** Currency. Exchange Rates. Devaluation.

AB This paper analyzes Krugman's contention that there is a "gold standard paradox" in the speculative attack literature. The paradox occurs if a country's currency appreciates after it runs out of gold or equivalently if a speculative attack can happen only after the country "naturally" runs out of reserves. We first show that Krugman's paradox is a very general phenomenon which does not require mean reverting processes for the fundamentals and which can be present in discrete time models as well as in continuous time models. We present several specific cases in which the paradox occurs i.e. environments which do not support an equilibrium.

Callen, Jeffrey L.

TI Opportunistic Behavior in Debt Renegotiations. **AU** Bergman, Yaacov Z.; Callen, Jeffrey L.

Calvo, Guillermo A.

PD September 1989. **TI** Credibility and Normal Debt:

Exploring the Role of Maturity in Managing Inflation. **AU** Calvo, Guillermo A.; Guidott, Pablo E. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/73; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** no charge. **JE** 134, 322, 323, 321. **KW** Public Debt. Taxes. Inflation. Fiscal Policy.

AB This paper focuses on the role of debt maturity in managing the government's incentives to use opportunistic inflation to reduce the ex post real value of its nominal liabilities. The maturity structure of government debt is shown to be a powerful instrument to affect the time profile of the inflation tax base and, hence, to mitigate the distortions introduced by time inconsistency on taxation policies. The nature of the optimal policy is shown to be heavily dependent on the type of precommitment enjoyed by policymakers.

Campbell, John Y.

PD October 1989. **TI** Yield Spreads and Interest Rate Movements: A Bird's Eye View. **AU** Campbell, John Y.; Shiller, Robert J. **AA** Campbell: London School of Economics. Shiller: Yale University. **SR** National Bureau of Economic Research Working Paper: 3153; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $2.00. **JE** 313, 311. **KW** Term Structure. Interest Rate. Bonds. Expectations Theory.

AB The expectations theory of the term structure implies that the spread between a longer term interest rate and a shorter term interest rate forecasts two subsequent interest rate changes: the change in yield of the longer term bond over the life of the shorter term bond, and a weighted average of the changes in shorter term rates over the life of the longer term bond. For postwar U.S. data from McCulloch (1987) and just about any combination of maturities between one month and ten years we find that the former relation is not borne out by the data, the latter roughly is. We discuss several possible interpretations of these findings. We argue that they are consistent with a model in which the spread is a multiple of the value implied by the expectations theory.

PD December 1989. **TI** Predictable Stock Returns in the United States and Japan: A Study of Long-Term Capital Market Integration. **AU** Campbell, John Y.; Hamao, Yasushi. **AA** Campbell: Princeton University. Hamao: University of California, San Diego. **SR** National Bureau of Economic Research Working Paper: 3191; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 43. **PR** $2.00. **JE** 441, 132. **KW** Stock Returns. Capital Markets. International Markets. Interest Rates.

AB This paper studies the predictability of monthly excess returns on equity portfolios over the domestic short-term interest rate in the U.S. and Japan during the period 1971:1-1989:3. The paper finds that similar variables, including the dividend-price ratio and interest rate variables, help to forecast excess returns in each country. In addition, in the 1980's U.S. variables help to forecast excess Japanese stock returns. There is evidence of common movement in expected excess returns across the two countries, which is suggestive of integration of long-term capital markets.

TI U.S. Corporate Leverage: Developments in 1987 and 1988. **AU** Bernanke, Ben S.; Campbell, John Y.; Whited, Toni M.

Canova, Fabio

PD October 1989. **TI** Is There a Risk Premium Puzzle in Foreign Exchange Markets?. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-35; Department of Economics, Brown University, Providence, RI 02912. **PG** 35. **PR** no charge. **JE** 431, 441, 411. **KW** Foreign Exchange. Exchange Markets. Exchange Rates.

AB This paper examines the "risk premium puzzle" in foreign exchange markets, i.e., why the size, the variability and the autocorrelation properties of the ex-post forward bias are so different from those of the available theoretical measures of the risk premium. It constructs and simulates a simple general equilibrium monetary model where agents are rational and fundamentals drive exchange rate behavior. It is shown that the model combines low values of the risk aversion parameter with certain nonlinearities in the equilibrium solution to generate a risk premium whose statistical properties match several unconditional and conditional moments of the actual average forward bias on the dollar.

PD November 1989. **TI** An Alternative Approach to Modelling and Forecasting Seasonal Time Series. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-37; Department of Economics, Brown University, Providence, RI 02912. **PG** 29. **PR** no charge. **JE** 132, 212. **KW** Seasonality. Bayesian Models. Forecasting. Autoregressive Models.

AB This paper proposes an alternative methodology for modelling and forecasting seasonal series. The approach is in the Bayesian autoregression tradition and builds seasonality directly into the prior of the coefficients of the model by means of a set of uncertain linear restrictions. In order to illustrate the procedure, it is applied to 10 series. For each series the forecasting performance of a univariate time varying autoregressive model with seasonality built in the prior of the coefficients is then compared with 4 other widely used models.

PD March 1990. **TI** Trade Interdependence and the International Business Cycle. **AU** Canova, Fabio; Dellas, Harris. **AA** Canova: Brown University. Dellas: University of Maryland, College Park. **SR** Brown University Department of Economics Working Paper: 90-12; Department of Economics, Brown University, Providence, RI 02912. **PG** 29. **PR** no charge. **JE** 421, 423, 133, 226, 411. **KW** Business Cycle. World Economy. International Trade. Economic Fluctuations.

AB A stochastic, general equilibrium model of the world economy is developed to analyze the contribution of trade interdependence to international business cycles. We test some of the implications of the money using data from ten major industrial countries and a variety of detrending techniques to calculate the cyclical component of output. We find that the significance of trade in the transmission of economic disturbances across countries is not robust to the choice of the detrending method. In general, the role of trade interdependence is moderate and it has increased in the last fifteen years.

Card, David

TI The Effects of Immigration on the Labor Market Outcomes of Natives. **AU** Altonji, Joseph G.; Card, David.

Cardosa, Eliana

PD November 1989. **TI** Latin American Economic Development: 1950-1980. **AU** Cardosa, Eliana; Fishlow, Albert. **AA** Cardosa: Tufts University. Fishlow: University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3161; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 226, 121. **KW** Latin America. Economic Growth. Developing Countries. Income Distribution.

AB The paper stresses the evolutionary and adaptive experience of Latin American growth between 1950 and 1980, and provides a synthetic view by considering the sources of growth within a simple production framework. Regressions use quinquennial panel data for 18 Latin American countries. They provide an estimate of the net return to investment, of the elasticity of output to labor and of the contribution of other variables with influence on efficiency. The regressions show that Latin American growth varied systematically with trade performance. The paper provides information on the effects of inflation upon per capita income growth in the region. Finally we call attention to the persistent problems of income distribution and poverty.

Casella, Alessandra

PD January 1990. **TI** Participation in a Currency Union. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3220; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $2.00. **JE** 421, 432, 423, 411. **KW** Monetary Policy. International Coordination. Economic Integration. Currency.

AB When countries of different sizes participate in a cooperative agreement, the potential gain from deviation determines the minimum power that each country requires in the common decision-making. This paper studies the problem in the context of a monetary union, multiple countries sharing a common currency, whose very existence requires coordination of monetary policies. In the presence of externalities in the decentralized equilibrium with national currencies, it is shown that a small economy will in general require, and obtain, more than proportional power in the agreement.

Cass, David

PD July 1990. **TI** Indefinitely Sustained Consumption Despite Exhaustible Natural Resources. **AU** Cass, David; Mitra, Tapan. **AA** Cass: University of Pennsylvania. Mitra: Cornell University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-13; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 52. **PR** no charge. **JE** 721, 722, 024. **KW** Consumption. Natural Resources. Exhaustible Resources.

AB In this paper we analyze the feasibility of sustaining uniformly positive consumption forever, even when flows of exhaustible resources are an indispensable input. Our main result is a characterization of an economy's capability for sustaining such consumption -- under quite general maintained assumptions on technology -- in terms of a single, simple capital-resource substitution condition.

Cecchetti, Stephen G.

PD November 1989. **TI** Prices During the Great Depression: Was the Deflation of 1930-32 Really Unanticipated?. **AA** National Bureau of Economic Research and Ohio State University. **SR** National Bureau of Economic Research Working Paper: 3174; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $2.00. **JE** 133, 131, 134. **KW** Depression. Inflation. Business Cycle. Economic Fluctuation.

AB Several explanations for the depth of the Great Depression presume that the -30% deflation of 1930-32 was unanticipated. For example, the debt-deflation hypothesis originally put forth by Irving Fisher is based on the notion that unanticipated deflation increases the burden of nominal debt, adversely affecting the banking system and the aggregate economy. Other theories imply on ex ante real interest rates being low during the period, and so it is essential that the deflation was unanticipated. This paper measures inflationary expectations from data on prices, interest rates and money growth in order to investigate whether the deflation could have been anticipated.

Champsaur, Paul

PD 1989. **TI** Walrasian Exchange Processes. **AU** Champsaur, Paul; Cornet, Bernard. **AA** Champsaur: Direction de la Prevision. Cornet: Universite Paris I Pantheon-Sorbonne. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8930; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 11. **PR** not available. **JE** 021, 213. **KW** Exchange Economy. Prices. Pareto Optimal. Price Adjustment. General Equilibrium Theory.

AB Consider a pure exchange economy, with l commodities and m consumers. A Walrasian exchange process is a C(1) path, which associates to each time t, an allocation x(t) over m consumers and a price system p(t) such that the infinitesimal trade dx(t)/dt over m consumers and the price system p(t) are determined competitively in the associated marginal economy in which the consumers maximize their "marginal" utility subject to their ("marginal") budget constraint. Our main result states that, under standard assumptions, a Walrasian exchange process is a price adjustment process, in the sense that, (i) for each t, x(t) is attainable, (ii) the utility of each consumer is non-decreasing along time, (iii) exchange takes place at the current price p(t), and (iv) when t converges to infinity, x(t) converges to a Pareto optimum x* and p(t) converges to the price system p* which sustains the Pareto optimum x*.

Chandrakantha, M. W. Leslie

PD June 1990. **TI** Effects of Using Dependent and Independent Differences in Tests of Random Walk Models Against Regression Models. **AU** Chandrakantha, M. W. Leslie; Mehta, J. S.; Swamy, P. A. V. B. **AA** Chandrakantha and Mehta: Temple University. Swamy: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 129; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 19. **PR** no charge. **JE** 211. **KW** Random Walk. Regression Models. Power Function.

AB In the practical circumstances in which statistical procedures are applied, little is usually known of the suitability of any model to the data. Ratios of the estimated variances of

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

the first and kth differences of a variable, where k is greater than 1, with nonzero drift or regression models. The powers of these tests are investigated for the normal parent distributions.

Chang, I-Lok

PD August 1990. **TI** Efficient Computation of Stochastic Coefficients Models. **AU** Chang, I-Lok; Hallahan, Charles; Swamy, P. A. V. B. **AA** Chang: American University. Hallahan: U.S. Department of Agriculture. Swamy: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 132; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 15. **PR** no charge. **JE** 211, 214. **KW** Stochastic Coefficients Models. Algorithm. Linear Model. Least Squares Estimators.

AB Paige (1979) has produced a reliable computational approach for solving the generalized linear least squares problem. This approach is used here to produce a numerically stable algorithm for computing stochastic coefficients models. This algorithm is well suited to these models because the matrices appearing in them may be singular and the algorithm is made to handle any rank deficiency.

Chew, S. H.

PD February 1990. **TI** Recursive Utility Under Uncertainty. **AU** Chew, S. H.; Epstein, Larry G. **AA** Chew: Johns Hopkins University and University of California, Berkeley. Epstein: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9005; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 29. **PR** no charge. **JE** 022, 026. **KW** Recursive Utility. Uncertainty. Risk Aversion. Intertemporal Substitution. Infinite Horizon. Utility Theory.

AB This paper provides an axiomatization of recursive utility functions in an infinite horizon stochastic setting. In addition, some recently developed atemporal non-expected utility theories are integrated axiomatically into an intertemporal framework. They key axioms deal with intertemporal consistency and attitudes towards the temporal resolution of uncertainty.

Choudhry, Nurun N.

PD July 1989. **TI** Uncontrolled Markets and the Inflationary Process in a Centrally Planned Economy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/59; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** no charge. **JE** 134, 027, 052. **KW** Inflation. Rationing. Prices. Production. Communism.

AB This paper analyzes the inflationary process in a centrally planned economy which has an uncontrolled market where prices can move more freely. The maintenance of controls over prices and rationing in the economy leads to the emergence of forces that generate inflation in the uncontrolled market, and that cause shrinkage of the controlled economy as resources move into the uncontrolled market. Decontrol of prices and production in the controlled market is the optimal policy. The adoption of this policy facilitates an increase in income and aggregate demand, which raises the equilibrium prices and total production in the economy.

Christensen, Bent Jesper

PD January 1990. **TI** The Exact Likelihood Function for an Empirical Job Search Model. **AU** Christensen, Bent Jesper; Kiefer, Nicholas M. **AA** Christensen: New York University. Kiefer: Cornell University. **SR** Cornell Center for Analytic Economics Working Paper: 90-01; Cornell University, Uris Hall, Floor 4, Ithaca NY 14853-7601. **PG** 43. **PR** not available. **JE** 824, 821. **KW** Search Theory. Unemployment. Employment. Job Search.

AB The exact likelihood functions for a sequence of job search models are analyzed. The optimality condition implied by the dynamic programming framework is fully imposed. When unemployment duration and reemployment wage data are both available, using the optimality condition allows identification of an offer arrival probability separately from an offer acceptance probability. The estimation problem is nonstandard. The shape of the likelihood function in finite samples is considered, along with asymptotic properties of the maximum likelihood estimator.

Christofides, Louis N.

PD November 1989. **TI** Real Wage Determination in Collective Bargaining Agreements. **AU** Christofides, Louis N.; Oswald, Andrew J. **AA** Christofides: University of Guelph. Oswald: Dartmouth College. **SR** National Bureau of Economic Research Working Paper: 3188; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $2.00. **JE** 824, 832. **KW** Wage Determination. Wages. Unemployment. Collective Bargaining.

AB This paper studies the determinants of real wage rates using data on Canadian labor contracts signed between 1978 and 1984. Its results are consistent with Dunlop's neglected (1944) hypothesis that real pay movements are shaped by product price changes (contrary to the predictions of implicit contract theory and other models of wage inflexibility). The level of the unemployment rate is found to lower the real wage level with an elasticity between -0.04 and -0.13, whereas a Phillips Curve specification which relates wage changes to the level of the unemployment rate is not convincingly supported by the data. These results may be seen as consistent with the view that collective bargaining is a form of rent-sharing in which external unemployment weakens workers' bargaining strength.

Chu, Keyoung

TI Fiscal Policy for Stable and Equitable Growth in Latin America. **AU** Tanzi, Vito; Chu, Keyoung.

Chvatal, V.

PD February 1989. **TI** Which Line-Graphs are Perfectly Orderable?. **AA** Rutgers University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89562-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** no charge. **JE** 213. **KW** Orderable Graphs. Polynomial Time Algorithm.

AB We characterize (by forbidden induced subgraphs) those line- graphs which are perfectly orderable. Implicit in our presentation is a polynomial time algorithm for recognizing these graphs.

Chwe, Michael Suk-Young

PD March 1990. **TI** Violence in Incentives: Pain in a Principal-Agent Model. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 871; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 30. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 041, 821, 914. **KW** Slavery. Child Labor. Violence. Principal-Agent Model. Poverty.

AB One reason a person hurts another is to get that person to do something. This paper uses a model to show that threatening pain can be rational and that pain is inflicted upon people who are poor in the sense of having bad alternatives. The model corrects a confusion in previous models of slavery, gives an explanation why child and not adult laborers were beaten during the British industrial revolution, and prompts a discussion of the dangers of rational-choice modelling.

Clement, Jean A. P.

PD August 1989. **TI** The Macroeconomic Impacts of Counterpart Funds. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/63; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** no charge. **JE** 134, 322, 133. **KW** Macroeconomic Policy. Inflation.

AB This paper analyzes the macroeconomic impacts of the creation, accumulation, and use of counterpart funds. It draws attention to the importance of including counterpart funds in the design of macroeconomic policies to ensure their consistency. It shows that the creation or accumulation of counterpart funds in most cases is deflationary while their uses are inflationary. One conclusion is that "united" counterpart funds are more appropriate for countries implementing an adjustment program.

Coats, Warren L. Jr

PD October 1989. **TI** In Search of a Monetary Anchor: A "New" Monetary Standard. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/82; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** no charge. **JE** 134, 432, 311. **KW** Gold Standard. Monetary Theory. Money.

AB This paper explores recent versions of older ideas for stabilizing the value of money based on an independently defined unit of account. The gold standard was such a system, but suffered from gold's fluctuating relative value and the costly need to redeem money for gold. This paper explores monetary standards with relatively constant real values in which the supply of money is market determined by its redeemability for assets equal in value to its valuation basket (rather than for the basket itself). An SDR valuation basket with a constant real value might be widely adopted as a monetary standard.

Cochrane, John H.

PD November 1989. **TI** Explaining the Variance of Price Dividend Ratios. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3157; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 54. **PR** $2.00. **JE** 311, 132. **KW** Dividends. Prices.

AB This paper presents a bound on the variance of the price-dividend ratio and a decomposition of the variance of the price-dividend ratio into components that reflect variation in expected future discount rates and variation in expected future dividend growth. Unobserved discount rates needed to make the variance bound and variance decomposition hold are characterized, and the variance bound and variance decomposition are tested for several discount rate models, including the consumption based model, and models based on interest rates plus a constant risk premium.

Cook, W.

PD May 1989. **TI** On Integer points in Polyhedra. **AU** Cook, W.; Hartmann, M.; Kannan, R.; McDiarmid, C. **AA** Cook: University of Bonn. Hartmann: Johns Hopkins University. Kannan: Carnegie-Mellon University. McDiarmid: University of Oxford. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89574-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** no charge. **JE** 213. **KW** Integer Hull. Polyhedron.

AB We give an upper bound on the number of vertices of PI, the integer hull of a polyhedron P, in terms of the dimension n of the space, the number m of inequalities required to describe P, and the size alpha of these inequalities.

Cooper, Charles A.

PD June 1989. **TI** Perceptions of NATO Burden-Sharing. **AU** Cooper, Charles A.; Zycher, Benjamin. **AA** Rand Corporation. **SR** Rand Report: R-3750; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 43. **PR** not available. **JE** 114. **KW** NATO. Defense Spending. Military Spending.

AB The allocation of burdens and responsibilities within NATO has been a contentious issue since the formation of the alliance. This report explores the reasons that European defense spending is proportionately less than that of the United States, and contrasts the European spending record with their more impressive record in supplying defense resources to the Atlantic Alliance. The analysis makes clear that there are no simple quantitative criteria for assessing burden-sharing performance. Changing perceptions of the Soviet threat, and the forthcoming 1992 change in the European Economic Community, complicate the burden-sharing issue.

Corker, Robert

PD October 1989. **TI** Wealth, Financial Liberalization, and the Demand for Money in Japan. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/85; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** no charge. **JE** 223, 311. **KW** Japan. Money Demand. Money.

AB This paper presents estimates of a demand function for broad money in Japan. The function explains both secular trends in broad money during the 1970s and 1980s and the sharp decline in the income velocity of broad money during 1986-88. The inclusion of wealth and a measure of the return on holding broad money is essential to the specification of the money demand function. Developments in these variables, as opposed to a behavioral shift brought by the rapid pace of financial liberalization, explain the decline in money velocity during 1986-88.

Cornet, Bernard

TI Walrasian Exchange Processes. **AU** Champsaur, Paul; Cornet, Bernard.

Coughlin, Peter J.

PD May 1990. **TI** Majority Rule and Election Models. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-11; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 65. **PR** no charge. **JE** 025. **KW** Election Models. Majority Rule. Social Choice. Voting. Elections.

AB This paper surveys the theoretical work that has been done on majority rule and economic models of elections. This paper reviews the most important results that have been obtained about majority rule as an abstract collective choice rule; covers some models that include additional features that are present in political institutions where majority rule is used; concentrates on some alternative election models and equilibrium concepts; focuses on election models with abstentions and/or candidate uncertainty about voter behavior; and compares and contrasts models where candidates are certain about what the voters' choices will be (contingent upon the choices made by the candidates) and models where they are uncertain about those choices.

PD May 1990. **TI** Electoral Politics, Interest Groups, and the Size of Government. **AU** Coughlin, Peter J.; Mueller, Dennis C.; Murrell, Peter. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-12; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 32. **PR** no charge. **JE** 025, 321, 322. **KW** Electoral Politics. Interest Groups. Government Size. Elections. Lobbying.

AB We begin with an election model that has an equilibrium in which interest groups receive different weights. Building on that model, we then consider how government size responds to a change in one group's influence. We find that an increase in influence per se doesn't cause the government to increase--but an increase in government size does result from an increase in an interest group's strength when government (i) can't change tax shares or (ii) provides a good that benefits one (untaxed group, whose sole concern with policy is with maximizing its consumption of the good). We conclude with some normative implications.

Courant, Paul N.

PD August 1989. **TI** International Trade with Lumpy Countries. **AU** Courant, Paul N.; Deardorff, Alan V. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-4; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 26. **PR** not available. **JE** 941, 411, 823. **KW** International Trade. Mobility. Regional Economics.

AB This paper explores the implications for the pattern of international trade of various differences among regions within countries-what we call lumpiness. It is shown first that if factors of production are immobile among regions, and if they are sufficiently unevenly distributed across these regions, then the pattern of trade of the country as a whole may depart from what it would have been had factors been perfectly mobile. Second, the regional distribution of factors is made endogenous by assuming instead that they are mobile, but that differences now exist among regions in the levels of amenities that either attract labor or assist production. We show that such differences in amenities can cause the endogenous distribution of factors to be sufficiently uneven so as to influence trade. Finally, we introduce nontraded goods, which turn out also to influence trade.

Crabbe, Leland E.

PD February 1990. **TI** Event Risk: An Analysis of Losses to Bondholders and "Super Poison Put" Bond Covenants. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 111; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 34. **PR** no charge. **JE** 521, 313, 311. **KW** Financial Markets. Leveraged Buyout. Corporate Bonds. Bond Market.

AB Event risk generally refers to the risk that the price of an investment-grade bond will fall substantially following a major increase in leverage in the issuer's capital structure. This study uses a sample of 56 long-term, investment-grade bonds issued by industrial firms between 1983 and 1988 that were downgraded to speculative-grade following a capital restructuring. Estimates suggest that holders of downgraded bonds experienced losses of 12.33 percent and that the yields on the downgraded bonds increased 233 basis points. Late in 1988, many investment-grade industrial bonds began to include bond covenants, called "super poison puts," that provide explicit protection against event risk. Estimates indicate that industrial firms have saved about 24 basis points by including event-risk covenants.

Cramer, J. S.

TI A Censored Regression Model of Private Car Use. **AU** de Jong, G. C.; Cramer, J. S.

TI Joint Prediction of Automobile Ownership and Mileage by a Cross-Section Model. **AU** de Jong, G. C.; Boswijk, H. P.; Cramer, J. S.

Crane, Keith W.

PD October 1989. **TI** East Germany's Military: Forces and Expenditures. **AA** Rand Corporation. **SR** Rand Report: R-3726; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 81. **PR** not available. **JE** 114, 124. **KW** Defense Spending. Warsaw Pact. Military Personnel.

AB This report assesses the current and future contribution of the East German armed forces to the Warsaw Pact and attempts to determine whether their role in the Pact has changed in recent years. The study assesses the veracity of East German military spending figures and estimates costs of personnel, procurement of military durables, and arms trade. It compares East German military capabilities with those of Czechoslovakia, Poland, and the Group of Soviet Forces Germany, and finds that with the exception of the East German navy, rates of modernization in these forces have either exceeded or kept pace with those in East Germany. The report also estimates military manpower needs and compares them with demographic projections of 18-year-old cohorts.

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

Cremer, Helmuth

PD 1989. **TI** The Optimal Level and Profile of *Unemployment Insurance Benefits in a Model of Employment* Mismatch.. **AU** Cremer, Helmuth; Marchand, Maurice; Pestieau, Pierre. **AA** Cremer: Virginia Polytechnic Institute and State University. Marchand: Universite Catholique de Louvain. Pestieau: Universite de Liege and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8926; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 26. **PR** not available. **JE** 822, 824. **KW** Unemployment Benefits. Unemployment. Search Model. Employment.

AB The purpose of this paper is to derive the optimal level and profile of unemployment insurance benefits. The analysis rests on a search model in which risk averse job seekers face the possibility of a mismatch between the employment they prefer and the employment they are offered. We show that unemployment compensations are socially desirable and further, when these compensations are allowed to vary with the duration of unemployment, they should decline over time.

PD September 1989. **TI** Intergenerational Transfers Within the Family. **AU** Cremer, Helmuth; Kessler, D.; Pestieau, Pierre. **AA** Cremer: Virginia Polytechnic Institute and State University. Kessler: Ecole des Hautes Etudes en Sciences Sociales. Pestieau: Universite de Liege and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8918; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 16. **PR** not available. **JE** 921. **KW** Family Transfers. Altruism. Consumer Economics.

AB In this paper, we presented a stylized model of private transfers within the family under alternative assumptions as to the nature of relations between parents and children. We then analyze the effectiveness of public education and social security to achieve efficiency when needed.

d'Aspremont, Claude

PD September 1989. **TI** Pricing-Schemes and Cournotian Monopolistic Competition. **AU** d'Aspremont, Claude; Dos Santos Ferreira, Rodolphe; Gerard-Varet, Louis-Andre. **AA** d'Aspremont: Universite Catholique de Louvain. Dos Santos Ferreira: Universite Louis Pasteur. Gerard-Varet: GREQE, Ecole des Hautes Etudes en Sciences Sociales. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8919; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 18. **PR** not available. **JE** 611, 022. **KW** Oligopoly. Cournot Equilibrium. Monopolistic Competition.

AB First in a one-sector oligopoly model this paper proposes a re-interpretation of Cournot equilibrium based on a class of pricing-schemes, defined as coordination mechanisms influenced by individual decisions. More generally the proposed equilibrium concept generalizes both the Cournot equilibrium (for the one-sector case) and monopolistic competition (for the multisectorial case with one firm per sector). An existence result, based on Tarski fix-point theorem, is given in the multisectorial case with several firms per sector.

PD December 1989. **TI** Utilitarian Fundamentalism and Limited Information. **AU** d'Aspremont, Claude; Gerard-Varet, Louis-Andre. **AA** d'Aspremont: Universite Catholique de Louvain. Gerard-Varet: GREQE and Ecole des Hautes Etudes en Sciences Sociales. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8935; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 13. **PR** not available. **JE** 022. **KW** Utility Theory. Incentives.

AB The paper examines Harsanyi's fundamental utility approach and restates the Impersonal Choice Utilitarianism Theorem. Incentive theory is then used to evaluate the result from a pragmatic point of view.

Danker, Deborah

PD January 1990. **TI** International Financial Markets and the U.S. External Imbalance. **AU** Danker, Deborah; Hooper, Peter. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 372; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 55. **PR** no charge. **JE** 313, 431, 433, 441. **KW** Capital Flows. Exchange Rates. Investment. Savings.

AB This paper analyzes movements in the U.S. external imbalance over the 1980s from the perspective of the capital account. It considers the empirical evidence on two competing hypotheses about the causes of the large and persistent net capital inflow during the decade: one that the capital inflow was induced by a substantial increase in the expected rate of return on real fixed investment in the United States relative to other countries, and the other that strong U.S. fiscal stimulus and a declining private savings rate boosted demand for credit in the United States.

Davies, Sally M.

PD January 1990. **TI** Dynamic Price Competition, Briefly Sunk Costs, and Entry Deterrence. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 103; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 36. **PR** no charge. **JE** 611, 022. **KW** Duopoly. Monopoly. Barriers to Entry.

AB This paper examines entry deterrence in a model of dynamic duopoly. Two identical firms play an infinite-horizon, alternating-move price game in which costs are sunk too briefly to convey any advantage to the incumbent firm. If sunk costs are large, entry is always deterred. Moreover, either firm can deter entry and earn from zero to monopoly profits. If sunk costs are large and unequal, the lower-cost firm can consistently act more aggressively, and will earn monopoly profits.

Davis, Steve J.

PD April 1990. **TI** Gross Job Creation and Destruction: Microeconomic Evidence and Macroeconomic Implications. **AU** Davis, Steve J.; Haltiwanger, John. **AA** Davis: University of Chicago. Haltiwanger: University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-6; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 51. **PR** no charge. **JE** 131, 229, 824, 631. **KW** Manufacturing. Employment. Business Cycle. Economic Fluctuations.

AB This paper investigates the connection between the heterogeneity of establishment level employment changes and aggregate fluctuations at business cycle frequencies. Our empirical work exploits a rich data set with approximately 860,000 annual observations and 3.4 million quarterly observations on 160,000 manufacturing establishments to calculate rates of gross job creation, gross job destruction, and their sum, gross job reallocation.

Davutyan, Nurhan

PD November 1989. **TI** Testing Purchasing Power Party: Some Evidence of the Effects of Transaction Costs. **AU** Davutyan, Nurhan; Pippenger, John. **AA** University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 33-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 40. **PR** no charge. **JE** 431, 227. **KW** Purchasing Power Parity. Transaction Costs. Exchange Rates. Price Index.

AB Empirical tests of purchasing power parity often recognize the problems created by simultaneous equations, but seldom recognize the effects of measurement error or transaction costs, presumably because most researchers believe that they are unimportant. We present evidence that shows that measurement error and transaction costs can create serious econometric problems for testing purchasing power parity. One effect of these problems is that conventional tests of purchasing power parity can accept PPP when predictive errors are relatively large and reject it when predictive errors are relatively small.

de Janvry, Alain

TI Labor Contracting and a Theory of Contract Choice in California Agriculture. **AU** Vandeman, Ann; Sadoulet, Elisabeth; de Janvry, Alain.

de Jong, G. C.

PD September 1987. **TI** A Censored Regression Model of Private Car Use. **AU** de Jong, G. C.; Cramer, J. S. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 9/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 26. **PR** no charge. **JE** 933, 921. **KW** Households. Automobiles. Transportation. Consumer Economics.

AB We develop a model for the joint determination of private car ownership and private car use by households. To own a private car is not worth the cost unless permanent annual mileage exceeds a certain minimum; observed annual mileage however differs from permanent mileage because of transitory factors. This model calls for a nonzero Tobit threshold and for an unusual distribution of the disturbances. We estimate its parameters from the 1980 Dutch household budget survey and obtain satisfactory results. The threshold is about 7500 kilometers per year, and the overall income, elasticity of mileage 0.5. We also estimate a variable threshold model. In the case the overall income elasticity is slightly higher. The estimates of the variable threshold model confirm the old idea which says that the higher incomes will have a lower threshold.

PD July 1988. **TI** An Indirect Utility Model of Car Ownership and Private Car Use. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 5/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 25. **PR** no charge. **JE** 933, 921, 132. **KW** Automobiles. Transportation. Households. Consumer Economics.

AB In 1987 we developed a model (de Jong and Cramer, 1987) for the simultaneous determination of private car ownership and mileage. This model lacks the explicit influence of fixed and variable costs. In the present model, which is a utility model, we introduce these costs through the budget restriction. The model allows for the ensuing non-convexity. We present Maximum Likelihood estimates, using data from the Dutch national budget survey of 1985, and some micro-simulation results.

PD July 1988. **TI** Joint Prediction of Automobile Ownership and Mileage by a Cross-Section Model. **AU** de Jong, G. C.; Boswijk, H. P.; Cramer, J. S. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 6/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 20. **PR** no charge. **JE** 933, 921, 212. **KW** Automobiles. Transportation. Households. Consumer Economics.

AB A previously constructed model, which explains car ownership and private car use simultaneously and which was originally estimated on the 1980 Dutch budget survey, is now applied to 1985 in order to obtain validation of this model. Two methods are used: post sample prediction and re-estimation. This exercise raises some general issues of predicting individual discrete choice and of conditional prediction in a simultaneous framework. The main result is that a model which performs rather well at the aggregate level may fail to explain and predict behavior at the level of the individual household.

De Long, J. Bradford

TI Bull and Bear Markets in the Twentieth Century. **AU** Barsky, Robert B.; De Long, J. Bradford.

De Meyer, Bernard

PD November 1989. **TI** Repeated Games and Multidimensional Normal Distribution. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8932; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 29. **PR** not available. **JE** 026, 213. **KW** Repeated Games. Game Theory.

AB If we denote by [(v(p))n] the value of the n-times repeated zero-sum game with incomplete information on one side and by u(p) the value of the average game then the error term [(e(p))n]= [(v(p))n] - cav(u)(p) is known to converge to zero at least as rapidly as 1/(square root of n). In this article we prove that, for a special class of games, [(fee(p))n] = (square root of n)[(e(p))n] converges to some function fee(p) which is related to the multidimensional normal law. This generalizes a result of Mertens and Zamir to more than two states of nature.

Deardorff, Alan V.

TI International Trade with Lumpy Countries. **AU** Courant, Paul N.; Deardorff, Alan V.

Deaton, Angus

PD December 1989. **TI** Saving and Liquidity Constraints. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 3196; National Bureau of

Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 921. **KW** *Consumer Economics. Savings. Households.*

AB This paper is concerned with the theory of saving when consumers are not permitted to borrow, and with the ability of such a theory to account for some of the stylized facts of saving behavior. When consumers are relatively impatient, and when labor income is independently and identically distributed over time, assets act like a buffer stock, protecting consumption against bad draws of income. The precautionary demand for saving interacts with the borrowing constraints to provide a motive for holding assets. If the income process is positively autocorrelated, but stationary, assets are still used to buffer consumption, but do so less effectively, and at a greater cost in terms of foregone consumption. In the limit, when labor income is a random walk, it is optimal for impatient liquidity constrained consumers simply to consume their incomes.

Dekel, Eddie

PD February 1990. **TI** One-Sided Patience With One-Sided Communication Does Not Justify Stackelberg Equilibrium. **AU** Dekel, Eddie; Farrell, Joseph. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-136; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 6. **PR** $3.50. **JE** 026. **KW** Communication. Renegotiation. Repeated Game. Stackelberg Equilibrium.

AB The theory of games (with complete information in which a single patient long-run player faces a succession of short-run opponents cannot plausibly be used to justify the Stackelberg solution concept, because if that player can select which subgame perfect equilibrium is to be played then she can presumably also change her selection. Consequently, while she can choose among one shot Nash outcomes, she cannot achieve the Stackelberg outcome.

PD February 1990. **TI** Existence and Dynamic Consistency of Nash Equilibrium with Non-Expected Utility Preferences. **AU** Dekel, Eddie; Safra, Zvi; Segal, Uzi. **AA** Dekel: University of California, Berkeley. Safra: University of Pennsylvania and Tel Aviv University. Segal: University of Toronto. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-06; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 25. **PR** no charge. **JE** 022, 026. **KW** Expected Utility Theory. Game Theory.

AB There have recently been many generalizations of Expected Utility (EU) theory. These generalizations are concerned with the robustness of the EU model, and with explaining data which conflicts with the EU hypothesis. In order for such generalizations to be applied in economic models there are at least two issues which must be addressed. First, how should interactions among non-EU decision makers be modelled, that is, how is game theory to be extended to non-EU preferences? Second, how are decisions over time to be modelled, in particular, when are non-EU decision makers dynamically consistent? The first concern of the paper is with the effect of dropping Reduction of Compound Lotteries Assumption (RCLA) on game theory. We examine this effect while retaining the other assumptions which in the context of RCLA would imply EU, namely compound independence, continuity, and the preference order axioms (completeness, transitivity, etc.).

Delgado, Miguel A.

PD March 1990. **TI** Semiparametric Specification Testing. **AU** Delgado, Miguel A.; Stengos, Thanasis. **AA** Delgado: Indiana University. Stengos: University of Guelph and Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 778; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 21. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 211, 132. **KW** Nonnested Hypothesis. Specification Test. Monte Carlo Model. Asymptotic Theory.

AB We propose a specification test of a parametrically specified model against a weakly specified alternative. The latter is estimated using k nonparametric nearest neighbors (k-NN) in the context of an artificial regression. We derive the asymptotic distribution under the null hypothesis and under a series of local alternatives. Monte Carlo simulations suggest that the test is quite powerful although it has a tendency to over reject under the null hypothesis.

Dellas, Harris

TI Trade Interdependence and the International Business Cycle. **AU** Canova, Fabio; Dellas, Harris.

Demougin, Dominique M.

PD November 1989. **TI** An Ex-Post Efficient Mechanism for a Principal-Agent Model with Asymmetric Information. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8916; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 31. **PR** no charge. **JE** 022, 026. **KW** Principal-Agent Theory. Asymmetric Information. Adverse Selection.

AB A general consensus from the microeconomic literature is that the introduction of an asymmetry in information affects the distribution of wealth between the different agents as well as the overall efficiency of the system. In the present paper we show that these conclusions are very sensitive to changes in the assumptions of the models. Using a principal-agent model with adverse selection, it is shown that, if both parties can observe ex-post a random variable correlated to the type of the agent, the principal is able to support the first best solution in such a way as to leave in expected value the distribution of wealth unaffected by the asymmetry of information.

PD November 1989. **TI** Costless Revelation of Private Information in a Duopoly. **AU** Demougin, Dominique M.; Tschernig, Rolf. **AA** Demougin: University of Toronto. Tschernig: Ludwig Maximillian Universitat. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8915; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 33. **PR** no charge. **JE** 611, 512. **KW** Asymmetric Information. Duopoly. Management. Corporations. Managerial Economics.

AB We examine a noncooperative duopoly in order to study the consequences of integration versus separation between management and ownership under the assumption of moral hazard and adverse selection. We assert that if the private information are correlated across firms and the players risk neutral the duopoly will behave as if each of the owners were managing their firm.

Devarajan, Shantayanan

PD November 1989. **TI** Pro-Competitive Effects of Trade Reform: Results from a CGE Model of Cameroon. **AU** Devarajan, Shantayanan; Rodrik, Dani. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3176; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 44. **PR** $2.00. **JE** 421, 411, 121. **KW** Trade Policy. International Trade. Comparative Advantage.

AB How likely is trade liberalization to produce efficiency gains in the presence of imperfect competition, scale economies, and higher-than-average wages in the modern sectors--all common features of developing economies? These features create a potential conflict to the extent that traditional notions of comparative advantage would lead us to expect that the modern sectors will be squeezed with liberalization. In this paper we investigate the issue by using an applied general equilibrium model calibrated to Cameroonian data.

Devereux, Michael B.

PD February 1990. **TI** Realistic Cross-Country Consumption Correlations in a Two-Country, Equilibrium, Business Cycle Model. **AU** Devereux, Michael B.; Gregory, Allan W.; Smith, Gregor W. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 774; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 21. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 131, 133, 411. **KW** Consumption. Business Cycle.

AB A well-known feature of one good, multi-agent, Arrow-Debreu economies with identical, additively separable, homothetic preferences is that the consumptions of all agents are perfectly correlated. Such economies are widely used in interpreting business cycles but seem to be inconsistent with observed cross-country correlations of aggregate consumption. This paper provides an example of a two country real business cycle model in which preferences are not separable between consumption and labor supply. The model has a simple closed-form solution, and allows for fluctuations in labor supply in equilibrium. Moreover, it generates correlations between national consumption rates which are close to some of those observed in historical data.

Diamond, Peter

TI The Aggregate Matching Function. **AU** Blanchard, Olivier Jean; Diamond, Peter.

Diebold, Francis X.

PD September 1989. **TI** Forecasting Output with the Composite Leading Index: An Ex Ante Analysis. **AU** Diebold, Francis X.; Rudebusch, Glenn D. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 90; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 17. **PR** no charge. **JE** 133, 131, 132, 226. **KW** Forecasting. Prediction. Economic Indicators. Output.

AB We examine the usefulness of the composite index of leading indicators in the prediction of aggregate economic activity. Unlike previous evaluations, we include a completely ex ante analysis, using the provisional leading index data that were actually available in real time along with rolling parameter estimation. We find a substantial deterioration of forecasting performance when we move from an ex post to an ex ante framework.

PD January 1990. **TI** The Use of Prior Information in Forecast Combination. **AU** Diebold, Francis X.; Pauly, Peter. **AA** Diebold: University of Pennsylvania. Pauly: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9004; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 29. **PR** no charge. **JE** 211, 132. **KW** Prediction. Forecasting. Bayesian Analysis.

AB We develop and illustrate an approach to forecast combination that exploits a key finding: simple averages often, but not always, outperform much more sophisticated "optimal" forecast composites. We use Bayesian shrinkage techniques to allow the incorporation of prior information into the estimation of combining weights; the estimated combining weights are shrunken towards equality, but are not forced to be exactly equal. Instead, the least squares and prior (i.e., arithmetic average) weights then emerge as polar cases for the posterior mean; the exact location depends on prior precision, which can be estimated from the data.

Dominguez, Kathryn Mary

PD December 1989. **TI** Market Responses to Coordinated Central Bank Intervention. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3192; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $2.00. **JE** 431, 441, 311. **KW** Foreign Exchange. Monetary Policy. Central Bank.

AB The scale of unilateral and coordinated intervention in the foreign exchange market by the G-5 countries has become considerably larger over the last few years, following a period in which official U.S. policy was opposed to intervention. This paper examines market responses to official sterilized central bank intervention policy over the period 1985 through 1987. The efficacy of sterilized intervention is hypothesized to depend on the market's belief that central banks both have "inside" information about future monetary policy and the incentive to reveal that information truthfully through intervention signals. Central banks may agree to coordinate their intervention operations in order to influence the market's perception of the relative importance and credibility of own signals.

PD January 1990. **TI** Does Foreign Exchange Intervention Matter? Disentangling the Portfolio and Expectations Effects for the Mark. **AU** Dominguez, Kathryn Mary; Frankel, Jeffrey A. **AA** Dominguez: Harvard University and NBER. Frankel: Harvard University, University of California, Berkeley and NBER. **SR** University of California at Berkeley Working Paper in Economics: 90-133; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 44. **PR** $3.50. **JE** 431, 432, 441. **KW** Foreign Exchange. Risk Premium. Exchange Rates.

AB The time is ripe for a re-examination of the question whether foreign exchange intervention can affect the exchange rate. We attempt to isolate two distinct effects: the portfolio effect, whereby an increase in the supply of marks must reduce the dollar/mark rate (for given expected rates of return) and the additional expectations effect, whereby intervention that is publicly known may alter investors' expectations of the future exchange rate, which will feed back to the current equilibrium price. We estimate a system consisting of two equations, one describing investors' portfolio behavior and the other their formation of expectations, where the two endogenous variables are the current spot rate and investors' expectation of the future spot rate. We use relatively novel data sources: actual daily data on intervention by the Bundesbank, newspaper stories on known intervention, and survey data on investors' expectations. We find evidence of both an expectations effect and a portfolio effect.

Donaldson, J.

PD May 1989. **TI** Anticipation and the Aggregation of Sector-Specific Risks. **AU** Donaldson, J.; Dutta, J. **AA** Donaldson: Columbia University. Dutta: Columbia University and Katholieke Universiteit Leuven. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8929; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 48. **PR** not available. **JE** 131, 111, 023. **KW** Economic Fluctuations. Private Information. Productivity. Growth Model.

AB This paper examines the sole of private information as a source of aggregate fluctuations. We consider an economy where several firms face uncertainty in the form of productivity shocks. In the absence of private information, there are no aggregate effects of these idiosyncratic shocks; output is constant over time. However, if firms can anticipate their individual shocks, the optimal allocation displays aggregate randomness: as a result, output, employment and investment vary cyclically over time. We also show that this model is observationally equivalent to one which assumes that all firms face the same aggregate shock; for each equilibrium path of this model, one can construct a process of "aggregate shocks" which yields the same path at equilibrium.

Dooley, Michael P.

PD June 1989. **TI** Fiscal Policy, Locational Decisions, and Exchange Rates. **AU** Dooley, Michael P.; Isard, Peter. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/49; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** no charge. **JE** 321, 431, 441. **KW** Fiscal Policy. Exchange Rates. International Investment.

AB The paper distinguishes between three different channels through which fiscal policy changes may be transmitted to exchange rates. Based on both the balance of payments identity and empirical observations, it is argued that trade balances and exchange rates may be quite responsive to changes in the relative attractiveness of locating production facilities or storing other "taxable" forms of wealth in different countries. Recognition that fiscal policy has a major influence on asset location decisions may thus be very important for understanding the behavior of exchange rates.

PD July 1989. **TI** A Dynamic Model of Buy-Backs. **AU** Dooley, Michael P.; Symansky, Steven A.; Tryon, Ralph W. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/56; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** no charge. **JE** 443, 433. **KW** External Debt. Public Debt. Debt Buy-Backs.

AB A dynamic framework is utilized to evaluate buy-backs of a country's external debt. The model solves for the price of debt on the basis of expectations concerning the debtor's ability to pay, and upon a variety of assumptions concerning changes in property rights consistent with various debt reduction programs. The importance of these assumptions is illustrated in simulations that relate debt reduction to a conventional balance of payments projection.

PD October 1989. **TI** Tax Credits for Debt Reductions. **AU** Dooley, Michael P.; Helpman, Elhanan. **AA** Dooley: International Monetary Fund. Helpman: Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 3137; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** $2.00. **JE** 323, 322, 321. **KW** Debtor Nation. Government Debt. Public Debt. Taxation.

AB The incentives for domestic investment in debtor countries are influenced by the terms of their external obligations and by the system of taxation utilized to provide government revenue for debt payments. It is well known that existing debt contracts could be altered to improve the incentives for investment but this has proven difficult to accomplish, perhaps because individual creditors have incentives not to agree to such changes. In this paper we show that a simple tax credit scheme that can be implemented unilaterally by the debtor government can overcome at least some of the inefficiencies caused by existing debt contracts.

Dos Santos Ferreira, Rodolphe

TI Pricing-Schemes and Cournotian Monopolistic Competition. **AU** d'Aspremont, Claude; Dos Santos Ferreira, Rodolphe; Gerard-Varet, Louis-Andre.

TI Pricing-Schemes and Cournotian Monopolistic Competition. **AU** d'Aspremont, Claude; Dos Santos Ferreira, Rodolphe; Gerard-Varet, Louis-Andre.

Duffee, Gregory

PD January 1990. **TI** A Primer on Program Trading and Stock Price Volatility: A Survey of the Issues and the Evidence. **AU** Duffee, Gregory; Kupiec, Paul H.; White, A. Patricia. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 109; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 40. **PR** no charge. **JE** 313. **KW** Program Trading. Stock Prices. Stock Market.

AB This paper describes program trading: who does it, how, and why. Although the increase in program trading during the 1980s has been accompanied by an increase in the frequency of very large daily stock price movements, there are no strong theoretical or empirical arguments that support the contention that program trading caused the shifts in volatility in either the cash or futures markets. Program trading has a greater potential to raise very short-term volatility than long-term volatility, but the consequences of short-term volatility for individual investors do not appear to be significant. In addition, some evidence suggests that attempts to discourage program trading in the U.S. will shift program orders or associated futures activity to foreign exchanges.

TI A Securities Transactions Tax: Beyond the Rhetoric, What Can We Really Say?. **AU** White, A. Patricia; Kupiec, Paul H.; Duffee, Gregory.

Duin, Cees W.

PD July 1987. **TI** Reducing the Hierarchical Network

Design Problem. **AU** Duin, Cees W.; Volgenant, Anton. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 10/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 16. **PR** no charge. **JE** 213. **KW** Steiner Tree. Linear Programming. Network Design.

AB The Hierarchical Network Design problem (HNDP) can be seen as a minimum spanning tree problem involving two weight functions. It is shown that the HNDP is a special case of the Directed Steiner Tree Problem. Theorems are given to obtain optimal arcs, that are used in a Lagrangean relaxation of the linear programming model. Reduction tests, reducing the size of the problem graph and/or eliminating variables from this program, are specialized and developed for the HNDP. The presented techniques are illustrated on example problems from the literature.

PD December 1987. **TI** An Edge Elimination Test for the Steiner Problem in Graphs. **AU** Duin, Cees W.; Volgenant, Anton. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 13/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 5. **PR** no charge. **JE** 213. **KW** Steiner Tree. Graph Reduction. Bottleneck Length.

AB It is known that before actually solving the Steiner Problem in Graphs, reduction tests can considerably reduce the problem size, e.g., by eliminating vertices/edges from the graph that are dispensable. One of them, the Least Cost test, eliminates an edge (i,j) if its length exceeds the shortest path length between nodes i and j. This test is much improved by replacing shortest path length with "special distance", a notion based on a min max measure. The "special distance" test also generalizes a known reduction method, using minimum spanning trees. The matrix of special distances can be calculated in the same time complexity order as the matrix of all the shortest path lengths.

Dunsmuir, W. T. M.

PD December 1989. **TI** ABC Analysis in Inventory Control - the Issue of Stability. **AU** Dunsmuir, W. T. M.; Snyder, R. D. **AA** Dunsmuir: Bond University. Snyder: Monash University. **SR** Monash Department of Econometrics Working Paper: 13/89; Department of Econometrics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 4. **PR** no charge. **JE** 522, 213. **KW** Inventory Control. Inventories.

AB The role of ABC analysis in inventory management is questioned. It is suggested that in some applications, particularly in the management of spare parts inventories, there is often insufficient stability in usage patterns to make ABC analysis a worthwhile approach.

Dutta, J.

TI Anticipation and the Aggregation of Sector-Specific Risks. **AU** Donaldson, J.; Dutta, J.

Ebrill, Liam P.

PD September 1989. **TI** Money Demand in Canada. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/77; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** no charge. **JE** 314, 311. **KW** Financial Markets. Demand Functions. Money Demand. Canada.

AB The pace of financial market innovation in Canada quickened in the past decade or so with implications for the empirical relationships between the various monetary aggregates and other economic variables. Against this background, this paper, using an error correction formulation, presents new estimates of the demand functions for real M1, M2, and M2+ balances and concludes that while some reasonable well-behaved money demand functions exist, the interpretation of some of the variables, notably the Canadian Savings Bond variable, is open to question. The total interest elasticities of demand (i.e., including the own rate elasticity) are close to zero raising monetary management questions.

Edwards, Sebastian

PD October 1989. **TI** On the Sequencing of Structural Reforms. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 3138; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** $2.00. **JE** 613, 123, 113. **KW** Regulation. Developing Countries. Developed Countries. Government Policy.

AB Both OECD and developing economies have embarked on structural reforms aimed at dismantling regulations and reducing the extent of distortions affecting different sectors of their economies. Regardless of the marked difference, both groups have to deal with the problem of the appropriate sequencing and speed of reforms. This paper first critically reviews the LDCs' related literature on sequencing and speed of structural reforms drawing out features which are of relevance for OECD economies. The paper then develops a formal framework based on a welfare criterion for evaluating efficiency effects of structural policies paying particular attention to the way in which distortions interact both intra and inter-temporally.

Eichengreen, Barry

PD February 1989. **TI** Dealing with Debt: The 1930s and the 1980s. **AU** Eichengreen, Barry; Portes, Richard. **AA** Eichengreen: University of California, Berkeley. Portes: Birkbeck College. **SR** University of California at Berkeley Working Paper in Economics: 89-104; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 55. **PR** $3.50. **JE** 433, 441, 411. **KW** Debt. Capital Markets. Lending. Debt Crisis. International Markets.

AB The history of foreign lending in the 19th and 20th centuries offers a rich lode of evidence on the operation of international capital markets. The last hundred years have been punctuated by a series of crises -- in the 1870s, 1890s and 1930s to cite three instances -- bearing a striking resemblance to the debt crisis of the 1980s. For the historian, that experience provides an exceptional opportunity to study the long-term evolution of international markets and their adaptation to repeated shocks. For the economist, it provides an opportunity to reflect on how the current debt crisis may be resolved.

PD August 1989. **TI** Phrases in the Development of the International Monetary System. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 89-116; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720.

PG 48. **PR** $3.50. **JE** 431, 432. **KW** Exchange Rates. International Monetary System.
AB The last century divides into four periods characterized by very different degrees of reliance on the exchange rate as an instrument of economic policy. In the heyday of the classical gold standard (1880-1913), exchange rate changes were few and far between. In the interwar period, in contrast, reliance on exchange rate changes was more extensive. With the establishment of the Bretton Woods System after World War II, utilization of the exchange rate instrument again was relatively rare. Since 1971, exchange rate changes have again been more common, although the European Monetary System, which limits the scope for exchange rate changes by its members, represents an important countercurrent. There are two obvious categories of explanation for these successive transformations of international monetary relations. The first emphasizes the role of domestic politics in the formulation of international monetary policies. The other category of explanation emphasizes the role of international factors in the formulation of domestic policies.

PD September 1989. **TI** International Monetary Instability Between the Wars: Structural Flaws or Misguided Policies?. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3124; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** $2.00. **JE** 041, 432, 431. **KW** International Monetary System. Economic History. Exchange Rates.
AB This paper reassesses the history of the international monetary system between the wars. It confirms the generality of several widely held interpretations of recent experience with floating exchange rates. There is a positive association between nominal exchange rate flexibility and nominal exchange rate variability. There is a positive association between nominal exchange rate variability and real exchange rate variability. But policies of intervention which reduce nominal exchange rate variability do not guarantee a proportionate reduction in nominal exchange rate risk or in real exchange rate variability and unpredictability. A credible commitment to a stable intervention rule is needed to deliver these benefits.

PD September 1989. **TI** The Gold Standard Since Alec Ford. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3122; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $2.00. **JE** 047, 044. **KW** Gold Standard. Monetary Policy. Money Markets.
AB This paper surveys studies of the operation of the classical gold standard published subsequent to the appearance of Alex Ford's, "The Gold Standard 1880-1914: Britain and Argentina," in 1962. Contributions tend to fall under two headings: those which emphasize stock equilibrium in money markets (examples of the so-called "monetary approach") and those which emphasize instead stock-flow interactions in bond markets. The paper then addresses the perennial question of how the gold standard worked. A central element of my explanation for the stability of the gold standard at the center is the credibility of the official commitment to gold.

PD October 1989. **TI** Credibility and Cooperation under the Gold Standard. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 89-124; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 16. **PR** $3.50. **JE** 431, 432, 321. **KW** Gold Standard. Monetary Policy. Exchange Rates. International Monetary System.
AB The one feeling shared by all observers of the current international monetary system is dissatisfaction with the performance of floating exchange rates. Even countries like the United States whose political leaders are for ideological reasons favorably inclined toward floating have been forced to abandon policies of benign neglect when exchange rates get out of line. Sporadic intervention is no more popular than benign neglect. It is criticized for creating uncertainty, in part owing to doubts that exchange-market intervention unaccompanied by changes in monetary and fiscal policies can have more than transitory effects. These observations have prompted growing discussion of alternative international monetary arrangements. The menu of options ranges from the Williamson-Miller blueprint for target zones to Richard Cooper's scheme for a world money and Ronald McKinnon's proposal for reestablishment of the gold standard, perhaps without a monetary role for gold.

Engel, Charles

PD November 1989. **TI** Long Swings in the Exchange Rate: Are They in the Data and Do Markets Know It?. **AU** Engel, Charles; Hamilton, James D. **AA** University of Virginia. **SR** National Bureau of Economic Research Working Paper: 3165; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 46. **PR** $2.00. **JE** 431, 132, 131. **KW** Exchange Rates. Economic Forecasting.
AB The value of the dollar appears to move in one direction for long periods of time. We develop a new statistical model of exchange rate dynamics as a sequence of stochastic, segmented time trends. The paper implements new techniques for parameter estimation and hypothesis testing for this framework. We reject the null hypothesis that exchange rates follow a random walk in favor of our model of long swings. Our model also generates better forecasts than a random walk. We conclude that persistent movement in the value of the dollar is a fact that calls for greater attention in the theory of exchange rate behavior.

PD January 1990. **TI** The Constrained Asset Share Estimation (CASE) Method: Testing Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles; Frankel, Jeffrey A.; Froot, Kenneth A.; Rodrigues, Anthony. **AA** Engel: University of Virginia and NBER. Frankel: Harvard University, University of California, Berkeley and NBER. Froot: Harvard University, MIT, and NBER. Rodrigues: Federal Reserve Bank of New York. **SR** University of California at Berkeley Working Paper in Economics: 90-134; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 27. **PR** $3.50. **JE** 313, 132. **KW** CAPM. Stock Market. Market Efficiency. Asset Prices.
AB We apply the method of constrained asset share estimation (CASE) to test the mean-variance efficiency (MVE) of the stock market. This method allows conditional expected returns to vary in unrestricted ways, given investor preferences. We also allow conditional variances to follow an ARCH process. The data estimate reasonably the price of risk, though they are unable to reject risk neutrality. We reject the restrictions implied by MVE, although changing conditional

variances improve statistically upon measured market efficiency. We find that unrestricted asset share and ARCH models help forecast excess returns. Once MVE is imposed, however, this forecasting ability disappears.

Engineer, Merwan

PD November 1989. **TI** Barter and Money, and the Optimality of Legal Restrictions. **AU** Engineer, Merwan; Bernhardt, Dan. **AA** Engineer: University of Guelph. Bernhardt: Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 765; Department of Economics, Queens University, Kingston, Ontario, CANADA K7L 3N6. **PG** 37. **PR** $3.00 Canada; $3.50 U.S. and Foreign. **JE** 023, 311. **KW** Barter. Money Supply.

AB We examine a monetary economy in which there is an absence of the temporal coincidence of wants and households are free to barter. If the growth rate of the money supply is sufficiently small, monetary exchange is preferable. Nevertheless, barter may drive out money exchange even if monetary exchange Pareto dominates. Legal restrictions prohibiting barter exchange may therefore be necessary. With stochastic preferences, both barter and money may coexist; agents barter to supplement monetary exchange when they have an unexpectedly high demand. Again too much exchange may be conducted in barter and legal restrictions on barter are optimal.

Epstein, Larry G.

PD September 1989. **TI** "First Order" Risk Aversion and the Equity Premium Puzzle. **AU** Epstein, Larry G.; Zin, Stanley E. **AA** Epstein: University of Toronto. Zin: Carnegie Mellon University. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8914; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 31. **PR** no charge. **JE** 026, 023. **KW** Risk Aversion. Equity Premium. Uncertainty. Consumption.

AB This paper integrates Yaari's dual theory of choice under uncertainty into a multiperiod context and examines its implications for the equity premium puzzle. An important property of these preferences is that of "first-order risk aversion" which implies, in our model, that the risk premium for a small gamble is proportional to the standard deviation rather than the variance. Since the standard deviation of the growth rate in aggregate consumption is considerably larger than its variance, the model can generate both a small risk-free rate and a moderate equity premium.

TI Recursive Utility Under Uncertainty. **AU** Chew, S. H.; Epstein, Larry G.

Ericsson, Neil R.

TI Evaluating the Predictive Performance of Trade-Account Models. **AU** Marquez, Jaime; Ericsson, Neil R.

Evans, Martin

PD December 1989. **TI** A Modern Look at Asset Pricing and Short-Term Interest Rates. **AU** Evans, Martin; Wachtel, Paul. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-90-3; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 31. **PR** not available. **JE** 131, 134, 133. **KW** Interest Rates. Output. Inflation. Economic Fluctuations.

AB This paper uses modern asset pricing theory to examine the behavior of short-term nominal interest rates over the past 25 years. The analysis investigates whether variation in the stochastic behavior of output and inflation can explain movements in the rate of interest. Our results reveal that much of the month to month movement in nominal interest rates reflects changes in the real rate and the risk premia rather than inflationary expectations.

Evans, William N.

PD April 1990. **TI** Localized Market Power in the U.S. Airline Industry. **AU** Evans, William N.; Kessides, Ioannis N. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-5; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 40. **PR** no charge. **JE** 615, 612. **KW** Market Structure. Airline Industry. Competition. Prices. Public Policy.

AB This paper tests whether the observed dominance of most city-pair markets and airports in the U.S. domestic airline industry by single carriers confers any pricing power on the dominant firms. The results of fixed effects estimation indicate that airport dominance by a carrier does confer upon it substantial pricing power, whereas dominance at the route level seems to confer no such pricing power. Additionally, we find a positive, albeit weak, correlation between both route concentration and price and airport concentration and price. The quantitative importance of airport dominance reveals that the most promising direction for public policy aimed at improving the industry's performance is to ensure equal access to sunk airport facilities.

Faig, Miquel

PD May 1990. **TI** Debt Restructuring and the Time Consistency of Optimal Policies. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9010; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 19. **PR** no charge. **JE** 321, 322, 915. **KW** Debt Restructuring. Fiscal Policy. Consumption. Government Spending. Social Security.

AB Clever debt restructuring insures time consistency of the optimal taxation of consumption goods and labor even if the government chooses the level of public spending, and if present goods can be transformed into future goods. For this result, two types of debt are needed: debt indexed by the after tax consumption prices, and debt indexed by the after tax wage rate. An example of a government liability linked to the wage rate is the initial pension payments of the social security system in many countries. This generalizes Lucas and Stokey (1983).

PD May 1990. **TI** Time Consistency, Capital Mobility and Debt Restructuring in a Small Open Economy. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9009; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 17. **PR** no charge. **JE** 441, 443, 411. **KW** Capital Mobility. Debt Restructuring. Open Economy. Debt.

AB Debt restructuring insures the time consistency of the optimal provision of public services financed by taxes on labor income and consumption in a small open economy with and without constraints to capital mobility. For this result, the government needs two types of debt. In one type, debt is indexed by the CPI, so it promises a consumption good in a future period. In the other type, debt is indexed by the net-of-tax wage rate, so it promises a unit of leisure. Persson and Svensson (1986) showed that with only the first type of debt time consistency could not be insured.

Fare, Rolf

TI Indirect Productivity Measurement. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna.

TI Derivation of Virtual Prices for Undesirable Outputs: A Distance Function Approach. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna; Yaisawarng, Suthathip.

Farmer, Roger E. A.

PD August 1990. **TI** Dynasty: A Simple Stochastic Growth Model. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 598; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 29. **PR** $2.50. **JE** 111, 023. **KW** Intertemporal Model. Growth Theory.

AB This paper combines the two "workhorses" of macroeconomics: the Ramsey model and the overlapping generations model. A new dynasty of infinite horizon families appears every period. Each dynasty is characterized by the same Kreps-Porteus utility functional that I refer to as RINCE, which is an acronym for the characteristic properties of risk neutrality and a constant elasticity of intertemporal substitution. Preferences in this class allow exact solutions to be obtained to the agent's intertemporal choice problem. The solutions to each problem are aggregated across agents to arrive at a low order stochastic difference equation that characterizes equilibria in the economy.

Farrell, Joseph

PD December 1989. **TI** Converters, Compatibility, and the Control of Interfaces. **AU** Farrell, Joseph; Saloner, Garth. **AA** University of California, Berkeley and MIT. **SR** University of California at Berkeley Working Paper in Economics: 89-130; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 38. **PR** $3.50. **JE** 621, 611, 514, 522, 511. **KW** Technology. Adoption.

AB Converters, emulators, or adapters can often make one technology partially compatible with another. We analyze the equilibrium market adoption of otherwise incompatible technologies, when such converters are available, and the incentives to provide them. While market outcomes with converters are often inefficient, we find that, in plausible cases, the availability of converters can actually make matters worse. We also find that when one of the technologies is supplied only by a single firm, that firm may have an incentive to make conversion costly. This may lend some theoretical support to allegations of anticompetitive disruption of interface standards.

TI One-Sided Patience With One-Sided Communication Does Not Justify Stackelberg Equilibrium. **AU** Dekel, Eddie; Farrell, Joseph.

Feldstein, Martin

PD November 1989. **TI** National Saving and International Investment. **AU** Feldstein, Martin; Bacchetta, Phillipe. **AA** Feldstein: National Bureau of Economic Research. Bacchetta: Brandeis University. **SR** National Bureau of Economic Research Working Paper: 3164; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 224, 441. **KW** Capital Flows. Capital Mobility. Savings. Investment.

AB This paper extends earlier work by Feldstein and Horioka on the relation between domestic saving rates and international capital flows or, equivalently, between domestic saving rates and domestic investment. The basic conclusion of the present analysis is that an increase in domestic saving has a substantial affect on the level of domestic investment although a smaller effect than would have been observed in the 1960s and 1970s. The savings retention coefficient for the 1980-86 period is 0.79, down from 0.91 in the 1960s and 0.86 in the 1970s. The more closely integrated economies of the EEC also appear to have more outward capital mobility (i.e., a lower saving retention coefficient) than other OECD countries. There is no support for the view that the estimated saving-investment relation reflects a spurious impact of an omitted economic growth variable.

TI International Trade Effects of Value Added Taxation. **AU** Krugman, Paul; Feldstein, Martin.

Fershtman, Chaim

PD March 1990. **TI** Observable Contracts: Strategic Delegation and Cooperation. **AU** Fershtman, Chaim; Judd, Kenneth L.; Kalai, Ehud. **AA** Fershtman: Tel Aviv University and Northwestern University. Judd: Stanford University. Kalai: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 879; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 17. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 026, 022. **KW** Noncooperative Games. Delegation Game. Duopoly. Common Knowledge.

AB The role of commitment in noncooperative games is well acknowledged and documented. One of the ways to achieve such a commitment is by letting a delegate represent the main player in the game. In such a case, a sophisticated distortion of the delegate's preferences might benefit the principal player. In this paper we study a delegation game in which the players can use agents strategically to play on their behalf and the contracts they sign with them are common knowledge and can be conditioned upon in the agents' game. We show that in such cases every Pareto optimal outcome of the game becomes a subgame perfect Nash equilibrium of the delegation game. We demonstrate this result by discussing the Cournot-type duopolistic game.

Filer, John E.

PD April 1989. **TI** Redistribution, Income, and Voting. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B. **AA** Filer: University of South Alabama. Kenny: University of Florida. Morton: Nicholls State University. **SR** University of Florida Working Paper in Economics: 89-5; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 38. **PR** no charge. **JE** 323, 321, 025. **KW** Voting. Social Choice. Taxation.

AB A model that recognizes the positive association between income and voting found in cross-sectional studies with declining voter turnout is developed and tested. The explanation lies in two factors that are associated with income. One is the time cost of voting which increases with income. Another is the amount of income redistributed throughout the means of government, which is greater for those at the upper end of the income distribution. In the model, candidates compete for votes by offering different tax schedules to different groups of potential voters.

PD July 1989. **TI** Voting Laws, Educational Policies, and Minority Turnout. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B. **AA** Filer: University of South Alabama. Kenny: University of Florida. Morton: Nicholls State University. **SR** University of Florida Working Paper in Economics: 89-7; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 26. **PR** no charge. **JE** 025, 917. **KW** Voting. Social Choice. Discrimination. Segregation.
AB We examine racial differences in voter turnout using U.S. county voting data from the 1948, 1960, 1968, and 1980 presidential elections. Approximately 40 percent of the difference can be attributed to the lingering effects of segregated school systems, voting laws such as poll taxes and literacy tests, and discrimination. The lower quality of education that resulted from segregation and the poll taxes and literacy tests and the passage of the 1965 Voting Rights Act narrowed the racial gap in turnout considerably. By 1980 there was almost no scope for policy to reduce this gap any further.

Fisher, Anthony C.

PD April 1990. **TI** A Model of the Impacts of Water Flows, Hatchery Operations, and Harvest Regulations on the California Central Valley Salmon Fishery. **AU** Fisher, Anthony C.; Hanemann, W. Michael; Keeler, Andrew G. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 532Rev; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 42. **PR** $8.40. **JE** 631, 721. **KW** Hatcheries. Fishing. Natural Resources.
AB In this paper we develop a model to simulate the impacts on the California Central Valley salmon fishery of changes in fresh water flows into and out of the San Francisco Bay Delta. The model also describes interactions among these water flow controls, hatchery operations, and harvest regulation. Traditionally, management of California's fresh water resources and anadromous fisheries have been undertaken separately, in the literature and in practice. We demonstrate the potential gains from a coordinated management approach.

Fishlow, Albert

TI Latin American Economic Development: 1950-1980. **AU** Cardosa, Eliana; Fishlow, Albert.

Flanders, M. June

PD August 1990. **TI** Rules Versus Rules Under the Gold Standard: Peel's Act (The Bank Act of 1844), The Cunliffe Committee and The Bank of England. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 18-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 46. **PR** no charge. **JE** 044, 133, 311, 431. **KW** Monetary Policy. England. Gold Standard.
AB The paper argues that simple unambiguous rules of monetary policy are rare and difficult to formulate. The historical gold standard, from the mid-nineteenth century until the outbreak of World War I, is frequently cited as just such a precise, simple rule. The Bank Act of 1984 (Peel's Act) is supposedly laid down the rule for the Bank of England to follow; the Cunliffe Committee in 1918 gave somewhat different interpretation to the prewar functioning of the mechanism; the reality, as described by Sayers and others, was different again. I conclude that the rule was not unambiguous and that the functioning of the system involved the monetary authorities in a high degree of discretion.

Flood, Robert

PD October 1989. **TI** Risk Neutrality and the Two-Tier Foreign Exchange Market: Evidence from Belgium. **AU** Flood, Robert; Marion, Nancy. **AA** Flood: International Monetary Fund. Marion: Dartmouth College. **SR** International Monetary Fund Working Paper: WP/89/83; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** no charge. **JE** 431, 432, 311. **KW** Foreign Exchange. Exchange Rates. Current Account. Monetary Policy.
AB In this paper we develop and test a model of a utility maximizing representative agent operating in the Belgium-Luxembourg two-tier foreign exchange market. Our tests examine and fail to reject a risk neutral representative agent utility function. When we combine a risk neutral utility function with goods arbitrage we end up with the implication that the proportionate spread between the current account and financial exchange rates is not influenced by domestic policy. This implication is not rejected in some additional tests relating the Belgium-Luxembourg two-tier market spread to some Belgian policy variables and some foreign variables.

Florens, Jean-Pierre

PD December 1989. **TI** Invariance Arguments in Bayesian Statistics. **AU** Florens, Jean-Pierre; Mouchart, Michel; Rolin, Jean-Marie. **AA** Florens: GREMAQ, Universite des Sciences Sociales. Mouchart and Rolin: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8937; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 18. **PR** not available. **JE** 211. **KW** Bayesian Statistics. Asymptotic Theory. Statistics.
AB Invariance arguments are used, in Bayesian statistics, for at least, three types of questions: definition and properties of so-called non-informative prior distributions, integration of nuisance parameters using a mutually sufficient pair of statistics and parameters, and asymptotic questions. In this paper, the concept of invariance, standard in measure theory, is extended to the conditional case and is shown to provide a suitable framework to define invariant Bayesian experiments, even in the case of improper prior distributions. This framework is then used to successively deal with the three types of invariance questions met in Bayesian statistics.

Frank, Richard G.

PD October 1989. **TI** Market Forces and the Public Good: Competition Among Hospitals and Provision of Indigent Care. **AU** Frank, Richard G.; Salkever, David S.; Mitchell, Jean. **AA** Frank and Salkever: Johns Hopkins University. Mitchell: Florida State University. **SR** National Bureau of Economic Research Working Paper: 3136; National

Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 913. **KW** Hospitals. Medical Care. Health Care.

AB The research presented here focuses on the impact of competitive forces on the provision of social or merit goods by non-profit hospitals. We specifically examine the behavior of altruistic non-profit hospitals in the supply of charity care. The effects of competitive pressures and past charity care provision on the supply of philanthropic donations to non-profit hospitals are also examined. Empirical models of the supply of donations and charity care are specified and estimated using data on non-profit hospitals in Florida for the years 1980-1984. The coefficient estimates imply strong income effects in the charity care supply equations.

Frankel, Jeffrey A.

PD November 1989. **TI** Japanese Finance: A Survey. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3156; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 67. **PR** $2.00. **JE** 122, 521, 522, 441. **KW** Japan. Financial Markets. Capital. Corporations. Capital Mobility.

AB Five sets of questions puzzle observers of Japanese financial markets, particularly from the U.S. viewpoint. They concern: the apparently low corporate cost of capital, low real interest rates, high equity prices, high land prices, and the rising real yen. The paper surveys writings on these issues, in brief enough form that one can see how the questions fit together. Topics covered include: the leverage of Japanese firms, dividend payout, equity price/earnings ratios, corporate taxation, cross-ownership, land price/rental ratios, speculative bubbles, the household saving rate, international capital mobility, expected real appreciation of the yen, the lower cost of financing investment internally and through "main bank" relationships, and the move to a more market oriented system as these relationships break down.

PD January 1990. **TI** International Nominal Targeting (INT): A Proposal for Overcoming Obstacles to Policy Coordination. **AA** Harvard University and University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-135; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 56. **PR** $3.50. **JE** 421, 423, 432, 411. **KW** International Coordination. Policy Coordination. Monetary Policy.

AB The paper reviews the obstacles to successful international macroeconomic policy coordination, and then offers a proposal for coordination that is designed to have the best chance of overcoming these obstacles: an international version of nominal GNP targeting. There are three sorts of obstacles to coordination: uncertainty, enforcement, and inflation-fighting credibility. The paper argues that International Nominal Targeting (INT) is the best choice for nominal anchor, as well as the best choice for the performance criterion by which compliance with international agreements can be monitored. Nominal GNP (or, better yet, nominal demand) is superior to other candidates such as MI as a candidate for the nominal variable on which policy makers should focus, because it is far more robust to velocity shifts and other uncertainties.

TI The Constrained Asset Share Estimation (CASE) Method:
Testing Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles; Frankel, Jeffrey A.; Froot, Kenneth A.; Rodrigues, Anthony.

TI Does Foreign Exchange Intervention Matter? Disentangling the Portfolio and Expectations Effects for the Mark. **AU** Dominguez, Kathryn Mary; Frankel, Jeffrey A.

PD January 1990. **TI** And Now Won/Dollar Negotiations? Lessons From the Yen/Dollar Agreement of 1984. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-131; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 22. **PR** $3.50. **JE** 431, 432. **KW** Korea. Financial Liberalization. Financial Markets. Foreign Exchange.

AB In 1984, a U.S. Treasury campaign for the liberalization of Japanese financial markets came to fruition in the form of the Yen/Dollar Agreement with Japan's Ministry of Finance. In 1990 the Treasury is launching "Won/Dollar talks," with the aim of bringing about the liberalization of Korean financial markets and the appreciation of the won. This paper reviews the political origins and economic effects of the yen/dollar campaign, and attempts to draw lessons for the current episode. The conclusion is that, while liberalization in Asian countries is a good thing overall, it may be a mistake to identify such liberalization with appreciation of the Asian currencies against the dollar and with the economic interests of the United States. Furthermore, there is nothing in free market principles that says that Korea should refrain from intervening in its foreign exchange market.

PD March 1990. **TI** Japanese Finance: A Survey. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-137; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 87. **PR** $3.50. **JE** 521, 441, 431. **KW** Japan. Capital. Financial Liberalization. Financial Markets. Capital Mobility.

AB Five sets of questions puzzle observers of Japanese financial markets. They concern: the apparently low corporate cost of capital, low real interest rates, high equity prices, high land prices, and the rising real yen. The paper surveys writings on these issues. Topics covered include: the leverage of Japanese firms, dividend payout, equity price/earnings ratios, corporate taxation, cross-ownership, land price/rental ratios, speculative bubbles, the household saving rate, international capital mobility, expected real appreciation of the yen, the lower cost of financing investment internally and through "main bank" relationships, and the move to a more market oriented system as these relationships break down.

Frazis, Harley

PD August 1989. **TI** Is There a College Diploma Effect?. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 196; Bureau of Labor Statistics, 441 G Street NW, Washington, DC 20212. **PG** 50. **PR** no charge. **JE** 851, 912. **KW** Human Capital. Selection Bias. Self-Selection. Education.

AB This paper evaluates the evidence for a college diploma effect, a particularly high return to completing college, in the National Longitudinal Study of Young Men (NLS) and the 1970 Census. An ordered probit model of schooling choice is developed to correct for selection bias. Selection bias does not account for the diploma effect; this result does not appear sensitive to the exact specification of the model. While diploma effects estimated using the NLS are substantial but only sporadically significant, effects estimated by pooling the NLS and the 1970 Census are large and consistently significant.

Freeman, Richard B.

TI The Declining Economic Position of Less-Skilled American Males. **AU** Blackburn, McKinley L.; Bloom, David E.; Freeman, Richard B.

PD November 1989. **TI** The Impact of Industrial Relations Legislation on British Union Density. **AU** Freeman, Richard B.; Pelletier, Jeffrey. **AA** Freeman: Harvard University and National Bureau of Economic Research. Pelletier: United Food & Commercial Workers. **SR** National Bureau of Economic Research Working Paper: 3167; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** $2.00. **JE** 831. **KW** Trade Unions. Unions. England.
AB The unionized share of the work force changed markedly in the United Kingdom between the 1970s and 1980s. In the 1970s density rose steadily, making the United Kingdom the most heavily organized large OECD country. In the 1980s by contrast, density fell by 1.4 percentage points per annum -- a faster drop than in the rapidly de-unionizing U.S. or in Japan. What explains this turnaround - the severe recession of the 1980s? Shifts in the composition of employment from unionized manufacturing to services? The Thatcher government's industrial relations legislation? In this paper we investigate these questions with a quantitative analysis of 1945-1986 changes in British union density.

Freeman, Scott

PD January 1990. **TI** Welfare Analysis in Dynastic Economies. **AA** University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 2-90; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 23. **PR** no charge. **JE** 111, 023. **KW** Bequests. Altruism. Welfare Theory. Social Welfare.
AB The paper studies the welfare implications of interpreting dynasties of finitely lived altruistic parents as infinitely lived representative agents. It demonstrates that representative agent models mislead welfare analysis by reporting only a single optimum, ignoring all other Pareto optima, including the golden rule. The sole optimum it reports is shown to be social optimum only for a restricted set of social welfare orderings.

Froot, Kenneth A.

TI The Constrained Asset Share Estimation (CASE) Method: Testing Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles; Frankel, Jeffrey A.; Froot, Kenneth A.; Rodrigues, Anthony.

TI The Constrained Asset Share Estimation (CASE) Method: Testing Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles; Frankel, Jeffrey A.; Froot, Kenneth A.; Rodrigues, Anthony.

Gabszewicz, Jean J.

PD July 1989. **TI** Quality Uncertainty and Price Competition. **AU** Gabszewicz, Jean J.; Grilo, Isabel. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8921; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 33. **PR** not available. **JE** 611, 022. **KW** Prices. Duopoly. Differentiated Products.
AB In this paper we analyze the properties of price equilibria in a duopoly market where firms sell vertically differentiated products, consumers being uncertain about which firm sells which quality. Both existence and properties of price equilibria are characterized by the beliefs of the consumers' population about the distribution of quality between firms.

PD November 1989. **TI** Capacity Adjustments Under Demand Fluctuations: An Example. **AU** Gabszewicz, Jean J.; Michel, Philippe. **AA** Gabszewicz: Universite Catholique de Louvain. Michel: Universite Paris I and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8925; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 7. **PR** not available. **JE** 641, 522, 131, 133. **KW** Economic Capacity. Business Investment. Investment. Market Demand.
AB In a recent paper we have analyzed capacity adjustments in a competitive economy, assuming market demand to be stationary over time. Here we assume on the contrary that market demand fluctuates and, by means of an example, we study the investment cycles observed under alternative assumptions on firms' investment behavior.

PD December 1989. **TI** Location. **AU** Gabszewicz, Jean J.; Thisse, Jacques-Francois. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8928; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 35. **PR** not available. **JE** 611, 941, 022, 026. **KW** Spatial Theory. Price Discrimination. Prices. Differentiated Products. Market Structure.
AB This paper provide a survey of the main contributions recently developed in spatial competition. Two types of games are considered: (i) inside location games where firms choose their location within the residential area; (ii) outside location games where firms choose their location outside the residential area. Theses two families of games are akin to horizontal and vertical product differentiation respectively. For each type of game, we consider successively the price competition and the price-location problems. Two pricing policies are studied, i.e., mill pricing and spatial discriminatory pricing. Finally, we discuss the location problem under parametric given prices.

Gagnon, Joseph E.

TI The Global Economic Implications of German Unification. **AU** Alexander, Lewis S.; Gagnon, Joseph E.

Galor, Oded

PD September 1989. **TI** Income Distribution and Macroeconomics. **AU** Galor, Oded; Zeira, Joseph. **AA** Galor: Brown University. Zeira: The Hebrew University of Jerusalem and Brown University. **SR** Brown University Department of Economics Working Paper: 89-25; Department of Economics, Brown University, Providence, RI 02912. **PG** 26. **PR** no charge. **JE** 023, 133, 226. **KW** Income Distribution. Capital Market. Growth Model. Economic Growth.
AB This paper analyzes the role of income distribution in

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

macroeconomic analysis. The study demonstrates that long-run equilibrium depends on the initial distribution of income. In accordance with empirical evidence concerning the correlation between income distribution and output, an economy that is characterized by a relatively equal distribution of wealth is likely to be wealthier in the long run. The study may, therefore, provide an additional explanation for the persistent differences in per-capita output across countries. Furthermore, the paper may shed light on cross-countries differences in macroeconomic adjustment to aggregate shocks.

PD October 1989. **TI** Technological Breakthroughs and Development Traps. **AU** Galor, Oded; Tsiddon, Daniel. **AA** Galor: Brown University. Tsiddon: Hebrew University. **SR** Brown University Department of Economics Working Paper: 89-31; Department of Economics, Brown University, Providence, RI 02912. **PG** 9. **PR** no charge. **JE** 111, 112, 023. **KW** Economic Growth. Technology. Economic Development. Growth Theory.

AB This paper attempts to explain why countries which maintain identical economic conditions at different points in time do not necessarily enjoy a similar path of output growth thereafter. The paper develops a model where timing is a significant element of economic growth. The analysis indicates that the steady-state equilibrium in a "leading" country is unique, whereas equilibrium in a country that lags behind is path dependent. Technological progress in the advanced country presents a choice of technology in the "following" country that affects its dynamic evolution and traps the economy in a lower steady-state equilibrium.

PD February 1990. **TI** The Probability of Return Migration, Migrants' Work Effort, and Migrants' Performance. **AU** Galor, Oded; Stark, Oded. **AA** Galor: Brown University. Stark: Harvard University and Bar-Ilan University. **SR** Brown University Department of Economics Working Paper: 90-5; Department of Economics, Brown University, Providence, RI 02912. **PG** 7. **PR** no charge. **JE** 823, 824, 813. **KW** Migration. Labor Supply. Wage Differentials. Immigration.

AB This paper demonstrates that differences in earnings between migrants and the native population may reflect differences in incentives rather than differences in characteristics. The analysis indicates that in the presence of a positive probability of return migration, migrants' work effort is higher than that of comparable native-born workers. This differential may explain why, even if all workers are perfectly homogeneous in skills, migrants often outperform the native-born workers in the receiving economy.

Gandal, Neil

PD August 1989. **TI** Coordinating Research Through Research Joint Ventures. **AU** Gandal, Neil; Scotchmer, Suzanne. **AA** Gandal: Boston University. Scotchmer: University of California, Berkeley and Hoover Institution. **SR** Stanford Hoover Institute Working Paper in Economics: E-89-27; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 47. **PR** not available. **JE** 621. **KW** Joint Ventures. Patents. Patent Law. R&D. Research.

AB We ask to what extent joint ventures assembled by a mechanism designer can improve on the crude incentives for research provided by patent law. In a simple model, we show that, when research qualities are unobservable, there is a balanced budget mechanism that achieves the first best, and there is also a mechanism without budget balance that holds firm to their reservation payoffs, while implementing first best actions. Therefore, a profit-maximizing contract giver will exhaust all potential for improving efficiency. We define a mechanism for the case that qualities and actions are both unobservable. First best actions can be implemented with unobservable actions, but not necessarily with budget balance.

Garfinkel, Michelle R.

PD January 1990. **TI** Strategic Discipline in Monetary Policy with Private Information: Optimal Targeting Periods. **AU** Garfinkel, Michelle R.; Oh, Seonghwan. **AA** Garfinkel: Federal Reserve Bank of St. Louis. Oh: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 584; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 27. **PR** $2.50. **JE** 311, 023. **KW** Central Bank. Monetary Policy. Money Growth. Monetary Authority.

AB This paper analyzes the optimal choice of the length of time over which the monetary authority targets money growth, in a setting where the monetary authority's lack of credibility potentially gives rise to an inflationary bias.. When the monetary authority has some private information, e.g., a private forecast, that obscures the relevance of reputational considerations and the effectiveness of legislation to enforce the efficient policy, the targeting procedure serves as a device to diminish the inflationary bias while providing the monetary authority limited flexibility to react to its private information. The analysis strengthens the monetarist proposition that the monetary authority should follow a strict rule. Even when the monetary authority has a fairly accurate forecasting technology, the optimal targeting period can be very short, implying that limited or no flexibility in monetary policy would be optimal.

PD June 1990. **TI** When and How to Talk: Credibility and Flexibility in Monetary Policy with Private Information. **AU** Garfinkel, Michelle R.; Oh, Seonghwan. **AA** Garfinkel: Federal Reserve Bank of St. Louis. Oh: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 593; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 23. **PR** $2.50. **JE** 311, 023. **KW** Credibility. Incentives. Monetary Policy. Private Information.

AB This paper analyzes how noisy or imprecise announcements might partially remove the inefficiencies resulting from the credibility problem in monetary policy when the presence of non-verifiable private information adds another dimension to that problem. The analysis finds that imprecise or noisy announcements can be a meaningful form of communication only if it is possible to "tie" the hands of the monetary authority somehow. To the extent that it is otherwise efficient for policy to react to the monetary authority's private information, such announcements can be extremely costly in terms of the sacrifice in flexibility required to make them relevant. Surprisingly, the conditions under which the monetary authority can make more precise announcements are identical to those under which the monetary authority is less likely to prefer the noisy announcement equilibrium.

Garner, Thesia I.

PD September 1989. **TI** Consumer Expenditures and Inequality: An Analysis Using the Gini Coefficient. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 197; Bureau of Labor Statistics, Office of Prices and Living Conditions, 600 E Street NW, Room 4013, Washington, DC 20212. **PG** 19. **PR** no charge. **JE** 921. **KW** Households. Consumer Expenditures. Consumer Economics.

AB Consumption expenditures are evaluated in terms of the inequality of these expenditures across consumer units. The Gini coefficient is used as the measure of inequality. Gini coefficients are produced for the total population sample and for demographic subgroups. In addition, the Gini coefficient is decomposed by budget components, using the Lerman and Yitzhaki covariance method, to examine the effects of changes in expenditures on overall inequality. Data from the U.S. Consumer Expenditure Survey Interview for 1987-88 are analyzed. An overall Gini of .33 results; this Gini is slightly lower than estimates based on income. Differences in inequality across demographic subgroups exist. The decomposition of the Gini by budget components reveals that shelter accounts for the largest contribution to overall inequality in expenditures. Holding all else constant, reductions in inequality can be achieved by increasing expenditures for food, fuel and utilities, private transportation, and medical care and services.

Garrett, Mario D.

TI Insider Power in Wage Determination. **AU** Blanchflower, David G.; Oswald, Andrew J.; Garrett, Mario D.

Gatsios, Konstantine

PD July 1989. **TI** The Welfare Effects of Imperfect Harmonization of Trade and Industrial Policy. **AU** Gatsios, Konstantine; Karp, Larry. **AA** Gatsios: University of Cambridge. Karp: University of Southampton. **SR** University of Cambridge Economic Theory Discussion Paper: 138; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 44. **PR** $4.00, checks payable to University of Cambridge. **JE** 422, 423, 421. **KW** Trade Policy. Imperfect Competition. Customs Union. Industrial Policy. Oligopoly.

AB Partial cooperation in setting trade policy may be worse than no cooperation for countries who form a customs union. The paper investigates three situations where this is likely to occur. First, if the countries forming the union comprise too small a percentage of the noncompetitive sector of the industry, their cooperation may be disadvantageous in oligopolistic industries. Second, even if the countries forming the union comprise the entire noncompetitive sector of industry, cooperation on trade policy may be disadvantageous if industrial policy (e.g., investment subsidies) are chosen non-cooperatively.

PD July 1989. **TI** Winners and Losers from Anti-Merger Laws. **AU** Gatsios, Konstantine; Karp, Larry. **AA** Gatsios: University of Cambridge. Karp: University of Southampton. **SR** University of Cambridge Economic Theory Discussion Paper: 139; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 34. **PR** $4.00, checks payable to University of Cambridge. **JE** 522, 611. **KW** Mergers. Cartels.

AB We study a model in which, in the absence of anti-merger laws, a merger which includes all non-competitive firms always occurs. However, the merger can occur (in the absence of laws which prohibit it) only after the firms are formed, which in the present context means after investment has occurred. The investment decision is always undertaken noncooperatively, but with the rational anticipation of whether or not a merger will subsequently occur. The anticipation of a merger alters the incentives for investment.

Gatto, Joseph

PD April 1990. **TI** A Random Coefficient Qualitative Choice Model of Telecommunications Demand: Results and Conjectures. **AU** Gatto, Joseph; Kelejian, Harry; Stephan, Scott. **AA** Gatto and Stephan: AT&T Communications. Kelejian: University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-7; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 12. **PR** no charge. **JE** 211. **KW** Random Coefficients. Qualitative Choice. Panel Data.

AB A panel data random coefficient qualitative choice model is considered. An estimation procedure for the model's realized coefficient vectors as well as the parameters of their generating process is suggested. Large sample results are given for certain configurations of the sample. For purposes of stimulating further research, conjectures are given concerning the large sample properties of the proposed estimators for other configurations of the sample.

Geanakoplos, John

TI Common Knowledge of an Aggregate of Expectation. **AU** Nielsen, Lars Tyge; Brandenburger, Adam; Geanakoplos, John; McKelvey, Richard; Page, Talbot.

TI Common Knowledge of an Aggregate of Expectation. **AU** Nielsen, Lars Tyge; Brandenburger, Adam; Geanakoplos, John; McKelvey, Richard; Page, Talbot.

Gerard-Varet, Louis-Andre

TI Utilitarian Fundamentalism and Limited Information. **AU** d'Aspremont, Claude; Gerard-Varet, Louis-Andre.

Gertler, Mark

PD December 1989. **TI** Taxation, Corporate Capital Structure and Financial Distress. **AU** Gertler, Mark; Hubbard, R. Glenn. **AA** Gertler: University of Wisconsin, Madison. Hubbard: Columbia University. **SR** National Bureau of Economic Research Working Paper: 3202; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $2.00. **JE** 511, 514, 611, 521, 522. **KW** Corporations. Corporate Debt. Capital Stock. Corporate Strategy.

AB Is corporate leverage excessive? Is the tax code distorting corporate capital structure decisions in a way that increases the possibility of an economic crisis owing to "financial instability"? Answering these kinds of questions first requires some precision in terminology. In this paper, we describe the cases for and against the trend toward high leverage, and evaluate the role played by taxation. While provision of proper incentives to managers may in part underlie

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

the trend to the debt, high leverage may in practice be a blunt way to address the problem, and one which opens up the possibility for undue exposure to the risks of financial distress.

Ghosal, Vivek

PD October 1989. **TI** Factor Substitutability, Competitiveness and Firms' Input Choices Under Demand Uncertainty. **AA** University of Florida. **SR** University of Florida Working Paper in Economics: 89-9; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 31. **PR** no charge. **JE** 635, 226. **KW** Factor Productivity. Manufacturing. Firm Size.

AB Models of firm behavior show that depending on the nature of elasticity of substitution between capital and labor, firm size and product market competitiveness, demand uncertainty may result in firms operating with a lower capital-labor ratio. These predictions have potentially important implications for the analysis of factor demand and factor productivity. Our econometric analysis of the U.S. manufacturing sector shows that data contains substantial evidence of a negative relationship between demand uncertainty and the capital-labor ratio under various combinations of firm size and elasticity of substitution.

Gibbons, Robert

PD November 1989. **TI** Does Unmeasured Ability Explain Inter-Industry Wage Differences?. **AU** Gibbons, Robert; Katz, Lawrence. **AA** Gibbons: Massachusetts Institute of Technology. Katz: Harvard University. **SR** National Bureau of Economic Research Working Paper: 3182; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $2.00. **JE** 851, 824, 821. **KW** Wage Differentials. Human Capital. Wages.

AB This paper provides empirical assessments of two leading explanations of measured inter-industry wage differentials: (1) true wage differentials exist across industries, and (2) the measured differentials simply reflect unmeasured differences in workers' productive abilities. First, we summarize the existing evidence on the unmeasured-ability explanation, which is based on first-differenced regressions using matched Current Population Survey (CPS) data. Second, we construct a simple model in which unmeasured ability is not equally valued in all industries; instead, there is matching. Third, we propose two new empirical approaches designed to minimize these endogeneity problems.

Gilles, Christian

PD October 1989. **TI** On the Arbitrage Pricing Theory. **AU** Gilles, Christian; Le Roy, Stephen F. **AA** Gilles: Carleton University. Le Roy: University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 35-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 23. **PR** no charge. **JE** 313, 311. **KW** Arbitrage. Securities. Asset Pricing. Portfolios.

AB The Arbitrage Pricing Theory relates the expected rates of return on a sequence of primitive securities to their factor exposures, suggesting that factor risk is of critical importance in asset pricing. However, we show that if the sequence of primitive returns is replaced by a sequence of returns on portfolios formed from the primitive securities, then the factor subspace is arbitrary. The implication is that the theorems relating expected returns to factor risk require substantial reinterpretation. Our reinterpretation consists of a demonstration that exact and approximate factor pricing do not constitute substantive characterizations of asset pricing.

Ginsburgh, Victor

PD 1989. **TI** Structural Shocks and Investment Subsidies in an Overlapping Generations Model with Perfect Foresight. **AU** Ginsburgh, Victor; Sneessens, Henri. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8931; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 19. **PR** not available. **JE** 023, 522, 613, 323. **KW** Investment. Capital. Overlapping Generations Model. Subsidies.

AB The paper is concerned with investment subsidies and their effect on structural adjustments. We construct a two-sector overlapping generations model where consumers live for two periods, both consumers and firms have perfect foresight, and prices and wages are perfectly flexible, so that the economy is always at full-employment. The structural shock is represented by an unanticipated permanent change in consumers' preferences. This change induces firms to scrap part of their capital stock in one sector and to invest in the other. Because adjustment costs make capital imperfectly mobile across sectors, this structural change implies a loss of welfare for the generations living at the moment of the shock. The question is whether the scrapping and investment rates generated by the market are optimal, or whether there is room for government intervention.

Giovannini, Alberto

PD December 1989. **TI** Time-Series Tests of a Non-Expected Utility Model of Asset Pricing. **AU** Giovannini, Alberto; Jorian, Phillipe. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3195; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 22. **PR** $2.00. **JE** 313, 311. **KW** Asset Pricing Model. Stock Market. Stock Prices. Dynamic Model.

AB This paper provides two alternative estimation and testing procedures of a representative agent model of asset pricing which relies on a particular parametrization of non-expected utility preferences. The first is based on maximum likelihood estimates, supplemented with an explicit model of time varying first and second moments (where the time variation of second moments is modelled with an ARCH process); the second is based on generalized method of moments estimates. We perform our tests on a data set that includes monthly observations of rates of return on US stock prices and US consumption of nondurables and services.

Glomm, Gerhard

PD July 1990. **TI** A Theory of Resource Allocation Under Communal Property Rights. **AU** Glomm, Gerhard; Lagunoff, Roger. **AA** Glomm: University of Virginia. Lagunoff: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-15; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 29. **PR** no charge. **JE** 027. **KW** Property Rights. Coalitions.

Private Property.
AB This paper develops a model to study communal property rights (CPR) regimes, regimes in which goods are owned by coalitions rather than by individuals only. We compare allocations resulting from such regimes with those that result from regimes of purely private property. For each good we consider a partition of the set of agents; each partition element defines a coalition that shares joint claims to that good whether currently owned or eventually received in trade. We define the Communal Property Rights Core, a core concept we use to analyze these structures. In the CPR Core a coalition can block only with those goods to which its members share a unanimous communal claim given by the partition structure. We show that CPR Core allocations differ from those under private property in several crucial respects.

Goldin, Claudia

PD December 1989. **TI** The Role of World War II in the Rise of Women's Work. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 3203; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $2.00. **JE** 824, 813, 841. **KW** Female Labor Supply. Labor Force. Wages. Employment.
AB The 1940's were a turning point in married women's labor force participation, leading many to credit World War II with spurring economic and social change. This paper uses information from two retrospective surveys, one in 1944 and another in 1951, to resolve the role of World War II in the rise of women's paid work. More than 50% of all married women working in 1950 had been employed in 1940, and more than half of the decade's new entrants joined the labor force after the war. Of those women who entered the labor force during the war, almost half exited before 1950. Employment during World War II did not enhance a woman's earnings in 1950 in a manner consistent with most hypotheses about the war.

PD December 1989. **TI** Wages, Prices, and Labor Markets Before the Civil War. **AU** Goldin, Claudia; Margo, Robert A. **AA** Goldin: University of Pennsylvania. Margo: Vanderbilt University. **SR** National Bureau of Economic Research Working Paper: 3198; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $2.00. **JE** 042. **KW** Economic History. Industrialization. Unemployment.
AB Two opposing views of the antebellum economy are tested. One is that aggregate economic activity was severely diminished and that unemployment was substantial and prolonged during several downturns. The alternative interpretation is that antebellum fluctuations were more apparent than real; nominal wages, not labor quantities, did most of the adjusting. We analyze data on real wages for laborers, artisans, and clerks across four regions (Northeast, North Central, South Atlantic, and South Central) during 1821 to 1856. Various time-series econometric methods reveal that shocks to real wages persisted even five years after an innovation, but that their impact eventually vanished.

Gomez-Oliver, Antonio

PD May 1989. **TI** Private Consumption and Saving: The Cases of Mexico and Chile. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/51; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** no charge. **JE** 122, 224. **KW** Developed Countries. Chile. Consumption. National Wealth. Mexico.
AB This paper examines the behavior of private consumption in Mexico and Chile. Understanding private consumption behavior in developing countries is receiving increasing attention at a time many of them are required to substitute national saving for external saving. For both countries dealt with in this study, changes in the real rate of interest appeared to have a sizable negative effect on private consumption. Private consumption also appeared to be (positively) influenced by real net capital inflows. An empirical approximation to permanent income also appears relevant for both countries, in particular for Mexico, where the sum of the two-year income elasticities was very close to 1.0. Finally, government consumption did not appear as a relevant variable in either country.

Goovaerts, M. J.

TI New Upper Bounds for Stop-Loss Premiums for the Individual Model. **AU** van Heerwaarden, A. E.; Goovaerts, M. J.; Kaas, R.

TI Between Individual and Collective Model for the Total Claims. **AU** Kaas, R.; van Heerwaarden, A. E.; Goovaerts, M. J.

Gordon, Roger H.

PD January 1990. **TI** Effects of the Tax Reform Act of 1986 on Corporate Financial Policy and Organizational Form. **AU** Gordon, Roger H.; Mackie-Mason, Jeffrey. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3222; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** $2.00. **JE** 323, 522, 511, 514. **KW** Taxes. Taxation. Corporate Debt. Dividends. Shareholders.
AB We examine the effects of the Tax Reform Act of 1986 on the financial decisions made by firms. We review the theory and empirical predictions of prior literature for corporate debt policy, for dividend and equity repurchase payouts to shareholders, and for the choice of organizational form. We then compare the predictions to post-1986 experience. The change in debt/value ratios has been substantially smaller than expected. Dividend payouts increased as predicted, but stock repurchases increased even more rapidly which was unexpected and is difficult to understand. Based on very scant data, it appears that some activities have shuffled among organizational forms; in particular, loss activities may have been moved into corporate form "where they are deducted at a higher tax rate, while gain activities may have shifted towards noncorporate form, to be taxed at the lower personal rates.

Gorecki, Paul K.

TI The Contribution of the Competitive Process to Productivity Growth: The Role of Firm and Plant Turnover. **AU** Baldwin, John R.; Gorecki, Paul K.

TI Intra-Industry Mobility in the Canadian Manufacturing Sector. **AU** Baldwin, John R.; Gorecki, Paul K.

TI Firm Entry and Exit in the Canadian Manufacturing Sector. **AU** Baldwin, John R.; Gorecki, Paul K.

TI Mergers and the Competitive Process. **AU** Baldwin, John R.; Gorecki, Paul K.

Gorter, Kees

TI Unemployment Benefits and Search Behavior: An Empirical Investigation. **AU** Ridder, Geert; Gorter, Kees.

Goulder, Lawrence H.

TI Promoting Investment Under International Capital Mobility: An Intertemporal General Equilibrium Analysis. **AU** Bovenberg, A. Lans; Goulder, Lawrence H.

Gradstein, Mark

PD January 1990. **TI** Private Provision of Pubic Goods Under Price Uncertainty. **AU** Gradstein, Mark; Nitzan, Shmuel; Slutsky, Steven M. **AA** Gradstein: Ben-Gurion University. Nitzan: Bar-Ilan University. Slutsky: University of Florida. **SR** University of Florida Working Paper in Economics: 90-2; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 28. **PR** no charge. **JE** 024, 321. **KW** Public Goods. Uncertainty. Welfare Analysis.

AB In this paper, we introduce price uncertainty into the model of voluntary provision of public goods. In particular, we highlight the significant factors that determine the effect of changes in uncertainty on the level of provision, the level of welfare, and the gaps between equilibrium and optimal values of these variables. The analysis is carried out in a variety of situations depending upon whether the public or private good price is random and whether individuals make real or nominal contributions. The results depend upon which of these situations is considered, on which variable is considered, on what certain benchmark is used for comparison with uncertainty, and on the characteristics of preferences.

Gravelle, Jane G.

PD October 1989. **TI** Corporate Taxation and the Efficiency Gains of the 1986 Tax Reform Act. **AU** Gravelle, Jane G.; Kotlikoff, Laurence J. **AA** Gravelle: Library of Congress. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3142; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 52. **PR** $2.00. **JE** 323, 522, 521. **KW** Taxation. Corporate Taxes.

AB The 1986 Tax Reform Act, while having little effect on the overall effective tax rate on U.S. capital income, did reduce significantly the difference in effective taxation of corporate and noncorporate capital within a number of U.S. industries. The Mutual Production Model developed in Gravelle and Kotlikoff (1989) can be used to study the efficiency gains from the reduction in corporate tax wedges within industries. Unlike the Harberger Model, the Mutual Production Model permits both corporate and noncorporate firms to produce the same goods and, therefore, to coexist within a given industry.

Gray, Wayne B.

PD December 1989. **TI** Longitudinal Patterns of Compliance with OSHA Health and Safety Regulations in the Manufacturing Sector. **AU** Gray, Wayne B.; Jones, Carol Adaire. **AA** Gray: Clark University. Jones: Resources for the Future. **SR** National Bureau of Economic Research Working Paper: 3213; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 631, 613, 616. **KW** Safety. Manufacturing. Industrial Policy. OSHA. Government Regulation.

AB We examine the impact of OSHA enforcement on company compliance with agency regulations in the manufacturing sector, with a unique plant-level dataset of inspection and compliance behavior during 1972-1983, the first twelve years of the agency operation. The analysis suggests that, for an individual inspected plant, the average effect of OSHA inspections during this period was to reduce expected citations by 3.0 or by .36 s.d. The total effect on expected citations of additional inspections can be decomposed into two parts: evaluated at the mean of the sample, 59 percent of the total change in citations occurred due to an increase in the compliance rate; 41 percent was due to a reduction in citations among continuing violators.

Greenwood, Jeremy

PD December 1989. **TI** Financial Development, Growth and the Distribution of Income. **AU** Greenwood, Jeremy; Jovanovic, Boyan. **AA** Greenwood: Federal Reserve Bank of Minneapolis and University of Western Ontario. Jovanovic: New York University. **SR** National Bureau of Economic Research Working Paper: 3189; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 314, 311, 112. **KW** Endogenous Growth. Financial Intermediaries. Economic Growth. Economic Development.

AB A paradigm is presented where both the extent of financial intermediation and the rate of economic growth are endogenously determined. Financial intermediation promotes growth because it allows a higher rate of return to be earned on capital, and growth in turn provides the means to implement costly financial structures. Thus, financial intermediation and economic growth are inextricably linked in accord with the Goldsmith-McKinnon-Shaw view on economic development. The model also generates a development cycle reminiscent of the Kuznets hypothesis. In particular, in the transition from a primitive slow-growing economy to a developed fast-growing one, a nation passes through a stage where the distribution of wealth across the rich and poor widens.

Gregory, Allan W.

TI Realistic Cross-Country Consumption Correlations in a Two-Country, Equilibrium, Business Cycle Model. **AU** Devereux, Michael B.; Gregory, Allan W.; Smith, Gregor W.

Grilli, Vittorio U.

TI The "Gold Standard Paradox" and Its Resolution. **AU** Buiter, Willem H.; Grilli, Vittorio U.

Grilo, Isabel

TI Quality Uncertainty and Price Competition. **AU** Gabszewicz, Jean J.; Grilo, Isabel.

Grogger, Jeffrey

PD January 1990. **TI** Crime, Persistent Youth Joblessness, and Black/White Employment Differentials. **AA** University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 34-89(R); Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 31. **PR** no charge. **JE** 826, 916, 824, 917. **KW** Youth Employment. Signalling Theory.

Employment. Crime.

AB Economists have long been concerned with the labor market problems of young men. Recently, research has indicated that one- fourth to one-half of all men are active in crime at some point during their youth. Furthermore, joblessness and criminal activity vary similarly by age and race. We analyze two rich data sets containing arrest and employment information to assess whether criminal activities may underlie persistent joblessness and black/white employment differentials among young men. Two different approaches are taken to control for individual heterogeneity which may lead to spurious inferences. Arrests are seen to be capable of generating some persistence in non- employment.

Grosskopf, Shawna

TI Indirect Productivity Measurement. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna.

TI Derivation of Virtual Prices for Undesirable Outputs: A Distance Function Approach. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna; Yaisawarng, Suthathip.

Grossman, Gene M.

PD December 1989. **TI** Quality Ladders and Product Cycles. **AU** Grossman, Gene M.; Helpman, Elhanan. **AA** Grossman: Princeton University. Helpman: Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 3201; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 621, 411, 111. **KW** Innovation. Product Quality. Investment. Technology.

AB We develop a two-country model of endogenous innovation and imitation in order to study the interactions between these two processes. Firms in the North race to bring out the next generation of a set of technology-intensive products. Each product potentially can be improved a countably infinite number of times, but quality improvements require the investment of resources and entail uncertain prospects of success. In the South, entrepreneurs invest resources in order to learn the production processes that have been developed in the North. All R&D investment decisions are made by forward looking, profit maximizing entrepreneurs. The steady-state equilibrium is characterized by constant aggregate rates of innovation and imitation. We study how these rates respond to changes in the sizes of the two regions and to policies in each region to promote learning.

PD December 1989. **TI** Explaining Japan's Innovation and Trade: A Model of Quality Competition and Dynamic Comparative Advantage. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 3194; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $2.00. **JE** 621, 411, 421, 422. **KW** Innovation. Comparative Advantage. R&D. Trade Policy.

AB In this paper, I develop a model of dynamic comparative advantage based on endogenous innovation. Firms in each of two countries devote resources to R&D in order to improve the quality of high-technology products. Research successes generate profit opportunities in the world market. The model predicts that a country such as Japan, with abundance of skilled labor and scarcity of natural resources, will specialize relatively in industrial innovation and in the production of high-technology goods. Data are provided to support this prediction. I use the model to explore the effects of R&D subsidies, production subsidies and trade policies on the long-run rates of innovation in trade partner countries and on the long-run pattern of trade.

PD March 1990. **TI** Trade, Innovation, and Growth. **AU** Grossman, Gene M.; Helpman, Elhanan. **AA** Grossman: Princeton University. Helpman: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 6-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 14. **PR** no charge. **JE** 621, 422, 111, 411. **KW** Open Economy. Endogenous Growth. Trade Policy. Innovation. International Trade.

AB We review our work on endogenous growth in the context of open economies. We explain our approach to the modeling of the innovation process, the international transmission of knowledge and the role of international trade. In addition we explore the role of trade policy and certain forms of industrial policy on long run growth.

Grossman, Herschel I.

PD December 1989. **TI** A Theory of Kleptocracy with Probabilistic Survival and Reputation. **AU** Grossman, Herschel I.; Noh, Suk Jae. **AA** Grossman: Brown University. Noh: Hallym University, Korea. **SR** Brown University Department of Economics Working Paper: 89-38; Department of Economics, Brown University, Providence, RI 02912. **PG** 24. **PR** no charge. **JE** 321, 323. **KW** Taxes. Political Economy. Government Policy.

AB We develop a positive theory of kleptocracy, in which the incumbent ruler's concern about his survival probability can induce him to pursue relatively benevolent policies. But, this effect can lower the equilibrium tax rate only until the time-consistency requirement becomes a binding constraint on the equilibrium tax rate. The minimum time-constraint tax rate in a reputational equilibrium is lower the more that the ruler values prospective future revenues, but the value of prospective future revenues itself depends on the ruler's survival probability. The analysis reveals that, if a relatively benevolent tax policy is both necessary and sufficient for a high survival probability, then equilibrium tax policy is relatively benevolent.

PD January 1990. **TI** Proprietary Public Finance and Economic Welfare. **AU** Grossman, Herschel I.; Noh, Suk Jae. **AA** Grossman: Brown University. Noh: Hallym University, Korea. **SR** Brown University Department of Economics Working Paper: 90-1; Department of Economics, Brown University, Providence, RI 02912. **PG** 28. **PR** no charge. **JE** 321, 322, 323. **KW** Public Finance. Economic Welfare. Taxes. Government Spending.

AB We develop a positive theory of public finance in which the objective of tax and spending policy is to extract rents for the incumbent ruler, the proprietor of the governmental enterprise and of sovereign power. This self-interested ruler in general both sets a higher tax rate and provides less productive public services than would maximize the welfare of the representative producer. But, the self-interested ruler's criterion for expanding productive public services turns out to be the same as the welfare-maximizing criterion -- namely, set the marginal product of public services equal to unity.

Grossman, Michael

TI The Dynamic Relationship Between Low Birthweight and Induced Abortion in New York City: An Aggregate Time-Series Analysis. **AU** Joyce, Theordore; Grossman, Michael.

Guidott, Pablo E.

TI Credibility and Normal Debt: Exploring the Role of Maturity in Managing Inflation. **AU** Calvo, Guillermo A.; Guidott, Pablo E.

Gustafsson, Siv

PD March 1990. **TI** Cohort Size and Female Labor Supply. **AA** University of Amsterdam. **SR** Centre for Economic Policy Research Discussion Paper: 384; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 26. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** 841, 824, 813, 821. **KW** Labor Supply. Wages. Labor Force. Fertility. Demographic Economics.

AB Easterlin's relative income hypothesis projects for smaller cohorts increasing wages, increasing fertility and decreasing female labor supply. This paper reviews the literature on the substitutability of female for male labor, on relative income changes as a result of changes in cohort size and on husband's income as a determinant of female labor supply. It is concluded that own wage is a more important determinant of female labor supply than husband's income. Policies that increase female net wages therefore stimulate female labor supply. The example of Sweden shows that pronatalist policies can be combined with policies that stimulate female labor supply.

Haas, Richard S.

PD September 1989. **TI** INDOMOD: A Simulation Model of the Indonesian Economy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/75; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** no charge. **JE** 121, 112. **KW** Indonesia. Growth Theory. Demand Fluctuations. Macroeconomics Model.

AB This paper presents a small macro simulation model of the Indonesian economy. The model was constructed to assess the effects of alternative policies as well as changes in the external environment on the Indonesian economy over the medium term. Accordingly, the focus is on the determinants of growth with relatively little attention devoted to explaining the effects of short-run demand fluctuations.

Hahn, F.H

PD July 1989. **TI** Solowian Growth Models. **AA** University of Cambridge. **SR** University of Cambridge Economic Theory Discussion Paper: 137; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 20. **PR** $4.00, checks payable to University of Cambridge. **JE** 111. **KW** Growth Model. Labor Supply. Technical Progress. Technology. Growth Theory.

AB This paper examines some simple growth models in which technical progress and the supply of labor are endogenous. Particular attention is paid to multiple steady states. Some remarks are offered on stability.

Haimovich, M.

PD 1988. **TI** Analysis of Heuristics for Vehicle Routing Problems. **AU** Haimovich, M.; Kan, A. H. G. Rinnooy; Stougie, L. **AA** Haimovich: Tel Aviv University. Kan: Erasmus University Rotterdam. Stougie: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 1/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 11. **PR** no charge. **JE** 213. **KW** Algorithms. Scheduling Problems. Probabilistic Analysis.

AB Almost all vehicles routing and scheduling problems are NP-hard, and most of the algorithms designed for their solution are of a heuristic nature. Due to complications present in most vehicle routing problems e.g. time-windows, conflicting objectives, precedence constraints, these heuristics are often equipped with problem specific features that turn the theoretical analysis of their performance quality into a far from trivial task. Consequently, the number of results in this direction is still very limited. We present examples from the recent literature, in which mathematical analysis has led to rigorous statements on the performance of vehicle routing heuristics. We shall describe more or less extensively examples of worst-case and probabilistic analysis of heuristics for capacitated vehicle routing problems. Notes on selected references have been added.

Haliassos, Michael

PD February 1990. **TI** Why Do So Few Hold Stocks? The View From Asset Pricing Theory. **AU** Haliassos, Michael; Bertaut, Carol. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-3; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 31. **PR** no charge. **JE** 921, 313. **KW** CAPM. Liquidity Constraints. Asset Pricing. Consumption. Consumer Economics. Households.

AB Representative agent models have recently come under attack for failing to incorporate agent heterogeneity. This paper investigates a puzzling incidence of heterogeneity, namely that only 25% of U.S. households hold stocks despite the existence of a premium on equity. We show that zero stockholding cannot be an interior solution of the standard Consumption CAPM, regardless of the degree of risk aversion and of heterogeneity of beliefs, provided that agents perceive an equity premium. We then investigate which of the candidate explanations are consistent with maximization of intertemporal utility of consumption. We examine two versions of liquidity constraints, a minimum investment constraint, information costs, heterogeneous beliefs, and differences in risk aversion.

Hall, Bronwyn H.

PD December 1989. **TI** The Impact of Corporate Restructuring on Industrial Research and Development. **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** University of California at Berkeley Working Paper in Economics: 89-129; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 50. **PR** $3.50. **JE** 522, 521, 611, 621, 631. **KW** Research and Development. LBO. Financial Leverage. Manufacturing. Mergers. Capital Structure. Corporations.

AB This paper investigates whether the recent wave of corporate restructuring in the United States has had a negative impact on research and development investment by industrial firms. Using a newly constructed sample of about 2500 manufacturing firms from 1974 to 1987, I examine three major classes of restructuring events: leveraged buyouts and other "going private" transactions, mergers and acquisitions in general, and substantial increases in leverage.

PD December 1989. **TI** The Impact of Corporate Restructuring on Industrial Research and Development. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3216; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** $2.00. **JE** 611, 621, 635. **KW** R&D. Technology. Manufacturing. Corporations. Mergers. Leveraged Buyouts.
AB This paper investigates whether the recent wave of corporate restructuring in the United States has had a negative impact on research and development investment by industrial firms. Using a newly constructed sample of about 2500 manufacturing firms from 1974 to 1987, I examine three major classes of restructuring events: leveraged buyouts and other "going private" transactions, mergers and acquisitions in general, and substantial increases in leverage.

Hall, Peter
TI Simple Formulae for Steps and Limits in the Backfitting Algorithm. **AU** Hardle, Wolfgang; Hall, Peter.

Hall, Robert E.
PD October 1989. **TI** A Framework for Studying Monetary Non-Neutrality. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 3145; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 131, 133, 023. **KW** Aggregate Demand. Macroeconomics. Output. Economic Fluctuations.
AB This paper sets forth a simple general structural model of aggregate output, the interest rate, and the price level. The core of the model is the determination of the level of output as a product market equilibrium, either competitive or oligopolistic, possible indeterminate because of thick-market externalities. Monetary non-neutrality can affect either product demand or product supply. In either case, monetary policy has leverage over output as well as the price level. The paper develops a two-diagram analysis intended to replace the aggregate demand-aggregate supply diagram.

PD October 1989. **TI** Spontaneous Volatility of Output and Investment. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 3144; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 131, 133, 221. **KW** Economic Fluctuations. GNP. National Income Accounting.
AB Spontaneous shifts in output originating within the business sector are an important factor in aggregate fluctuations. This paper develops a simple two-component decomposition of the movement of real GNP. One component is the path that GNP would have followed in order to deliver the volume of goods and services actually taken by consumers, government, and the rest of the world. The second component, noise, is the residual between actual GNP and the theoretical calculation. The two components are of roughly the same size, but noise has more of its power at higher frequencies.

PD October 1989. **TI** Temporal Agglomeration. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 3143; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 131, 133. **KW** Economic Fluctuations. Economic Activity.
AB When economic activity is concentrated over space or over time, it is more efficient. Most production occurs in geographic hot spots, and most production occurs between 9 and 12 in the morning and 1 to 5 in the afternoon on weekdays. The thick-market efficiencies that encourage the concentration of activity in certain time periods may be internal to the firm, or they may be external to the firm. When they are internal, the firm can make efficient arrangements to take advantage of the effects. The firm should martial all its forces from time to time in bursts of activity. When thick-market effects are external to the firm, the possibility of indeterminacy can arise. Aggregate fluctuations may arise with either internal or external thick-market effects.

Hallahan, Charles
TI Efficient Computation of Stochastic Coefficients Models. **AU** Chang, I-Lok; Hallahan, Charles; Swamy, P. A. V. B.

Haltiwanger, John
TI Gross Job Creation and Destruction: Microeconomic Evidence and Macroeconomic Implications. **AU** Davis, Steve J.; Haltiwanger, John.

Hamao, Yasushi
TI Predictable Stock Returns in the United States and Japan: A Study of Long-Term Capital Market Integration. **AU** Campbell, John Y.; Hamao, Yasushi.

Hamilton, James D.
TI Long Swings in the Exchange Rate: Are They in the Data and Do Markets Know It?. **AU** Engel, Charles; Hamilton, James D.

Hamilton, Jonathan H.
TI Dynamic Optimal Income Taxation With Government Commitment. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Randomization in Optimal Income Tax Schedules. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

PD March 1990. **TI** Competitive Spatial Price Discrimination With Capacity Constraints. **AU** Hamilton, Jonathan H.; Thisse, Jacques-Francois. **AA** Hamilton: University of Florida. Thisse: Universite Catholique de Louvain. **SR** University of Florida Working Paper in Economics: 90-3; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 22. **PR** no charge. **JE** 611, 641, 022. **KW** Price Discrimination. Economic Capacity. Duopoly.
AB The model of spatial price discrimination by duopolists is extended by adding capacity constraints on the firms' outputs. With zero-one consumer demands, some configurations of capacity levels and locations do not have pure strategy Nash equilibria in price schedules, in particular when firms have some excess capacity but not enough to serve the entire market individually. An alternative to the mixed strategy Nash equilibrium in price schedules--the core of the market game among producers and consumers--is described and shown to

have allocations corresponding to pure strategies for all location and capacity configurations. The Nash equilibrium corresponding to core allocations has price schedules identical to those in the uncapacitated problem.

Hamlin, Alan

TI Bicameralism and Stability. **AU** Brennan, Geoffrey; Hamlin, Alan.

Hanemann, W. Michael

TI A Model of the Impacts of Water Flows, Hatchery Operations, and Harvest Regulations on the California Central Valley Salmon Fishery. **AU** Fisher, Anthony C.; Hanemann, W. Michael; Keeler, Andrew G.

Hannon, John M.

TI The Effects of Human Resource Management Decisions on Shareholder Value. **AU** Abowd, John M.; Milkovich, George T.; Hannon, John M.

Hansen, Gary D.

PD January 1990. **TI** The Role of Unemployment Insurance in an Economy with Liquidity Constraints and Moral Hazard. **AU** Hansen, Gary D.; Imrohoroglu, Ayse. **AA** Hansen: University of California, Los Angeles. Imrohoroglu: University of Southern California. **SR** University of California at Los Angeles Department of Economics Working Paper: 583; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 32. **PR** $2.50. **JE** 822, 824, 921. **KW** Unemployment Insurance. Liquidity Constraints. Unemployment. Consumer Economics.

AB A dynamic general equilibrium economy is used to compute the potential welfare benefits that can be obtained from unemployment insurance, along with the optimal replacement ratio. In order to obtain an upper bound on these welfare benefits, we assume that agents face exogenous idiosyncratic employment shocks and are unable to borrow or insure themselves through private markets. In the absence of moral hazard, replacement ratios as high as .7 are optimal, and the welfare benefits of unemployment insurance are quite large. However, even under these extreme assumptions, if there is a moderate amount of moral hazard, the potential welfare benefits disappear.

Haque, Nadeem

TI Growth, External Debt and Sovereign Risk in a Small Open Economy. **AU** Bhandari, Jagdeep S.; Haque, Nadeem; Turnovsky, Stephen J.

PD June 1989. **TI** A Forward-Looking Macroeconomic Simulation Model for a Developing Country. **AU** Haque, Nadeem; Montiel, Peter; Symansky, Steven A. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/53; International Monetary Fund, Washington, DC 20431. **PG** 34. **PR** no charge. **JE** 121, 133, 131, 023. **KW** Developing Countries. Dynamic Model. Macroeconoic Policy.

AB The paper develops a small dynamic macroeconomic simulation model for a representative developing country which relies on familiar macroeconomic theory and in which expectations are formed rationally. The model is useful for the analysis and simulation of important policy questions in a general equilibrium setting. Several policy experiments are conducted which illustrate the workings of the model and yield fresh insights into the effects of standard macroeconomic policies in developing countries.

Hardle, Wolfgang

PD 1989. **TI** Simple Formulae for Steps and Limits in the Backfitting Algorithm. **AU** Hardle, Wolfgang; Hall, Peter. **AA** Hardle: CORE. Hall: Australian National University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8938; Universite Catholique de Louvain, Voie de Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 18. **PR** not available. **JE** 213, 214. **KW** Algorithm. Mean Squared Distance.

AB We show that in the case of a large and very important class of curve estimators, which includes histospline estimators, simple and elegant step-by-step formulae can be given for the backfitting algorithm. The result of each cycle of the algorithm may be represented succinctly in terms of a sequence of d projections in n-dimensional space, where d is the number of design coordinates and n is sample size. This representation overcomes technical problems reported by other authors in studying the convergence of the backfitting algorithm. It follows from our formulae that the limit of the algorithm is simply the projection of the data onto that vector space which is orthogonal to the space of all n-vectors fixed by each of the projections.

PD November 1989. **TI** Bootstrap Simultaneous Error Bars for Nonparametric Regression. **AU** Hardle, Wolfgang; Marron, J. S. **AA** Hardle: Universite Catholique de Louvain and Universitat Bonn. Marron: Universitat Bonn. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8923; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348, Louvain-la-Nueve, BELGIUM. **PG** 20. **PR** not available. **JE** 211, 132. **KW** Kernel Estimation. Nonparametric Regression. Bootstrap.

AB Simultaneous error bars are constructed for nonparametric kernel estimates of regression functions. The method is based on the bootstrap, where resampling is done from a suitably estimated residual distribution. The error bars are seen to give asymptotically correct coverage probabilities uniformly over any number of gridpoints. Applications to an economic problem are given and comparison to both pointwise and Bonferroni-type bars is presented through a simulation study.

Hargraves, Monica

PD September 1989. **TI** Information Production, Evaluation Risk and Optimal Contracts. **AU** Hargraves, Monica; Romer, Paul M. **AA** Hargraves: Brown University. Romer: University of Chicago. **SR** Brown University Department of Economics Working Paper: 89-27; Department of Economics, Brown University, Providence, RI 02912. **PG** 26. **PR** no charge. **JE** 026. **KW** Contracts. Information Process. Incentives. Asymmetric Information.

AB This paper analyzes the structure of optimal contracts and organizational arrangements for situations in which valuable information is produced, and must be transmitted to other agents in the economy if resources are to be used optimally. The primary result is that the allocation of evaluation risk plays an important role in determining incentives for truthtelling, even if individuals are risk neutral. Optimal compensation contracts and internal financing arrangements are shown to be two classes of solutions that solve asymmetric information problems of this sort by shifting evaluation risk. The general equilibrium analysis makes possible a comparison of these two solutions on the basis of their ability to support the optimal investment in information production. The formal model is then used to interpret compensation for direct employees of firms as well as professionals like accountants, engineers, lawyers, and investment bankers.

PD October 1989. **TI** Optimal Risk-Sharing and Incentive Contracts with Two Stages of Risk. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-28; Department of Economics, Brown University, Providence, RI 02912. **PG** 18. **PR** no charge. **JE** 022. **KW** Moral Hazard. Contracts.
AB This paper studies optimal contracts in an environment with sequential resolution of two forms of uncertainty. First, a firm-worker pair learns whether or not it is efficient for effort to be expended. Second, when effort is expended there is a random component to the outcome of the production process. Incentive problems arise because effort is unobservable. Compensation in the "work state" must be contingent on outcomes, and is therefore risky. In this environment, optimal risk-sharing contracts impose disparities in utility levels across the work-no-work margin. In fact, a likely result is that contracts will set expected utility lower in the work state than in the no work state -- even before the disutility of effort is taken into account. The intuition behind such utility disparities is explained using Pratt's measure of the risk premium for consumption in risky states. The condition determining whether expected utility will be higher or lower in the risky state is shown to be equivalent to the condition for whether the risk premium is a decreasing or increasing function of expected consumption.

Harris, Richard G.

PD November 1989. **TI** Contingent Protection, and the International Distribution of Excess Capacity. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 763; Department of Economics, Queens University, Kingston, Ontario, CANADA K7L 3N6. **PG** 29. **PR** $3.00 Canada; $3.50 U.S. and Foreign. **JE** 131, 641, 422, 411. **KW** Excess Capacity. Commercial Policy. Sunk Costs. Protectionism. Tariffs.
AB The implications of demand and cost fluctuations, both anticipated and uncertain, for the international distribution of industrial excess capacity are explored. Three partial equilibrium models of excess capacity and contingent protection policies which are correlated with distress on the part of the domestic firms are constructed. It is argued that conventional tariff-equivalent measures of protection are substantial understatements of the long run effects of contingent protection when sunk costs in the form of capacity are large. It is also argued that contingent protection exacerbates the degree of excess capacity on average in the industry, and further that anticipation of the policy "triggers" for implementation of contingent protection fosters collusive behavior in the industry.

PD February 1990. **TI** Barriers to Export. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 775; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 28. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 411, 422, 423, 421. **KW** Subsidies. Entry Deterrence. Economic Integration. Exports. Commercial Policy.
AB A model of entry by a small exporting country into a large country market with an incumbent monopolist is constructed, and export promotion policy is examined. In the presence of strategic entry deterrence by the large country incumbent firm a number of situations can emerge, including the possibility that, in the event of trade liberalization between countries, exports based on cost differences may fail to emerge, and a possibility that export promotion is world welfare improving. A model of multiple export markets with incomplete information on the part of the government is also considered. There it is shown that a policy of export promotion suffers from adverse selection (inefficient entry to export markets, but that this problem can be mitigated in the presence of incumbent monopolists in the potential export market who can actively deter entry.

PD February 1990. **TI** Trade and Industrial Policy for a "Declining?" Industry: The Case of the U.S. Steel Industry. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 766; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 43. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 422, 616. 631. **KW** Steel Industry. Trade Policy. Industrial Policy. Protectionism. Quotas. Free Trade.
AB An intertemporal partial equilibrium model of the U.S. steel industry is developed which stresses imperfect competition, and the interaction between the large declining integrated steel producers and the entry of the new efficient mini-mills. A central question is whether trade and industrial policy should favor one sector at the expense of another. The existing policy of VRA's on steel is estimated to have a welfare cost of equal to 6.5 percent of the present value of base consumption. Furthermore, it is shown that the joint presence of imperfect competition and the rent-shifting VRA's implies that a partial tightening of the steel quotas would lead to an improvement in national welfare which is quantitatively significant, even through free trade in steel is the globally optimal policy.

Harrison, Scott C.

TI Medicare Patients and Postacute Care: Who Goes Where?. **AU** Neu, C. R.; Harrison, Scott C.; Heilbrunn, Joanna Z.

Hartmann, M.

TI On Integer points in Polyhedra. **AU** Cook, W.; Hartmann, M.; Kannan, R.; McDiarmid, C.

Hartwick, John M.

PD January 1990. **TI** Natural Resources, National Accounting and Economic Depreciation. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 771; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 15. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 221, 113, 721, 722. **KW** National Accounting. Natural Resources. Pollution. Economic Depreciation.
AB The current value Hamiltonian in an aggregate optimal growth problem with heterogeneous capital stocks including exhaustible, renewable and environmental stocks is the NNP function. Routine substitutions reveal that the using up of natural resource stocks is representable as easy-to-interpret

economic depreciation magnitudes. We obtain true NNP inclusive of natural resource stock diminution.

PD January 1990. **TI** Pollution and National Accounting. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 772; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 10. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 221, 113, 721, 722. **KW** National Accounting. Natural Resources. Pollution. Economic Depreciation.
AB The current value Hamiltonian in an aggregate optimal growth problem with heterogeneous capital stocks including exhaustible, renewable and environmental stocks is the NNP function. Routine substitutions reveal that the using up of environmental capital (more pollution) is representable as an easy-to-interpret economic depreciation magnitude. We obtain a result which indicates when it is valid to net pollution abatement expenditures from GNP. We also obtain the general result: deduct rents on environmental capital reductions from GNP to get NNP.

Hay, Joel, W.

PD February 1990. **TI** Bootstrapping HIV/AIDS Projection Models: Back Calculation With Linear Inequality-Constrained Regression. **AU** Hay, Joel, W.; Wolak, Frank A. **AA** Stanford University. **SR** Stanford Hoover Institute Working Paper in Economics: E-90-5; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 62. **PR** not available. **JE** 913. **KW** Epidemic. Public Health. Health.
AB An HIV/AIDS back calculation regression model with linear inequality constraints is used to estimate cumulative adult/adolescent HIV infections in the United States prior to 1989, and to generate AIDS case incidence projections through 1992. Regression diagnostics show that the OLS residuals are highly heteroskedastic and that a power-of-the-mean model of heteroskedasticity appears to correct this. A test of the inequality constraints for the weighted least squares regression cannot reject the nonnegativity-restricted model. Asymptotic specification testing of the final model also shows that the weighted least squares nonnegativity-constrained model cannot be rejected.

Hayashi, Fumio

PD December 1989. **TI** Japan's Saving Rate: New Data and Reflections. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 3205; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $2.00. **JE** 224, 921, 226. **KW** Savings. Life-Cycle Hypothesis. Growth Model.
AB This paper examines available evidence on Japan's wealth accumulation. Time series evidence over the last one hundred years indicates that the phenomenon of extraordinarily high Japanese saving rate is limited to the high growth era of 1965-1975. Micro evidence about consumption and saving by age can be more easily explained by the dynasty model than by the life-cycle hypothesis. The infinite horizon neoclassical growth model, while capable of generating the hump in the saving rate and explaining why it was preceded by the rapid GNP growth in the post-war period, leaves unanswered the question of why wealth accumulation in pre-war Japan was so slow. Perhaps growth in pre-war Japan was hampered by harmful effects of misguided government policies.

Heckman, James J.

PD October 1989. **TI** Forecasting Aggregate Period Specific Birth Rates: The Time Series Properties of a Microdynamic Neoclassical Model of Fertility. **AU** Heckman, James J.; Walker, James R. **AA** Heckman: Yale University. Walker: University of Wisconsin, Madison. **SR** National Bureau of Economic Research Working Paper: 3133; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 824, 229, 826, 132. **KW** Fertility. Microdata. Demographic Economics. Wages.
AB This article demonstrates the value of microdata for understanding the effect of wages on life cycle fertility dynamics. Conventional estimates of neoclassical economic fertility models obtained from linear aggregate time series regressions are widely criticized for being nonrobust when adjusted for serial correlation. Moreover, the forecasting power of these aggregative neoclassical models has been shown to be inferior when compared with conventional time series model that assign no role to wages. This article demonstrates, that when neoclassical models of fertility are estimated on microdata using methods that incorporate key demographic restrictions and when they are properly aggregated, they have considerable forecasting power.

Heffley, Dennis

TI Unfolding the Flypaper: The Effects of Intergovernmental Grants in an Open Local Economy. **AU** Hewitt, Daniel; Heffley, Dennis.

Heijmans, R. D. H.

PD December 1988. **TI** Asymptotic Properties of Extremal Estimators. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 16/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 14. **PR** no charge. **JE** 211. **KW** Asymptotic Theory. Optimization. Nonlinear Model. Generalized Least Squares.
AB In this paper we look at the asymptotic properties of extremal estimators, i.e. estimators obtained from maximizing (minimizing) some objective function. It is shown that under fairly general conditions these extremal estimators have some desirable asymptotic properties, like convergence in rth mean and almost sure convergence. As an example we look at a nonlinear regression model and it appears that conditions imposed on the errors are very general; in particular no independence is assumed but only some conditions on the eigenvalues on the variance-covariance matrix.

Heilbrunn, Joanna Z.

TI Medicare Patients and Postacute Care: Who Goes Where?. **AU** Neu, C. R.; Harrison, Scott C.; Heilbrunn, Joanna Z.

Helpman, Elhanan

TI Tax Credits for Debt Reductions. **AU** Dooley, Michael P.; Helpman, Elhanan.

PD October 1989. **TI** Real Wages, Monetary Accommodation, and Inflation. **AU** Helpman, Elhanan; Leiderman, Leonardo. **AA** Tel Aviv University. **SR** National Bureau of Economic Research Working Paper:

3146; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $2.00. **JE** 134, 131, 133. **KW** Inflation. Wage Determination. Wages. Prices.

AB We analyze the dynamics of inflation in an economy characterized by a forward-looking, staggered, price and wage determination process, and by monetary accommodation. In our model, inflation reconciles the conflicting claims of workers and firms. The model is capable of generating a positive association between real wages and inflation, of the type that has been observed in some high inflation countries. It generates a price-wage spiral but does not result in inflationary inertia.

TI Quality Ladders and Product Cycles. **AU** Grossman, Gene M.; Helpman, Elhanan.

TI Trade, Innovation, and Growth. **AU** Grossman, Gene M.; Helpman, Elhanan.

Hewitt, Daniel

PD July 1989. **TI** Unfolding the Flypaper: The Effects of Intergovernmental Grants in an Open Local Economy. **AU** Hewitt, Daniel; Heffley, Dennis. **AA** Hewitt: International Monetary Fund. Heffley: University of Connecticut. **SR** International Monetary Fund Working Paper: WP/89/58; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** no charge. **JE** 325, 322. **KW** Government Spending. Grants. State Governments. Block Grants.

AB Empirical studies of the effects of intergovernmental grants to localities do not support standard microeconomic predictions. Block grants have surprisingly large positive effects on public expenditures. Researchers have attributed this "flypaper effect" to imperfect information (fiscal illusion), bureaucratic self- interest (Leviathan motives), and flawed econometrics. In this paper, a three-sector, computable general equilibrium model of a local economy is used to explore the effects of block grants and matching grants. The paper demonstrates that without fiscal illusion or unresponsive bureaucrats, these grants can have large spending consequences.

Hirsch, Werner Z.

PD May 1990. **TI** State Residency Laws: Their Constitutionality Under the Privileges and Immunity Clause. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 591; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 17. **PR** $2.50. **JE** 324, 822. **KW** Residency Laws. State Government. Unemployment. Unemployment Benefits.

AB State residence laws can impose significant burdens on states, particularly when they are coping with unemployment. Under the Privileges and Immunities Clause of the Constitution, such acts can be held constitutional if in addition to constituting a heavy burden, they also can turn out to be socially efficient. This would be the case when the state enacting a preference law has significantly higher unemployment rates in its border counties compared to those of adjacent border counties of other states. This turns out to be the situation in Illinois where few if any attractive alternatives exist towards producing the desired legitimate results.

Hirshleifer, Jack

PD August 1990. **TI** The Technology of Conflict as an Economic Activity. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 597; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 17. **PR** $2.50. **JE** 114. **KW** Political Economy. Conflict. Technology.

AB Engaging in conflict, defined broadly to include non-violent actions like strikes and lawsuits as well as actual combat, is always an option for individuals and groups. Many stylized facts of political economy are explained by the competition between the technology of conflict and the technology of production and exchange. The Contest Success Function (CSF), which indicates how the resources respectively devoted to conflict yield outcomes in the form of losses and gains to the two sides, should incorporate ranges of increasing and decreasing returns. It should also be consistent with both one-sided peace (subjugation) and two-sided peace (settlement) outcomes. There are two canonical forms of the CSF, in which the outcome becomes a function of the ratio or alternatively of the difference of the fighting efforts.

PD August 1990. **TI** Are Equilibrium Strategies Unaffected by Incentives? The Police Game. **AU** Hirshleifer, Jack; Rasmusen, Eric R. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 595; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 15. **PR** $2.50. **JE** 916, 026. **KW** Incentives. Mixed Strategies. Game Theory.

AB When a matrix game has an equilibrium in mixed strategies, changing one player's payoffs affects only the other player's equilibrium strategy mix. We call this the Payoff-Irrelevance Proposition (PIP). The PIP, it has been contended, undercuts the main foundations of economic policy analysis. A policy-maker who attempts to influence behavior by adjusting costs and benefits will fail, assertedly, since equilibrium behavior will not respond to changes in incentives. We show, in contrast, that: (1) Policy interactions usually should be modelled as a sequential-move Stackelberg game, the policy-maker having the first move, in which case the PIP does not hold. (2) Even in a simultaneous-move game, the PIP almost always fails if the strategy space is a continuum.

Hochman, Oded

PD August 1990. **TI** Federal Income Taxes and Their Effects on Inter and Intra City Resource Allocation. **AU** Hochman, Oded; Pines, David. **AA** Hochman: Ben Gurion University. Pines: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 20-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 21. **PR** no charge. **JE** 324, 931, 024. **KW** Urban Economics. Public Goods. Income Tax. Resource Allocation.

AB This paper discusses the distortive effect of federal income tax on the efficiency of resource allocation within and between cities. The underlying assumption is that cities differ from one another in labor productivity. Consequently, in equilibrium, the size, the nominal income, and the price of housing vary across cities. When uniform income tax rate is used for financing federal expenditure, the shadow price of housing exceeds the market price in the larger cities, indicating that the stock of housing is too small and the per-capita housing consumption is too large. The opposite is true in small cities, where also, if housing and LPG (local public good) are net substitutes, the provision of the LPG is excessive. The paper also discusses the effects of federal corporate profit and net land rent taxes. The first is shown to discourage the supply of the LPG; the second is not always a feasible tax instrument capable to raise the predetermined tax revenue. This is especially true in the long run.

Hoffman, Dennis

PD December 1989. **TI** The Demand for Money in the U.S. During the Great Depression: Estimates and Comparison with the Post War Experience. **AU** Hoffman, Dennis; Rasche, Robert H. **AA** Hoffman: Arizona State University. Rasche: Michigan State University. **SR** National Bureau of Economic Research Working Paper: 3217; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 042, 131, 133. **KW** Money Demand. Economic History. Great Depression.

AB This study investigates the equilibrium demand for a narrowly defined monetary aggregate during the Great Depression. We find evidence in support of a stable demand for real balances, but no evidence in support of stable demand functions for real currency and real monetary base. This is consistent with the Friedman-Schwartz interpretation of this period. We do not reject the hypothesis that the equilibrium demand for real M1 is stable between the pre and post WWII sample periods. We find that the "shift in the drift" of M1 velocity after 1945 and at the end of 1981 as well as the "shift in the drift" of currency and base velocities in 1981 is the image of corresponding "shift in the drift" of short-term interest rates.

Holly, Alberto

TI A General Kronecker Formula for the Moments of the Multivariate Normal Distribution. **AU** Balestra, Pietro; Holly, Alberto.

Holzmann, Robert

PD August 1989. **TI** The Welfare Effects of Public Expenditure Programs Reconsidered. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/62; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** no charge. **JE** 322, 911, 024. **KW** Social Programs. Public Expenditures. Social Welfare. Market Constraints. Income Distribution.

AB The paper proposes a new welfare-based measure to evaluate the distributive effects of public programs. The proposed measure differs from traditional approaches in two important ways: first, it is based on life-cycle considerations, since most public expenditure programs have an intertemporal objective; second, it takes into account market imperfections, which themselves give rise to many governmental interventions. The measure and its numerical illustrations suggest that, in general, the welfare effects from public programs whose aim is to eliminate market constraints predominate those that can be achieved through interpersonal income distribution.

Hooper, Peter

TI International Financial Markets and the U.S. External Imbalance. **AU** Danker, Deborah; Hooper, Peter.

Hoover, Kevin D.

PD July 1990. **TI** Scientific Research Program or Tribe? A Joint Appraisal of Lakatos and the New Classical Macroeconomics. **AA** University of California at Davis. **SR** University of California at Davis Research Program in Applied Macro and Macro Policy: 69; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 47. **PR** no charge. **JE** 031, 036, 023. **KW** Classical Macroeconomics. Macroeconomics. Economic Methodology. Economic Thought.

AB The paper explores the soundness of Imre Lakatos's methodology of scientific research programs using the development of the new classical macroeconomics of Lucas, Sargent, Wallace et al. as a case study. It is shown that Lakatos's methodology does not capture essential features of the structure of scientific progress. Following Kuhn's interpretation of the scientific "paradigm" as a concrete exemplar, I develop a better description of scientific progress and apply it to the case of the new classical macroeconomics.

PD July 1990. **TI** The Causal Direction Between Money and Prices: An Alternative Approach. **AA** University of California at Davis. **SR** University of California at Davis Research Program in Applied Macro and Macro Policy: 70; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 59. **PR** no charge. **JE** 036, 134, 311. **KW** Causality. Money. Inflation. Business Cycle. Prices.

AB A relation is causal if control over A would yield control over B. This view is captured in Herbert Simon's description of causality as an asymmetrical relation of recursion in the unobservable process which generates economic data. This is in turn operationalized as different partitions of the multivariate normal distribution into conditional and marginal distributions. It is then shown that tests of the relative stability of the regressions representing alternative partitions provides evidence on the direction of causality in the data generating process. The causal direction between prices and money in the United States is assessed on the period 1950-1985. Tests of the stability of alternative partitions based on recursive regression techniques are coordinated with the historical and institutional evidence. The balance of evidence supports the view that money does not cause prices, and that prices do cause money.

PD July 1990. **TI** Keynes' Labor Market: Relative Wages, Rationality and Involuntary Unemployment. **AA** University of California at Davis. **SR** University of California at Davis Research Program in Applied Macro and Macro Policy: 71; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 43. **PR** no charge. **JE** 031, 023, 821. **KW** Keynes. Labor Market. Efficiency Wages. Unemployment. Aggregate Supply.

AB Most interpretations of Chapter Two of Keynes' General Theory conclude that non-market-clearing money wages and involuntary unemployment ultimately depend in Keynes' system on irrationality. Workers, it is said, suffer from "money illusion". Lucas argues that the concept of involuntary unemployment is vacuous. Both these views are wrong. I offer an interpretation of Chapter Two and related parts of the General Theory which, while not set out in fine detail, is nonetheless suggested by Keynes' text. Keynes insisted that workers were rational. I will show that if workers are concerned, as Keynes repeatedly says, with relative wages and if firms pay nominal efficiency wages, no irrationalities are involved and that Keynes' concept of involuntary unemployment has real content. This interpretation has the advantage of rationalizing most, if not all, of Keynes' substantial claims about the behavior of wages, prices and unemployment, which is, perhaps, the strongest claim that any interpretation can lay on being deemed correct.

Hosek, James R.

PD January 1990. **TI** Serving Her Country: An Analysis of Women's Enlistment. **AU** Hosek, James R.; Peterson, Christine E. **AA** Rand Corporation. **SR** Rand Report: R-3853; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 67. **PR** not available. **JE** 114, 813. **KW** Enlistment. Recruitment. Armed Forces.

AB Using data drawn from a 1979 Department of Defense survey of enlistees and the 1979 wave of the National Longitudinal Survey of Youth Labor Force Behavior, this report examines one aspect of women's military service--the factors affecting the flow of new recruits. The analysis uses models of both individual willingness to enlist and the allocation of recruiter effort to enlist women and other groups. These models, estimated with a microdatabase containing many individual and local market variables, make it possible to circumvent the distorting effects of the overall demand constraint that has, in the past, jeopardized aggregate data analyses of women's enlistment.

Houseman, Susan N.

TI Job Security and Work Force Adjustment: How Different are U.S. and Japanese Practices?. **AU** Abraham, Katharine G.; Houseman, Susan N.

Howitt, Peter

TI A Model of Growth Through Creative Destruction. **AU** Aghion, Phillippe; Howitt, Peter.

PD April 1990. **TI** Animal Spirits. **AU** Howitt, Peter; McAfee, R. Preston. **AA** University of Western Ontario. **SR** University of Western Ontario Department of Economics Research Report: 9005; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 29. **PR** $5.00 Canada; $7.00 Elsewhere. **JE** 131, 133, 023, 821. **KW** Business Cycle. Expectations. Sunspots. Learning. Economic Fluctuations. Unemployment.

AB This paper constructs an example of a stationary rational expectations equilibrium in which unemployment and the level of economic activity fluctuate randomly in response to an extraneous random variable, which we call animal spirits. The model is based upon trading externalities. The labor market is one with costly matching, and there is a thin market externality in the goods market according to which the net profitability of hiring a worker depends positively upon the aggregate level of activity. Animal spirits follow a two state Markov process. Firms hire workers when spirits are high, but not when spirits are low. Unlike the stationary sunspot equilibria that have been constructed in monetary models, our equilibrium involves involuntary unemployment, and does not invoke any unrealistically large or perversely signed effect upon labor effort of variations in expected inflation.

Huang, Peter

TI Topological Social Choice. **AU** Baigent Nick; Huang, Peter.

PD December 1989. **TI** Equilibrium of Incomplete European Option Markets. **AU** Huang, Peter; Wu, Ho-Mou. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 89-128; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 20. **PR** $3.50. **JE** 313, 311, 021. **KW** Option Markets. Competitive Equilibrium. Commodities. Futures Market. Contracts.

AB We study a two period economy with commodity futures contracts and European call and put options written on one of the futures contracts. The strike prices of these options are set endogenously by an options exchange to be at the money, meaning the option strike prices are chosen to equal the price of the underlying commodity futures contract. We prove that, in the space of initial endowments, competitive equilibria generically exist.

Hubbard, R. Glenn

TI Taxation, Corporate Capital Structure and Financial Distress. **AU** Gertler, Mark; Hubbard, R. Glenn.

PD May 1990. **TI** Internal Net Worth and the Investment Process: An Application to U.S. Agriculture. **AU** Hubbard, R. Glenn; Kashyap, Anil K. **AA** Hubbard: Columbia University and National Bureau of Economic Research. Kashyap: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 124; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 46. **PR** no charge. **JE** 313, 715. **KW** Capital Markets. Investment. Agriculture.

AB We present new evidence in favor of models stressing the link between information problems in capital markets and investment. There are two noteworthy features of this evidence. First it is obtained from studying the U.S. agricultural sector; this sector has experienced large fluctuations in net worth and the profitability of investment, and is one where reasonable measures of net worth can be constructed. Second, rather than relying on investment function representations (e.g., the q-theory approach), we make use of predictions generated by firms' Euler equation for capital accumulation.

Humphrey, David B.

TI The Dominance of Inefficiencies over Scale and Product Mix Economies in Banking. **AU** Berger, Allen N.; Humphrey, David B.

Hyafil, Francoise

PD September 1988. **TI** Rational Expectations and the Natural Rate Model: Some Evidence for France. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-26; Department of Economics, Brown University, Providence, RI 02912. **PG** 42. **PR** no charge. **JE** 311, 133, 023. **KW** Rational Expectations. France. Money Growth.

AB In this paper, the policy ineffectiveness proposition is empirically evaluated for France. This proposition, initially developed by Sargent and Wallace, embodies two hypotheses: the rationality of expectations hypothesis and the Natural Rate hypothesis. A joint nonlinear estimation method has been used. The results of the tests presented here have been obtained from quarterly data with, successively the inflation rate and the money growth as the aggregate demand policy variable and the industrial production and employment as real variables. It turns out that the rationality and rationality hypothesis are jointly and separately rejected. The results find support for the alternative proposition that there is short-term influence of anticipated demand policy on output and employment. Paper in French.

Iannaccone, Laurence R.

PD September 1989. **TI** Sacrifice and Stigma Reducing Free-Riding in Cults, Communes, and Other Collectives. **AA** Santa Clara University and National Fellow, Hoover Institution. **SR** Stanford Hoover Institute Working Paper in Economics: E-89-29; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 51. **PR** not available. **JE** 921, 025. **KW** Religion. Social Clubs.

AB This paper presents an economic analysis of religious behavior that accounts for the continuing success of groups with bizarre behavioral requirements and seemingly inefficient prohibitions. The analysis does not presuppose any special motives for religious activity. Rather, religion is modeled as a club good that displays positive returns to "participatory crowding." The analysis demonstrates that efficient religions with perfectly rational members may benefit from stigma, self-sacrifice, and unusual behavioral restrictions. The model also addresses sacrifice in non-religious "social clubs": fraternities, communes, political parties, work groups, and families.

Imrohoroglu, Ayse

TI The Role of Unemployment Insurance in an Economy with Liquidity Constraints and Moral Hazard. **AU** Hansen, Gary D.; Imrohoroglu, Ayse.

Isard, Peter

TI Fiscal Policy, Locational Decisions, and Exchange Rates. **AU** Dooley, Michael P.; Isard, Peter.

Ito, Takatoshi

PD September 1989. **TI** Endogenous Election Timings and Political Business Cycles in Japan. **AA** Hitotsubashi University. **SR** National Bureau of Economic Research Working Paper: 3128; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $2.00. **JE** 133, 025. **KW** Business Cycle. General Election. Political Economy.

AB This paper constructs a theoretical model of political business cycles in a Parliamentary system and tests predictions and hypotheses of a theoretical model against the post-war Japanese data. Unlike in a presidential system, the timing of a general election is an endogenous policy variable in a parliamentary system. Thus, one of the interesting questions in a parliamentary system is whether elections cause business cycles or economic expansions trigger general elections.

Jakeman, Anthony J.

TI Estimating the Percentiles of Some Misspecified Non-Nested Distributions. **AU** Bai, Jun; Jakeman, Anthony J.; McAleer, Michael.

John, Kose

PD December 1989. **TI** Limited Liability, Tax Deductibility of Corporate Debt, and Public Policy. **AU** John, Kose; Senbet, Lemma W. **AA** John: New York University. Senbet: University of Wisconsin, Madison. **SR** New York University Salomon Brothers Center Working Paper: 544; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 29. **PR** not available. **JE** 522, 514, 511, 323. **KW** Liability. Corporations. Investment. Debt. Taxes.

AB Corporate limited liability engenders agency conflicts between the private and public sector. These conflicts have the potential to distort private investment decisions relative to social interests. Given corporate limited liability, and all equity firm overinvests in risky projects relative to the socially optimal level, if investment levels are "noncontractible". On the other hand, outstanding risky debt induces an offsetting underinvestment incentive. Thus, risky debt can play a vital role in aligning the privately optimal investment choices with social optimality. The preferential tax treatment of debt over equity provides an appropriate incentive for corporations to choose optimal capital structures consistent with socially optimal investments. This provides one rationale for the tax-deductibility of debt from a public policy perspective. Further implications are drawn for regulatory policies and the design of taxation.

PD December 1989. **TI** Reputation and Investment Incentives. **AU** John, Kose; Nachman, David C. **AA** John: New York University. Nachman: Georgia Institute of Technology. **SR** New York University Salomon Brothers Center Working Paper: 543; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 13. **PR** not available. **JE** 522, 521, 315, 514. **KW** Investment. Credit. Incentives. Reputation.

AB This paper contains two parts. The first part is an Appendix I which presents a detailed proof of the theorem in John and Nachman (1985). The second part, "Equilibrium with Retention", extends the model in John and Nachman (1985) to allow firms to retain funds from one period and use it to finance investments in a subsequent period. Firms' dependence on external markets is thereby reduced. In this scenario the market not only observes the repayment behavior of firms but also the amount borrowed for the subsequent investments. In the resulting equilibrium, it is shown that reputation effects curtail underinvestment incentives.

Johnson, Leland L.

PD July 1989. **TI** Competition, Pricing, and Regulatory Policy in the International Telephone Industry. **AA** Rand Corporation. **SR** Rand Report: R-3790; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 63. **PR** not available. **JE** 635, 613, 442. **KW** Telecommunications. Telephones. Communications. International Business.

AB This report focuses on the characteristics of prices charged by international telecommunications carriers to their customers or "end users," and the arrangements by which carriers in separate countries compensate each other for handling portions of traffic that together permit end-to-end "retail" service. More specifically, the study examines the relationships between international telephone rates and the cost of service, the impediments to efficient pricing of telephone service, the effects of competition on prices and financial settlements among telephone carriers, and the implications for economic efficiency and government regulatory policy.

Johnston, R. Barry

PD June 1989. **TI** Monetary Control Procedures and Financial Reform: Approaches, Issues, and Recent Experiences in Developing Countries. **AU** Johnston, R. Barry; Brekk, Odd Per. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/48; International Monetary Fund, Washington, DC 20431. **PG** 55. **PR** no charge. **JE** 311, 121. **KW** Monetary Policy. Developing Countries. Financial System.

AB Many countries have initiated reforms in their monetary control procedures by relaxing direct controls and increasing the role of market processes. The changed approach is often inevitable when countries reform their financial systems in support of growth and adjustment. This is because reform of those procedures increases the scope of monetary policy for stabilization purposes and allows for more flexible arrangements for setting interest rates and allocating credit that are necessary elements in improving resource mobilization and the efficiency of investment. This paper discusses the approaches to reforming monetary instruments, the issues in implementation, and experiences in developing countries.

Jones, Carol Adaire

TI Longitudinal Patterns of Compliance with OSHA Health and Safety Regulations in the Manufacturing Sector. **AU** Gray, Wayne B.; Jones, Carol Adaire.

Jonung, Lars

TI The Long-Run Behavior of Velocity: The Institutional Approach Revisited. **AU** Bordo, Michael D.; Jonung, Lars.

Jorian, Phillipe

TI Time-Series Tests of a Non-Expected Utility Model of Asset Pricing. **AU** Giovannini, Alberto; Jorian, Phillipe.

Jovanovic, Boyan

TI Externalities and Growth Accounting. **AU** Benhabib, Jess; Jovanovic, Boyan.

TI Financial Development, Growth and the Distribution of Income. **AU** Greenwood, Jeremy; Jovanovic, Boyan.

PD January 1990. **TI** An Estimate of a Sectoral Model of Labor Mobility. **AU** Jovanovic, Boyan; Moffit, Robert. **AA** Jovanovic: New York University. Moffit: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3227; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $2.00. **JE** 823, 821. **KW** Labor Mobility. Search Theory. Labor Market.

AB This paper develops a model of sectoral labor mobility and tests its main implications. The model nests two distinct hypotheses on the origin of mobility: (a) sectoral shocks (Lucas and Prescott, 1974) and (b) worker- employer mismatch (Jovanovic, 1979, Miller, 1984, Flinn, 1986). We estimate the relative importance of each hypothesis, and find that the bulk of labor mobility is caused by mismatch rather than by sectoral shift. We then try to put a value on society's match-specific information. That is, we ask to what extent the availability of the option to change jobs raises GNP. We find that the mobility option raises expected earnings by roughly between 8.5 percent and 13 percent of labor earnings, which translates to an increase in GNP of between 6 percent and 9 percent.

Joyce, Theordore

PD December 1989. **TI** The Dynamic Relationship Between Low Birthweight and Induced Abortion in New York City: An Aggregate Time-Series Analysis. **AU** Joyce, Theordore; Grossman, Michael. **AA** City University of New York. **SR** National Bureau of Economic Research Working Paper: 3211; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 14. **PR** $2.00. **JE** 913, 914. **KW** Pregnancy. Abortion.

AB We use a vector autoregression to examine the dynamic relationship between the race-specific percentage of pregnancies terminated by induced abortion and the race-specific percentage of low birthweight births in New York City. With monthly data beginning in 1972, we find that induced abortion explains low birthweight for blacks, but not for whites. There is no evidence of feedback from low birthweight to induced abortion. Simulations based on the model reveal that an unanticipated decrease in the percentage of pregnancies terminated by induced abortion results in an increase in the rate of low birthweight births among blacks. The findings suggest that restrictions on legalized abortion in New York City would worsen birth outcomes among blacks.

Judd, Kenneth L.

TI Observable Contracts: Strategic Delegation and Cooperation. **AU** Fershtman, Chaim; Judd, Kenneth L.; Kalai, Ehud.

Jurriens, P.

PD February 1987. **TI** The Solution of Nonlinear Forward Looking Rational Expectations Models. **AU** Jurriens, P.; Jurriens, Yvette. **AA** Jurriens, P.: Pierson, Heldring and Pierson. Jurriens, Y.: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 1/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 18. **PR** no charge. **JE** 213, 214. **KW** Rational Expectations. Algorithm. Gauss-Newton Algorithm. Nonlinear Models.

AB In this paper a solution technique based on Gauss-Newton's method is developed for nonlinear rational expectations models. It is shown that the multiple shooting method can hardly be applied to models with current expectations of future variables, especially if the expectations horizon of the model is large. Our algorithm provides a solution path for this problem. Finally the number of iterations required for convergence of our Gauss-Newton based algorithm is compared with the number of iterations required in Gauss-Siedel based algorithms of Fair-Talor, Fisher, Holly and Hughes Hallett. It turns out that for the type of models considered our algorithm is more efficient.

Jurriens, Yvette

TI The Solution of Nonlinear Forward Looking Rational Expectations Models. **AU** Jurriens, P.; Jurriens, Yvette.

PD March 1987. **TI** Determination of Production Plans in a Stock Market Model. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 3/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 34. **PR** no charge. **JE** 022, 514, 511. **KW** Firm Theory. Production.

Shareholders.
AB In an economy with complete markets, a firm acts in its owner's interests if it maximizes profits. However, in a world of uncertainty where contingent contracts are not possible, there is in general no goal for a firm to pursue which represents the interests of all its shareholders. In this paper we assume that a firm can revise an initial production plan, the input level being given, if and only if it is accompanied by compensating transfers of shares among shareholders of the firm, such that the final production plan selected is unanimously favored by all shareholders of the firm.

Kaas, R.

TI New Upper Bounds for Stop-Loss Premiums for the Individual Model. **AU** van Heerwaarden, A. E.; Goovaerts, M. J.; Kaas, R.

PD February 1988. **TI** Between Individual and Collective Model for the Total Claims. **AU** Kaas, R.; van Heerwaarden, A. E.; Goovaerts, M. J. **AA** Kaas and van Heerwaarden: University of Amsterdam. Goovaerts: University of Amsterdam and K. U. Leuven. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 3/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 6. **PR** no charge. **JE** 213, 022. **KW** Collective Model. Premiums.
AB This article studies random variables whose stop-loss rank falls between a certain risk and the compound Poisson approximation to this risk. They consist of a compound Poisson part to which some independent Bernoulli-type variables are added. Replacing each term in an individual model with such a random variable leads to an approximating model for the total claims on a portfolio of contracts that is computationally almost as attractive as the compound Poisson approximation used in the standard collective model. The resulting stop-loss premiums are much closer to the real values.

Kahn, Charles M.

PD February 1990. **TI** The Good, the Bad, and the Ugly: Coalition Proof Equilibrium in Games with Infinite Strategy Spaces. **AU** Kahn, Charles M.; Mookherjee, Dilip. **AA** Kahn: University of Illinois, Urbana-Champaign and Economics Research Center/NORC. Mookherjee: Indian Statistical Institute and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 90-2; Economics Research Center/NORC, 1155 E. 60th St., Chicago, IL 60637. **PG** 31. **PR** $2.00; send requests to Librarian, Economics Research Center. **JE** 026. **KW** Nash Equilibrium. Strategies. Game Theory.
AB This paper shows how to extend the definition of Coalition Proof Nash Equilibrium to games with infinite strategies. Our new definition reduces to the recursive definition of Bernheim, Peleg and Whinston when there are a finite number of players and a finite strategy space. Unlike the old characterization, our new one maintains an equivalence between the recursive definition and a non-recursive characterization in terms of consistent families of equilibria; for the old definition the equivalence was only maintained in the case of finite players and finite strategy space. We give some examples of the employment of the new definition to show its advantages and its relatively simple characterization, even for games with infinite numbers of agents.

Kalai, Ehud

TI Observable Contracts: Strategic Delegation and Cooperation. **AU** Fershtman, Chaim; Judd, Kenneth L.; Kalai, Ehud.

Kan, A. H. G. Rinnooy

TI A Probabilistic Analysis of the Multiknapsack Value Function. **AU** Meanti, M.; Kan, A. H. G. Rinnooy; Stougie, L.; Vercellis, C.

TI Analysis of Heuristics for Vehicle Routing Problems. **AU** Haimovich, M.; Kan, A. H. G. Rinnooy; Stougie, L.

PD August 1988. **TI** On the Relation Between Complexity and Uncertainty. **AU** Kan, A. H. G. Rinnooy; Stougie, L. **AA** Kan: Erasmus University Rotterdam. Stougie: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 9/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 5. **PR** no charge. **JE** 213. **KW** *Optimization. Uncertainty. Knapsack Problem.*
AB In practical problem situations data are usually inherently unreliable. A mathematical representation of uncertainty leads to stochastic optimization problems. In this paper the complexity of stochastic combinatorial optimization problems is discussed. Surprisingly, certain stochastic versions of NP-hard deterministic combinatorial problems appear to be solvable in polynomial time.

PD December 1988. **TI** Probabilistic Analysis of Algorithms. **AU** Kan, A. H. G. Rinnooy; Stougie, L. **AA** Kan: Erasmus University Rotterdam. Stougie: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 17/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 14. **PR** no charge. **JE** 213, 214. **KW** Asymptotic Theory. Algorithms. Optimization. Probabilistic Analysis.
AB Probabilistic analysis of algorithms for combinatorial optimization problems has only recently become an active research area. The nature of mathematical techniques used in the analysis and of the results obtained is illustrated by a selection of examples from the literature. The selection is made in such a way that various problem classes in combinatorial optimization are represented. At several points, challenging open problems are mentioned as an encouragement for further research in this area.

Kan, W.

TI Here's Looking at You: Modelling and Policy Use of Auction Price Expectations. **AU** Brayton, F.; Kan, W.; Tinsley, P. A.; von zur Muehlen, P.

Kannan, R.

TI On Integer points in Polyhedra. **AU** Cook, W.; Hartmann, M.; Kannan, R.; McDiarmid, C.

Karni, Edi

PD January 1990. **TI** Technological Progress and Income Inequality. **AU** Karni, Edi; Zilcha, Itzhak. **AA** Karni: John Hopkins University. Zilcha: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 1-90; Department of Economics, Tel Aviv

University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 24. **PR** no charge. **JE** 111, 023. **KW** Income Distribution. Technology. Technological Progress.

AB The impact of technological progress upon income distribution is studied here in an OLG model with production. Individuals work in the first period and their optimization includes an endogenous supply of labor and bequest. We trace the equilibrium income distribution in all periods following the technological improvement. It is shown that the effect on income distribution depends solely upon the elasticity of substitution in production: if the technological change is Hicks-neutral or Harrod-neutral then income inequality decreases (increases) if and only if the elasticity of substitution is larger (smaller) than one. For a Solow-neutral change the income inequality increases (decreases) if and only if the elasticity is larger (smaller) than one.

PD March 1990. **TI** Utility Theory and Uncertainty. **AU** Karni, Edi; Schmeidler, David. **AA** Karni: Johns Hopkins University. Schmeidler: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 8-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 94. **PR** no charge. **JE** 026, 022. **KW** Utility. Uncertainty. Risk.

AB To do justice to the subject of utility theory with uncertainty would require an entire handbook. Because of the space limitations of the present survey we confine the presentation to a few selected topics. Over the years several excellent expositions of the theory of decision making under uncertainty have appeared. More recent developments are discussed in Fishburn (1988), Wakker (1989), and Machina (1987). Arrow (1951) gives an interesting glimpse into the state of the art in the early 1950's. Reading the recent surveys in conjunction with Arrow's exposition highlights the dramatic transformation of the field in the aftermath of Savage's fundamental work on expected utility theory. The present survey provides an exposition of expected utility theory and the theories that have emerged from departures from the sure thing principle in the theory of decision making under uncertainty and the independence axiom in the theory of decision making under risk.

Karp, Larry

TI The Welfare Effects of Imperfect Harmonization of Trade and Industrial Policy. **AU** Gatsios, Konstantine; Karp, Larry.

TI Winners and Losers from Anti-Merger Laws. **AU** Gatsios, Konstantine; Karp, Larry.

PD November 1989. **TI** Optimal Tariffs on Exhaustible Resources. **AU** Karp, Larry; Newbery, David M. **AA** Karp: University of Southampton. Newbery: University of Cambridge. **SR** University of Cambridge Economic Theory Discussion Paper: 141; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 34. **PR** $4.00, checks payable to University of Cambridge. **JE** 422, 721, 411. **KW** Tariffs. Commercial Policy. Exhaustible Resources. Imports.

AB The optimal tariff of a large oil importer who can commit to future tariff levels rises at the rate of interest. Without commitment, this plan is dynamically inconsistent - high future tariffs are chosen in part to lower the current price. Once that oil has been purchased, the importer would like to lower future tariffs. We solve for a dynamically consistent perfect tariff for n identical importers, and compare the result with a time-consistent Nash tariff and a reneged open-loop tariff, finding the latter a close approximation to the perfect tariff. Inability to commit makes importers behave more competitively.

Kashyap, Anil K.

PD March 1990. **TI** Sticky Prices: New Evidence From Retail Catalogs. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 112; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 39. **PR** no charge. **JE** 134, 227, 633. **KW** Inflation. Menu Costs. Prices. Retail Trade.

AB Despite the central importance of the debate over whether prices are flexible, there is almost no evidence on the time series movements of actual transaction prices. This paper presents new data on the prices of twelve selected retail goods over the past 35 years. We uncover three basic facts about these data: first, the time interval between changes is very irregular and on average nominal prices are fixed for more than one year; second, prices change more often during periods of high overall inflation; third, when prices do change, the sizes of the changes are widely dispersed. Both "large" and "small" changes occur for the same item and the sizes of these changes do not closely depend on overall inflation. These facts strongly challenge the recent theories that are based on "menu costs" or fixed time intervals between changes that have been put forward to explain price rigidities.

TI Internal Net Worth and the Investment Process: An Application to U.S. Agriculture. **AU** Hubbard, R. Glenn; Kashyap, Anil K.

Katz, Lawrence

TI Does Unmeasured Ability Explain Inter-Industry Wage Differences?. **AU** Gibbons, Robert; Katz, Lawrence.

Keeler, Andrew G.

TI A Model of the Impacts of Water Flows, Hatchery Operations, and Harvest Regulations on the California Central Valley Salmon Fishery. **AU** Fisher, Anthony C.; Hanemann, W. Michael; Keeler, Andrew G.

Kelejian, Harry

TI A Random Coefficient Qualitative Choice Model of Telecommunications Demand: Results and Conjectures. **AU** Gatto, Joseph; Kelejian, Harry; Stephan, Scott.

Kennickell, Arthur B.

PD May 1990. **TI** Demographics and Household Savings. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 123; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 16. **PR** no charge. **JE** 841, 921. **KW** Savings. Households. Aging.

AB This paper examines the effects of projected changes in the age structure of the population on the rate of household saving. The 1983-86 Surveys of Consumer Finances and several years of the continuing Consumer Expenditure Survey are used to generate age-saving and age-income profiles.

Observations from these surveys are re-weighted to simulate the future age distribution of households. The result is that at this level of analysis, there is no strong evidence that the projected aging of the population will significantly increase the saving rate.

Kenny, Lawrence W.

TI Redistribution, Income, and Voting. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B.

TI Voting Laws, Educational Policies, and Minority Turnout. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B.

Kern, Walter

TI A Guided Tour through Oriented Matroid Axioms. **AU** Bachem, Achim; Kern, Walter.

Kessides, Ioannis N.

TI Localized Market Power in the U.S. Airline Industry. **AU** Evans, William N.; Kessides, Ioannis N.

Kessler, D.

TI Intergenerational Transfers Within the Family. **AU** Cremer, Helmuth; Kessler, D.; Pestieau, Pierre.

Khan, Mohsin S.

PD July 1989. **TI** Private Investment and Economic Growth in Developing Countries. **AU** Khan, Mohsin S.; Reinhart, Carmen M. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/60; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** no charge. **JE** 111, 121. **KW** Developing Countries. Growth Model. Investment. Economic Growth.

AB Despite the growing support for market-oriented strategies, and for a greater role of private investment, empirical growth models for developing countries typically make no distinction between the private and public components of investment. This paper sheds some light on this important issue by formulating a simple growth model that separates the effects of public sector and private sector investment. This model is estimated for a cross-section sample of 24 developing countries, and the results support the notion that private investment has a larger direct effect on growth than does public investment.

Kiefer, Nicholas M.

TI The Exact Likelihood Function for an Empirical Job Search Model. **AU** Christensen, Bent Jesper; Kiefer, Nicholas M.

Kihlstrom, Richard E.

PD March 1990. **TI** Managerial Incentives in an Entrepreneurial Stock Market Model. **AU** Kihlstrom, Richard E.; Matthews, Steven E. **AA** Kihlstrom: University of Pennsylvania. Matthews: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 876; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 27. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 512, 514, 022. **KW** Moral Hazard. Stock Market. Rational Expectations. Firm Equity. Entrepreneur.

AB This paper addresses the First Theorem of Welfare Economics in a moral hazard environment. An entrepreneur sells equity in a firm which he supplies with an unobservable, costly input. How much equity he retains determines his incentives and is observed by investors. The investors have rational expectations which cause the equity price to increase in the amount of equity the entrepreneur retains. This gives the entrepreneur an incentive to retain equity and hence supply input. The entrepreneur may also be bound by an explicit incentive contract. In this framework, not all competitive equilibria are efficient, as defined relative to the moral hazard constraint. However, equilibria can be inefficient only if the entrepreneur's optimal input is nonunique or exhibits positive income effects.

Kim, I.

TI The Instruments and Operating Procedures for Conducting Monetary Policy in the Group of Five Countries. **AU** Batten, D.; Blackwell, M.; Kim, I.; Nocera, Simon E.; Ozeki, Y.

Kim, Moshe

TI The Effects of Mergers on Prices, Costs, and Capacity Utilization in the U.S. Air Transportation. **AU** Lichtenberg, Frank R.; Kim, Moshe.

King, Maxwell L.

PD December 1989. **TI** Small-Disturbance Asymptotics and the Durbin-Watson and Related Tests in the Dynamic Regression Model. **AU** King, Maxwell L.; Wu, Ping X. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 12/89; Department of Econometrics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 11. **PR** no charge. **JE** 211. **KW** Durbin-Watson Test. Ordinary Least Squares. Asymptotic Theory. Linear Regression Model.

AB Until recently, it was thought inappropriate to apply the Durbin-Watson (DW) test to a dynamic linear regression model because of the lack of appropriate critical values. Recently, Inder (1986) used a modified small-disturbance distribution (SDD) to find approximate critical values. This paper studies the exact SDD of statistics of the same general form as the DW statistic and suggests some changes to Inder's result. We show how to calculate true small-disturbance critical values and bounds for these critical values that take into account the exogenous regressors. Our results give a justification for the use of the familiar tables of bounds when the DW test is applied to a dynamic regression model.

King, Mervyn A.

PD October 1989. **TI** Endogenous Growth and the Role of History. **AU** King, Mervyn A.; Robson, Mark. **AA** London School of Economics. **SR** National Bureau of Economic Research Working Paper: 3151; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 111, 321, 023. **KW** Growth Model. Fiscal Policy Endogenous Growth.

AB This paper presents a model in which the realization of stochastic tax and depreciation rates determine both the level and growth rate of output: externalities to investment - learning by watching - are characterized by diminishing returns, yielding a nonlinear "technical progress function". This results in multiple steady-state growth rates. History matters.

It is possible that two economies with identical "deep" parameters and initial capital stocks may cycle around different trend growth rates, depending upon the historical path of fiscal shocks. Growth and cycles interact, and the nonlinearity means that output changes cannot be decomposed into a stochastic trend and a trend-stationary process.

King, Robert G.

PD November 1989. **TI** Transitional Dynamics and Economic Growth in the Neoclassical Model. **AU** King, Robert G.; Rebelo, Sergio T. **AA** King: University of Rochester. Rebelo: Rochester Center for Economic Research and Northwestern University. **SR** National Bureau of Economic Research Working Paper: 3185; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $2.00. **JE** 111, 022, 921. **KW** Neoclassical Model. Households. Growth Model. Growth Theory.

AB In this paper, we undertake a systematic quantitative investigation of transitorial dynamics within the most widely employed versions of the neoclassical model with intertemporally optimizing households. Lengthy transitorial episodes arise only if there is very low intertemporal substitution. But, more important, we find that the simplest neoclassical model inevitably generates a central implication that is traced to the production technology. Whenever we try to use it to explain major growth episodes, the model produces a rate of return that is counterfactually high in the early stages of development. For example, in seeking to account for U.S.-Japan differences in post war growth as a consequence of differences in end-of-war capital, we find that the immediate postwar rate of return in Japan would have had to exceed 500% per annum.

PD November 1989. **TI** Real Business Cycles and the Test of the Adelmans. **AU** King, Robert G.; Plosser, Charles I. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 3160; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $2.00. **JE** 133, 132. **KW** Business Cycles. Simulation Model. Economic Model.

AB This paper conducts a modern variant of the test proposed and carried out by Adelman and Adelman (1959). Using the methods developed by Burns and Mitchell (1946), we see if we can distinguish between the economic series generated by an actual economy and those analogous artificial series generated by a stochastically perturbed economic model. In the case of the Adelmans, the model corresponded to the Klein-Goldberger equations. In our case, the model corresponds to a simple real business cycle model. The results indicate a fairly high degree of coincidence in key economic aggregates between the business cycle characteristics identified in actual data and those found in our simulated economy.

Kitson Michael

PD September 1989. **TI** Trade Policy and the Development of Bilateralism in the Inter-war Period: The Experience of the UK and Germany. **AU** Kitson Michael; Solomou, Solomos. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 8916; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 14. **PR** $4.00; checks payable to University of Cambridge. **JE** 044, 421, 422. **KW** Protectionism. Trade Agreement. Commercial Policy.

AB The discriminatory protectionist policies in the 1930s are assumed to have led to a collapse of multilateral trading patterns. In this paper we document the extent of the increase in bilateralism for the UK and Germany during the inter-war period. The results suggest that a long-term increase in bilateralism is only observed in Germany after 1934. The variations in bilateralism are mainly explained by variations in trade flows and not by the development of bilateral trading agreements.

Kiviet, Jan F.

PD October 1988. **TI** Bias Reduction in a Dynamic Regression Model: A Comparison of Jackknifed and Bias Corrected Least Squares Estimators. **AU** Kiviet, Jan F.; Phillips, Garry D. A. **AA** Kiviet: University of Amsterdam. Phillips: University of Manchester. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 11/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 41. **PR** no charge. **JE** 211, 132. **KW** Ordinary Least Squares. Asymptotic Theory. Linear Regression Model. Sample Bias. Monte Carlo Model.

AB Employing small-sigma asymptotics we approximate the small sample bias of the ordinary least squares (OLS) estimator of the full coefficient vector in a linear regression model which includes a one period lagged dependent variable and an arbitrary number of fixed regressors. This bias term is used to construct a corrected ordinary least squares (COLS) estimator which is unbiased to O(sigma squared). We also consider another technique for bias reduction, viz. jackknifing, and we present a simple expression for the JOLS(m) estimator: the m-delete jackknifed OLS estimator. Then we compare the accuracy of the O(sigma squared) approximation to the bias and the efficiency of OLS, COLS and JOLS(m) in a Monte Carlo study of artificial but realistic models.

Kmenta, Jan

TI Testing Hypotheses About Regression Coefficients in Misspecified Models. **AU** Battacharya, Dilip K.; Kmenta, Jan.

Koelln, Kenneth

PD January 1990. **TI** Rigid Prices and Flexible Products. **AU** Koelln, Kenneth; Rush, Mark. **AA** University of Florida. **SR** University of Florida Working Paper in Economics: 90-1; Department of Economics, University of Florida, Gainesville, FL 32611. **PG** 20. **PR** no charge. **JE** 227, 023, 131. **KW** Product Market. Prices. Innovations. Macroeconomic Model.

AB Many new Keynesian microfoundations models are based on the disequilibrium created by sticky prices in the goods market. Empirical justification for sticky prices is limited primarily to findings of sticky newsstand prices of magazines. However, we present evidence indicating that changes in the product definition may substitute for price changes. This result indicates that previous empirical work has overstated the extent of any disequilibrium in the goods market.

Kokoski, Mary F.

PD November 1989. **TI** Changes in Taxes, Prices and the Cost of Living: An Analysis of Tax Reform. **AA** Bureau of

Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 199; Bureau of Labor Statistics, Office of Prices and Living Conditions, 600 E Street NW, Room 4013, Washington, DC 20212. **PG** 29. **PR** no charge. **JE** 323, 227, 921. **KW** Consumer Economics. Tax Reform. Prices. Price Index. Taxes.

AB The tax-and-price index (TPI) extends the scope of an expenditure-based price index, such as the Consumer Price Index, to include income taxes. It incorporates the interrelated effects of changes in prices as well as federal and state and local income taxes in assessing the relative cost of consuming a reference bundle of goods and services in different periods. As such it provides a useful tool for analyzing the effects of a tax change, such as the 1986 Tax Reform Act, on the cost-of-living of U.S. households.

Kolen, Antoon

TI Economic Lot-Sizing: An O(n log n)-Algorithm that Runs in Linear Time in the Wagner-Whitin Case. **AU** Wagelmans, Albert; van Hoesel, Stan; Kolen, Antoon.

Kong, Paul

TI Technical Progress and Jobs. **AU** Nickell, Stephen; Kong, Paul.

TI Demand and Employment. **AU** Nickell, Stephen; Kong, Paul.

Korajczyk, Robert A.

PD November 1989. **TI** Understanding Stock Price Behavior Around the Time of Equity Issues. **AU** Korajczyk, Robert A.; Lucas, Deborah J.; McDonald, Robert L. **AA** Korajczyk and McDonald: University of Chicago. Lucas: Northwestern University. **SR** National Bureau of Economic Research Working Paper: 3170; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 313, 522. **KW** Stock Market. Common Stock. Stock Prices.

AB It is well-documented that stock prices rise significantly prior to an equity issue, and fall upon announcement of the issue. We expand on earlier studies by using a large sample which includes OTC firms, by examining the cross-sectional properties of the price rise, and by using accounting data to track the pattern of debt ratios and Tobin's q around the time of equity issues. We consider a number of explanations for our results, and conclude that the data is largely consistent with informational models in which managers are asymmetrically informed about the value of the firm.

Kotlikoff, Laurence J.

PD June 1989. **TI** From Deficit Delusion to the Fiscal Balance Rule: Looking for an Economically Meaningful Way to Assess Fiscal Policy. **AA** Boston University. **SR** International Monetary Fund Working Paper: WP/89/50; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** no charge. **JE** 321, 322, 023. **KW** Fiscal Policy. Budget Deficit. Intertemporal Model.

AB Although the deficit is a useful construct for Keynesian analyses of fiscal policy, the deficit appears to be a less useful measure of fiscal policy within all but a restricted class of intertemporal neoclassical models. This paper suggests that the nature of deficits in a simple certainty model with nondistortionary policies, and in settings with uncertain policy, distortionary policy, and liquidity constraints is, to a large extent, arbitrary. It then posits a more appropriate description of fiscal policy for the class of models in question, and proposes the economically meaningful "fiscal balance rule" as an alternative to the economically arbitrary "balanced budget rule" as a means of assessing whether fiscal policy is intergenerationally tight or loose.

TI Demographics, Fiscal Policy, and U.S. Saving in the 1980s and Beyond. **AU** Auerbach, Alan J.; Kotlikoff, Laurence J.

TI Corporate Taxation and the Efficiency Gains of the 1986 Tax Reform Act. **AU** Gravelle, Jane G.; Kotlikoff, Laurence J.

Krelove, R.

PD June 1989. **TI** Efficient Tax Exporting. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8912; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 23. **PR** no charge. **JE** 931, 324. **KW** Urban Economics. Taxes. Local Taxes. Communities.

AB In a multi-jurisdiction economy with free mobility of households between communities, some portion of any community's tax is incident upon nonresident landowners. It is shown that when the objective of a community is taken to be the level of satisfaction of its residents, a fully efficient allocation is a (Nash) equilibrium of the decentralized game. In general no local tax structure that restricts a community's tax base to residents can attain the optimum; thus tax exporting is necessary for independent local government behavior to be consistent with efficiency.

Kremers, Jeroen J. M.

PD October 1989. **TI** External Imbalances and Fiscal Policy in the Group of Three Countries: The Role of Stock-Flow Dynamics. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/81; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** no charge. **JE** 321, 322, 443, 431. **KW** Fiscal Policy. Budget Deficit. Public Debt.

AB This paper discusses recent empirical research on the interplay between fiscal policies and external imbalances in the G3 countries, focusing on the stock-flow dynamics of public and foreign deficits and debt accumulation.

Krieger, Reva

PD September 1989. **TI** Real Exchange Rates, Sectoral Shifts, and Aggregate Unemployment. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 92; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 28. **PR** no charge. **JE** 824, 823, 131, 132. **KW** Exchange Rates. Unemployment Rate. Labor Mobility.

AB This paper analyzes the effects of variability of the real exchange rate on the aggregate U.S. unemployment rate. The differential impact of real exchange rate shocks across industries necessitates a reallocation of labor out of adversely affected industries. In the case in which labor mobility across sectors is not instantaneous, due to the fact that firms lay off workers faster than they hire them, this reallocation process will be slow and is accompanied by unemployment in the interim. The specific hypothesis that is tested in this paper is that a higher dispersion of real exchange rate shocks across industries leads to a higher level of unemployment by increasing the amount of labor reallocation which is required. The results indicate that real exchange rate shocks have, in fact, affected the aggregate unemployment rate through this channel.

Krueger, Alan B.

PD September 1989. **TI** The Evolution of Unjust-Dismissal Legislation in the United States. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 3127; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $2.00. **JE** 833, 916. **KW** Legislation. Judicial System. Liability. Labor Turnover.

AB In the last decade, state courts in many areas of the United States have ruled in favor of employees alleging they were improperly dismissed. Many economists have contended that any judicial or legislative departure from the employment-at-will doctrine is regressive and inefficient because it restricts employment flexibility and freedom of contract. This paper advances an evolutionary theory of unjust-dismissal legislation in which employer groups eventually support unjust-dismissal legislation in response to the threat of large and variable damage awards imposed by the judicial system. Legislation is sought to clearly define property rights and to limit employer liability.

Krugman, Paul

PD November 1989. **TI** International Trade Effects of Value Added Taxation. **AU** Krugman, Paul; Feldstein, Martin. **AA** Krugman: Massachusetts Institute of Technology. Feldstein: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3163; National Bureau of Economic Research, 1050 Massachusetts Avenue, MA 02138. **PG** 26. **PR** $2.00. **JE** 431, 323. **KW** Value Added Tax. Taxes. Taxation. Imports. Exports.

AB The actual value added tax systems used in many countries differ significantly from the completely general VAT that has been the focus of most economic analyses. In practice, VAT systems exempt broad classes of consumer goods and services. This has important implications for the effect of the VAT on international trade. A value added tax is sometimes advocated as a way of improving a country's international competitiveness because GATT rules permit the tax to be levied on imports and rebated on exports. For a general VAT on all consumption, this argument is incorrect except in the very short run because exchange rates or domestic prices adjust to offset the effect of the tax on the relative prices of domestic and foreign goods.

Kupiec, Paul H.

PD September 1989. **TI** Animal Spirits, Margin Requirements, and Stock Price Volatility. **AU** Kupiec, Paul H.; Sharpe, Steven. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 91; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 26. **PR** no charge. **JE** 313, 311. **KW** Stock Prices. Central Bank. Monetary Policy.

AB Recent episodes of extreme stock price volatility have rekindled interest in the Federal Reserve Board's power to regulate initial margin requirements. Despite the long history of margin regulation, there exists no well-articulated theory of the interaction between initial margin requirements and stock prices and their returns' characteristics. We use a simple overlapping generations model to study initial margin requirements in a general equilibrium setting. In our model, investors exhibit heterogeneous preferences for risk-bearing that evolve stochastically across generations. Using this framework we show that imposing a binding initial margin requirement may either increase or decrease stock price volatility. The direction of the effect depends upon the structure of the heterogeneity underlying the fluctuations in each generation's average risk-bearing propensity.

PD January 1990. **TI** Futures Margins and Stock Price Volatility: Is There Any Link?. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 104; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 29. **PR** no charge. **JE** 313, 311, 522. **KW** Futures Margins. Volatility. Futures Markets.

AB This paper investigates the issue of futures market leverage and its effects on cash market volatility. We review the literature on margins and volatility and investigate the statistical relationship between the initial margin requirements on the S&P 500 index- futures contract and the S&P 500 cash market volatility. The results do not support the hypothesis that low initial futures margins increase volatility in the cash market. Rather, the results indicate that periods of higher cash market volatility are associated with higher initial margin rates in the index-futures market. This association is consistent with the prudential behavior of the futures exchange's margin committee and empirical findings that indicate that cash market volatility tends to be larger during periods of negative market returns.

TI A Primer on Program Trading and Stock Price Volatility: A Survey of the Issues and the Evidence. **AU** Duffee, Gregory; Kupiec, Paul H.; White, A. Patricia.

PD June 1990. **TI** Animal Spirits, Margin Requirements, and Stock Price Volatility. **AU** Kupiec, Paul H.; Sharpe, Steven. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 127; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 39. **PR** no charge. **JE** 313, 311. **KW** Volatility. Margin Requirements. Stock Market. Stock Prices.

AB Recent episodes of extreme stock price volatility have rekindled interest in the Federal Reserve Board's power to regulate initial margin requirements. Despite the long history of margin regulation, there exists no well-articulated theory of the interaction between initial margin requirements and stock prices and their returns' characteristics. We use a simple overlapping generations model to study initial margin requirements in a general equilibrium setting. Investors are assumed to exhibit either heterogeneous preferences for risk-bearing or heterogeneous "noise trader" expectations. In each case the distribution of characteristics evolves stochastically across generations.

TI A Securities Transactions Tax: Beyond the Rhetoric, What Can We Really Say?. **AU** White, A. Patricia; Kupiec, Paul H.; Duffee, Gregory.

Kymah, Emmanuel O.

PD November 1989. **TI** Monetary Concepts and Definitions. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/92; International Monetary Fund, Washington, DC 20431. **PG** 56. **PR** no charge. **JE** 311, 112, 123. **KW** Financial Markets. Money. Currency. Monetary Policy.

AB This paper examines monetary concepts and definitions. It notes that approaches to monetary analysis, and the concept of money itself, have been undergoing substantial change in many countries due in large part to recent innovation, which has affected financial markets, financial instruments, and financial institutions. As a result, many countries increasingly tend to focus on multiple creators and instruments of money as opposed to just currency and transferable demand deposits. This fact is borne out by the paper's survey of national practices in the selection and grouping of instruments in money measures. The paper concludes that the emerging trend towards broader concepts of money implies the need for some rethinking of traditional notions of money measures.

Labus, Miroljub

TI Adjustment Under Different Trade Strategies: A Mean-Variance Analysis with a CGE Model of the Yugoslav Economy. **AU** Adelman, Irma; Berck, Peter; Labus, Miroljub; Vujovic, Dusan.

Lagunoff, Roger

PD July 1990. **TI** Noncooperative Foundations for the Core of an Economy. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-14; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 20. **PR** no charge. **JE** 021, 026. **KW** Core. Allocation Mechanism. Voting. Exchange Economy.

AB One common method of providing a "noncooperative foundation" for a cooperative, game theoretic concept is to show that there exists a mechanism whose (noncooperative) equilibria coincide with the cooperative solution over a general class of economies. When applied to the core this method does not provide an adequate strategic separation between core and noncore allocations. Instead, we find that for a general class of exchange economies there is a class of mechanisms with the property that (1) each mechanism achieves a core allocation as a noncooperative equilibrium outcome; and (2) each core allocation is a noncooperative equilibrium outcome of a subclass of mechanisms in this class. We extend these results to hold for general characteristic function form games.

TI A Theory of Resource Allocation Under Communal Property Rights. **AU** Glomm, Gerhard; Lagunoff, Roger.

Lai, Kon S.

PD December 1989. **TI** Nonconvex Costs and the Volatility of Production. **AU** Lai, Kon S.; Pauly, Peter. **AA** Lai: California State University. Pauly: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8917; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 24. **PR** no charge. **JE** 522, 227, 131, 023. **KW** Inventories. Production. Volatility. Investment. Prices.

AB In this paper we examine the role of nonconvex cost in explaining the observed "excess" volatility of production. It is shown that declining marginal costs do not generally cause the variance of production to be higher than that of sales, and that they do not necessarily invalidate the application of the stock adjustment model, popular in empirical work. It is also shown that in the case where nonconvex costs can generate the "excess" volatility of production, the model is, however, incompatible with the empirical behavior of inventory investment and with the standard proposition regarding price behavior that prices respond negatively to changes in inventories.

Larman, D. G.

TI A Colored Version of Tverberg's Theorem. **AU** Barany, I.; Larman, D. G.

Layard, Richard

PD January 1990. **TI** Review of the Year's Work 1988/89. **AA** London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 365; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 38. **PR** no charge. **JE** 824, 821. **KW** Wages. Unemployment. Job Search. Labor Market.

AB Our research has focussed on five main issues: 1. The Thatcher record and the productivity "miracle", 2. Wage determination and unemployment, 3. Mismatch, 4. Job search, and 5. Labor market theory. In what follows we describe the research done in the academic year 1988/89.

Le Roy, Stephen F.

TI On the Arbitrage Pricing Theory. **AU** Gilles, Christian; Le Roy, Stephen F.

PD January 1990. **TI** Stock Price Volatility: Tests Based on the Geometric Random Walk. **AU** Le Roy, Stephen F.; Parke, William R. **AA** Parke: University of North Carolina, Chapel Hill. Le Roy: University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 3-90; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 25. **PR** no charge. **JE** 313, 311, 131. **KW** Volatility. Asset Pricing Models. Stock Prices. Stock Market.

AB This paper reports tests of stock price volatility under the maintained assumption that dividends follow a geometric random walk. We find that non-model-based tests reject the volatility implication of the present-value model, whereas model-based tests accept. Using Monte Carlo methods, we show that bias and sample variability in the non-model-based tests are sufficient to account for the rejection. Based on results of Campbell-Shiller, we conjecture, however, that our acceptance reflects the low power of tests of bounds on price variance.

Lee, Lung-Fei

PD December 1989. **TI** Semiparametric Maximum Profile Likelihood Estimation of Polytomous and Sequential Choice Models. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research

Discussion Paper: 253; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 35. **PR** free. **JE** 211. **KW** Discrete Choice Models. Semiparametric Model. Semiparametric Estimation. Maximum Likelihood.

AB This article considers semiparametric estimation of discrete choice models. The estimation methods are some semiparametric maximum profile likelihood methods which generalize Klein and Spady [1987] to the estimation of polytomous choice and sequential choice models. Special emphases are on the correction of asymptotic bias and negative density estimates caused by high order kernel density estimation. The estimators are shown to be the square root of n consistent and asymptotically normal. They attain the asymptotic efficiency bound of semiparametric estimation with some infinite dimensional parameter spaces of index probability functions.

Leeper, Eric M.

PD February 1990. **TI** The Dynamics of Interest Rate and Tax Rules in a Stochastic Model. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 375; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 28. **PR** no charge. **JE** 311, 321, 134, 322. **KW** Inflation. Prices. Budget Deficit. Monetary Policy. Fiscal Policy.

AB A simple stochastic equilibrium structure is used to study the implications of monetary and fiscal policy interactions for government intertemporal budget balance. Existence and uniqueness of monetary equilibria are shown to depend on parameters of policy rules. The paper derives closed form solutions for equilibrium inflation and real debt as functions of policy parameters and policy shocks and obtains conditions under which the usual tests that deficits Granger-cause money creation will successfully uncover evidence of monetized deficits. In addition, equilibria are studied in which private agents today know tomorrow's taxes exactly. Coupling this informational assumption with a monetary policy that pegs the nominal interest rate reverses the usual Granger-causal ordering between deficits and monetization, so that money growth (or inflation) may predict higher deficits.

Leiderman, Leonardo

PD September 1989. **TI** Current Account Dynamics: The Role of Real Shocks. **AU** Leiderman, Leonardo; Razin, Assaf. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/80; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** no charge. **JE** 431, 433, 441, 423, 411. **KW** Current Account. Developed Countries. Private Savings.

AB This paper demonstrates how a full-blown optimizing model of the dynamics of the current account can be reduced to a small-scale collection of reduced-form relations capable of implementing a rich set of macro-economic simulations. Emphasizing the role of shocks to productivity, labor employment, world rate of interest, and tax revenues, the analysis can account for movements in trade imbalances and the decline in private saving and investment observed recently in developed open economies.

TI Real Wages, Monetary Accommodation, and Inflation. **AU** Helpman, Elhanan; Leiderman, Leonardo.

PD March 1990. **TI** Determinants of External Imbalances: The Role of Productivity, Employment and Taxes. **AU** Leiderman, Leonardo; Razin, Assaf. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 7-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 68. **PR** no charge. **JE** 121, 431, 411. **KW** Open Economy. Developing Countries. Intertemporal Model. Current Account.

AB The purpose of this study is to provide a framework which enables the analysis of the dynamics of external balance in the small open economy, with special emphasis on deriving a set of policy implications. The framework is implemented on data from the Israel economy for the 1980s. We first uncover a set of stylized facts that characterize the behavior of the external balance. While it is not proper to derive policy implications solely based on these empirical regularities, they set the agenda for a systematic econometric analysis of a macroeconomic model designed so as to account for these regularities. Next, we develop and estimate an intertemporal optimizing model of external balance behavior.

TI Consumption and Asset Returns under Non-Expected Utility: Some New Evidence. **AU** Bufman, Gil; Leiderman, Leonardo.

Lev, Baruch

TI Corporate Control and the Choice of Investment Financing: The Case of Corporate Acquisitions. **AU** Amihud, Yakov; Lev, Baruch; Travlos, Nickolaos G.

Levich, Richard M.

PD January 1990. **TI** Tax-Driven Regulatory Drag: European Financial Centers in the 1990s. **AU** Levich, Richard M.; Walter, Ingo. **AA** Levich: New York University and National Bureau of Economic Research. Walter: New York University and INSEAD. **SR** New York University Salomon Brothers Center Working Paper: S-90-2; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 41. **PR** not available. **JE** 313, 621, 311. **KW** Financial Markets. Innovation. Technology.

AB The competitive dynamics of financial markets over the past quarter century has been affected by three powerful forces: product innovation, process innovation and technological change. In Section II of the paper, we outline the conceptual reasoning underlying the competitive dynamics of financial markets in an open economy. In particular, we review how competitive forces affect both users and suppliers of financial services, as well as how they affect regulators. In Section III, we consider securities taxation in Europe, specifically taxation bearing directly on the investor and taxation bearing on primary- and secondary-market transactions.

Levine, Robert A.

PD November 1989. **TI** U.S. Interests and Intervention in the Nuclear Age. **AA** Rand Corporation. **SR** Rand Report: R-3805; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 39. **PR** not available. **JE** 114. **KW** War. Nuclear Weapons. National Defense.

AB This report considers what interests the United States has risked the use of nuclear weapons to defend, under what

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

conditions it might do so in the future, and the kinds of risks that would be involved. It discusses concepts and definitions surrounding the use of nuclear weapons in the defense of interests, outlines the history of U.S. pursuit of national interests by military means, and analyzes the debate over the same issues in terms of opposing schools of thought involved today and as they have developed over the past 25 years.

Levine, Ross

PD February 1990. **TI** Stock Markets, Growth, and Policy. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 374; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 43. **PR** no charge. **JE** 621, 112, 111, 313, 311. **KW** Financial Markets. Endogenous Growth. Economic Development. Taxes. Technology.

AB In a model that emphasizes technological progress and human capital creation as essential features of economic development, this paper establishes a theoretical link between the financial system and per capita output growth. More specifically, it demonstrates that stock markets by facilitating the ability to trade ownership of firms without disrupting the productive processes occurring within firms, naturally encourage technological innovation and economic growth. Along with recent studies of the role played by financial institutions other than stock markets in promoting growth, this paper contributes to a theoretical foundation upon which financial policy recommendations may more confidently rest.

Levy, David T.

PD November 1989. **TI** Merger in the Round: Anticompetitive Effects of Mergers in Markets with Localized Competition. **AU** Levy, David T.; Reitzes, James D. **AA** Levy: University of Baltimore. Reitzes: Federal Trade Commission. **SR** Federal Trade Commission Bureau of Economics Working Paper: 177; Bureau of Economics, Federal Trade Commission, 6th and Pennsylvania Ave. NW, Washington, D.C. 20580. **PG** 26. **PR** no charge. **JE** 611, 612, 022. **KW** Mergers. Collusion. Differentiated Products. Market Structure.

AB This paper examines the incentives for merger and collusion in a market where firms offer differentiated products and serve specific customer segments. The nature of interaction among firms largely determines the choice of a partner for merger, and Bertrand, Stackelberg, and collusive cases are investigated. In comparison to other types of markets (i.e., those characterized by homogeneous products or homogeneous consumers), this paper shows that collusion may be relatively easier to achieve in markets with spatial competition. These findings are related to the approach recommended in the Merger Guidelines of the Department of Justice.

Liang, Nellie

PD February 1990. **TI** New Data on the Performance of Nonbank Subsidiaries of Bank Holding Companies. **AU** Liang, Nellie; Savage, Donald. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Staff Studies Paper: 159; Staff Studies Section, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 12. **PR** no charge. **JE** 314, 312. **KW** Financial Intermediaries. Banking.

AB Bank holding companies apply regularly to the Federal Reserve Board for permission to engage in new activities through nonbank subsidiaries. Little has been known, however, about the performance of those holding companies and subsidiaries that have been engaged in nonbank activities. This study presents data from the new reporting system for 1986 and 1987 on the extent of the involvement of bank holding companies in nonbank activities and the profitability and riskiness of the nonbank subsidiaries. The first section briefly discusses the evolution of nonbank subsidiaries. The second section describes the system of data collection, and subsequent sections present analyses of the data themselves.

Lichtenberg, Frank R.

PD December 1989. **TI** The Effects of Mergers on Prices, Costs, and Capacity Utilization in the U.S. Air Transportation. **AU** Lichtenberg, Frank R.; Kim, Moshe. **AA** Lichtenberg: Jerome Levy Economics Institute, Bard College. Kim: University of Haifa. **SR** National Bureau of Economic Research Working Paper: 3197; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $2.00. **JE** 611, 635, 641, 226. **KW** Mergers. Airlines Factor Productivity. Economic Capacity.

AB We analyze the effect of mergers on various aspects of airline performance during the period 1970-84, using a panel data set constructed by Caves et al. Estimates derived from a simple "matched pairs" statistical model indicate that these mergers were associated with reductions in unit cost. The average annual rate of unit cost growth of carriers undergoing merger was 1.1 percentage points lower, during the five-year period centered on the merger, than that of carriers not involved in merger. Almost all of this cost reduction appears to have been passed on to consumers.

Lindsey, Lawrence

PD January 1990. **TI** Joint Crowdout: An Empirical Study of the Impact of Federal Grants on State Government Expenditures and Charitable Donations. **AU** Lindsey, Lawrence; Steinberg, Richard. **AA** Lindsey: Harvard University and Office of Policy Management, Executive Office of the President. Steinberg: Virginia Polytechnic Institute and State University. **SR** National Bureau of Economic Research Working Paper: 3226; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 322, 324, 325. **KW** Government Spending. State Governments. Charities. Social Services.

AB We estimate the effect of exogenous federal expenditure cutbacks on state social service expenditures and on charitable donations. In the process, we also estimate tax and income effects and explore the impact of community environment and "need" variables. Data consist of a unique three-year panel of aggregate itemized giving by state and income class and government expenditures by state. Our results confirm the "flypaper effect" of federal grants on state spending and show statistically significant but partial crowdout of charitable donations. The flypaper effect appears to dominate the crowdout of donations, so that federal grants are especially productive of overall social service expenditures. Finally, we find that the state's poverty rate is a particularly strong and positive determinant of charitable giving.

Lipman, Barton L.

TI Stock Price Manipulation Through Takeover Bids. **AU** Bagnoli, Mark; Lipman, Barton L.

Lipsey, Robert E.

TI What Do Rich Countries Trade With Each Other? R&D and the Composition of U.S. and Swedish Trade. **AU** Blomstrom, Magnus; Lipsey, Robert E.; Ohlsson, Lennart.

Lorie, Henri

PD August 1989. **TI** Financial and Fiscal Programming Under Debt Rescheduling. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/61; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** no charge. **JE** 311, 322, 321. **KW** External Debt. Government Spending. Central Bank. Federal Deficit.

AB This paper reviews implications for financial and fiscal programming of different treatments of external debt rescheduling. Adjustment formulas are derived to ensure invariance of the macroeconomic outcome. An important consideration is the impact on the income position of the central bank. The results caution against the simple adjustment formulas sometimes applied. Even when defined on a "falling due basis," the size of the public sector deficit can be affected by the rescheduling treatment adopted.

Lovasz, Laszlo

PD January 1989. **TI** Communication Complexity: A Survey. **AA** University of Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89555-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 39. **PR** no charge. **JE** 213. **KW** Computational Complexity. Communication.

AB In the following sections we give some examples from the theory of VLSI that lead to problems concerning communication; then we give a survey of the theory of communication complexity. I hope also to "communicate" my feeling that this lovely theory brings together a surprising number of ideas from classical and modern mathematics, and it also illustrates in a rather clear way basic notions from complexity theory like non-determinism and randomization.

PD June 1990. **TI** The Generalized Basis Reduction Algorithm. **AU** Lovasz, Laszlo; Scarf, Herbert E. **AA** Lovasz: Eotvos Lorand University, Budapest and Princeton University. Scarf: Yale University. **SR** Yale Cowles Foundation Discussion Paper: 946; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 23. **PR** no charge. **JE** 213. **KW** Reduced Basis. Lattice Point. Integer Programming.

AB Let F(x) be a convex function defined in R(n), which is symmetric about the origin and homogeneous of degree 1, and let L be the lattice of integers Z(n). A definition of a reduced basis, b(1),..., b(n), of the lattice with respect to the distance function F is presented, and we describe an algorithm which yields a reduced basis in polynomial time, for fixed n. We show that the basis vector b(1), in a reduced basis, is an approximation to a shortest non-zero lattice point with respect to F and relate the basis vectors b(i) to Minkowski's successive minima. The results lead to an algorithm for integer programming which executes in polynomial time for fixed n, but which avoids the ellipsoidal approximations required by Lenstra's algorithm.

Lovell, C. A. Knox

PD February 1990. **TI** Stratified Models of Education Production using DEA and Regression Analysis. **AU** Lovell, C. A. Knox; Walters, L. K.; Wood, L. L. **AA** University of North Carolina, Chapel Hill. **SR** University of North Carolina Working Paper Series: 90-5; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 31. **PR** not available. **JE** 912, 851. **KW** Education. Public Schools. Human Capital.

AB We formulate a stratified model of education production, in which secondary schools use physical, financial and human resources to produce educational opportunities, which are then combined with student input to produce intermediate and long term educational achievements. The performance of schools in each of these three pursuits is calculated using DEA techniques. To avoid a multitude of schools having DEA scores of unity, we drop each "efficient" school from its own reference set. The resulting DEA scores are bounded below by zero, but not above by unity. The natural logarithms of these DEA scores are unbounded, and are regressed against groups of environmental variables in an effort to provide an explanation of the variation in school performance. This two stage DEA/OLS strategy is applied to several hundred US high schools that participated in the High School and Beyond study beginning in 1980.

PD February 1990. **TI** Indirect Productivity Measurement. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna. **AA** University of North Carolina, Chapel Hill. **SR** University of North Carolina Working Paper Series: 90-4; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 23. **PR** not available. **JE** 226, 227, 225. **KW** Productivity. Public Sector. Prices.

AB Caves, Christensen and Diewert showed that the Tornqvist productivity index is superlative in a considerably more general sense than had been previously believed. We examine the price and technical efficiency hypotheses on which their finding rests. We show that the price efficiency hypothesis can be modified, which makes the Tornqvist index superlative in a wider sense than even CCD showed, since it is consistent with a type of price efficiency other than the standard cost minimization and revenue maximization hypothesis considered by CCD. We also show that if the technical efficiency hypothesis is relaxed, the CCD result may no longer hold, and the distance functions that form the basis of the Malmquist productivity indexes, and hence of the Tornqvist productivity index, must be calculated. We then show how to calculate the underlying distance functions, and we argue that there are real advantages to doing so, particularly in public sector applications.

PD February 1990. **TI** Derivation of Virtual Prices for Undesirable Outputs: A Distance Function Approach. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna; Yaisawarng, Suthathip. **AA** University of North Carolina, Chapel Hill. **SR** University of North Carolina Working Paper Series: 90-3; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC

27599-3305. **PG** 15. **PR** not available. **JE** 022, 024. **KW** Production. Output. Productivity.
AB Many production activities generate undesirable byproducts in conjunction with the desirable outputs they produce. Pittman (1983) showed how to adjust productivity calculations, and Fare et al. (1986) showed how to adjust efficiency measures, in the presence of undesirable outputs. Here we show how to estimate output distance functions to generate shadow values of the undesirable outputs. An empirical application is provided.

PD February 1990. **TI** A DEA Approach to the Problem of New and Disappearing Commodities in the Construction of Price Indexes. **AU** Lovell, C. A. Knox; Zieschang, Kimberly D. **AA** University of North Carolina, Chapel Hill. **SR** University of North Carolina Working Paper Series: 90-2; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 19. **PR** not available. **JE** 227, 225. **KW** Price Index. Linear Programming Model. Reservation Price. Commodities.
AB Appearance of new commodities and disappearance of old commodities causes problems in the construction of price indexes: what price is imputed, and why, when quantity is zero? The theoretically elegant reservation price technique proposed in 1972 by Fisher and Shell has not been implemented, and as of 1989 "the empirical difficulties remain formidable" according to Diewert. We propose a technique that exploits the duality between the Fisher-Shell revenue function and the Shephard distance function, and that uses linear programming techniques to construct a nonparametric distance function. Optimal values of dual variables can be used to recover the desired reservation prices of new and disappearing goods. An application to the US computer equipment industry illustrates the feasibility of the technique.

Lucas, Deborah J.

TI Understanding Stock Price Behavior Around the Time of Equity Issues. **AU** Korajczyk, Robert A.; Lucas, Deborah J.; McDonald, Robert L.

PD November 1989. **TI** Equity Issues and Stock Price Dynamics. **AU** Lucas, Deborah J.; McDonald, Robert L. **AA** Lucas: Northwestern University. McDonald: Northwestern University and University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3169; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 522, 313. **KW** Firm Equity. Common Stock. Stock Market.
AB This paper presents an information-theoretic, infinite horizon model of the equity issue decision. The model's predictions about stock price behavior and issue timing explain most of the stylized facts in the empirical literature: (a) equity issues on average are preceded by an abnormal positive return on the stock, although there is considerable variation across firms, (b) equity issues on average are preceded by an abnormal rise in the market, and (c) the stock price drops significantly at the announcement of an issue. In this model, the price drop at issue announcement is uncorrelated with the social cost of suboptimal investment due to asymmetric information; the welfare loss may be small even if the price drop is large.

Lumpkin, Stephen A.

TI The Treasury Yield Curve as a Cointegrated System. **AU** Bradley, Michael G.; Lumpkin, Stephen A.

Mackie-Mason, Jeffrey

TI Effects of the Tax Reform Act of 1986 on Corporate Financial Policy and Organizational Form. **AU** Gordon, Roger H.; Mackie-Mason, Jeffrey.

Magnanti, Thomas L.

TI Some Recent Advances in Network Flows. **AU** Ahuja, Ravindrak; Magnanti, Thomas L.; Orlin, James B.

Mandler, Michael

PD November 1989. **TI** Sequential Regularity in Smooth Production Economies. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 89-22; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 28. **PR** no charge. **JE** 021. **KW** General Equilibrium Model. Technology. Intertemporal Model.
AB In an earlier paper, I criticized the standard approach to studying the determinacy of the general equilibrium model. We took a two period general equilibrium model, and decomposed each intertemporal equilibrium into a pair of markets so that there is trading in each of the two periods. By examining the second period economies that are generated by an intertemporal equilibrium, we can examine the determinacy question for economies whose endowments are determined endogenously. In the earlier paper, technology was described by an activity analysis matrix, the reference model for this literature (see Kehoe, Mas-Colell). In this paper, we show in contrast that if the technology of the economy is described by a sufficiently smooth transformation function, then second period indeterminacy does not arise.

Mankiw, N. Gregory

PD October 1989. **TI** Stock Market Forecastability and Volatility: A Statistical Appraisal. **AU** Mankiw, N. Gregory; Romer, David; Shapiro, Matthew D. **AA** Mankiw: Harvard University. Romer: University of California, Berkeley. Shapiro: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3154; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 313, 132, 131. **KW** Forecasting. Stock Market. Efficient Market Hypothesis.
AB This paper presents and implements statistical tests of stock market forecastability and volatility that are immune from the severe statistical problems of earlier tests. Although the null hypothesis of strict market efficiency is rejected, the evidence against the hypothesis is not overwhelming. That is, the data do not provide evidence of gross violations of the conventional valuation model.

Mann, Catherine L.

PD January 1990. **TI** Prospects for Sustained Improvement in U.S. External Balance: Structural Change Versus Policy Change. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 373; Division of International Finance, Board of

Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 28. **PR** no charge. **JE** 431. **KW** Current Account. Pass-Through. External Adjustment.
AB This paper assesses prospects for sustained improvement in the U.S. external balance drawing on both model-based macro analysis and examination of disaggregated data. Most model projections of the future path of U.S. external balance show the recent improvement petering out by the end of 1989 or so. Key structural factors leading to the expected future worsening of U.S. external balance are two asymmetries -- the "income asymmetry" and the "pass-through asymmetry". That is, asymmetries in the pricing behavior of U.S. exporters and foreign suppliers and asymmetries in the elasticities of U.S. demand for imports and foreign demand for U.S. exports with respect to economic activity.

PD March 1990. **TI** Towards the Next Generation of Newly Industrializing Economies: The Roles for Macroeconomic Policy and the Manufacturing Sector. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 376; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 35. **PR** no charge. **JE** 112, 121, 131, 133. **KW** Economic Fluctuations. Manufacturing. Economic Development. Developing Countries.
AB In the 1970s, the Newly Industrializing Economies (NIEs) emerged from the pack of developing countries by exporting manufactured goods. Some succeeded and some did not. In this decade, another set of developing countries are poised to become the next generation of NIEs. Which have the prerequisites of stable macroeconomic policies and the foundation for further manufacturing development? A review of the Latin and Asian NIEs' experiences suggests criteria against which we can measure countries of the next generation.

Marchand, Maurice
TI The Optimal Level and Profile of Unemployment Insurance Benefits in a Model of Employment Mismatch.. **AU** Cremer, Helmuth; Marchand, Maurice; Pestieau, Pierre.

Margo, Robert A.
TI Wages, Prices, and Labor Markets Before the Civil War. **AU** Goldin, Claudia; Margo, Robert A.

Marion, Nancy
TI Risk Neutrality and the Two-Tier Foreign Exchange Market: Evidence from Belgium. **AU** Flood, Robert; Marion, Nancy.

Marquez, Jaime
PD March 1990. **TI** Evaluating the Predictive Performance of Trade-Account Models. **AU** Marquez, Jaime; Ericsson, Neil R. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 377; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 91. **PR** no charge. **JE** 431, 132. **KW** Prediction. Trade Account. Forecasting. Encompassing Test.
AB This paper evaluates the distributional properties of forecasts from six econometric models of the U.S. trade account. Using stochastic (Monte Carlo) simulation, we derive confidence intervals and forecast-based test statistics which account for uncertainty from future disturbances and from coefficient estimation. Empirically, the confidence intervals of the trade account forecasts are very wide, and are generally (but not necessarily) increasing with the forecast horizon. Even with such a large degree of uncertainty, some models exhibit "predictive failure" when tested. To evaluate forecasts across models, we generalize Chong and Hendry's (1986) forecast-encompassing test statistic to allow for model nonlinearity and to account for uncertainty arising from estimation.

Marron, J. S.
TI Bootstrap Simultaneous Error Bars for Nonparametric Regression. **AU** Hardle, Wolfgang; Marron, J. S.

Matsui, Akihiko
PD July 1990. **TI** Cheap-Talk and Cooperation in a Society. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-16; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 29. **PR** no charge. **JE** 026. **KW** Cheap Talk. Game Theory. Credibility. Common Interest.
AB This paper considers a society which consists of many individuals. They are divided into two types, and two individuals of different types are randomly matched to play a two-by-two game of common interest with cheap talk; that is, in the first state, each individual announces a message simultaneously, and in the second stage, knowing the announcement of the opponent, they actually play a one-shot two-by-two game of common interest, which has a unique weakly (a fortiori a unique strongly) Pareto optimal outcome. We apply a noncooperative solution concept called cyclically stable sets to this society.

Matsuyama, Kiminori
PD March 1990. **TI** Increasing Returns, Industrialization and Indeterminacy of Equilibrium. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 878; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 47. **PR** \$3.00 in the U.S.A. or Canada; \$5.00 via international mail. **JE** 611, 022, 112. **KW** Economies of Scale. Industrialization. Multiple Equilibria. Global Bifurcation. Manufacturing.
AB This paper asks whether adjustment processes over real time help to "select" the long run outcome in a model of industrialization, where multiple stationary states exist because of increasing returns in the manufacturing sector. "History" alone cannot in general determine where the economy will end up. Self-fulfilling expectations often make the escape from the state of pre-industrialization (the take-off) possible. The global bifurcation technique is used to determine when an underdevelopment trap exists and when a take-off path exists. The role of government policy and agricultural productivity in industrialization are then considered.

PD April 1990. **TI** The Mathematical Appendix to "Residential Investment and the Current Account". **AA** Northwestern University. **SR** Northwestern Center for

Mathematical Studies in Economics and Management Science Working Paper: 875; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 7. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 313, 431. **KW** Investment. Current Account.
AB No abstract.

Matthews, Steven A.

PD June 1990. **TI** Refining Cheap-Talk Equilibria. **AU** Matthews, Steven A.; Okuno-Fujiwara, Masahiro; Postlewaite, Andrew. **AA** Matthews: Northwestern University. Okuno-Fujiwara: University of Tokyo. Postlewaite: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-12; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 27. **PR** no charge. **JE** 026. **KW** Cheap Talk. Asymmetric Information. Communication.
AB Several conceptual points are made concerning communication in games of asymmetric information. Equilibrium refinements of Sender-Receiver cheap-talk games that are based on the concept of a putative equilibrium, and which rely on the presence of a rich language with literal meanings, are discussed. Three nested criteria are proposed: strong announcement proofness, announcement proofness, and weak announcement proofness.

Matthews, Steven E.

TI Managerial Incentives in an Entrepreneurial Stock Market Model. **AU** Kihlstrom, Richard E.; Matthews, Steven E.

Mayer, Thomas

PD May 1990. **TI** Friedman's Methodology of Positive Economics: A Minimalist View. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 359; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 23. **PR** no charge. **JE** 036. **KW** Economic Methodology. Positive Economics.
AB Friedman's 1953 essay has received much criticism from methodologists, while other economists seem to be drawn to it. Friedman was concerned with combatting, on the one hand, a formalist tradition that took the task of economic theory as developing implications of "obvious" assumptions, and on the other hand, a naive empiricism that tried to reject most theory. For his purpose he did not have to choose a specific version of empiricism. Hence, while one can find instrumentalist elements in Friedman's essay, it is not an instrumentalist manifesto. Friedman's rejection of testing by assumptions do not provide a test, and also, that a theory may be adequate for deducing predictions for one problem, but not for another one.

McAfee, R. Preston

TI Animal Spirits. **AU** Howitt, Peter; McAfee, R. Preston.

McAleer, Michael

TI Estimating the Percentiles of Some Misspecified Non-Nested Distributions. **AU** Bai, Jun; Jakeman, Anthony J.; McAleer, Michael.

McCallum, Bennett T.

PD November 1989. **TI** Could a Monetary Base Rule Have Prevented the Great Depression?. **AA** Carnegie Mellon University. **SR** National Bureau of Economic Research Working Paper: 3162; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 311, 132, 131. **KW** Monetary Policy. GNP. Output. Employment. Simulation Model.
AB This paper continues an ongoing investigation of the properties of a specific, quantitative, and operational rule for the conduct of monetary policy, a rule that specifies settings of the monetary base that are designed to keep nominal GNP growing smoothly at a noninflationary rate. Whereas previous studies have examined the rule's performance in the context of United States experience since World War II, the present paper is concerned with the period 1923-1941. Counterfactual historical simulations are conducted with the rule and a small model of nominal GNP determination, estimated with U.S. quarterly data for 1922-1941. Residuals from the estimated relationships serve as estimates of the behavioral shocks that occurred and accordingly are fed into the simulation process quarter by quarter.

McDiarmid, C.

TI On Integer points in Polyhedra. **AU** Cook, W.; Hartmann, M.; Kannan, R.; McDiarmid, C.

McDonald, Ian M.

PD February 1990. **TI** The Social Opportunity Cost of Consumption for Canada, 1965 to 1986. **AU** McDonald, Ian M.; Tacconi, Luca. **AA** McDonald: University of Melbourne and Queen's University. Tacconi: University of Melbourne. **SR** Queen's Institute for Economic Research Discussion Paper: 776; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 33. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 122, 431, 441, 225. **KW** Interest Rates. Investment. Current Account. Consumption.
AB The Social Opportunity of Cost of Consumption (SOCC) for an economy is the rate by which a resident can trade current consumption for consumption in the future. In this paper series for the period 1965 to 1986 for Canada are calculated. As the Fisherian analysis suggests (see e.g., McDonald (1985)) for a small open economy such as Canada the SOCC is determined by foreign interest rates. In this paper foreign interest rates are the basis from which the SOCC for Canada is calculated. The SOCC is an important determinant of the optimal level of the current account surplus or deficit and the optimal level of investment.

McDonald, Robert L.

TI Understanding Stock Price Behavior Around the Time of Equity Issues. **AU** Korajczyk, Robert A.; Lucas, Deborah J.; McDonald, Robert L.

TI Equity Issues and Stock Price Dynamics. **AU** Lucas, Deborah J.; McDonald, Robert L.

McKelvey, Richard

PD April 1989. **TI** Public and Private Information: An Experimental Study of Information Pooling. **AU** McKelvey, Richard; Page, Talbot. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-33;

Department of Economics, Brown University, Providence, RI 02912. **PG** 24. **PR** no charge. **JE** 215, 026. **KW** Information Pooling. Common Knowledge. Bayesian Learning. Information Process.

AB The paper reports on an experimental study of the way in which individuals make inferences from publicly available information. We compare the predictions of a theoretical model of a common knowledge inference process with actual behavior. In the theoretical model, "perfect Bayesians," starting with private information, take actions; an aggregate statistic is made publicly available; the individuals do optimal Bayesian updating and take new actions; and the process continues until there is a common knowledge equilibrium with complete information pooling. We find that the theoretical model roughly predicts the observed behavior, but the actual inference process is clearly less efficient than the standard of the theoretical model, and while there is some pooling, it is incomplete.

McLennan, Andrew

PD December 1989. **TI** Selected Topics in the Theory of Fixed Points. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 251; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 92. **PR** free. **JE** 213, 021. **KW** General Equilibrium. Correspondence. Fixed Point Theorem. Nash Equilibrium.

AB We present a treatment for mathematical economists of three topics in the theory of fixed points: (a) the Lefschetz fixed point index; (b) the Lefschetz fixed point theorem; (c) the theory of essential sets of fixed points. Our treatment is geometric, based on elementary techniques, and largely self-contained. In particular there is no essential reference to algebraic topology. Within the chosen scope of the paper the results are at the level of generality of the mathematical literature. The development of these theories for correspondences is emphasized. It emerges that the solution concepts of Kohlberg and Mertens (1986) have a definite, though obscure, place in this theory.

PD December 1989. **TI** Approximation of contractible Valued Correspondences by Functions. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 252; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 10. **PR** free. **JE** 213, 021. **KW** Fixed Point Theory. Upper Hemicontinuity. Correspondence.

AB Let X and Y be absolute neighborhood retracts (this is a large class of spaces) with X compact, and let F: X converges Y be an upper hemicontinuous correspondence whose values are compact and contractible. It is shown that any neighborhood of the graph of F contains the graph of a continuous function f: X converges Y. The relevance of this result to fixed point theory is indicated. It is also shown that if X is "locally infinite," then F can be approximated in the stronger sense of the graph of f being close to the graph of F and every point in the graph of F being close to some point in the graph of f. A conjectured generalization of the main result is stated.

McManus, Douglas A.

PD July 1990. **TI** Who Invented Local Power Analysis?. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 130; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 7. **PR** no charge. **JE** 211. **KW** Power Analysis. Asymptotic Theory. Power Function.

AB Asymptotic local power analysis has become an important and increasingly used technique in econometrics. This paper reviews the history of local power analysis and delineates the contribution of J. Neyman, E. J. G. Pitman, and G. Noether.

Meade, Ellen E.

PD April 1990. **TI** Computers and the Trade Deficit: The Case of the Falling Prices. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 378; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 38. **PR** no charge. **JE** 221, 227, 431. **KW** Computers. International Trade. Price Index.

AB This paper investigates two issues related to international trade in computers: measurement and prediction. Because of the rapid technological advancement in the computer industry, the Bureau of Economic Analysis (BEA) measures computer prices using techniques that adjust for quality change. The constructed hedonic index is essentially a domestic price measure, but the BEA uses it for the deflation of international sales and purchases of computers. This paper begins with a review of the theory behind hedonic price indexes, and then proceeds to discuss the concerns that arise when a domestic index is used to deflate international transactions.

Meanti, M.

PD 1987. **TI** A Probabilistic Analysis of the Multiknapsack Value Function. **AU** Meanti, M.; Kan, A. H. G. Rinnooy; Stougie, L.; Vercellis, C. **AA** Meanti and Vercellis: University of Milano. Kan: Erasmus University Rotterdam and Massachusetts Institute of Technology. Stougie: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 2/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 8. **PR** no charge. **JE** 211. **KW** Knapsack Function. Asymptotic Theory. Probabilistic Analysis.

AB The optimal solution value of the multiknapsack problem as a function of the knapsack capacities is studied under the assumption that the profit and weight coefficients are generated by an appropriate random mechanism. A strong asymptotic characterization is obtained, that yields a closed form expression for certain special cases.

Mehta, J. S.

TI Effects of Using Dependent and Independent Differences in Tests of Random Walk Models Against Regression Models. **AU** Chandrakantha, M. W. Leslie; Mehta, J. S.; Swamy, P. A. V. B.

Mertens, Jean-Francois

PD October 1989. **TI** Equilibrium and Rationality: Context and History-Dependence. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8927; Universite Catholique de Louvain,

Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 14. **PR** not available. **JE** 026. **KW** Noncooperative Games. Game Theory.
AB We show that the correct context-independence requirements on a solution theory for noncooperative games imply that, in some cases, solutions have to be history-dependent.

Meyer, Bruce D.

PD November 1989. **TI** A Quasi-Experimental Approach to the Effects of Unemployment Insurance. **AA** Northwestern University. **SR** National Bureau of Economic Research Working Paper: 3159; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 822, 824. **KW** Unemployment Insurance. Layoffs. Unemployment.
AB This paper uses the natural experiment provided by periodic increases in state benefit levels to estimate the effects of higher unemployment insurance benefits. Individuals who filed just before and just after sixteen benefit increases are compared using data from five states during 1979-1984. The increases, which average about 9 percent, are found to increase the period of unemployment insurance receipt by about one week. This effect is precisely estimated and found using several approaches. The incidence of layoffs resulting in unemployment insurance claims is unaffected by the increases. The evidence does not suggest that higher benefits lead to better jobs. In fact, the post-unemployment earnings of individuals receiving higher benefits are estimated to fall slightly, but the estimates are imprecise.

Michel, Philippe

TI Capacity Adjustments Under Demand Fluctuations: An Example. **AU** Gabszewicz, Jean J.; Michel, Philippe.

Milkovich, George T.

TI The Effects of Human Resource Management Decisions on Shareholder Value. **AU** Abowd, John M.; Milkovich, George T.; Hannon, John M.

Millward, Neil

TI Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J.

Mincer, Jacob

PD December 1989. **TI** Job Training: Costs, Returns, and Wage Profiles. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3208; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 811, 824, 851. **KW** Human Capital. Wages. Education. Job Training.
AB Using information on time costs of training and gains in wages attributable to training I computed rates of return on training investments. The range of estimates based on several data sets generally exceeds the magnitude of rates of return usually observed for schooling investments. It is not clear, however, that the difference represents underinvestment in job training. Two methods were used to estimate total annual costs of job training in the U.S. economy, for 1958, 1976, and 1987. The "direct" calculation uses information on time spent in training and on wages. The estimates indicate a slower growth of training than of school expenditures in the past decades. Substitution of schooling for job training is a likely cause.

PD December 1989. **TI** Human Capital Responses to Technological Change in the Labor Market. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3207; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 851, 226, 824, 825. **KW** Human Capital. Technology. Economic Growth. Wages. Labor Market. Productivity.
AB In a broad sense, the relation of human capital to economic growth is reciprocal. This study focuses more narrowly on labor market consequences of human capital adjustments to the pace of technological change. Using Jorgenson's multifactor productivity growth indexes for industrial sectors in the 1960s and 1970s the study explores effects of differential pace of technological changes on industry demands for educated and trained workers as reflected in PSID data covering the 1968 to 1983 period. The findings show relative increases both in quantity demanded (utilization) and in price (wages) of skilled workers in the more progressive sectors. Steeper wage profiles, less turnover, and less unemployment characterize labor in sectors whose productivity grew faster in preceding years.

Miron, Jeffrey A.

PD November 1989. **TI** A New Monthly Index of Industrial Production, 1884-1940. **AU** Miron, Jeffrey A.; Romer, Christina D. **AA** Miron: University of Michigan. Romer: University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3172; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 228. **KW** Industrial Production.
AB The paper derives a new monthly index of industrial production for the United States for 1884-1940. This index improves upon existing measures of industrial production by excluding indirect proxies of industrial activity, by only using component series that are consistent over time, and by not making ad hoc adjustments to the data. Analysis of the new index shows that it has more within-year volatility than conventional indexes, has relatively unimportant seasonal fluctuations, and has cyclical turning points that are grossly similar to but subtly different from existing series.

Mishkin, Frederic S.

PD September 1989. **TI** The Information in the Longer Maturity Term Structure About Future Inflation. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3126; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** $2.00. **JE** 311, 134, 132. **KW** Inflation. Term Structure. Interest Rates.
AB This paper provides empirical evidence on the information in the term structure for longer maturities about both future inflation and the term structure of real interest rates. The evidence indicates that there is substantial information in the longer maturity term structure about future inflation: the slope of the term structure does have a great deal of predictive power for future changes in inflation. On the other hand, at the longer maturities, the term structure of nominal interest rates contains very little information about the term structure of real interest rates. These results are strikingly different from those

found for very short-term maturities, six months or less, in previous work. For maturities of six months or less, the term structure contains no information about the future path of inflation, but it does contain a great deal of information about the term structure of real interest rates.

PD September 1989. **TI** A Multi-Country Study of the Information in the Term Structure About Future Inflation. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3125; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $2.00. **JE** 122, 134, 311. **KW** Term Structure. Inflation. OECD Countries. Developed Countries. Interest Rates.
AB This paper provides evidence on what the term structure (for maturities of twelve months or less) tells us about future inflation in ten OECD countries. The empirical results on the information in the term structure contrast with those that find that the level of interest rates help forecast the future level of inflation. Instead, they indicate that for the majority of the countries in the sample, the term structure does not contain a great deal of information about the future path of inflation. The results for France, the United Kingdom and Germany tell a different story, however. In these countries the term structure contains a highly significant amount of information about future changes in inflation.

Mitchell, Bridger M.

TI Local Telephone Pricing and Universal Telephone Service. **AU** Park, Rolla Edward; Mitchell, Bridger M.

PD August 1989. **TI** Incremental Capital Costs of Telephone Access and Local Use. **AA** Rand Corporation. **SR** Rand Report: R-3764; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 45. **PR** not available. **JE** 635. **KW** Telecommunications. Communications. Telephones. Marginal Cost.
AB This report develops a methodology for assessing the incremental costs of local telephone services and provides initial estimates of those costs for conditions that are typical of California markets served by the two major local exchange carriers--Pacific Bell and GTE. The author constructs a small engineering-economic model of the three functional divisions of a local exchange: the local loop (the cables connecting subscribers to the switching point), the central office switch, and the interoffice transport facilities that link switches together.

Mitchell, Jean

TI Market Forces and the Public Good: Competition Among Hospitals and Provision of Indigent Care. **AU** Frank, Richard G.; Salkever, David S.; Mitchell, Jean.

Mitra, Tapan

TI Indefinitely Sustained Consumption Despite Exhaustible Natural Resources. **AU** Cass, David; Mitra, Tapan.

Mocan, Naci H.

PD November 1989. **TI** Business Cycles and Fertility Dynamics in the U.S.: A Vector-Autoregressive Model. **AA** Manhattan College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3177; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 921. **KW** Fertility. Business Cycle. Divorce. Unemployment Rate.
AB Using recent developments in time-series econometrics, this paper investigates the behavior of fertility over the business cycle. The sex-specific unemployment rates, the divorce rate and the fertility rate are shown to be governed by stochastic trends. Furthermore, fertility is determined to be co-integrated with the divorce and unemployment rates. In the bivariate vector-autoregressions between fertility and unemployment, an increase in the female or male unemployment rates generate a decrease in fertility, which confirms the findings of previous time-series research concerning the procyclical behavior of fertility.

Moffit, Robert

TI An Estimate of a Sectoral Model of Labor Mobility. **AU** Jovanovic, Boyan; Moffit, Robert.

Moffitt, Robert

PD January 1990. **TI** Estimating Dynamic Models With a Time Series of Repeated Cross Sections. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-3; Department of Economics, Brown University, Providence, RI 02912. **PG** 37. **PR** no charge. **JE** 211. **KW** Panel Data. Dynamic Model. Asymptotic Theory.
AB Repeated cross-sectional data contain information on independent cross sections of individual units at two or more points in time. Estimation of dynamic models with such data is made difficult by the general lack of information on lagged dependent and independent variables and the consequent unobservability of the intertemporal covariances needed to estimate dynamic models. It is demonstrated here that consistent estimates of the parameters of many linear and nonlinear dynamic models with and without fixed effects are nevertheless obtainable with the imposition of mild restrictions. The paper includes an examination of dynamic limited dependent variable models, which can be parameterized in terms of transition rates between states.

Moldovanu, Benny

PD October 1989. **TI** Bargaining Equilibria for Assignment Games without Side Payments. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-125; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 25. **PR** no charge. **JE** 022, 026. **KW** Game Theory. Assignment Games.
AB The intersection of the core and the kernel of games with side payments has a very interesting property: A payoff vector is in this intersection if and only if each pair obtains the standard solution in its reduced game, where the standard solution is the only efficient, symmetric and covariant solution to a two-person bargaining problem with side payments. A set with similar properties for general games without side payments is shown not to exist. The equations leading to such a solution may be inconsistent. We show the existence of a set of equilibria for assignment games without side payments, which naturally generalize the intersection of the core and the kernel of similar games with side payments. All the main properties of the old solution are preserved.

Monahan, J. Christopher

TI An Improved Heteroskedasticity and Autocorrelation Consistent Covariance Matrix Estimator. **AU** Andrews, Donald W. K.; Monahan, J. Christopher.

Montiel, Peter

TI A Forward-Looking Macroeconomic Simulation Model for a Developing Country. **AU** Haque, Nadeem; Montiel, Peter; Symansky, Steven A.

PD September 1989. **TI** Money versus Credit in the Determination of Output for Small Open Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/78; International Monetary Fund, Washington, DC 20431. **PG** 28. **PR** no charge. **JE** 441, 431, 411, 311. **KW** Open Economy. Balance of Payments. Capital Mobility. Credit. Money Supply.
AB It is well known that in a small open economy where there is perfect substitutability between domestic and foreign assets and costless portfolio adjustment, the monetary authorities cannot control the money supply, but can influence the balance of payments through the use of domestic credit. It has been argued that domestic credit is therefore the relevant variable in output determination as well. However, this paper demonstrates, using a "new classical" structural model, that under the conditions that render the money supply uncontrollable, neither money nor domestic credit affects output. If either has a significant effect in empirical tests, it implies that the assumption of perfect capital mobility is not satisfied.

Mookherjee, Dilip

TI The Good, the Bad, and the Ugly: Coalition Proof Equilibrium in Games with Infinite Strategy Spaces. **AU** Kahn, Charles M.; Mookherjee, Dilip.

Morley, Samuel

TI Measuring Income Mobility with Census Data. **AU** Adelman, Irma; Morley, Samuel; Schenzler, Christoph; Warning, Matthew.

Morton, Rebecca B.

TI Redistribution, Income, and Voting. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B.

TI Voting Laws, Educational Policies, and Minority Turnout. **AU** Filer, John E.; Kenny, Lawrence W.; Morton, Rebecca B.

Mouchart, Michel

TI Invariance Arguments in Bayesian Statistics. **AU** Florens, Jean-Pierre; Mouchart, Michel; Rolin, Jean-Marie.

Moulton, Brent R.

PD December 1989. **TI** A Bayesian Approach to Regression Selection and Estimation, With Application to a Price Index for Radio Services. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 200; Bureau of Labor Statistics, Office of Prices and Living Conditions, 600 E Street NW, Room 4013, Washington, DC 20212. **PG** 31. **PR** no charge. **JE** 227, 212, 211. **KW** Bayesian Analysis. Hedonic Model. Prices. Model Specification.
AB Most econometric applications entail uncertainty in the choice of model. An example is the possible use of hedonic regressions for quality adjustment of price index numbers for radio services. Economic theory suggests that a hedonic regression specification ought to include price-determining characteristics of a good as regressors, but gives no guidance as to which characteristics are likely to be price determining. In this paper I argue that Bayesian techniques provide a natural methodology for both choosing a best model and combining inferences across models to better reflect and measure the uncertainty faced by the data analyst. Empirical analysis of hedonic regressions for radio advertising prices is used to illustrate the techniques.

Mueller, Dennis C.

PD May 1990. **TI** Rates of Return on Corporate Investment. **AU** Mueller, Dennis C.; Reardon, Elizabeth A. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-10; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 31. **PR** no charge. **JE** 512, 522, 514. **KW** Investment. Corporations. Managerial Economics.
AB The issue of whether corporate managers invest at rates of return at least as great as shareholder opportunity costs, once hotly debated in the industrial organization literature, is reexamined in this paper. Using market value data for 698 U.S. corporations, we calculate rates of return on investment for the period 1970 through 1987. We find in general low estimates of returns on investment relative to owner opportunity costs. The potential policy implications of these results are discussed.

TI Electoral Politics, Interest Groups, and the Size of Government. **AU** Coughlin, Peter J.; Mueller, Dennis C.; Murrell, Peter.

Muniagurria, Maria Eugenia

PD June 1989. **TI** A Dynamic Model of International Transfers of Technology. **AA** University of California, Santa Cruz. **SR** Stanford Hoover Institute Working Paper in Economics: E-89-18; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 51. **PR** not available. **JE** 621, 441. **KW** Technology. International Investment. Learning.
AB We develop a dynamic general equilibrium model that can be used to analyze host country's regulations on international transfers of technology. We look at the case of two countries that differ both in their production technologies and their level of managerial expertise. The interaction between the exporter and the importer is modeled as a dynamic game and the Subgame Perfect Nash Equilibrium is calculated. By incorporating technological learning and spillover effects, we show that only in the case where these effects are sufficiently large is it optimal for the host country to impose restrictions on the entry of foreign firms.

PD June 1989. **TI** A Model of Growth with Technology Adoption. **AA** University of California, Santa Cruz. **SR** Stanford Hoover Institute Working Paper in Economics: E-89-19; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 66. **PR** not available. **JE** 111, 621, 021. **KW** Growth Theory. Technological Change. Government

Policy. Subsidies.
AB We develop a growth model with endogenous technological change that explicitly incorporates technology adoption. The model focuses on the role of adoption and research and development in the growth process. We look at the competitive equilibrium and at the planner's problem. Our economy exhibits constant growth along the optimal path. The competitive equilibrium has a constant growth solution and this constant rate is smaller than the optimal rate. Furthermore, the growth rate can be affected by policies on adoption and research and development. The model indicates that for some economies a subsidy to adoption will be optimal and for the other economies it will be optimal to subsidize research and development.

Murrell, Peter

TI Electoral Politics, Interest Groups, and the Size of Government. **AU** Coughlin, Peter J.; Mueller, Dennis C.; Murrell, Peter.

Muttardy, Alphecca

TI Commodity Prices and Inflation: Evidence from Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca.

TI Commodity Prices and Inflation: Evidence From Seven Large Industrial Countries. **AU** Boughton, James M.; Branson, William H.; Muttardy, Alphecca.

Myers, Stewart C.

PD December 1989. **TI** Signaling and Accounting Information. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3193; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 541, 512, 514. **KW** Accounting. Managerial Economics. Signalling Model. Shareholders.
AB This paper develops a signalling model in which accounting information improves real investment decisions. Pure cash flow reporting is shown to lead to underinvestment when managers have superior information but are acting in shareholders' interests. Accounting by prespecified, "objective" rules alleviates the underinvestment problem.

Nachman, David C.

TI Reputation and Investment Incentives. **AU** John, Kose; Nachman, David C.

Neu, C. R.

PD November 1989. **TI** Medicare Patients and Postacute Care: Who Goes Where?. **AU** Neu, C. R.; Harrison, Scott C.; Heilbrunn, Joanna Z. **AA** Rand Corporation. **SR** Rand Report: R-3780; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 84. **PR** not available. **JE** 913. **KW** Medicare. Medical Care. Health Care. Nursing Homes.
AB As part of an effort to understand better the "natural history" of episodes of care among Medicare beneficiaries, this report documents patterns of postacute care use by Medicare patients and explores some factor that may explain these patterns. The research suggests that there are factors unrelated to a patient's medical condition that determine the setting in which postacute care is given. These factors include economic and social circumstances, include economic and social circumstances, and characteristics of the discharging hospital. Specifically, whites are significantly more likely to use skilled nursing facility (SNF) care than nonwhites, whereas nonwhites are significantly more likely to use home health care than whites.

Neudecker, H.

PD 1987. **TI** MSE Superiority of Forecasts. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 14/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 11. **PR** no charge. **JE** 211, 132. **KW** Mean Squared Error. Forecasting.
AB A well-known criterion for comparing two (vector) forecasts is the difference of the mean squared error matrices of their errors. In the last few years several papers have been published on what is called MSE superiority of estimators. We want to mention the work of Terasvirta (1986), Trenkler and Trenkler (1983) and Trenkler(1985). Their papers contain further references. Although the papers deal with estimators, their methodology can easily be applied to forecasts. The present paper is addressed to the problem of forecasting, and it builds on the earlier mentioned papers.

PD 1987. **TI** The Asymptotic Variance Matrix of the Sample Correlation Matrix. **AU** Neudecker, H.; Wesselman, A. M. **AA** Neudecker: University of Amsterdam. Wesselman: Digital Equipment, Utrecht, Netherlands. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 11/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 10. **PR** no charge. **JE** 211. **KW** Correlation Coefficients. Asymptotic Theory.
AB The derivation of the (asymptotic) distributional properties of sample correlation coefficients has a long history. Already in 1915 Fisher considered the distribution of a correlation coefficient of a set of independent, bivariate normally distributed observations. A general expression for the elements of the asymptotic variance matrix of the sample correlations of normally distributed sample observations that consist of more than two variables, has been given by Hsu (1949). Steiger and Hakstian (1982) generalized this result by deriving corresponding results for nonnormal observations. Nel (1985) derived a matrix expression for the asymptotic variance matrix of sample correlations under the assumption that the observations are normally distributed and Browne and Shapiro(1986) obtained similar results under more general (i.e. nonnormal) distributional assumptions. In this paper we shall present a shorter and more straightforward approach to obtain the results as described by Browne and Shapiro.

TI Albert's Theorem Applied to Problems of Efficiency and MSE Superiority. **AU** Bekker, P. A.; Neudecker, H.

PD October 1988. **TI** The Hessian Matrix for Image Factor Analysis. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 14/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 11. **PR** no charge. **JE** 211. **KW** Likelihood Function. Hessian Matrix. Factor Analysis.

AB The Hessian matrix of the likelihood function is derived for the image factor analysis model by using methods of matrix differential calculus.

PD November 1988. **TI** On a Representation Theorem for [the pth root of (tr AP)]. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 12/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 5. **PR** no charge. **JE** 211. **KW** Optimization. Lagrangean Function. Spectral Decomposition.
AB Magnus (1987) established the result: max tr AX=the pth root of (tr AP), subject to tr X(to the q power)=1, where q= p/(p-1) is greater than 1, A and X being non-zero positive semi-definite matrices. The derivation was based on Karamata's inequality. In the present paper the result is derived by means of matrix differential calculus. A further result is: min tr AX= lambda(s), where lambda(s) is the smallest non-zero eigenvalue of A.

PD November 1988. **TI** The Asymptotic Variance Matrix of the Sample Correlation Matrix. **AU** Neudecker, H.; Wesselman, A. M. **AA** Neudecker: University of Amsterdam. Wesselman: Digital Equipment, Utrecht, The Netherlands. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 15/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 10. **PR** no charge. **JE** 211. **KW** Limiting Distribution. Central Limit Theorem. Correlation Matrix.
AB The limiting distribution of the square root of n vec(Phat-P) is derived, where Phat and P are the sample and population correlation matrices. The result is identical with the Browne and Shapiro (1986) result, the derivation is different.

Neven, Damien J.

PD September 1989. **TI** On Quality and Variety Competition. **AU** Neven, Damien J.; Thisse, Jacques-Francois. **AA** Neven: INSEAD. Thisse: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8920; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 39. **PR** not available. **JE** 611, 022. **KW** Duopoly. Nash Equilibrium. Prices. Differentiated Products.
AB A duopoly model encompassing both horizontal and vertical differentiation is analyzed. We seek subgame perfect Nash equilibria in a game where firms choose, first, the horizontal (variety) and the vertical (quality) characteristics of their product and, then, compete in prices. We show that, whatever the products' characteristics, a price equilibrium exists. In the product selection stage, firms choose maximum differentiation along one of the characteristics and minimum differentiation along the other. When the quality range is broad enough relative to the variety range, firms choose the same variety but maximize differentiation in quality. Otherwise, they both choose the maximum quality but maximize their difference in terms of variety.

PD February 1990. **TI** European Integration and Trade Flows. **AU** Neven, Damien J.; Roller, Lars-Hendrik. **AA** INSEAD. **SR** Centre for Economic Policy Research Discussion Paper: 367; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 42. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** 631, 442, 423, 421. **KW** Manufacturing. International Trade. Economic Integration. Europe. External Trade.
AB We study a model of intra-European trade flows and trade between Europe and the rest of the world for 29 manufacturing sectors for 1975-85. We investigate the claim that European integration has slowed down in recent years and find that it has proceeded alongside integration with the rest of the world. Only in the food industry has European integration occurred at the expense of world integration. We also use an econometric model to investigate the factors underlying European trade flows and how these factors have changed over time.

Newbery, David M.

PD September 1989. **TI** Implications of Imperfect Risk Markets for Agricultural Taxation. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 8914; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 26. **PR** $4.00; checks payable to University of Cambridge. **JE** 713, 323, 712, 715. **KW** Agriculture. Prices. Taxes. Exports.
AB Partially stabilizing the domestic price of serially uncorrelated traded agricultural goods can be cost effective if carefully designed. Unfortunately, most traded agricultural crops experience substantial serial correlation, which makes price stabilization difficult and less effective. Stabilizing non-traded goods requires costly storage and justifies incomplete stabilization. If agricultural exports supply a significant fraction of total government tax revenue, as in the case of Ghanian cocoa, then additional factors complicate the choice of taxation, for as the world price fluctuates, so will tax revenue, and the marginal cost of raising taxes. The optimal tax on export crops will therefore depend on the world price and may either stabilize or destabilize the domestic price. Calculations for Ghana suggest that which of these applies depends on attitudes to inequality, but that to a first approximation the export tax should be set as a constant fraction of the export price.

TI Optimal Tariffs on Exhaustible Resources. **AU** Karp, Larry; Newbery, David M.

PD February 1990. **TI** Tax Reform, Trade Liberalization and Industrial Restructuring in Hungary. **AA** University of Cambridge. **SR** Centre for Economic Policy Research Discussion Paper: 371; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 36. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** 443, 112, 323, 124. **KW** Hungary. Foreign Debt. Economic Development. Taxes. Economic Reform.
AB The two central economic problems facing Hungary are its large foreign debt and its relatively poor rate of growth over the 1980s. The paper examines some of the reform issues facing Hungary, starting with the tax reforms of 1988 and 1989, but concentrating on the importance of creating competitive conditions in product and factor markets as a precondition for success of other reforms. International trade could play a key role, but liberalization is constrained by the contractual nature of trade with other Eastern Bloc countries through the CMEA, and by the large overhang of hard currency debt. Issues of

capital market reform and privatization are briefly discussed.

Newman, Andrew F.

TI Risk-Bearing and the Theory of Income Distribution. **AU** Banerjee, Abhijit; Newman, Andrew F.

Nickell, Stephen

PD November 1989. **TI** Technical Progress and Jobs. **AU** Nickell, Stephen; Kong, Paul. **AA** Nickell: London School of Economics. Kong: Oxford University. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 366; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 33. **PR** no charge. **JE** 824, 621, 631. **KW** Technical Change. Employment. Wages. Manufacturing.

AB This paper is concerned with the impact of technical progress on employment in UK manufacturing. The key results are as follows. First in the long run, the existence of insider wage setting has no implications for the employment effects of technical change. The fact that insiders can capture the productivity gains in short run are irrelevant because competitive forces in the product market ensure that these gains are eventually spread throughout the population via their impact on product prices. Second, the impact of technical progress on employment depends on two offsetting forces. A negative effect arises from the fact that fewer workers are needed to produce any given output. A positive effect is generated by the increased demand arising from the fall in marginal cost and hence product price.

PD November 1989. **TI** Demand and Employment. **AU** Nickell, Stephen; Kong, Paul. **AA** Nickell: London School of Economics. Kong: Oxford University. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 367; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 34. **PR** no charge. **JE** 824, 631, 131, 132. **KW** Employment. Wages. Manufacturing. Demand Shocks. Wage Determination.

AB This paper examines the impact of demand shifts on output and employment in a variety of manufacturing industries. The key results are as follows. First, there two factors which determine the effect on demand shifts on industry output and employment. If demand rises, there is a positive direct effect and an offsetting negative effect because of the induced rise in the price of output. The size of this latter effect depends on (i) the impact of demand on prices and (ii) the demand elasticity. If these two parameters are large, then the price offset will, itself, be large. Second, the size of firm/industry specific effects in wage determination are also important here because of industry wages respond directly to industry output prices (via firms' "ability to pay"), then this will magnify the price changes induced by demand shifts. Finally, the results indicate a wide range of output and employment responses to demand shifts across different industries.

Nielsen, Lars Tyge

PD September 1989. **TI** Common Knowledge of an Aggregate of Expectation. **AU** Nielsen, Lars Tyge; Brandenburger, Adam; Geanakoplos, John; McKelvey, Richard; Page, Talbot. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-34; Department of Economics, Brown University, Providence, RI 02912. **PG** 8. **PR** no charge. **JE** 026. **KW** Common Knowledge. Common Priors. Aggregation. Expectations.

AB This note provides a simple proof of the following extension of a result due to McKelvey and Page (1986). Suppose n individuals start with a common prior and then form expectations, conditioned on their different information, of some random variable of interest. If a stochastically monotone aggregate of the n conditional expectations is common knowledge, then the expectations must be identical. This result holds not only when information is described by partitions but also when it is represented by sigma fields.

Nitzan, Shmuel

TI Private Provision of Pubic Goods Under Price Uncertainty. **AU** Gradstein, Mark; Nitzan, Shmuel; Slutsky, Steven M.

Nocera, Simon E.

TI The Instruments and Operating Procedures for Conducting Monetary Policy in the Group of Five Countries. **AU** Batten, D.; Blackwell, M.; Kim, I.; Nocera, Simon E.; Ozeki, Y.

PD August 1989. **TI** Pricing an Interest Payment Guarantee - A Contribution to Debt Reduction Techniques. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/65; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** no charge. **JE** 443. **KW** Bonds. Sovereign Debt. Insurance. Contingent Claims. Credit.

AB This paper describes an approach for computing the market value of an interest guarantee on a bond where the principal is fully collateralized and which is exchanged for discounted sovereign debts. The cost of the insurance is determined on the basis of a simple option pricing model according to the theory of contingent claims. This method offers the advantage over previously proposed approaches by drawing a distinction between different classes of creditors that may wish to select different levels of insurance protection, recognizing thereby the leverage opportunities that arise from the existence of differing views on the credit risk of the sovereign borrower and different operational environments of the creditors.

Noh, Suk Jae

TI A Theory of Kleptocracy with Probabilistic Survival and Reputation. **AU** Grossman, Herschel I.; Noh, Suk Jae.

TI Proprietary Public Finance and Economic Welfare. **AU** Grossman, Herschel I.; Noh, Suk Jae.

O'Brien, Daniel P.

PD May 1989. **TI** Endogenous Price Leadership: A Bargaining Model of International Telecommunications Settlements. **AA** Northwestern University. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-8; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 45. **PR** not available. **JE** 635, 616, 611. **KW** Bargaining. Telecommunications. Price Discrimination. Monopoly.

AB This article develops a noncooperative bargaining model to address the effects of the uniform settlements policy (USP) in international telecommunications. The model predicts that the USP is more likely to increase (decrease) access charges in markets where, under the USP, U.S. firms carry more (less) outbound than inbound traffic. This is due to the model's more general prediction that forbidding price discrimination may allow an upstream monopolist to credibly commit to a take-it or leave-it intermediate product price. Two brief case studies from the international telegraph market lend support to this prediction.

O'Flaherty, Brendan

PD September 1989. **TI** On the Job Screening, Up or Out Rules, and Firm Growth. **AU** O'Flaherty, Brendan; Siow, Aloysius. **AA** O'Flaherty: Columbia University. Siow: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8913; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 40. **PR** no charge. **JE** 833, 824. **KW** Firm Growth. Employment. Human Capital. Profits.

AB This paper uses on the job screening to derive a stochastic and dynamic model of hiring, promotion and dismissal policies, and their impact on total firm employment and output. The model provides an explanation of the up or out rule observed in many organizations. It also provides an explanation for a cost of adjustment mechanism for the stock of human capital in a firm. The model predicts that the rate of growth of employment and output of the firm is independent of the size of the firm (Gibrat's Law), and positively related with per period profitability. The incidence of layoffs is negatively related with per period profitability.

Oates, Wallace E.

TI Community Composition and the Provision of Local Public Goods: A Normative Analysis. **AU** Schwab, Robert M.; Oates, Wallace E.

PD March 1990. **TI** Economics, Economists, and Environmental Policy. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-9; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 23. **PR** no charge. **JE** 722, 613. **KW** Environmental Policy. Environment. Regulation. Pollution.

AB This paper presents some reflections on the role of economic incentives for environmental management. It provides an assessment of our experience with such measures and then, based on this experience, explores the potential of different policy instruments in the policy arena. The paper argues that economists have an important role to play, not only in the design of economic measures for pollution control, but also in providing constructive analysis of the range of "command-and- control" approaches that are more commonly used. The paper then examines the issue of environmental federalism, suggesting that there are some important gains from the decentralization of certain kinds of environmental policy decisions.

Ocana, Carlos

PD January 1990. **TI** Learning From Mistakes: A Note on Just-In-Time Systems. **AU** Ocana, Carlos; Zemel, Eitan. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 874; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 35. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 522, 511, 621. **KW** Inventories. Learning. Production. Investment.

AB We consider an inventory model in which the production technology is not given but, instead, admits improvement through a sequential learning process controlled by the firm. It is shown that in this framework some salient characteristics of Just-in-Time (JIT) systems (sequential inventory reduction, emphasis in variability reduction, and suboptimal inventory levels relative to the static optimum) emerge as profit maximizing policies. Thus, the model permits rationalization of JIT systems within the standard optimization paradigm. Central to our approach is the learning process considered; it is characterized as an investment of optional intensity and random yield. The probability of a successful investment is larger after a poor performance of the production system so that the process can be seen as one of learning from mistakes.

Ogaki, Masao

PD December 1989. **TI** A Co-integration Approach to Estimating Preference Parameters. **AU** Ogaki, Masao; Park, Joon Y. **AA** Ogaki: University of Rochester. Park: Cornell University. **SR** University of Rochester Center for Economic Research Working Paper: 209; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 70. **PR** no charge. **JE** 921. **KW** Consumption. Consumer Economics. Utility Functions.

AB This paper estimates the curvature parameter of an isoelastic utility function for nondurable consumption, which can be interpreted as the relative risk aversion coefficient under some circumstances, by utilizing information in stochastic and deterministic time trends. The first order condition that equates the relative price and the contemporaneous marginal rate of substitution for two goods are used to derive a restriction that the relative price and consumption of two goods are co-integrated. The co-integrating vector involves curvature parameters, and these preference parameters are estimated with a co-integrating regression. This co-integration approach allows for liquidity constraints, aggregation over heterogeneous consumers, unknown preference shocks, and a general form of time-nonseparability.

PD April 1990. **TI** Engel's Law and Cointegration. **AA** University of Rochester. **SR** University of Rochester Center for Economic Research Working Paper: 228; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 43. **PR** no charge. **JE** 921, 914. **KW** Engel's Law. Consumption. Consumer Economics. Expenditures.

AB In cross sectional data, it is widely observed that a higher share of total expenditure goes to food for poorer households than is the case for richer households. A time series counterpart of this observation, Engel's law, is that the expenditure share on food declines as the economy grows. The purpose of the present paper is to test if the addilog utility function proposed by Houthakker (1960) can explain both of these cross sectional and time series observations simultaneously.

PD July 1990. **TI** A Specification Test for a Model of Engel's Law and Saving. **AU** Ogaki, Masao; Atkeson, Andrew. **AA** Ogaki: University of Rochester. Atkeson: University of Chicago. **SR** University of Rochester Center for Economic Research Working Paper: 236; Department of

Economics, University of Rochester, Rochester, NY 14627. **PG** 31. **PR** no charge. **JE** 921, 912. **KW** Consumer Behavior. Savings. Specification Test.

AB This paper develops a formal specification test for Atkeson and Ogaki's (1990) model of consumer behavior that explains, at least qualitatively, some stylized facts concerning Engel's law and saving in a unified framework. As an initial step to quantify our predictions about the stylized facts, we estimate and test our model, using Consumption Expenditure Survey (CES) and National Income and Product Accounts (NIPA) in the U.S. Then a specification test is formed by comparing our estimates from the CES with our estimates from the NIPA data. We obtain similar estimates from these two set of data, and the specification test does not reject our model.

Oh, Seonghwan

TI Strategic Discipline in Monetary Policy with Private Information: Optimal Targeting Periods. **AU** Garfinkel, Michelle R.; Oh, Seonghwan.

TI When and How to Talk: Credibility and Flexibility in Monetary Policy with Private Information. **AU** Garfinkel, Michelle R.; Oh, Seonghwan.

PD June 1990. **TI** Bank Runs: Speculative Runs and Fundamental Runs. **AU** Oh, Seonghwan; Wrase, Jeffrey. **AA** Oh: University of California, Los Angeles. Wrase: Arizona State University. **SR** University of California at Los Angeles Department of Economics Working Paper: 592; Department of Economics, UCLA, 2263 Bunche, Los Angeles, CA 90024. **PG** 15. **PR** $2.50. **JE** 312, 311. **KW** Commercial Banks. Banking. Bank Deposits.

AB This paper analyzes deposit contracts when banks face alternative types of bank runs. The bank in our model can prevent speculative types of bank runs, which arise when depositors believe that deposit withdrawal volume will lead the bank into insolvency, by designing contracts that allow for payment suspension. However, suspension does not eliminate fundamental runs which arise when depositors calculate, given new information revealing low returns, that deposit withdrawal dominates deposit retention. The bank can eliminate fundamental runs by restricting payments. Then, deposit claim depreciation depends on expected returns and withdrawal volume prior to restriction.

Ohlsson, Lennart

TI What Do Rich Countries Trade With Each Other? R&D and the Composition of U.S. and Swedish Trade. **AU** Blomstrom, Magnus; Lipsey, Robert E.; Ohlsson, Lennart.

Ohno, Kenichi

PD June 1989. **TI** The Purchasing Power Parity Criterion for Stabilizing Exchange Rates. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/52; International Monetary Fund, Washington, DC 20431. **PG** 40. **PR** no charge. **JE** 431, 432, 227. **KW** Exchange Rates. Developed Countries. Purchasing Power Parity. Prices.

AB The use of purchasing power parity as a basis of fixing exchange rates among industrial countries, as proposed by McKinnon, is discussed and contrasted with alternative interpretations of the PPP doctrine. Major policy implications of such a regime are emphasized. Furthermore, a new technique for estimating PPP exchange rates which makes use of price pressure exerted by exchange deviation is introduced. This method is capable of solving the "base-year" problem more satisfactorily than the traditional Cassel-Keynes methodology. Estimated yen/dollar and mark/dollar PPP exchange rates are close to estimates derived using other methods.

PD September 1989. **TI** Exchange Rate Fluctuations, Pass-Through, and Market Share. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/67; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** no charge. **JE** 431, 423, 442, 411. **KW** Exchange Rate. Market Share. Duopoly. Cournot Model. Exports.

AB When the exchange rate fluctuates and the market exhibits hysteresis, planning horizons of domestic and foreign competitors will matter in determining pass-through as well as relative market shares of these firms. Using the Cournot duopoly model, it is shown that if the foreign exporter is a long-term maximizer relative to the domestic firm, pass-through will be lower and average export penetration higher than otherwise.

Okuno-Fujiwara, Masahiro

TI Refining Cheap-Talk Equilibria. **AU** Matthews, Steven A.; Okuno-Fujiwara, Masahiro; Postlewaite, Andrew.

TI Refining Cheap-Talk Equilibria. **AU** Matthews, Steven A.; Okuno-Fujiwara, Masahiro; Postlewaite, Andrew.

Orlin, James B.

TI Some Recent Advances in Network Flows. **AU** Ahuja, Ravindrak; Magnanti, Thomas L.; Orlin, James B.

Osborne, Martin J.

TI Noncooperative Models of Bargaining. **AU** Binmore, Kenneth; Osborne, Martin J.; Rubinstein, Ariel.

Osiewalski, Jacek

PD December 1989. **TI** A Note on Bayesian Inference in a Regression Model with Elliptical Errors. **AA** Academy of Economics, Poland and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8940; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 11. **PR** not available. **JE** 211, 132. **KW** Regression Model. Linear Model. Prediction. Estimation.

AB In this note estimation and prediction is considered for a (linear or nonlinear) regression model with the error vector distributed as a scale mixture of multivariate normal distributions. The results obtained for the linear model by Zellner (1976), Jammalamadaka et al. (1987) and Chib et al. (1988) are explained and generalized to much more general classes of regression models and prior distributions.

Ostry, Jonathan D.

PD September 1989. **TI** Tariffs and the Macroeconomy: Some Empirical Evidence. **AU** Ostry, Jonathan D.; Rose, Andrew K. **AA** Ostry: International Monetary Fund. Rose: University of California, Berkeley. **SR** International Monetary Fund Working Paper: WP/89/70; International Monetary Fund, Washington, DC 20431. **PG** 24. **PR** no charge. **JE** 431, 422. **KW** Tariffs. Exchange Rates. Trade

Theory.
AB This paper examines the macroeconomic impact of tariffs. Existing theoretical models do not provide clear-cut predictions concerning the co-movement between unilateral tariff changes and a set of macroeconomic variables consisting of the real exchange rate, the trade balance, and the level of output. Three different data sets are found to be consistent with the hypothesis that tariffs have no statistically significant impact on the trade balance, the real exchange rate, or the level of output.

Oswald, Andrew J.

TI Real Wage Determination in Collective Bargaining Agreements. **AU** Christofides, Louis N.; Oswald, Andrew J.

TI The Wage Curve. **AU** Blanchflower, David G.; Oswald, Andrew J.

TI Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J.

TI Insider Power in Wage Determination. **AU** Blanchflower, David G.; Oswald, Andrew J.; Garrett, Mario D.

Ozeki, Y.

TI The Instruments and Operating Procedures for Conducting Monetary Policy in the Group of Five Countries. **AU** Batten, D.; Blackwell, M.; Kim, I.; Nocera, Simon E.; Ozeki, Y.

Page, Talbot

TI Public and Private Information: An Experimental Study of Information Pooling. **AU** McKelvey, Richard; Page, Talbot.

Palmer, Adele R.

PD December 1989. **TI** An Integrative Modeling Approach for Managing the Total Defense Labor Force. **AU** Palmer, Adele R.; Rydell, C. Peter. **AA** Rand Corporation. **SR** Rand Report: R-3756; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 61. **PR** not available. **JE** 114, 813. **KW** Armed Forces. Military Personnel. Enlistment. Military.
AB This report documents an exploratory research project that considers that salient relationships between wartime and peacetime manpower roles and between utilization--and how these relationships can be integrated in a manpower management model. It also discusses whether such a model would evaluate manning options differently from conventional analysis, i.e., whether it could fundamentally alter Department of Defense (DOD) labor management. The authors outline desirable features for a total force management model, build a rudimentary version of such a model, and exercise it to demonstrate that it can lead to manning policies different from those favored by existing DOD policy.

Papke, Leslie E.

PD September 1989. **TI** International Differences in Capital Taxation and Corporate Borrowing Behavior: Evidence from the U.S. Withholding Tax. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3129; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 313, 323. **KW** Securities. Government Bonds. Foreign Investment. Corporate Bonds. Taxation.
AB Securities transactions in the U.S. climbed on a net basis from $19 billion in 1983 to $50 billion in 1985. This rise was due almost entirely to an increase in foreign purchases of U.S. securities - largely corporate and government bonds. One reason suggested for this phenomenon is foreign investors' perception that the U.S. is a safe haven: there are strong investment fundamentals in the U.S. relative to other industrialized countries. Moreover, since the summer of 1984, these instruments have been free from withholding tax on interest paid to foreign holders of notes and bonds issued by U.S. entities. Recently, there has been discussion of re-imposing the withholding tax. A common counter argument to re-imposition is that such a tax is notoriously ineffective at raising revenue.

PD November 1989. **TI** Interstate Business Tax Differentials and New Firm Location: Evidence from Panel Data. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3184; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $2.00. **JE** 324, 631, 611. **KW** Taxes. Taxation. Manufacturing. Industrialization.
AB This paper examines the impact of state and local tax differentials on the location of industry using a panel data set of manufacturing firm start-ups. The number of firm births is modeled as a Poisson count process and the estimation technique explicitly accounts for unobserved location or state heterogeneity in the estimation. A second focus of the analysis is the development of an industry and year specific series of effective tax rates for each state. After controlling for state and industry effects, the estimates indicate that a high state marginal effective tax rate reduces the number of firm births for most industries examined.

Park, Joon Y.

TI A Co-integration Approach to Estimating Preference Parameters. **AU** Ogaki, Masao; Park, Joon Y.

Park, Rolla Edward

PD June 1989. **TI** Local Telephone Pricing and Universal Telephone Service. **AU** Park, Rolla Edward; Mitchell, Bridger M. **AA** Rand Corporation. **SR** Rand Report: R-3724; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 52. **PR** not available. **JE** 635, 921. **KW** Telecommunications. Communications. Telephones. Households.
AB This report describes an economic assessment of several different ways of trying to maintain universal telephone service in the face of increasing local telephone rates. The assessment is based on a simulation model that describes households and models the choice among optional tariffs. The simulation model is calibrated using recent empirical estimates of telephone demands and costs. The simulations compare various tariffs--including flat rates, mandatory measured rates, optional measured rates, and income targeted lifeline rates--in terms of their effects on telephone penetration, economic welfare, and consumer surplus. At current price levels, neither optional measured rates nor lifeline rates have much effect on telephone penetration, even among low income households.

PD June 1989. **TI** Incremental Costs and Efficient Prices with Lumpy Capacity: The Single Product Case. **AA** Rand Corporation. **SR** Rand Report: R-3723; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 98. **PR** not available. **JE** 641, 022. **KW** Economic Capacity. Prices. Consumer Surplus.
AB This report discusses the relationship between incremental costs and efficient prices when capacity must be added in costly "lumps," as much of it must be in the telephone business and other capital-intensive industries. It emphasizes comparison of various pricing rules, using numerical results from an abstract computer simulation model. The author provides some quantitative comparisons of prices and their effects on aggregate economic welfare and consumer surplus under the three pricing rules. He uses computer simulation models to determine the relationship between capacity costs and optimal prices; how the lumpiness of capacity affects prices, welfare, and consumer surplus, and how the effects differ for smaller or larger lump sizes; and what is gained by using more elaborate pricing rules when capacity is lumpy.

Parke, William R.
TI Stock Price Volatility: Tests Based on the Geometric Random Walk. **AU** Le Roy, Stephen F.; Parke, William R.

Pauly, Peter
TI Nonconvex Costs and the Volatility of Production. **AU** Lai, Kon S.; Pauly, Peter.

TI The Use of Prior Information in Forecast Combination. **AU** Diebold, Francis X.; Pauly, Peter.

Pelletier, Jeffrey
TI The Impact of Industrial Relations Legislation on British Union Density. **AU** Freeman, Richard B.; Pelletier, Jeffrey.

Perloff, Jeffrey M.
PD March 1990. **TI** There's No Such Thing as Free Housing For Hired Agricultural Workers. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 487Rev; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 29. **PR** $5.80. **JE** 813, 921, 932. **KW** Housing. Agriculture. Consumer Economics.
AB One-quarter of hired agricultural workers live in housing that is provided without rent, whereas few workers in other industries are provided with rent free housing as part of their employment compensation. Workers who live in rent free housing are paid more than comparable agricultural workers, possibly reflecting the low quality and isolation of such housing.

Pestieau, Pierre
TI The Optimal Level and Profile of Unemployment Insurance Benefits in a Model of Employment Mismatch.. **AU** Cremer, Helmuth; Marchand, Maurice; Pestieau, Pierre.

TI Intergenerational Transfers Within the Family. **AU** Cremer, Helmuth; Kessler, D.; Pestieau, Pierre.

Peterson, Christine E.
TI Serving Her Country: An Analysis of Women's Enlistment. **AU** Hosek, James R.; Peterson, Christine E.

Phillips, Garry D. A.
TI Bias Reduction in a Dynamic Regression Model: A Comparison of Jackknifed and Bias Corrected Least Squares Estimators. **AU** Kiviet, Jan F.; Phillips, Garry D. A.

Pines, David
TI Federal Income Taxes and Their Effects on Inter and Intra City Resource Allocation. **AU** Hochman, Oded; Pines, David.

Pippenger, John
TI Testing Purchasing Power Party: Some Evidence of the Effects of Transaction Costs. **AU** Davutyan, Nurhan; Pippenger, John.

Pitt, Mark M.
PD October 1989. **TI** The Selectivity of Fertility and the Determinants of Human Capital Investments: Parametric and Semi-Parametric Estimates. **AU** Pitt, Mark M.; Rosenzweig, Mark R. **AA** Pitt: Brown University. Rosenzweig: University of Minnesota. **SR** Brown University Department of Economics Working Paper: 89-30; Department of Economics, Brown University, Providence, RI 02912. **PG** 37. **PR** no charge. **JE** 851, 841, 921. **KW** Selectivity Bias. Fertility. Human Capital.
AB In this paper we assess the importance of heterogeneity and selective fertility in altering estimates and interpretations of the determinants of the human capital of children. We set out a sequential model of human capital investments in children incorporating endogenous fertility and heterogeneity in human capital endowments to illustrate the fertility selection problem and issues of identification. Empirical results based on parametric and semi-parametric estimates of selectivity models applied to data on birthweight and schooling in Malaysia indicate that the hypothesis of no fertility selection is strongly rejected.

Plosser, Charles I.
TI Real Business Cycles and the Test of the Adelmans. **AU** King, Robert G.; Plosser, Charles I.

PD January 1990. **TI** Money and Business Cycles: A Real Business Cycle Interpretation. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 3221; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 131, 133, 311, 023. **KW** Economic Fluctuations. Money. Business Cycle. Monetary Theory.
AB This paper focuses on the role of money in economic fluctuations. While money may play an important role in market economies, its role as an important impulse to business cycles remains a highly controversial hypothesis. For years economists have attempted to construct monetary theories of the business cycles with only limited empirical success. Alternatively, recent real theories of the cycle have taken the view that to a first approximation independent variations in the nominal quantity of outside money are neutral. This paper finds that the empirical evidence for a monetary theory of the cycle is weak. Not only do variations in nominal money explain very little of subsequent movements in real activity, but what explanatory power exists arises from variations in endogenous components of money.

Popper, Steven W.

PD October 1989. **TI** Modernizing the Soviet Textile Industry: Implications for Perestroika. **AA** Rand Corporation. **SR** Rand Report: R-3779; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 81. **PR** not available. **JE** 123, 631. **KW** Textile Industry. Manufacturing. Modernization.

AB This report presents a case study of the investment program to modernize the Soviet textile industry. It examines the flow of information and decisions among the various parties in the modernization effort--the ministries, the users of industrial machinery, and the machine builders. The goal is to identify the way the modernization process is actually proceeding and to determine the likelihood it will provide Soviet industry with more productive equipment. Using industrial journals and secondary source material, the study is divided into four data sections: the central authorities, the textile enterprises, the machine builders, and obstacles to modernization. The study suggests that the poor results of Soviet modernization attempts show that systemic inadequacies make the process of adaptation for efficient utilization particularly difficult in the Soviet setting.

Porter, Richard D.

PD April 1990. **TI** Asset Prices and the Conduct of Monetary Policy. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 125; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 159. **PR** no charge. **JE** 313, 311. **KW** Monetary Policy. Asset Prices.

AB On December 5, 1989, the Division of Monetary Affairs conducted a workshop on "Asset Prices and the Conduct of Monetary Policy." The workshop was organized in two sessions with two papers presented in each session. This special issue of the FEDS working paper series presents the four papers, together with comments from the discussants and other participants at the workshop. Papers were written by William Whitesell, Jeffrey Fuhrer and George Moore, Guillermo Calvo and Carlo Vegh, and Vincent Reinhart. The discussants included Olivier Blanchard, Michael Gavin, Marvin Goodfriend, Bennet McCallum, Frederic Mishkin, and Edmund Phelps.

Portes, Richard

TI Dealing with Debt: The 1930s and the 1980s. **AU** Eichengreen, Barry; Portes, Richard.

Potscher, Benedikt M.

PD March 1990. **TI** Noninvertibility and Quasi Maximum Likelihood Estimation of Misspecified ARMA Models. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-8; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 19. **PR** no charge. **JE** 211. **KW** ARMA Models. Misspecification. Unit Roots. Likelihood Function.

AB Recently Tanaka and Satchell investigated the limiting properties of local maximizers of the Gaussian quasi likelihood function of a misspecified moving average model of order one in case the spectral density of the data process has a zero at frequency zero. We show that quasi maximum likelihood estimators in the narrower sense, i.e., global maximizers of the quasi likelihood function, may exhibit behavior drastically different from that of the local maximizers. Some general results on the limiting behavior of quasi maximum likelihood estimators in potentially misspecified ARMA models are also presented.

PD March 1990. **TI** Generic Uniform Convergence and Equicontinuity Concepts for Random Functions: An Exploration of the Basic Structure. **AU** Potscher, Benedikt M.; Prucha, Ingmar R. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-14; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 49. **PR** no charge. **JE** 211. **KW** Uniform Convergence. Equicontinuity. Random Functions. Law of Large Numbers.

AB In this paper we discuss the relationship between various equicontinuity concepts for random functions which have been used in the recent literature to derive uniform convergence results, in particular, uniform laws of large numbers. Those concepts have been used to transform either local or pointwise convergence of random functions into uniform convergence. This paper gives sufficient conditions for generic uniform laws of large numbers.

PD May 1990. **TI** Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part II: Asymptotic Normality. **AU** Potscher, Benedikt M.; Prucha, Ingmar R. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-15; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 68. **PR** no charge. **JE** 211. **KW** Nonlinear Models. Central Limit Theorem. Asymptotic Theory.

AB The paper provides an expository discussion of the basic structure of the asymptotic theory of M-estimators in dynamic nonlinear models and a review of the literature. In Part I we discuss consistency, uniform laws of large numbers and develop a new framework for laws of large numbers for dependent and heterogeneous processes, encompassing the theory of stochastically stable as well as near epoch dependent processes. This framework results in simple catalogues of sufficient conditions for consistency. In Part II we discuss central limit theorems and asymptotic normality.

PD July 1990. **TI** Effects of Model Selection on Inference. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-13; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 36. **PR** no charge. **JE** 211. **KW** Model Selection. Estimators. Asymptotic Theory. Parameter Estimation.

AB The asymptotic properties of parameter estimators which are based on a model that has been selected by a model selection procedure are investigated. In particular, the asymptotic distribution is derived and the effects of the model selection process on subsequent inference are illustrated.

Powers, Susan G.

PD August 1989. **TI** Cyclical Movements in Bureau of Labor Statistics Multifactor Productivity Measures and Capacity Utilization. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 198; Bureau of Labor Statistics, 441 G Street NW, Room 2126, Washington, DC 20212. **PG** 35. **PR** no charge. **JE** 825, 226. **KW** Multifactor Productivity. Capacity Utilization. Labor

https://doi.org/10.1017/S0951007900001935 Published online by Cambridge University Press

Productivity.
AB This research examines whether or not and, if so, to what extent the current Bureau of Labor Statistics (BLS) multifactor productivity (MFP) measurement framework adjusts for the impact of cyclical variations in capacity utilization on MFP measurement. The BLS multifactor productivity measures for the private business, private nonfarm business, and manufacturing sectors exhibit substantial cyclical variation during the 1948-1984 time period. This cyclical variation may result from the influence of various factors, including cyclical movements in capital asset discards and decay, in the rate of capacity utilization, and in the rate of labor utilization.

Prati, Alessandro

TI Public Confidence and Debt Management: A Model and a Case Study of Italy. **AU** Alesina, Alberto; Prati, Alessandro; Tabellini, Guido.

Prowse, Stephen David

PD January 1990. **TI** Institutional Investment Patterns and Corporate Financial Behavior in the US and Japan. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 108; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Wash., DC 20551. **PG** 45. **PR** no charge. **JE** 521, 522, 314, 514. **KW** Agency Costs. Leverage. Japan. Shareholders. Corporations.
AB The principal-agent conflict that occurs in a levered firm between its debtholders and shareholders can be mitigated by investors taking large shareholding positions in the firms to which they lend. While US financial institutions are restricted in the degree to which they can be large debt and equity holders in the same firm, evidence is provided suggesting that Japanese financial institutions pattern their debt and equity investments in just such a way. A sample of Japanese and US firms is examined to see if this difference produces observable differences in corporate financial behavior. An inverse relation is found to exist between a firm's debt ratio and the measured severity of the agency problem between shareholders and debtholders in US firms, whereas no such relation is found to exist for Japanese firms -- consistent with the notion that the agency problem is mitigated to a greater extent in Japanese firms.

Prucha, Ingmar R.

TI Generic Uniform Convergence and Equicontinuity Concepts for Random Functions: An Exploration of the Basic Structure. **AU** Potscher, Benedikt M.; Prucha, Ingmar R.

TI Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part II: Asymptotic Normality. **AU** Potscher, Benedikt M.; Prucha, Ingmar R.

Psaradakis, Zacharias

PD December 1989. **TI** The Econometrics of Cointegrated Time Series: A Survey. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8919; Department of Economics, University of Southampton, Southampton, 5O9 5NH, ENGLAND. **PG** 52. **PR** no charge. **JE** 211. **KW** Co-Integration. Time Series. Unit Root. Asymptotic Theory. Regression Models.
AB This paper surveys recent developments in the theory of integration and co-integration of time series. Univariate unit root testing procedures are examined and the main results from the asymptotic theory pertinent to regression models with integrated processes are briefly discussed. The concept of co-integration is then introduced and interest is shifted to alternative parameterizations of a co-integrated system, along with some important generalizations of the theory. A discussion of estimation and testing in systems of co-integrated variables completes the paper.

Qin, Cheng-Zhong

PD December 1989. **TI** The Inner Core of an N-Person Game. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8933; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 17. **PR** not available. **JE** 026, 021. **KW** Core. General Equilibrium Theory. Endowment. Exchange Economy.
AB In this paper sufficient conditions for games and economies to have nonempty inner cores are established, its properties are analyzed, and some applications to the economic models are discussed. The key condition is shown to be stronger than but very close to that of "cardinal balance," and hence it characterizes a class of NTU games that is even larger than both the class of NTU polyhedral games and that of "cardinal balanced with slack" NTU games.

Rasche, Robert H.

TI The Demand for Money in the U.S. During the Great Depression: Estimates and Comparison with the Post War Experience. **AU** Hoffman, Dennis; Rasche, Robert H.

Rasmusen, Eric R.

TI Are Equilibrium Strategies Unaffected by Incentives? The Police Game. **AU** Hirshleifer, Jack; Rasmusen, Eric R.

Rausser, Gordon C.

TI Organization Equilibrium and the Optimality of Collective Action. **AU** Zusman, Pinhas; Rausser, Gordon C.

Razin, Assaf

TI Current Account Dynamics: The Role of Real Shocks. **AU** Leiderman, Leonardo; Razin, Assaf.

PD October 1989. **TI** International Tax Competition and Gains From Tax Harmonization. **AU** Razin, Assaf; Sadka, Efraim. **AA** Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 3152; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 323, 411, 442. **KW** Taxation. International Coordination. Corporate Taxes. Taxes.
AB In a world economy there are two types of distortions which can be caused by capital income taxation in addition to the standard closed economy wedge between the consumer-saver marginal intertemporal rate of substitution and the producer-investor marginal productivity of capital: (i) international differences in intertemporal marginal rates of substitution, implying an inefficient allocation of world savings across countries; and (ii) international differences in the marginal productivity of capital, implying an inefficient allocation of world investment across countries. The paper

focuses on the structure of taxation for countries which are engaged in tax competition and on potential gains from a tax harmonization. We show that if the competing countries are sufficiently coordinated with the rest of the world then tax competition leads each country to apply the residence principle of taxation and there are no gains from tax harmonization.

TI Determinants of External Imbalances: The Role of Productivity, Employment and Taxes. **AU** Leiderman, Leonardo; Razin, Assaf.

Reardon, Elizabeth A.

TI Rates of Return on Corporate Investment. **AU** Mueller, Dennis C.; Reardon, Elizabeth A.

Rebelo, Sergio T.

TI Transitional Dynamics and Economic Growth in the Neoclassical Model. **AU** King, Robert G.; Rebelo, Sergio T.

Reinhart, Carmen M.

TI Private Investment and Economic Growth in Developing Countries. **AU** Khan, Mohsin S.; Reinhart, Carmen M.

Reinhold, Andrea

TI On the Complexity of the Farkas-Property of Oriented Matroids. **AU** Bachem, Achim; Reinhold, Andrea.

Reinsdorf, Marshall B.

PD January 1990. **TI** Multi-good Search and Cost of Living Indexes: Theory and Evidence. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 201; Bureau of Labor Statistics, 441 G Street NW, Room 2126, Washington, DC 20212. **PG** 35. **PR** no charge. **JE** 227, 921, 134. **KW** Cost of Living Index. Inflation. Price Index. Search Theory. Consumer Economics.
AB When prices are dispersed due to costly information, outlet choices of searching consumers are not independent of outlet prices. This paper shows that increases in price dispersion is likely to reduce the cost of living for consumers who search for low prices using either a fixed sample size or a reservation price strategy in comparison with the cost of living of consumers who do not search. Despite existing theoretical and empirical results suggesting that inflation itself contributes to intra-market price dispersion, thereby biasing downward a fixed weight COL index as it accelerates, this effect is not empirically supported in a sample of U.S. CPI food price data from 1980 to 1982. In fact, during this period of sharply falling inflation the average annual rate of inflation in expected prices paid by consumers following a simulated search strategy is about .5 percent lower than the average inflation rate of offered prices.

Reiter, Stanley

PD December 1989. **TI** Decentralized Dynamic Processes for Finding Equilibrium. **AU** Reiter, Stanley; Simon, Carl P. **AA** Reiter: Northwestern University. Simon: University of Michigan. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 865; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 51. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 022, 213. **KW** Linear Model. Dynamic Model. Algorithm.
AB This paper describes a class of decentralized dynamic processes designed to converge to equilibrium when the equilibrium equations are linear. These processes can also be viewed as algorithms for solving systems of linear equations, or as learning algorithms. The class includes processes that use a message space larger by one binary digit than the space in which the equilibrium exists. However, memory and time requirements increase exponentially with the number of agents (equations).

Reitzes, James D.

TI Merger in the Round: Anticompetitive Effects of Mergers in Markets with Localized Competition. **AU** Levy, David T.; Reitzes, James D.

Ridder, Geert

PD May 1986. **TI** Unemployment Benefits and Search Behavior: An Empirical Investigation. **AU** Ridder, Geert; Gorter, Kees. **AA** Ridder: University of Amsterdam and Cornell University. Gorter: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 11/86; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 22. **PR** no charge. **JE** 824, 821, 822. **KW** Search Model. Unemployment Benefits. Unemployment. Reservation Wage.
AB In this paper we estimate a structural model of the search behavior of the unemployed. We concentrate on the effect of unemployment benefits on the reservation wage which characterizes the optimal search strategy. We find a larger estimate of the benefit elasticity than that obtained in a comparable study for the United Kingdom. A comparison of the estimation results shows that the difference is due to a smaller arrival rate of job offers which is not accompanied by a lower reservation wage (relative to the wage offer distribution).

PD August 1987. **TI** The Sensitivity of Duration Models to Misspecified Unobserved Heterogeneity and Duration Dependence. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 7/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 41. **PR** no charge. **JE** 211. **KW** Hazard Models. Misspecification. Heterogeneity. Maximum Likelihood. Sample Bias.
AB In this paper we discuss the sensitivity of parameter estimates in Mixed Proportional Hazard models to misspecification of the baseline hazard (duration dependence) and the distribution of the unobserved heterogeneity. By combining analytical results and sampling experiments we conclude that, if the durations are uncensored, the MLE of the regression parameters are not sensitive to misspecification of the heterogeneity distribution. If there is (heavy) censoring, Then there is some sensitivity. However, in that case there is also a considerable "small sample" bias in the MLE. Misspecification of the duration dependence usually causes a significant bias in the MLE.

PD November 1989. **TI** Analysis of Related Durations: A Semi-Parametric Approach with an Application to a Study of Child Mortality in Malaysia. **AU** Ridder, Geert; Tunali, Insan. **AA** Ridder: Rijksuniversiteit Groningen, the Netherlands. Tunali: Cornell University and University of Chicago. **SR** Economics Research Center/NORC Discussion

Paper: 90-1; Economics Research Center/NORC, 6030 S. Ellis, Chicago, Illinois 60637. **PG** 40. **PR** $2.00; send requests to Librarian, NORC. **JE** 212, 913. **KW** Mortality. Proportional Hazards. Hazard Model.

AB In this paper we specify a Proportional Hazards model which allows for correlation between related durations through a common fixed-effect. We rely on the Cox Partial Likelihood estimator which admits time-varying regressors under certain conditional independence assumptions. The method is illustrated with a study of child mortality. The data we employ were previously analyzed by R. Olsen and K. Wolpin in the 1983 volume of Econometrica. Our re-examination offers tests of the parametric assumptions Olsen and Wolpin rely on, as well as tests of our own parameterization and of endogeneity of the regressors.

Robson, Mark

TI Endogenous Growth and the Role of History. **AU** King, Mervyn A.; Robson, Mark.

Rockenbach, Bettina

PD October 1989. **TI** The Negotiation Agreement Area: An Experimental Analysis of Two-Person Characteristic Function Games. **AU** Rockenbach, Bettina; Uhlich, Gerald R. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-126; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 58. **PR** no charge. **JE** 215, 026. **KW** Experimental Economics. Negotiations.

AB In this paper a generalization of the Negotiation Agreement Area (NAA) to games with a negative threat point will be presented and the NAA will be compared with other theories in the light of our data base, consisting of six sessions of laboratory experiments. Moreover, we shall introduce a general area theory for two-person characteristic function games with a positive coalition value. Since this general NAA is only partially based on experimental data, some minor changes for types of games not in our data base may be necessary in the face of future experimental evidence.

Rodrik, Dani

TI Pro-Competitive Effects of Trade Reform: Results from a CGE Model of Cameroon. **AU** Devarajan, Shantayanan; Rodrik, Dani.

Roemer, John E.

PD May 1990. **TI** The Economics of Equal Educational Opportunity: Public and Voucher Regimes. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 360; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 59. **PR** no charge. **JE** 912, 024. **KW** Education. Public Schools.

AB Two-generation general equilibrium models of education are studied. Children come in types, where a type specifies the ease with which the child can be embedded with skills by the educational process. Society adopts a public syllabus, which specifies the vector of skills that each child-type shall be guaranteed by education. Parents choose how much of their income to spend on children's education; they care about their (grown) child's utility in the second period, which is a function of his earning capacity. Two voucher regimes are studied. The type of constrained efficiency characteristic of the equilibria of each system is characterized, and there is discussion of market failures that are likely to be seen with each system.

Rogerson, William P.

PD February 1990. **TI** Contractual Solutions to the Hold-Up Problem. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 873; Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208-2014. **PG** 35. **PR** $3.00 in the U.S.A. or Canada; $5.00 via international mail. **JE** 026, 022. **KW** Contracts. Investment. Bargaining.

AB The hold-up problem as first described by Klein, Crawford and Alchian [1978] and Williamson [1975, 1977] has come to be accepted by economists as a fundamental determinant of contractual and organizational structure. A hold-up problem occurs when two factors are present. First, parties to a future transaction must make non-contractible specific investments prior to the transaction in order to prepare for it. Second, the exact form of the optimal transaction (e.g., how many units if any, what quality level, the time of delivery) cannot be specified with certainty ex-ante. It depends on the resolution of uncertain parameters and these parameters cannot be objectively measured and contracted upon. The problem is that these two factors create what at least superficially appear to be conflicting requirements for the nature of the contractual structure governing the transaction. An important task for economic theory is therefore to explore the extent to which contractual arrangements can simultaneously deal with both of these apparently conflicting requirements.

Rolin, Jean-Marie

TI Invariance Arguments in Bayesian Statistics. **AU** Florens, Jean-Pierre; Mouchart, Michel; Rolin, Jean-Marie.

Roller, Lars-Hendrik

TI European Integration and Trade Flows. **AU** Neven, Damien J.; Roller, Lars-Hendrik.

Romer, Christina D.

TI A New Monthly Index of Industrial Production, 1884-1940. **AU** Miron, Jeffrey A.; Romer, Christina D.

Romer, David

PD October 1989. **TI** Staggered Price Setting with Endogenous Frequency of Adjustment. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3134; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 8. **PR** $2.00. **JE** 133, 132, 023. **KW** Monetary Shocks. Business Cycle. Wage Adjustment. Prices.

AB The classic models of staggered adjustment of Taylor and Blanchard takes the frequency of price or wage adjustment as exogenous. This paper develops a model in which the frequency of price changes is endogenous. It then uses the model to analyze the effects of changes in the parameters of the economy on the frequency of adjustment and the real effects of monetary shocks.

TI Stock Market Forecastability and Volatility: A Statistical Appraisal. **AU** Mankiw, N. Gregory; Romer, David; Shapiro, Matthew D.

Romer, Paul M.

TI Information Production, Evaluation Risk and Optimal Contracts. **AU** Hargraves, Monica; Romer, Paul M.

PD November 1989. **TI** Human Capital and Growth: Theory and Evidence. **AA** Center for Advanced Studies in the Behavioral Sciences. **SR** National Bureau of Economic Research Working Paper: 3173; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $2.00. **JE** 851, 111. **KW** Human Capital. Endogenous Growth. Literacy.

AB This paper outlines a theoretical framework for thinking about the role of human capital in a model of endogenous growth. The framework pays particular attention to two questions: What are the theoretical differences between intangibles like education and experience on the one hand, and knowledge or science on the other? and How do knowledge and science actually affect production? One implication derived from this framework is that the initial level of a variable like literacy may be important for understanding subsequent growth. This emphasis on the level of an input contrasts with the usual emphasis from growth accounting on rates of change of inputs. The principal empirical finding is that literacy has no additional explanatory power in a cross-country regression of growth rates on investment and other variables, but consistent with the model, the initial level of literacy does help predict the subsequent rate of investment, and indirectly, the rate of growth.

PD December 1989. **TI** Endogenous Technological Change. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3210; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** 2.00. **JE** 621, 111. **KW** Endogenous Growth. Technology. Monopolistic Competition. Human Capital.

AB Growth in this model is driven by technological change that arises from intentional investment decisions made by profit maximizing agents. The distinguishing feature of the technology as an input is that it is neither a conventional good nor a public good; it is a nonrival, partially excludable good. Because of the nonconvexity introduced by a nonrival good, price-taking competition cannot be supported, and instead, the equilibrium is one with monopolistic competition. The main conclusions are that the stock of human capital determines the rate of growth, that too little human capital is devoted to research in equilibrium, that integration into world markets will increase growth rates, and that having a large population is not sufficient to generate growth.

Rose, Andrew K.

TI Tariffs and the Macroeconomy: Some Empirical Evidence. **AU** Ostry, Jonathan D.; Rose, Andrew K.

Rosenzweig, Mark R.

TI The Selectivity of Fertility and the Determinants of Human Capital Investments: Parametric and Semi-Parametric Estimates. **AU** Pitt, Mark M.; Rosenzweig, Mark R.

Rosett, Joshua

PD November 1989. **TI** Do Union Wealth Concessions Explain Takeover Premiums? The Evidence on Contract Wages. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3187; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 39. **PR** $2.00. **JE** 831, 512, 511, 514. **KW** Unions. Wages. Takeovers. Shareholders. Corporations.

AB I estimate changes in levels of union real wage growth associated with corporate takeovers and accompanying chief executive officer changes. The effects are statistically insignificant. The results are used to construct union wealth changes associated with corporate control events. Target firm shareholder wealth premiums are estimated using a simple market model. The union and shareholder wealth changes are compared, and I conclude that transfers of wealth from unions to shareholders are not an economically significant explanation of shareholder wealth premiums.

Rotemberg, Julio J.

PD December 1989. **TI** Oligopolistic Pricing and the Effects of Aggregate Demand on Economic Activity. **AU** Rotemberg, Julio J.; Woodford, Michael. **AA** Rotemberg: Massachusetts Institute of Technology. Woodford: University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3206; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 52. **PR** $2.00. **JE** 021, 132, 114. **KW** Demand Shocks. Military Spending. General Equilibrium Model. Collusion.

AB We construct a dynamic general equilibrium model in which the typical industry colludes by threatening to punish deviations from an implicitly agreed upon pricing path. We argue that models of this type explain better than do competitive models the way in which the economy responds to aggregate demand shocks. When we calibrate a linearized version of the model using methods similar to those of Kydland and Prescott (1982), we obtain predictions concerning the economy's response to changes in military spending which are close to the response we estimate with postwar US data.

PD January 1990. **TI** Competition and Human Capital Accumulation: A Theory of Interregional Specialization and Trade. **AU** Rotemberg, Julio J.; Saloner, Garth. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3228; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 941, 615. **KW** Transportation Costs. Regional Economics.

AB We consider a model with several regions whose technological ability and factor endowments are identical and in which transport costs between regions are non-negligible. Nonetheless, certain goods are sometimes produced by multiple firms all of which are located in the same region. These goods are then exported from the regions in which their production is agglomerated. Regional agglomeration of production and trade stem from two forces. First, competition between firms for the services of trained workers is necessary for the workers to recoup the cost of acquiring industry-specific human capital. Second, the technology of production is more efficient when plants are larger than a minimum efficient scale and local demand is insufficient to support several firms of that scale. We also study the policy implications of our model.

Rubinstein, Ariel

TI Noncooperative Models of Bargaining. **AU** Binmore, Kenneth; Osborne, Martin J.; Rubinstein, Ariel.

PD August 1990. **TI** Rationalizable Conjectural Equilibrium: Between Nash and Rationalizability. **AU** Rubinstein, Ariel; Wolinsky, Asher. **AA** Rubinstein: Tel Aviv University. Wolinsky: Northwestern University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 19-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 22. **PR** no charge. **JE** 026, 022. **KW** Nash Equilibrium. Common Knowledge.

AB For a steady state to be a Nash equilibrium the agents have to perfectly observe the actions of others. This paper suggests a solution concept for cases where players observe only an imperfect signal of what the others' actions are. The model is enriched by specifying the signal that each player has about the actions taken by the others. The solution, which we call rationalizable conjectural equilibrium (RCE), is a profile of actions such that each player's action is optimal, given the assumption that it is common knowledge that all players maximize their expected utility given their knowledge. The RCE occupies an intermediary position between Nash equilibrium on the one hand and Rationalizability style Bernheim-Pearce on the other hand. The concept is demonstrated by several examples in which it refines the rationalizability concept and still is not equivalent to Nash equilibrium.

Rudebusch, Glenn D.

TI Forecasting Output with the Composite Leading Index: An Ex Ante Analysis. **AU** Diebold, Francis X.; Rudebusch, Glenn D.

Ruser, John W.

PD August 1989. **TI** Workers' Compensation and Occupational Injuries and Illness. **AA** Bureau of Labor Statistics. **SR** Bureau of Labor Statistics Working Paper: 195; Bureau of Labor Statistics, 441 G Street NW, Room 2126, Washington, DC 20212. **PG** 50. **PR** no charge. **JE** 822, 631. **KW** Workers' Compensation. Injury Rates. Manufacturing. Fringe Benefits.

AB A longitudinal establishment data set is used to assess the effect of changes in workers' compensation benefits on the incidence of lost workday injury and illness cases in manufacturing for the years 1979-1984. Higher benefits are found generally to increase lost-workday cases. However, consistent with theory, the benefit effect is smaller in larger, more highly experience-rated establishments and in establishments which pay higher wages. Further, larger, more highly experience-rated establishments are safer. After initial estimates are obtained using ordinary and weighted least squares, several count data models are explored which are more appropriate for the integer injury and illness counts in the data.

PD October 1989. **TI** Re-Estimating OSHA's Effects: Have the Data Changed?. **AU** Ruser, John W.; Smith, Robert S. **AA** Ruser: Bureau of Labor Statistics. Smith: Cornell University. **SR** Bureau of Labor Statistics Working Paper: 194; Bureau of Labor Statistics, 441 G Street NW, Room 2126, Washington, DC 20212. **PG** 45. **PR** no charge. **JE** 822. **KW** OSHA. Injury Rates. Government Policy. Safety Inspections.

AB In this paper, we investigate, both directly and inferentially, whether changes in recordkeeping practices and the use of employer reported injury data in OSHA's scheduling of inspections have altered injury data quality in significant ways. Inferentially, our analysis proceeds by replicating earlier studies of OSHA's inspection effects to see if the relationships found prior to the above changes still hold. The sizes and patterns of coefficients that we obtain in our analyses, including the lack of evidence that OSHA inspections (or the threat of them) reduce the injury rate, are consistent with those found earlier.

Rush, Mark

TI Rigid Prices and Flexible Products. **AU** Koelln, Kenneth; Rush, Mark.

Rydell, C. Peter

TI An Integrative Modeling Approach for Managing the Total Defense Labor Force. **AU** Palmer, Adele R.; Rydell, C. Peter.

Ryder, Harl E.

TI Exit, Voice, and Distribution: A Non-Cooperative Bargaining Analysis. **AU** Skillman, Gil, Jr.; Ryder, Harl E.

Sabourian, Hamid

PD July 1989. **TI** The Folk Theorem of Repeated Games with Bounded (One-Period) Memory. **AA** University of Cambridge. **SR** University of Cambridge Economic Theory Discussion Paper: 143; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 50. **PR** $4.00, checks payable to University of Cambridge. **JE** 026. **KW** Folk Theorem. Bounded Memory. Repeated Games. Perfect Equilibrium.

AB This paper shows that a Folk Theorem result (with subgame perfect equilibrium) can be demonstrated for repeated games with one-period memory if either the action space has a large number of elements or if randomization (public or private) is allowed. Moreover, the paper shows that the 1-period memory strategies needed to demonstrate the Folk Theorem results can be quite complex in the case of pure strategies where as with mixed strategies they are very simple. Finally the results of this paper indicate that in general the solution to two player repeated games with 1-period memory differ qualitatively from those of n players, where n > 2.

PD November 1989. **TI** Repeated Games with M-Period Bounded Memory (Pure Strategies). **AA** University of Cambridge. **SR** University of Cambridge Economic Theory Discussion Paper: 144; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 55. **PR** $4.00, checks payable to University of Cambridge. **JE** 026. **KW** Bounded Memory. Repeated Games. Perfect Equilibrium.

AB This paper provides a characterization for the set of outcomes which can be sustained by M-period memory pure subgame perfect equilibrium strategies in repeated games with no discounting and finite number of actions. The characterization indicates that the equilibrium set expands very fast (in an exponential fashion) as the memory increases and slowly (in a polynomial fashion) as the set of actions available to players at each stage expands.

Sadka, Efraim

TI International Tax Competition and Gains From Tax Harmonization. **AU** Razin, Assaf; Sadka, Efraim.

Sadoulet, Elisabeth

TI Labor Contracting and a Theory of Contract Choice in California Agriculture. **AU** Vandeman, Ann; Sadoulet, Elisabeth; de Janvry, Alain.

Saffer, Henry

PD December 1989. **TI** Alcohol Consumption and Tax Differentials Between Beer, Wine and Spirits. **AA** Kean College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3200; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 14. **PR** $2.00. **JE** 913, 323. **KW** Public Health. Taxation. Taxes. Alcohol.

AB Several public health interest groups in the United States have recently called for equalization of the federal tax on a unit of alcohol in beer, in wine and in spirits. This paper provides some new empirical evidence of what effect alcohol tax differentials have on total alcohol consumption. The data indicate that the greatest decrease in alcohol consumption results from an increase in spirits taxes, followed by beer taxes and then wine taxes. This suggests that the existing generally accepted taxation policy of placing the highest tax on spirits, a lower tax on beer, and the lowest tax on wine, results in the greatest reduction in total alcohol consumption.

Safra, Zvi

PD January 1990. **TI** Dominance Axioms and Multivariate Nonexpected Utility Preferences. **AU** Safra, Zvi; Segal, Uzi. **AA** Safra: Tel Aviv University. Segal: University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9001; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 27. **PR** no charge. **JE** 022. **KW** Dominance Axioms. Multivariate Distributions. Expected Utility. Utility Theory.

AB This paper deals with preference relations over multivariate distributions, when the expected utility assumptions are not assumed. We present two equivalent dominance axioms that imply (and are implied by) an additively separable structure of the local utility functions. This structure is relatively convenient in applications since it also implies that the non-expected utility function directly depends on the marginals of the given multivariate distributions. We then define an invariance axiom, show that it is equivalent, and prove that it implies an additively separable expected utility functional when the dominance axiom is also assumed.

TI Existence and Dynamic Consistency of Nash Equilibrium with Non-Expected Utility Preferences. **AU** Dekel, Eddie; Safra, Zvi; Segal, Uzi.

Sahay, Ratna

PD October 1989. **TI** Trade Policy and Market Structure Interaction in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/91; International Monetary Fund, Washington, DC 20431. **PG** 24. **PR** no charge. **JE** 422, 121, 641, 411, 611. **KW** Quotas. Economic Capacity. Imports. Manufacturing. Developing Countries. Tariffs. Oligopoly.

AB This paper shows that the presence of quotas on imported inputs that are based on installed capacity can lead to capacity underutilization in manufacturing industries of developing countries. A replacement of such quotas by tariffs leads to full capacity utilization under assumptions of both perfectly and imperfectly competitive markets. Furthermore, such a policy also eliminates strategic advantages for oligopolistic firms that arise in quota-based regimes.

Salemi, Michael K.

PD February 1990. **TI** Saddlepath Solutions for Multivariate Linear Rational Expectations Models. **AU** Salemi, Michael K.; Song, Jaeyeong. **AA** University of North Carolina, Chapel Hill. **SR** University of North Carolina Working Paper Series: 90-1; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 29. **PR** not available. **JE** 132. **KW** Rational Expectations. Autoregressive Model. Monte Carlo Model. Likelihood Function.

AB Linear Rational Expectations Models which include "forward looking" variables typically imply equation of motion with unstable roots. This paper derives a closed-form expression for saddlepath restrictions which purge unstable roots from the model's reduced form. It also shows that, for the class of models considered, the reduced form may be written as a finite order autoregression. An example is provided along with Monte Carlo experiments which demonstrate the gains in estimate accuracy which are obtained when the results of this paper are used to concentrate the likelihood function of the model's parameters.

Salkever, David S.

TI Market Forces and the Public Good: Competition Among Hospitals and Provision of Indigent Care. **AU** Frank, Richard G.; Salkever, David S.; Mitchell, Jean.

Saloner, Garth

TI Converters, Compatibility, and the Control of Interfaces. **AU** Farrell, Joseph; Saloner, Garth.

TI Competition and Human Capital Accumulation: A Theory of Interregional Specialization and Trade. **AU** Rotemberg, Julio J.; Saloner, Garth.

Savage, Donald

TI New Data on the Performance of Nonbank Subsidiaries of Bank Holding Companies. **AU** Liang, Nellie; Savage, Donald.

Scarf, Herbert E.

TI The Generalized Basis Reduction Algorithm. **AU** Lovasz, Laszlo; Scarf, Herbert E.

PD June 1990. **TI** The Frobenius Problem and Maximal Lattice Free Bodies. **AU** Scarf, Herbert E.; Shallcross, David F. **AA** Scarf: Yale University. Shallcross: I. B. M. **SR** Yale Cowles Foundation Discussion Paper: 945; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 12. **PR** no charge. **JE** 213. **KW** Algorithm. Frobenius Problem.

AB Let p = (p(1),...,p(n)) be a vector of positive integers whose greatest common divisor is unity. The Frobenius problem is to find the largest integer f* which cannot be written as a non-negative integral combination of the p(i). In this note we relate the Frobenius problem to the topic of maximal lattice free bodies and describe an algorithm for n = 3.

Schenzler, Christoph

TI Measuring Income Mobility with Census Data. **AU** Adelman, Irma; Morley, Samuel; Schenzler, Christoph; Warning, Matthew.

Schmeidler, David

TI Utility Theory and Uncertainty. **AU** Karni, Edi; Schmeidler, David.

Schwab, Robert M.

PD March 1990. **TI** Community Composition and the Provision of Local Public Goods: A Normative Analysis. **AU** Schwab, Robert M.; Oates, Wallace E. **AA** University of Maryland, College Park. **SR** University of Maryland Department of Economics Working Paper Series: 90-4; Department of Economics, University of Maryland, College Park, MD 20742. **PG** 40. **PR** no charge. **JE** 324, 931. **KW** Communities. Public Goods. Urban Economics. Public Policy.

AB This paper explores the implications for optimal community structure of production functions for local services that depend upon community composition. Where there is interaction among types of residents in the provision of local public goods (e.g., where levels of education or public safety depend upon the characteristics of the residents of the community), optimal community composition involves a tradeoff between the gains from homogeneity in demands among residents and the gains from heterogeneity in the production of these goods. This paper derives the formal efficiency conditions for the optimal composition of local communities and examines their policy implications. The analysis establishes a role for equalizing intergovernmental grants on efficiency grounds: such grants can provide the needed incentives for sustaining the heterogeneity in community composition needed for the efficient provision of local public goods.

Schwartz, Abba

PD April 1990. **TI** Tenure, Seniority and the Firm's Turnover Cost. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 9-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 25. **PR** no charge. **JE** 824, 821. **KW** Employment. Turnover Costs. Tenure. Efficiency Wages.

AB A two period turnover cost model is constructed to show that granting tenure and/or seniority may be a rational choice by a firm. The driving force is the idea that tenure as well as seniority have value to the employee who receives it. Consequently their turnover cost is lower. The firm gains from manipulating its turnover cost by its choice of the share of tenured and senior employees.

Scotchmer, Suzanne

TI Coordinating Research Through Research Joint Ventures. **AU** Gandal, Neil; Scotchmer, Suzanne.

Seabringt, Paul

PD November 1989. **TI** Rationality and Herd Behavior: A Bounded Rationality Model of Keynes' Beauty Contest. **AA** University of Cambridge. **SR** University of Cambridge Economic Theory Discussion Paper: 142; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 39. **PR** $4.00, checks payable to University of Cambridge. **JE** 313, 311, 026, 022. **KW** Rationality. Common Knowledge. Asset Prices. Speculation. Asset Markets.

AB This paper develops a model in which agents form beliefs about the beliefs of other agents to a finite number of levels. The effect of such beliefs on the behavior of asset markets depends on the accuracy with which higher-level beliefs represent those of lower levels. In particular, if higher-level beliefs function like signals conditional upon which agents can form rational expectations, markets are stabilized and prices reveal private information fully even if they did not do so in the absence of higher-level beliefs. If, however, higher-level beliefs introduce into agents' expectations a degree of noise of which they are unaware, which is one reasonable form of bounded rationality, there may be both excess price volatility and divergent expectations, permitting speculative trade even in an equilibrium in which agents learn from prices.

Segal, Uzi

TI Dominance Axioms and Multivariate Nonexpected Utility Preferences. **AU** Safra, Zvi; Segal, Uzi.

TI Stochastic Dominance Under Bayesian Learning. **AU** Bikhchandani, Sushil; Segal, Uzi; Sharma, Sunil.

TI Existence and Dynamic Consistency of Nash Equilibrium with Non-Expected Utility Preferences. **AU** Dekel, Eddie; Safra, Zvi; Segal, Uzi.

PD April 1990. **TI** Order Indifference and Rank-Dependent Probabilities. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9008; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 24. **PR** no charge. **JE** 022, 026. **KW** Uncertainty. Utility Theory. Compound Lotteries. Decision Theory.

AB This paper presents a new axiomatization of anticipated utility (also known as the rank dependent) model for decision under uncertainty (Quiggin, 1982). It is based on the analysis of two-stage lotteries with the compound independence axiom but without the reduction of compound lotteries axiom. The major new axiom assumes indifference to the order at which uncertainty is resolved in some simple two-stage lotteries.

Senbet, Lemma W.

TI Limited Liability, Tax Deductibility of Corporate Debt, and Public Policy. **AU** John, Kose; Senbet, Lemma W.

Sengupta, Jati K.

PD January 1990. **TI** The Maximum Entropy Approach in Production Frontier Estimation. **AA** University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 1-90; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 18. **PR** no charge. **JE** 211. **KW** Maximum Entropy. Production Frontier. Nonparametric Estimation. Data Consistency.

AB The maximum entropy approach which provides an objective way of determining the distribution of a random variable consistent with the observed data is analyzed here in relation to the theory of production frontier estimation. Its usefulness in econometric models is illustrated here in terms of the L(p)-norm estimation.

Sertel, Murat R.

PD April 1990. **TI** Workers' Enterprises in Imperfect Competition. **AA** Bogazici University and University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-10; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 13. **PR** no charge. **JE** 611, 053, 022. **KW** Workers' Enterprise. Labor-Managed Firms. Free Entry. Cournot Equilibrium. Oligopoly.

AB Neither a Cournot equilibrium nor a von Stackelberg equilibrium is altered when any profit-maximizing firm in an oligopoly is replaced by a twin workers' enterprise (equipped with the same production function), and this holds both in the long run and in the short. Thus, Cournot and von Stackelberg equilibria exist and behave in the presence of workers' enterprises just as they do in the absence of such firms, and likewise for free entry Cournot equilibrium. Workers' enterprises, whose workers and partners coincide by charter, thus belie the equilibrium non-existence and perversity results obtained for labor-managed "firms" of the usual school where management and partnership (ownership) are disconnected.

Shaffer, Greg

PD November 1989. **TI** Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-6; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 27. **PR** not available. **JE** 611, 616, 633. **KW** Retail Trade. Perfect Competition. Social Welfare Function. Prices.

AB Producers in a perfectly competitive industry compete to obtain shelf space at the retail level. Barring contract observability problems, slotting allowances are observed in equilibrium. Producers charge a high wholesale price, but give back their profits via up-front payments to retailers. However, if the individual supplier-retailer wholesale price terms are unobservable by competitors, then resale price maintenance will be seen, but the coverage will not be universal. The equilibria can be ranked by the usual social welfare criteria. Resale price maintenance, though worse than simple marginal cost wholesale pricing, yields greater surplus than the slotting allowance equilibrium.

Shallcross, David F.

TI The Frobenius Problem and Maximal Lattice Free Bodies. **AU** Scarf, Herbert E.; Shallcross, David F.

Shapiro, Matthew D.

TI Stock Market Forecastability and Volatility: A Statistical Appraisal. **AU** Mankiw, N. Gregory; Romer, David; Shapiro, Matthew D.

Shapley, Lloyd

PD February 1990. **TI** On Kakutani's Fixed Point Theorem, the K-K-M-S Theorem and the Core of a Balanced Game. **AU** Shapley, Lloyd; Vohra, Rajiv. **AA** Shapley: University of California, Los Angeles. Vohra: Brown University. **SR** Brown University Department of Economics Working Paper: 90-8; Department of Economics, Brown University, Providence, RI 02912. **PG** 12. **PR** no charge. **JE** 213, 021. **KW** Fixed Point Theorem. Core. General Equilibrium Theory.

AB We provide elementary proofs of Scarf's theorem on the non-emptiness of the core and of the K-K-M-S theorem, based on Kakutani's fixed point theorem. We also show how these proofs can be modified to apply a coincidence theorem of Fan instead of Kakutani's fixed point theorem, for some additional simplicity.

Sharma, Sunil

TI Stochastic Dominance Under Bayesian Learning. **AU** Bikhchandani, Sushil; Segal, Uzi; Sharma, Sunil.

Sharpe, Steven

TI Animal Spirits, Margin Requirements, and Stock Price Volatility. **AU** Kupiec, Paul H.; Sharpe, Steven.

TI Animal Spirits, Margin Requirements, and Stock Price Volatility. **AU** Kupiec, Paul H.; Sharpe, Steven.

Sheffrin, Steven M.

PD May 1990. **TI** Dynamic Consistency and Political Institutions: The Case of Social Security. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 68; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 15. **PR** no charge. **JE** 322, 915. **KW** Social Security. Government Spending. Trust Fund.

AB This paper examines the idea of building up a trust fund for Social Security from the point of view of time-inconsistency. Under the current system, increased capital accumulation will not decrease the payroll tax rates facing future generations. If they will react adversely to these rates and cut benefits, it will not be rational to build up the trust fund fully.

Shiller, Robert J.

TI Yield Spreads and Interest Rate Movements: A Bird's Eye View. **AU** Campbell, John Y.; Shiller, Robert J.

Shin, Hyun Song

PD December 1989. **TI** Non-Partitional Information on Dynamic State Spaces and the Possibility of Speculation. **AA** University of Michigan and Magdalen College. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-11; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 29. **PR** not available. **JE** 026, 022. **KW** Speculation. Information Process. Game Theory.

AB We describe an environment in which the development of the world over time is an object of uncertainty for the individual. In this environment, a natural representation of information is in terms of non-partitional structures. However, not all non-partitional information can be justified in this way. We identify a set of conditions which are necessary and jointly sufficient for such a representation, namely, that the individual's information be such that (1) whatever is known is true, (2) whatever is known is known to be known, and (3) that information be nested. Moreover, these three conditions are precisely those identified in a paper by Geanakoplos as precluding speculative trade in games with generalized information. Thus, our discussion provides an alternative perspective on the issue of speculation.

Simon, Carl P.

TI Decentralized Dynamic Processes for Finding Equilibrium. **AU** Reiter, Stanley; Simon, Carl P.

Sinn, Hans-Werner

PD January 1990. **TI** The Vanishing Harberger Triangle. **AA** University of Munich. **SR** National Bureau of Economic Research Working Paper: 3225; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 522, 521, 611, 323. **KW** Dividends. Taxes. Corporate Debt. Firm Equity.

AB The paper presents a trapped equity model, but instead of studying how taxes affect corporate decisions when a sufficient amount of equity is already in the trap, it asks the question how does the equity get there. To be more specific, the paper analyzes how the double taxation of dividends affects the growth of a corporation that starts with no equity capital. One conclusion is that dividend taxes are distortionary before they are paid, but not when they are paid. Once the firm is in a stage of maturity where it pays dividends and dividend taxes, tax neutrality prevails. Thus the true intersectoral distortion resulting from corporate taxation is negatively correlated with the measured tax burden, and it is lower, the higher the distortion which estimates of Harberger type would predict. Another conclusion is that the King-Fullerton cost of capital formulae are not applicable in the case of immature firms.

PD January 1990. **TI** The Non-Neutrality of Inflation for International Capital Movements. **AA** University of Munich. **SR** National Bureau of Economic Research Working Paper: 3219; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $2.00. **JE** 441, 134. **KW** Capital Mobility. Inflation. International Market. Capital Flows.

AB This paper studies the question of how unilateral changes in the rate of inflation affect the international allocation of capital. Presenting a model that incorporates a transaction motive for money holding and capital income taxation with historical cost accounting, it counters the view that inflation will be neutral in a world of perfect foresight and costless arbitrage: under mild conditions, domestic inflation will unambiguously induce a capital export. The paper includes a discussion of the Fisher effect. The empirical observation of a less than one-to-one translation of inflation into nominal interest rates is shown to be compatible with the model, and in fact the capital export turns out to be stronger the lower the degree of translation.

Siow, Aloysius

TI On the Job Screening, Up or Out Rules, and Firm Growth. **AU** O'Flaherty, Brendan; Siow, Aloysius.

Skillman, Gil, Jr

PD February 1990. **TI** Exit, Voice, and Distribution: A Non-Cooperative Bargaining Analysis. **AU** Skillman, Gil, Jr.; Ryder, Harl E. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-10; Department of Economics, Brown University, Providence, RI 02912. **PG** 16. **PR** no charge. **JE** 832, 833, 026. **KW** Labor Supply. Cost Function. Collective Bargaining. Bargaining Model.

AB The roles of costly exit and voice in the distribution of surplus between a firm and the two-person labor team it employs is studied using a noncooperative bargaining model. The equilibrium partition is shown to depend on the structure of the exit cost function, with particular attention paid to the firm's use of "divide and conquer" tactics. Applications to the theory of the firm and labor supply are considered.

Slutsky, Steven M.

TI Dynamic Optimal Income Taxation With Government Commitment. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Dynamic Optimal Income Taxation With Government Commitment. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Randomization in Optimal Income Tax Schedules. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Randomization in Optimal Income Tax Schedules. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Private Provision of Pubic Goods Under Price Uncertainty. **AU** Gradstein, Mark; Nitzan, Shmuel; Slutsky, Steven M.

Smith, Gregor W.

TI Realistic Cross-Country Consumption Correlations in a Two-Country, Equilibrium, Business Cycle Model. **AU** Devereux, Michael B.; Gregory, Allan W.; Smith, Gregor W.

Smith, Robert S.

TI Re-Estimating OSHA's Effects: Have the Data Changed?. **AU** Ruser, John W.; Smith, Robert S.

Smith, Roger S.

PD May 1989. **TI** Factors Affecting Saving, Policy Tools, and Tax Reform: A Review. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/47; International Monetary Fund, Washington, DC 20431. **PG** 70. **PR** no charge. **JE** 323, 321, 113. **KW** Developed Countries. Saving. Capital. Taxes. Tax Reform.

AB This paper reviews the literature on factors which affect saving and capital formation in industrialized countries. Problems of measurement are briefly examined. Evidence of the effect on the rate of saving of real rates of return, income redistribution, allocation of saving between corporations and individuals, growth of public and private pension plans, tax incentives, and many other factors ranging from the bequest motive to energy prices and inflation, is considered. Given this evidence, the limited tools available to policy makers to affect savings are discussed. Finally, the extent to which recent tax reforms in a number of countries appear to have been affected by the desire to increase saving is reviewed.

Sneessens, Henri

TI Structural Shocks and Investment Subsidies in an Overlapping Generations Model with Perfect Foresight. **AU** Ginsburgh, Victor; Sneessens, Henri.

Snyder, R. D.

TI ABC Analysis in Inventory Control - the Issue of Stability. **AU** Dunsmuir, W. T. M.; Snyder, R. D.

PD December 1989. **TI** A Computerized System for Forecasting Spare Parts Sales: A Case Study. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 11/89; Department of Econometrics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 15. **PR** no charge. **JE** 214. **KW** Forecasting. Exponential Smoothing. Computer Programs. Inventories.

AB The focus of this paper is a computerized sales forecasting system for the control of automotive spare parts. The logic of the forecasting method, a refinement of exponential smoothing, is outlined together with a method for monitoring forecast errors. Experiences in developing, implementing and operating the system are also described.

Solomou, Solomos

TI Trade Policy and the Development of Bilateralism in the Inter-war Period: The Experience of the UK and Germany. **AU** Kitson Michael; Solomou, Solomos.

Song, Jaeyeong

TI Saddlepath Solutions for Multivariate Linear Rational Expectations Models. **AU** Salemi, Michael K.; Song, Jaeyeong.

Sonnenschein, Hugo

TI Voting by Committees. **AU** Barbera, Salvador; Sonnenschein, Hugo; Zhou, Lin.

Spencer, Michael G.

PD March 1990. **TI** Nominal Exchange Rate Dynamics in the European Monetary System. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 779; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 37. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 431, 432, 132. **KW** Exchange Rates. European Monetary System.

AB The EMS is modeled as imposing dual reflecting barriers on the exchange rate process. This policy leads to a state dependent conditional variance for exchange rate changes. This variance is always less than that under a pure free float regime. A Method of Simulated Moments procedure is employed to estimate the parameters of the model. Simulations with the estimated parameter values show that the model predicts non-normality and non-stationarity in the distribution of exchange rate changes and that these characteristics diminish with aggregation.

Staiger, Robert W.

TI Risky R&D in Oligopolistic Product Markets. **AU** Bagwell, Kyle; Staiger, Robert W.

TI The Sensitivity of Strategic and Corrective R&D Policy in Battles for Monopoly. **AU** Bagwell, Kyle; Staiger, Robert W.

Stark, Oded

TI The Probability of Return Migration, Migrants' Work Effort, and Migrants' Performance. **AU** Galor, Oded; Stark, Oded.

Steigerwald, Doug

PD September 1989. **TI** On the Finite Sample Behavior of Adaptive Estimators. **AA** University of California, Santa Barbara. **SR** University of California, Santa Barbara Department of Economics Working Paper: 31-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 26. **PR** no charge. **JE** 211. **KW** Monte Carlo. Adaptive Estimators. Time Series Regression. Linear Regression Model.

AB We explore the performance of adaptive estimators in linear time series regression models with a sample size of 50. Our results show that across a range of symmetrical distributions the 90% confidence interval of the adaptive estimator is 20% to 50% smaller than the corresponding interval for its OLS or GLS counterpart. When the assumption of symmetry is relaxed smaller gains are observed. These results are sensitive to the degree of departure from normality and the precision of the measurement exercise. We further observe that the estimated standard errors are biased downward.

Stein, Jerome L.

PD October 1989. **TI** An Evaluation of the Performance of Speculative Markets. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 89-29; Department of Economics, Brown University, Providence, RI 02912. **PG** 25. **PR** no charge. **JE** 313. **KW** Futures Market. Efficient Markets. Speculation.

AB This paper provides a quantitative welfare measure of the performance of speculative markets. It is applied to the two most actively traded contracts on the Sydney Futures exchange: bank accepted bills and the share price index. The bank accepted bills market is shown to function three times more effectively, in a welfare sense, than does the share price index. The welfare losses are due to Bayesian errors, whereby the participants do not know the true distributions of the stochastic variables.

TI The Dynamics of the Real Exchange Rate, Foreign Debt and Capital Intensity. **AU** Allen, Polly Reynolds; Stein, Jerome L.

PD January 1990. **TI** Cobwebs, Rational Expectations and Futures Markets. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-2; Department of Economics, Brown University, Providence, RI 02912. **PG** 14. **PR** no charge. **JE** 313, 715, 431, 441. **KW** Rational Expectations. Futures Markets. Commodities. Foreign Exchange.

AB There is a growing body of evidence which suggests that, in the absence of futures markets, cobweb cycles and other behavior inconsistent with Muth Rational Expectations (MRE) persist for long periods of time. When futures markets are introduced in commodities, then these markets behave in a manner much more consistent with MRE. By contrast, despite the existence of active forward and futures markets, the MRE hypothesis is rejected in the financial and foreign exchange markets. The aim of this paper is to suggest an explanation of these phenomena.

PD February 1990. **TI** Integration and Efficiency of International Financial Markets. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-9; Department of Economics, Brown University, Providence, RI 02912. **PG** 29. **PR** no charge. **JE** 431, 441, 432, 314, 311. **KW** Capital Markets. Exchange Rates. Speculation. Economic Integration. Financial Markets. International Markets.
AB This essay is addressed to two major issues. First, why have exchange rates been so unstable during the floating rate period? To what extent can the exchange rate variations be explained by fundamentals? How integrated are international financial markets? Second, the integration of international financial markets means the linking of domestic financial markets. Can the domestic financial markets be trusted? How effective are they in transferring resources? Does capital flow at the right time and in the right direction? Do financial markets recognize short run trends? Do they lose sight of the fundamentals?.

TI Capital Market Integration. **AU** Allen, Polly Reynolds; Stein, Jerome L.

Steinberg, Richard
TI Joint Crowdout: An Empirical Study of the Impact of Federal Grants on State Government Expenditures and Charitable Donations. **AU** Lindsey, Lawrence; Steinberg, Richard.

Stella, Peter
PD September 1989. **TI** Toward Defining and Measuring the Fiscal Impact of Public Enterprises. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/76; International Monetary Fund, Washington, DC 20431. **PG** 28. **PR** no charge. **JE** 614, 321. **KW** Public Enterprises. Fiscal Theory.
AB In many countries, the activities of public enterprises have an important fiscal impact. While the precise nature of this impact is often obscured, it is important that it be reflected in measures of overall fiscal activity. The paper is intended to raise and clarify some of the issues involved in this task.

Stengos, Thanasis
TI Semiparametric Specification Testing. **AU** Delgado, Miguel A.; Stengos, Thanasis.

Stephan, Scott
TI A Random Coefficient Qualitative Choice Model of Telecommunications Demand: Results and Conjectures. **AU** Gatto, Joseph; Kelejian, Harry; Stephan, Scott.

Steyn, Ivo
PD 1987. **TI** Recursive Estimation of Parameters in the Kalman Filter. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 8/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 13. **PR** no charge. **JE** 211, 214. **KW** Kalman Filter. State Space Model. Algorithm.
AB The Recursive Prediction Error method of Ljung & Soderstrom is improved by restarting the Kalman Filter after each new estimation step. In this way a wholly recursive method to estimate unknown parameters in a State Space model is constructed. Two empirical examples show the algorithm to be far more reliable than a standard Kalman Filter with numerical ML estimation.

Stougie, L.
TI A Probabilistic Analysis of the Multiknapsack Value Function. **AU** Meanti, M.; Kan, A. H. G. Rinnooy; Stougie, L.; Vercellis, C.

TI Analysis of Heuristics for Vehicle Routing Problems. **AU** Haimovich, M.; Kan, A. H. G. Rinnooy; Stougie, L.

TI On a Rate of Convergence of the Multiknapsack Value Function. **AU** van de Geer, S. A.; Stougie, L.

TI On the Relation Between Complexity and Uncertainty. **AU** Kan, A. H. G. Rinnooy; Stougie, L.

TI Probabilistic Analysis of Algorithms. **AU** Kan, A. H. G. Rinnooy; Stougie, L.

Stymne, Joakim
PD September 1989. **TI** Debt Growth and the Prospects for Debt Reduction: The Case of Sub-Saharan African Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/71; International Monetary Fund, Washington, DC 20431. **PG** 45. **PR** no charge. **JE** 443, 121. **KW** Public Debt. External Debt. Africa.
AB This paper analyzes the causes of growth of Africa's debt burden, and discusses the factors that induced African countries to seek external loans as well as the factors affecting the supply of external financing. The paper studies the development of some measures of debt burden for different categories of African debtors, and arrives at a hypothesis regarding feasible levels of debt and debt service ratios. In a final section, the paper discusses the options for debt relief using a simulation of payments ability.

Svensson, Lars E. O.
PD December 1989. **TI** Target Zones and Interest Rate Variability. **AA** University of Stockholm. **SR** National Bureau of Economic Research Working Paper: 3218; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 431, 311. **KW** Exchange Rates. Interest Rates.
AB The trade-off between interest rate variability and the width of an exchange rate target zone is examined, using the regulated Brownian motion model of target zones. It is shown that for narrow exchange rate bands, and for reasonable parameter values, the interest rate differential's asymptotic variability is increasing in the width of the exchange rate band: whereas for wide exchange rate bands it is slowly decreasing in the exchange rate band. The interest rate differential's instantaneous variability is decreasing in the width of the exchange rate band. A narrow target zone differs from a completely fixed exchange rate regime in that the interest rate differential's instantaneous standard deviation is high and even increases when the zone narrows.

Swamy, P. A. V. B.

PD June 1990. **TI** Is It Possible to Find an Econometric Law that Works Well in Explanation and Prediction: The Case of the Australian Money Demand. **AU** Swamy, P. A. V. B.; Tavlos, George J. **AA** Swamy: Board of Governors of the Federal Reserve System. Tavlos: International Monetary Fund. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 128; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 27. **PR** no charge. **JE** 132. **KW** Prediction. Money Demand. Forecasting.

AB Pratt and Schlaifer's (1984, 1988) research approaches employed in efforts to produce laws in economics are considered. Their use in predicting future data is described. Data for Australia are used to illustrate the approaches.

TI Effects of Using Dependent and Independent Differences in Tests of Random Walk Models Against Regression Models. **AU** Chandrakantha, M. W. Leslie; Mehta, J. S.; Swamy, P. A. V. B.

TI Efficient Computation of Stochastic Coefficients Models. **AU** Chang, I-Lok; Hallahan, Charles; Swamy, P. A. V. B.

Symansky, Steven A.

TI A Forward-Looking Macroeconomic Simulation Model for a Developing Country. **AU** Haque, Nadeem; Montiel, Peter; Symansky, Steven A.

TI A Dynamic Model of Buy-Backs. **AU** Dooley, Michael P.; Symansky, Steven A.; Tryon, Ralph W.

PD September 1989. **TI** Valuation of Menu Items in Debt Restructuring. **AU** Symansky, Steven A.; Tryon, Ralph W. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/69; International Monetary Fund, Washington, DC 20431. **PG** 9. **PR** no charge. **JE** 433, 443. **KW** Debt. Collateral. Market Price. Debt Buy-Backs.

AB This paper outlines a procedure for calculating the cash value of "menu items" in debt restructuring proposals, including par and non-par exchanges, with enhancements consisting of either interest or principal guarantees. It is argued that under certain plausible assumptions interest and principal guarantees are directly equivalent to cash buy-backs. Using these assumptions, formulas to calculate the exchange ratios, resource requirements, interest rates, and net debt reduction for particular menu items are derived. It is shown that there is not a direct relationship between the exchange discount and the market price.

Tabellini, Guido

TI Public Confidence and Debt Management: A Model and a Case Study of Italy. **AU** Alesina, Alberto; Prati, Alessandro; Tabellini, Guido.

Tacconi, Luca

TI The Social Opportunity Cost of Consumption for Canada, 1965 to 1986. **AU** McDonald, Ian M.; Tacconi, Luca.

Tanzi, Vito

PD November 1989. **TI** Fiscal Policy and Economic Reconstruction in Latin America. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/94; International Monetary Fund, Washington, DC 20431. **PG** 33. **PR** no charge. **JE** 121, 321, 134, 133. **KW** Latin America. Inflation. Fiscal Policy. Public Debt.

AB This paper surveys the fiscal landscape of Latin America. It analyzes external and domestic factors that over the years led to the deterioration of the fiscal accounts. It also discusses difficulties that are encountered in pursuing a sound fiscal policy under inflationary conditions. Issues such as the connection between external debt and fiscal policy and the role of public investment are also discussed. General guidelines are provided for a fiscal policy for the economic reconstruction of Latin America.

PD November 1989. **TI** Fiscal Policy for Stable and Equitable Growth in Latin America. **AU** Tanzi, Vito; Chu, Keyoung. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/93; International Monetary Fund, Washington, DC 20431. **PG** 41. **PR** no charge. **JE** 914, 321, 133, 111. **KW** Economic Growth. Inflation. Fiscal Policy. Social Programs. Latin America.

AB The resumption of economic growth in Latin America is predicated on the successful restoration of fiscal discipline and stabilization. In restoring fiscal discipline, the mix of policy instruments should aim at maximizing efficiency in the use of domestic and foreign resources. Poverty alleviation in Latin America is not likely to be achieved, in the near future, by economic growth. Policy should promote a more equitable distribution of income. While fiscal policy can play an important role in this process, it is important to realize that the current high domestic inflation in many Latin American countries implies that expanding social programs has high social costs.

Tauman, Yair

PD February 1990. **TI** Licensing and Shelving of Innovations under Incomplete Information. **AU** Tauman, Yair; Weiss, Yoram. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 2-90; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 50. **PR** no charge. **JE** 621, 611, 522, 514. **KW** Technology. Monopoly. Patent. License. Innovation.

AB The paper considers an innovation which reduces the fixed cost for some good currently produced by an incumbent monopoly. The innovator who owns a patent to the innovation can license it either to the incumbent or for new entrants. If the incumbent gets an exclusive license he will shelve the new technology. If new entrants obtain a license they will put the patent to work. The question is will the patent be put to work? We show that under complete information the patent will be used if and only if it enhances the total net profits of the industry (including the incumbent). Under incomplete information an innovation may be put to use even if it reduces aggregate profits. Conversely, the incumbent may get an exclusive license, and shelve the innovation even though industry wide profits can be increased by licensing the innovation to entrants who will put it to work.

Tavlos, George J.

TI Is It Possible to Find an Econometric Law that Works Well in Explanation and Prediction: The Case of the Australian Money Demand. **AU** Swamy, P. A. V. B.; Tavlos, George J.

Terrones, Marco

PD April 1990. **TI** Influence Activities and Economic Growth. **AA** University of Western Ontario. **SR** University of Western Ontario Department of Economics Research Report: 9006; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 33. **PR** $5.00 Canada; $7.00 Elsewhere. **JE** 111, 112, 321. **KW** Endogenous Growth. Dynamic Model. Political Economy. Fiscal Policy.

AB This paper studies the relation between influence (or redistributive) activities and economic performance in the context of a dynamic model with endogenous growth. That societies engage in influence activities has long been recognized and by now there is an extensive body of literature that studies the effects of influence activities on the economy in the context of static models. The effects of influence activities in dynamic macroeconomic models are less understood. Here, I show that influence activities may be detrimental for the performance of an economy since both the levels and, more importantly, the rates of growth of the different macroeconomic variables are inversely related to the amount of influence activities in which economic agents engage. This implies that social costs of influence activities are much higher than those suggested by static models.

Thisse, Jacques-Francois

TI On Quality and Variety Competition. **AU** Neven, Damien J.; Thisse, Jacques-Francois.

TI Location. **AU** Gabszewicz, Jean J.; Thisse, Jacques-Francois.

TI Competitive Spatial Price Discrimination With Capacity Constraints. **AU** Hamilton, Jonathan H.; Thisse, Jacques-Francois.

Tinsley, P. A.

TI Here's Looking at You: Modelling and Policy Use of Auction Price Expectations. **AU** Brayton, F.; Kan, W.; Tinsley, P. A.; von zur Muehlen, P.

Towe, Christopher M.

PD October 1989. **TI** Optimal Fiscal Policy and Government Provision of Contingent Liabilities: The Example of Government Loan and Deposit Guarantees. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/84; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** no charge. **JE** 315, 314, 323, 311. **KW** Portfolio. Credit. Deposit Insurance. Loans.

AB The optimal provision of loan guarantees or deposit insurance is examined in the context of an overlapping generations model. It is demonstrated that even in the face of a market imperfection that precludes diversification of the private sector's loan portfolio to eliminate risk, full government guarantee of private sector loans (or deposits) is suboptimal. The results of the paper suggest that although some degree of guarantee is appropriate, the design of such policies should be tempered to avoid an inefficient level of capital accumulation.

Travlos, Nickolaos G.

TI Corporate Control and the Choice of Investment Financing: The Case of Corporate Acquisitions. **AU** Amihud, Yakov; Lev, Baruch; Travlos, Nickolaos G.

Trefler, Daniel

PD February 1990. **TI** The Ignorant Monopolist: Optimal Learning with Endogenous Information. **AA** University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 9007; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 31. **PR** no charge. **JE** 611, 022. **KW** Learning. Monopoly. Firm Theory. Demand Analysis.

AB Economics lacks a good theory of the pricing and output decisions of a monopolist which does not know its demand - we inevitably assume that the monopolist knows much more about demand conditions than is reasonable. I present a model in which demand information is generated endogenously. When information is endogenous the monopolist has an incentive to experiment with price and quantity. I derive the direction of experimentation, characterize an important value function arising from dynamic programming problems with learning, and relate the results to Blackwell's comparison of experience.

Tryon, Ralph W.

TI A Dynamic Model of Buy-Backs. **AU** Dooley, Michael P.; Symansky, Steven A.; Tryon, Ralph W.

TI Valuation of Menu Items in Debt Restructuring. **AU** Symansky, Steven A.; Tryon, Ralph W.

Tschernig, Rolf

TI Costless Revelation of Private Information in a Duopoly. **AU** Demougin, Dominique M.; Tschernig, Rolf.

Tsiddon, Daniel

TI Technological Breakthroughs and Development Traps. **AU** Galor, Oded; Tsiddon, Daniel.

Tuma, Elias H.

PD June 1990. **TI** Industrialization in the Occupied Territories. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 362; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 26. **PR** no charge. **JE** 114, 121, 917. **KW** Industrialization. Developing Countries. Palestine.

AB This is a summary of three field studies of industrial development in the Israeli-Occupied West Bank and Gaza Strip(OT). Three main issues were explored: what were the main obstacles and facilities to industrialization and development, how do the business people with the OT cope with those obstacles and what do they recommend, and how do successful diaspora Palestinian business people see the economic future of an independent State of Palestine. The findings demonstrate a high degree of consensus on the problems, the steps to take, and the roles they themselves could and would play in the future.

PD August 1990. **TI** Food Production in the Middle East Since 1950 Glut or Deficit. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 364; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 58. **PR** no charge. **JE** 121, 713, 715, 711. **KW** Middle East. Agriculture. Agricultural Policy. Policy Coordination.

AB This is a comparative survey of food production in the Middle East since 1950, with emphasis on policy in the major food producer countries in the region. The data show increases in aggregate food production but per capita output has barely increased for a number of years. The major findings of this study are the following: Though awareness of the problem of food shortages has been increasing, there has been no distinct food production policy in any of the countries of the region, except Saudi Arabia; food is simply considered a part of agriculture. Economic variables that should influence food production do not seem influential, apparently because government intervention and control have rendered them ineffective, which may explain why prices, foreign aid, land per agricultural population, and terms of trade have little direct impact on food production.

Tunali, Insan

TI Analysis of Related Durations: A Semi-Parametric Approach with an Application to a Study of Child Mortality in Malaysia. **AU** Ridder, Geert; Tunali, Insan.

Turnovsky, Stephen J.

TI Growth, External Debt and Sovereign Risk in a Small Open Economy. **AU** Bhandari, Jagdeep S.; Haque, Nadeem; Turnovsky, Stephen J.

Udell, Gregory F.

TI Some Evidence on the Empirical Significance of Credit Rationing. **AU** Berger, Allen N.; Udell, Gregory F.

Uhlich, Gerald R.

TI The Negotiation Agreement Area: An Experimental Analysis of Two-Person Characteristic Function Games. **AU** Rockenbach, Bettina; Uhlich, Gerald R.

Usher, Dan

PD January 1990. **TI** The Birth of the Liberal Society. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 770; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 57. **PR** $3.00 Canada and U.S.; $3.50 Foreign. **JE** 053. **KW** Anarchy. Democracy. Economic System.

AB The liberal society might be supposed to have emerged directly from anarchy, spontaneously or in a social contract; or the liberal society might be supposed to have emerged indirectly by a roundabout process in which anarchy gave way in the first instance to despotism and then despotism gave way to a liberal society. The liberal society, for the purposes of this paper, is a society with an economy based on private property and with a polity based on majority rule voting. Anarchy is a society without law or government in which people divide their time among production, defending what they have produced and taking goods from others. Despotism is a society with a ruling class that exploits the rest of the population as a shepherd exploits a flock of sheep.

van de Geer, S. A.

PD August 1988. **TI** On a Rate of Convergence of the Multiknapsack Value Function. **AU** van de Geer, S. A.; Stougie, L. **AA** van de Geer: Centre for Mathematics and Computer Science. Stougie: University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 8/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 5. **PR** no charge. **JE** 213. **KW** Random Variables. Convergence. Asymptotic Theory. Knapsack Function.

AB In [Meanti et al. 1988] an almost sure asymptotic characterization has been derived for the optimal solution of the knapsack capacities, when the profit and requirement coefficients of items to be selected from are random variables. In this paper we establish a rate of convergence for this process using results from the theory of empirical processes.

van Deudekom, P. F. H.

PD 1988. **TI** The Traveling Salesman Problem on the Cyber 205. **AU** van Deudekom, P. F. H.; Volgenant, Anton. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 10/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 23. **PR** no charge. **JE** 214. **KW** Computer Program. Salesman Problem. Algorithm.

AB An existing computer program for the Traveling Salesman Problem based on a one-tree algorithm has been adapted for use on a supercomputer. The main modification concerns the one-tree subroutine, that has been rewritten from an order 2 to an order 1.5. The Cyber 205 solves random Euclidean problems of size 100 more than three times faster than the Cyber 150 and random table problems of size 200 more than four times. The 318-cities problem of Lin & Kernighan is solved in 313 cpu seconds and 9084 one-trees using a fictitious upper bound. An attempt to solve Padberg & Rinaldi's 532 cities problem failed: a best lower gap of 1.76% and the large dimension caused that the edge analysis procedure eliminated less than 70% of the edges.

van Heerwaarden, A. E.

PD July 1987. **TI** New Upper Bounds for Stop-Loss Premiums for the Individual Model. **AU** van Heerwaarden, A. E.; Goovaerts, M. J.; Kaas, R. **AA** van Heerwaarden and Kaas: University of Amsterdam. Goovaerts: University of Amsterdam and K. U. Leuven. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 6/87; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 7. **PR** no charge. **JE** 213, 022. **KW** Premiums. Upper Bound. Individual Model.

AB An analytical expression for an upper bound of the stop-loss premium for the individual model is given.

TI Between Individual and Collective Model for the Total Claims. **AU** Kaas, R.; van Heerwaarden, A. E.; Goovaerts, M. J.

van Hoesel, Stan

TI Economic Lot-Sizing: An O(n log n)-Algorithm that Runs in Linear Time in the Wagner-Whitin Case. **AU** Wagelmans, Albert; van Hoesel, Stan; Kolen, Antoon.

Vandeman, Ann

PD February 1990. **TI** Labor Contracting and a Theory of Contract Choice in California Agriculture. **AU** Vandeman, Ann; Sadoulet, Elisabeth; de Janvry, Alain. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 527; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 32. **PR** $6.40. **JE** 813. **KW** Agriculture. Labor Unions. Labor Force.

AB Labor contracting is an old institution in California agriculture. Contractors have supplied crews to plant, hoe, thin, and harvest labor intensive fruit and vegetable crops in the state for over 100 years. It is also a persistent institution. Although advocates of farm labor unionization predicted that contracting would disappear after the passage of collective bargaining legislation for California agriculture, contractors have continued to increase their share of the seasonal labor market. Currently, about one-third of the production jobs on California farms are performed by workers supplied by contractors. Contractors are providing growers with functions other than those of interpreters and foreman. How they contribute to the functioning of the labor market and to labor management are the focus of this paper.

Vander Ploeg, Frederick

PD February 1990. **TI** Risk Aversion, Intertemporal Substitution and Consumption: The CARA-LQ Problem. **AA** Universiteit Tilburg, The Netherlands. **SR** Centre for Economic Policy Research Discussion Paper: 359; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 24. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** 921, 022. **KW** Risk Aversion. Intertemporal Substitution. Consumption.

AB This paper employs the recursive utility approach, based on quadratic felicity functions and constant absolute risk aversion, to distinguish between risk aversion and intertemporal substitution. Stochastic dynamic programming yields closed-loop linear decision rules for the CARA-LQ problem. Certainty equivalence no longer holds, but instead the decision maker plays a min-max strategy against nature. When applied to a life cycle consumption problem, one finds a rationale for precautionary saving and a larger sensitivity of changes in consumption to income innovations. It is also shown that consumers with Ricardian rationality can display a Keynesian propensity to consume out of a current tax cut.

Varian, Hal R.

PD December 1989. **TI** Goodness of Fit in Optimizing Models. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-3; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 19. **PR** not available. **JE** 022, 212, 211. **KW** Demand Analysis. Production. Optimization. Revealed Preference.

AB Conventional econometric tests of optimizing models typically involve embedding the optimizing model in a parametric specification and then examining the parametric restrictions imposed by the optimization hypothesis. The optimization hypothesis is rejected if the estimated parameters are significantly different, in the statistical sense, from the values implied by optimization. I argue that a more fruitful approach to testing optimizing behavior is to measure the departure from optimization using the estimated objective function, and see whether this departure is significant in an economic sense. I discuss procedures for doing this that can be used in several sorts of optimizing models, and give a detailed illustration in the case of aggregate demand estimation.

PD January 1990. **TI** Sequential Provision of Public Goods. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-2; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 25. **PR** not available. **JE** 024, 022. **KW** Public Goods. Sequential Games. Nash Equilibrium. Stackelberg Equilibrium.

AB I consider the private provision of public goods when agents are able to make sequential contributions rather than simultaneous contributions. In the case of two agents with quasilinear utility, a quite complete analysis is possible. If the agent who likes the public good least gets to move first, the amount of the public good supplied will be the same as in the Nash equilibrium, but if the agent who likes the public good most moves first, less of the public good may be supplied. If the agents bid for the right to move first, the agent who values the public good least will always outbid the other agent. In general, each agent would prefer to subsidize the other agent's contributions. If each agent chooses the rate at which they subsidize the other agent, the subsidies that support the Lindahl allocation are the unique equilibrium subsidies. For general utility functions, I show that the subgame perfect equilibrium always results in less of the public good being supplied than does the Nash equilibrium.

PD January 1990. **TI** A Solution to the Problem of Externalities and Public Goods when Agents are Well-Informed. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-1; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 20. **PR** not available. **JE** 613, 024, 022. **KW** Externalities. Public Goods. Regulation. Two Stage Games. Sequential Games.

AB I consider economic environments involving externalities and public goods where agents have full information but the regulator does not. For these environments I present a class of simple two-stage games whose subgame perfect equilibria are efficient allocations. In the case of two-party externalities, the equilibria involve compensation for the party upon whom the externality is inflicted. In the case of public goods, the equilibria are Lindahl allocations.

Vercellis, C.

TI A Probabilistic Analysis of the Multiknapsack Value Function. **AU** Meanti, M.; Kan, A. H. G. Rinnooy; Stougie, L.; Vercellis, C.

Vogelsang, Ingo

TI Telephone Demand Over the Atlantic: Evidence from Country-Pair Data. **AU** Acton, Jan Paul; Vogelsang, Ingo.

Vohra, Rajiv

PD February 1990. **TI** On the Existence of a Proportional Bargaining Set. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-4; Department of Economics, Brown University, Providence, RI 02912. **PG** 10. **PR** no charge. **JE** 213, 026. **KW** Cooperative Games. Bargaining. Game Theory.

AB Fan's coincidence theorems have proved to be very useful in establishing the existence of certain solutions in cooperative game theory. We shall apply a coincidence theorem to prove the existence of a new equilibrium notion which we call a proportional bargaining set.

PD February 1990. **TI** Marginal Cost Pricing Under

Bounded Marginal Returns. **AA** Brown University. **SR** Brown University Department of Economics Working Paper: 90-6; Department of Economics, Brown University, Providence, RI 02912. **PG** 39. **PR** no charge. **JE** 022, 616, 521. **KW** Marginal Costs. Prices. Returns to Scale.

AB While there are now many results on the existence of marginal cost pricing equilibrium, we argue that they are unsatisfactory in one important respect. They typically make a survival assumption which is stated as a condition on the production equilibria of the economy. The primary objective of this paper is to provide an existence result which replaces such an assumption with one on the primitive data of the economy. Our main assumption is that no firm faces unbounded increasing returns in the sense that if it uses some input then the rate at which this input can be substituted into an output is finite. We also consider the individual survival problem in the context of various taxation schemes, such as wealth taxes and two part tariffs.

TI On Kakutani's Fixed Point Theorem, the K-K-M-S Theorem and the Core of a Balanced Game. **AU** Shapley, Lloyd; Vohra, Rajiv.

Volgenant, Anton

TI Reducing the Hierarchical Network Design Problem. **AU** Duin, Cees W.; Volgenant, Anton.

TI An Edge Elimination Test for the Steiner Problem in Graphs. **AU** Duin, Cees W.; Volgenant, Anton.

TI The Traveling Salesman Problem on the Cyber 205. **AU** van Deudekom, P. F. H.; Volgenant, Anton.

TI A PQ-Tree Heuristic for the Seriation Problem. **AU** Zoon, J.; Volgenant, Anton.

von zur Muehlen, P.

TI Here's Looking at You: Modelling and Policy Use of Auction Price Expectations. **AU** Brayton, F.; Kan, W.; Tinsley, P. A.; von zur Muehlen, P.

Vujovic, Dusan

TI Adjustment Under Different Trade Strategies: A Mean-Variance Analysis with a CGE Model of the Yugoslav Economy. **AU** Adelman, Irma; Berck, Peter; Labus, Miroljub; Vujovic, Dusan.

Wachtel, Paul

TI A Modern Look at Asset Pricing and Short-Term Interest Rates. **AU** Evans, Martin; Wachtel, Paul.

PD December 1989. **TI** The Impact of Treasury Auction Announcements on Interest Rates. **AU** Wachtel, Paul; Young, John. **AA** Wachtel: New York University. Young: Chase Manhattan Bank. **SR** New York University Salomon Brothers Center Working Paper: 542; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 16. **PR** not available. **JE** 313, 311. **KW** Securities. Auctions. Interest Rates. Financial Markets.

AB The market for U.S. government securities is widely thought to be efficient in the sense that interest rates rapidly respond to new information. Our interest in this paper is the immediate effects on financial markets of the announcement of new information about the supply and demand for government securities. Specifically, we examine the effect on interest rates of the Treasury's announcements of forthcoming securities auctions and the subsequent announcements of the auction results.

Wachter, Michael L.

PD February 1990. **TI** The Economics of Internal Labor Markets. **AU** Wachter, Michael L.; Wright, Randall D. **AA** Wachter: University of Pennsylvania. Wright: University of Pennsylvania and Hoover Institution. **SR** Stanford Hoover Institute Working Paper in Economics: E-90-3; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 48. **PR** not available. **JE** 832, 833, 831, 824, 821. **KW** Labor Market. Contracts. Employment. Unions. Collective Bargaining. Implicit Contract Theory.

AB This essay is concerned with the economics of long-term contractual relationships between a firm and its employees, referred to as the internal labor market. We review the economics literature on match-specific investments, risk aversion, asymmetric information, and transaction costs. We argue that an integrated treatment of all four factors is needed in order to apply implicit contract theory to internal labor markets. Integrating the topics also highlights the tradeoffs created among these factors. Particular stress is placed on contract enforcement mechanisms, including self-enforcing contracts and third-party enforcement. Union and nonunion sectors are discussed in light of historical and recent legal developments.

Wagelmans, Albert

PD September 1989. **TI** Economic Lot-Sizing: An O(n log n)-Algorithm that Runs in Linear Time in the Wagner-Whitin Case. **AU** Wagelmans, Albert; van Hoesel, Stan; Kolen, Antoon. **AA** Wagelmans: Erasmus University Rotterdam and CORE. van Hoesel: Erasmus University Rotterdam. Kolen: Limburg University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8922; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 23. **PR** not available. **JE** 521, 214. **KW** Algorithm. Marginal Costs. Cost Function. Inventories.

AB We consider the n-period economic lot-sizing problem, where the cost coefficients are not restricted in sign. In their seminal paper Wagner and Whitin proposed an O(squared)-algorithm for the special case of this problem where the marginal production costs are equal in all periods and the unit holding costs are non-negative. It is well known that their approach can also be used to solve the general problem, without affecting the complexity of the algorithm. In this paper we present an algorithm to solve the economic lot-sizing problem in O(nlog n) time and we show how the Wagner-Whitin case can be solved in linear time. These time bounds can be obtained without the use of any complicated data structure.

Walker, James R.

TI Forecasting Aggregate Period Specific Birth Rates: The Time Series Properties of a Microdynamic Neoclassical Model of Fertility. **AU** Heckman, James J.; Walker, James R.

Walter, Ingo

PD 1990. **TI** European Financial Integration and its Implications for the United States. **AA** New York University and INSEAD. **SR** New York University Salomon Brothers Center Working Paper: S-90-1; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 77. **PR** not available. **JE** 423, 432, 411. **KW** Economic Integration. International Markets. Financial Markets. Europe.

AB There is a good chance that the EC banking and financial markets in the 1990s will become among the most efficient and innovative in the world. They may well leapfrog those of the United States in some respects. European financial market integration stands to play a role in the 1990s that is comparable to the role of product market integration some thirty years earlier. Besides creating internal static and dynamic benefits for the EC regional economy, it will do much to enhance the standing of the EC in global finance and create a viable staging-area for financing the economic restructuring of Eastern Europe.

TI Tax-Driven Regulatory Drag: European Financial Centers in the 1990s. **AU** Levich, Richard M.; Walter, Ingo.

Walters, L. K.

TI Stratified Models of Education Production using DEA and Regression Analysis. **AU** Lovell, C. A. Knox; Walters, L. K.; Wood, L. L.

Warning, Matthew

TI Measuring Income Mobility with Census Data. **AU** Adelman, Irma; Morley, Samuel; Schenzler, Christoph; Warning, Matthew.

Warshawsky, Mark J.

PD February 1990. **TI** Is There a Corporate Debt Crisis? Another Look. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 110; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** 521, 315, 131. **KW** Corporate Finance. Debt-Equity Ratios. Junk Bonds. Corporations. Credit.

AB In a paper published in 1988, "Is There a Corporate Debt Crisis?," Ben S. Bernanke and John Y. Campbell examined several indicators of the financial stability of U.S. nonfinancial corporations, using information about individual large companies appearing on the COMPUSTAT files for the period 1969 through 1986. Here, the work by Bernanke and Campbell is expanded in several ways. First, the sample period is extended through 1988. Second, the sample is enlarged to include small corporations and corporations that have disappeared over the years. Third, the median bond rating is examined. Finally, a simpler and more accurate method of converting the book value into the market value of debt than employed by Bernanke and Campbell is used.

Weale, Martin

PD July 1989. **TI** Asymptotic Maximum-Likelihood Estimation of National Income and Expenditure. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 8913; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge, CB3 9DE, UNITED KINGDOM. **PG** 38. **PR** $4.00; checks payable to University of Cambridge. **JE** 211, 221. **KW** Measurement Error. National Accounts. Maximum Likelihood Estimator. Small Sample Properties.

AB The economic statistics presented in sets of national accounts are invariably subject to measurement error. A symptom of this is that discrepancies exist between income and expenditure estimates of gross domestic product. This paper presents an approach to reconciling accounting discrepancies in a manner which results in asymptotically maximum likelihood data estimates. Unlike other methods which have been used, it does not require any prior knowledge about the reliability of the unadjusted data estimates. Instead it is demonstrated that adequate information can be inferred about their reliability from the accounting discrepancies. Small sample properties of the estimation method are investigated, and a modification to the technique to improve its performance in small samples is discussed. Standard likelihood ratio tests can be used to test the validity of the technique. The technique is used to reconcile two inconsistent estimates of national income and expenditure for the United Kingdom.

Weiss, Yoram

TI Licensing and Shelving of Innovations under Incomplete Information. **AU** Tauman, Yair; Weiss, Yoram.

Wesselman, A. M.

TI The Asymptotic Variance Matrix of the Sample Correlation Matrix. **AU** Neudecker, H.; Wesselman, A. M.

TI The Asymptotic Variance Matrix of the Sample Correlation Matrix. **AU** Neudecker, H.; Wesselman, A. M.

White, A. Patricia

TI A Primer on Program Trading and Stock Price Volatility: A Survey of the Issues and the Evidence. **AU** Duffee, Gregory; Kupiec, Paul H.; White, A. Patricia.

PD August 1990. **TI** A Securities Transactions Tax: Beyond the Rhetoric, What Can We Really Say?. **AU** White, A. Patricia; Kupiec, Paul H.; Duffee, Gregory. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 133; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, D.C. 20551. **PG** 32. **PR** no charge. **JE** 323, 313, 311. **KW** Transactions Tax. Financial Markets. Taxes.

AB We discuss both the difficulties of implementing a financial transactions tax and the effects of such a tax. It is not clear how to design a tax that is not easily avoided by using derivative instruments yet that does not favor one financial market over another. The effects of a transactions tax on asset prices, trading volume, market liquidity and the competitiveness of U.S. financial markets are considered, as well as the incidence of such a tax and the possible implications for real investment.

White, Michelle J.

PD January 1990. **TI** Why are Taxes So Complex and Who Benefits?. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 90-7; Department

of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 18. **PR** not available. **JE** 323, 921, 812. **KW** Taxation. Consumer Economics. Tax Policy.
AB Commentators often bemoan the extreme complexity of tax law and its tendency to become ever more complex each time Congress passes a new tax reform act. In this paper I argue that U.S. tax law is complex because both the IRS and tax professionals have a vested interest in complexity. A general model determining the type and level of tax law complexity is presented and the effects of complexity on the resolution of tax disputes and on incentives for taxpayers to evade taxes are explored. The IRS is shown to prefer that tax law be complex both because it enables the IRS to collect more in disputes with taxpayers and because complexity discourages tax evasion. Tax professionals are shown to prefer that tax law be complex because complexity raises their incomes.

Whited, Toni M.

TI U.S. Corporate Leverage: Developments in 1987 and 1988. **AU** Bernanke, Ben S.; Campbell, John Y.; Whited, Toni M.

PD March 1990. **TI** Debt, Liquidity Constraints, and Corporate Investment: Evidence From Panel Data. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 114; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 44. **PR** no charge. **JE** 315, 522. **KW** Investment. Credit. Debt. Debt Constraint.
AB This paper presents evidence in support of the theory that problems of asymmetric information in debt markets may affect firms' real investment decisions. The basic premise of the paper is that certain firms, especially small firms with low net financial asset positions, will have limited access to debt markets. Such a constraint will cause them to allocate their investment over time as if they have a high discount rate. I implement these ideas by incorporating into a standard neoclassical model of investment a limit on the amount of debt a firm may have outstanding in any one period. I then derive and test the Euler equations of the model. Including the effect of a potentially binding debt constraint greatly improves the performance of the Euler equation in comparison to a simpler specification without this effect.

Wilkinson, Frank

PD June 1989. **TI** Industrial Relations and Industrial Decline: The Case of the British Iron and Steel Industry, 1870-1930. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 8915; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 30. **PR** $4.00; checks payable to University of Cambridge. **JE** 044, 631, 833. **KW** Steel Industry. Wages. Technical Progress. Productivity.
AB Industrial relations in iron and steel secured industrial peace by protecting the industry's interests; the general level of wages was linked to product prices, and the earnings in individual firms were geared to their ability to pay. They also served the interests of the organized process workers by linking wages to plant productivity: earnings were high in the most productive plants and, in the least efficient, jobs were preserved by low wages. By incorporating the fragmented industrial structure, the wage determining system hindered technical progress and restructuring, and contributed significantly to the industry's decline.

Wolak, Frank A.

TI Bootstrapping HIV/AIDS Projection Models: Back Calculation With Linear Inequality-Constrained Regression. **AU** Hay, Joel, W.; Wolak, Frank A.

Wolff, Edward N.

TI Multinational Corporations and Productivity Convergence in Mexico. **AU** Blomstrom, Magnus; Wolff, Edward N.

Wolinsky, Asher

TI Rationalizable Conjectural Equilibrium: Between Nash and Rationalizability. **AU** Rubinstein, Ariel; Wolinsky, Asher.

Wolsey, Laurence A.

TI Finding Minimum Cost Directed Trees with Demands and Capacities. **AU** Bousba, Choaib; Wolsey, Laurence A.

PD November 1989. **TI** Formulating Single Machine Scheduling Problems with Precedence Constraints. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 8924; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 17. **PR** not available. **JE** 213. **KW** Linear Programming. Scheduling Problem.
AB We consider mathematical programming formulations for the precedence constrained scheduling problem that involve both start-time and sequence determining variables. A formulation with O(n squared) constraints is derived that is sufficient to solve the problem with n jobs by linear programming when the precedence constraints are transitive series-parallel. A stronger formulation with O(n cubed) constraints is shown to be at least as strong as the formulations based on valid inequalities involving only start time variables proposed by Queyranne and Wang.

Wood, L. L.

TI Stratified Models of Education Production using DEA and Regression Analysis. **AU** Lovell, C. A. Knox; Walters, L. K.; Wood, L. L.

Woodford, Michael

TI Oligopolistic Pricing and the Effects of Aggregate Demand on Economic Activity. **AU** Rotemberg, Julio J.; Woodford, Michael.

Wrase, Jeffrey

TI Bank Runs: Speculative Runs and Fundamental Runs. **AU** Oh, Seonghwan; Wrase, Jeffrey.

Wright, Randall D.

TI The Economics of Internal Labor Markets. **AU** Wachter, Michael L.; Wright, Randall D.

Wu, Ho-Mou

TI Equilibrium of Incomplete European Option Markets. **AU** Huang, Peter; Wu, Ho-Mou.

Wu, Ping X.

TI Small-Disturbance Asymptotics and the Durbin-Watson and Related Tests in the Dynamic Regression Model. **AU** King, Maxwell L.; Wu, Ping X.

Yaisawarng, Suthathip

TI Derivation of Virtual Prices for Undesirable Outputs: A Distance Function Approach. **AU** Lovell, C. A. Knox; Fare, Rolf; Grosskopf, Shawna; Yaisawarng, Suthathip.

Younes, Yves

PD March 1990. **TI** General Competitive Equilibrium with Asymmetric Information Between Sellers and Buyers and Signalling. **AA** CEPREMAP, Paris and University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 90-08; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 48. **PR** no charge. **JE** 026, 022. **KW** Adverse Selection. Moral Hazard. Asymmetric Information.

AB There are, from some point of view, two ways of analyzing problems of asymmetric information (adverse selection and moral hazard) about the quality of goods, in a large economy (i.e., in a competitive setting). The first approach consists in an extension of the Walrasian paradigm for which agents are price takers. The second one is based on what can be called the Old Classical paradigm for which agents are not price takers but for which an allocation is an equilibrium one if, given the assumption of recontracting, there is not an additional exchange which is mutually profitable for some pair (group) of agents. This paper constitutes an attempt to formulate in a precise way and in general equilibrium setting the second paradigm in order to capture its essence and to test its internal consistency.

Young, John

TI The Impact of Treasury Auction Announcements on Interest Rates. **AU** Wachtel, Paul; Young, John.

Zanello, Alessandro

TI Aversion to Price Variability and the Optimal Degree of Wage Indexation. **AU** Bar-Ilan, Avner; Zanello, Alessandro.

TI Nominal Budgeting as a Stabilization Rule: The Optimal Degree of Indexation of Public Spending. **AU** Bar-Ilan, Avner; Zanello, Alessandro.

Zarnowitz, Victor

PD October 1989. **TI** Cost and Price Movements in Business Cycle Theories and Experience: Causes and Effects of Observed Changes. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3132; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $2.00. **JE** 131, 134, 133. **KW** Inflation. Price Level. Wages. Business Cycle. Economic Fluctuations.

AB This paper is a sequel to Working Paper No. 3131, "Hypotheses of Sticky Wages and Prices". My first objective is to re-examine the historical record of prices and wages. What changes in their behavior are indicated by the data and how can they be explained? Next, the models that imply that price flexibility may be destabilizing are identified and assessed. This requires in particular an analysis of the role of changes in interest rates and price expectations.

PD October 1989. **TI** Cost and Price Movements in Business Cycle Theories and Experience: Hypotheses of Sticky Wages and Prices. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3131; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 53. **PR** $2.00. **JE** 131, 134, 133. **KW** Business Cycle. Inflation. Wages. Prices. Recession. Economic Fluctuations.

AB In the post-World War II period, wage and price levels reacted much less to business contractions than they did in earlier times. Inflation prevailed and its persistence increased. The contractions themselves became relatively short and mild. All these developments have some common roots in the major structural, institutional, and policy changes of the era. This paper takes a look at the assumptions concerning wage and price behavior in types of contemporary macroeconomic theories and their implications for the analysis of the business cycle. The various hypotheses of real and nominal "rigidities" are then related to each other and to alternative theories of how markets clear.

Zeira, Joseph

TI Income Distribution and Macroeconomics. **AU** Galor, Oded; Zeira, Joseph.

PD February 1990. **TI** Informational Business Cycles. **AA** The Hebrew University of Jerusalem and Brown University. **SR** Brown University Department of Economics Working Paper: 90-7; Department of Economics, Brown University, Providence, RI 02912. **PG** 34. **PR** no charge. **JE** 522, 131, 133. **KW** Investment. Business Cycle. Search Model. Complete Information.

AB This paper shows that the process of search for investment opportunities in a continuously expanding economy can generate business cycles. If potential output is unknown and growing and if investment is costly, then the equilibrium rate of growth of actual output goes through repeated cycles. In a recession it suddenly falls, and then it gradually rises during the boom, until the next recession hits. We assume in the paper that entrepreneurs are value maximizers, that their expectations are rational and that perfect competition prevails in all markets. The cyclical behavior derived in this paper is, therefore, not a result of any market failure or of any sub-optimal behavior of the economic agents. It is rather a result of the lack of full information on investment opportunities in a growing economy.

Zemel, Eitan

TI Learning From Mistakes: A Note on Just-In-Time Systems. **AU** Ocana, Carlos; Zemel, Eitan.

Zhou, Lin

TI Voting by Committees. **AU** Barbera, Salvador; Sonnenschein, Hugo; Zhou, Lin.

Zieschang, Kimberly D.

TI A DEA Approach to the Problem of New and Disappearing Commodities in the Construction of Price Indexes. **AU** Lovell, C. A. Knox; Zieschang, Kimberly D.

Zilcha, Itzhak

TI Technological Progress and Income Inequality. **AU** Karni, Edi; Zilcha, Itzhak.

Zin, Stanley E.

TI "First Order" Risk Aversion and the Equity Premium Puzzle. **AU** Epstein, Larry G.; Zin, Stanley E.

Zivot, Eric

PD May 1990. **TI** Further Evidence on the Great Crash, the Oil Price Shock, and the Unit Root Hypothesis. **AU** Zivot, Eric; Andrews, Donald W. K. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 944; Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 53. **PR** no charge. **JE** 211, 212. **KW** Unit Root. Stationarity. Time Series.

AB Recently Perron (1989) has carried out tests of the unit root hypothesis against the alternative hypothesis of trend stationarity with a break in the trend occurring at the Great Crash of 1920 or at the 1973 oil price shock. His analysis covers the Nelson-Plosser macroeconomic data series as well as a post-war quarter real GNP series. His tests reject the unit root null hypothesis for most of the series. This paper takes issue with the assumption used by Perron that the Great Crash and the oil price shock can be treated as exogenous events. A variation of Perron's test is considered in which the break point is estimated rather than fixed. We argue this test is more appropriate than Perron's, since it circumvents the problem of data mining.

Zoon, J.

PD 1988. **TI** A PQ-Tree Heuristic for the Seriation Problem. **AU** Zoon, J.; Volgenant, Anton. **AA** University of Amsterdam. **SR** University of Amsterdam Actuarial Science and Econometrics Report: 7/88; Faculty of Actuarial Science and Econometrics, University of Amsterdam, Jodenbreestraat 23, 1011 NH Amsterdam, NETHERLANDS. **PG** 13. **PR** no charge. **JE** 213, 214. **KW** Sequencing. Heuristics.

AB The Seriation Problem is the problem of finding a permutation of the rows of a 0-1 matrix that minimizes the number of zeros enclosed by ones. We describe a heuristic derived from a structure called PQ-tree, introduced by Booth and Luecker. Computational results are given for problems from literature and for random problems up to size 80 and compared with known nearest neighbor and closest insertion heuristics. The new introduced heuristic appears to be best for the more dense problem cases at a moderate extra amount of computing time.

Zusman, Pinhas

PD April 1990. **TI** Organization Equilibrium and the Optimality of Collective Action. **AU** Zusman, Pinhas; Rausser, Gordon C. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 528; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 28. **PR** $5.60. **JE** 022. **KW** Collective Action. Organizations.

AB Collective action tends to be socially suboptimal even when the proclivity of free riders to defect is fully controlled and an organization for collective action is set up. To be effective, the organizational structure must feature a coordinating center and peripheral participants. Even if overall group objective is fully internalized by the center, the organizational equilibrium is suboptimal as it reflects the influence of narrowly rational peripheral participants. The efficiency loss is particularly evident in collective action over time, where group choices are likely to be myopic-a propensity further exacerbated by the center's short planning horizon.

Zycher, Benjamin

TI Perceptions of NATO Burden-Sharing. **AU** Cooper, Charles A.; Zycher, Benjamin.