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)

Abbott, Thomas A., III

PD March 1992. **TI** Price Dispersion in U.S. Manufacturing: Implications for the Aggregation of Products and Firms. **AA** Rutgers University and Bureau of the Census. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 92-3; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 22. **PR** not available. **JE** L15, L60, D24. **KW** Manufacturing. Productivity. Prices. Product Quality.

AB This paper addresses the question of whether products in the U.S. manufacturing sector sell at a single (common) price, or whether prices vary across producers. Price dispersion is interesting for at least two reasons. First, if output prices vary across producers, standard methods of using industry price deflators lead to errors in measuring real output at the industry, firm, and establishment level which may bias estimates of the production function and productivity growth. Second, price dispersion suggests product heterogeneity which, if consumers do not have identical preferences, could lead to market segmentation and price in excess of marginal cost, thus making the current (competitive) characterization of the manufacturing sector inappropriate and invalidating many empirical studies.

Acharya, Sankarshan

PD November 1991. **TI** Efficient Resolution of Moral Hazard Via Capital Market: Monitoring Banks. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 178; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 43. **PR** no charge. **JE** G21. **KW** Capital Markets. Financial Intermediaries.

AB This paper shows that capital market competition can efficiently resolve moral hazard in a firm whose shareholders (the agent) control the standard deviation of the rate of return to assets (volatility), and whose debt holders, unable to observe the volatility, can appoint a not-for-profit principal (regulator) to insure their debt and monitor the firm for a price. In equilibrium, shareholders of such a firm (e.g., a bank) receive an expected rate of return (compensation) consistent with their risk of investment; and the asset volatility and debt (deposit) insurance premium are determined as increasing functions of capital. Further, thresholds of capital below which such a firm is closed is positive. An algorithm is presented to compute equilibrium results.

PD November 1991. **TI** Maximizing the Market Value of a Firm to Choose Dynamic Policies for Managerial Hiring, Compensation, Firing, and Tenuring. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 179; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 34. **PR** no charge. **JE** J33, J44, L21. **KW** Moral Hazard. Compensation. Market Value. Managerial Hiring.

AB Sequentially incentive compatible policies for compensation, replacement and tenuring of chief executive officers (CEOs) exist when a firm maximizes its market value and CEOs maximize their expected utility of wealth. In equilibrium, these policies induce CEOs to implement their firm's highest profit potential. The market value of a firm increases following replacement of CEOs. The probability of removal of a CEO decreases in the expected profits of the firm, but increases in the CEO's risk aversion, the wage he can receive from the next best job opportunity, the cost of implementing instructions, and the firm's cost of capital.

PD November 1991. **TI** Debt Buybacks Signal Sovereign Countries' Creditworthiness: Theory and Tests. **AU** Acharya, Sankarshan; Diwan, Ishac. **AA** Acharya: Board of Governors of the Federal Reserve System. Diwan: World Bank. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 180; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** F34. **KW** Debt Buyback. Swap. Debt Overhang. Public Debt. Signaling.

AB It is a well-known proposition that debt overhang may lead debtor countries to forgo worthwhile investments unless debt relief is offered. But, creditors face a problem of screening countries willing to invest and increase debt repayment in response to partial relief from those unwilling. We show that debt buybacks can credibly screen a debtor country's willingness to invest and increase repayment. In our equilibrium, countries buying back a part of their debt receive positive debt reliefs and others do not. We test and fail to reject two implications of our model. First, creditors systematically grant debt relief to countries that have a buyback program in place. Second, the secondary market price of country debt is higher when a debt-equity swap program is in operation than the debt price with no such program.

PD December 1991. **TI** Monitoring Financial Institutions. **AU** Acharya, Sankarshan; Udell, Gregory F. **AA** Acharya: Board of Governors of the Federal Reserve System. Udell: New York University. **SR** New York University Salomon Brothers Center Working Paper: S-92-3; 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** 10. **PR** $5.00. **JE** G21. **KW** Monitoring. Banking. Financial Institutions.

AB Like the claimants of any firm, the stakeholders of a financial institution have an interest in monitoring its performance and condition. The special nature of financial firms (Fama (1985)), however, makes the monitoring of these organizations somewhat distinct from the monitoring of nonfinancial institutions. In this paper, we analyze the process of monitoring of financial institutions. To focus our discussion, we will generically call banks. Our focus on monitoring banks seems particularly appropriate in the light of recent events.

Adams, Gwyn

PD January 1992. **TI** German Unification and the European Monetary System: A Quantitative Analysis. **AU** Adams, Gwyn; Alexander, Lewis; Gagnon, Joseph E. **AA** Adams: Office of Management and Budget. Alexander and Gagnon: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 421; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 28. **PR** no charge. **JE** O52, F33, F42. **KW** Fiscal Policy. Monetary Policy. Germany. Policy Coordination.

AB This paper uses a macroeconomic model with rational expectations to analyze issues related to German unification. A principal focus of the paper is the effect of unification on member countries of the European Monetary System. Under certain conditions, German unification has a contractionary effect on other EMS countries. We explore the implications for EMS and other countries of alternative German fiscal and monetary policies.

Agenor, Pierre-Richard

PD November 1991. **TI** Testing for Credibility Effects. **AU** Agenor, Pierre-Richard; Taylor, Mark P. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/110; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** E63, E61, E42. **KW** Stabilization Policy. Macroeconomic Policy.

AB This paper examines some recent techniques designed to draw inferences about the credibility of changes in macroeconomic policy regimes. An alternative two-step approach, based on the decomposition between permanent and transitory components of a "credibility variable" is proposed. The methodology is then used to test for the existence of a credibility effect in the Cruzado stabilization plan implemented in Brazil in 1986.

PD January 1992. **TI** Foreign Currency Deposits and the Demand for Money in Developing Countries. **AU** Agenor, Pierre-Richard; Khan, Mohsin S. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/1; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** E41, F32, O19. **KW** Developing Countries. Foreign Exchange. Currency Demand.

AB This paper examines the relative demands for domestic and foreign currency deposits by residents of developing countries. A dynamic currency substitution model that incorporates forward-looking rational expectations is formulated and then estimated for a group of ten developing countries. The results indicate that the foreign rate of interest and the expected rate of depreciation of the parallel market exchange rate are important factors in the choice between holding domestic money or switching to foreign currency deposit held abroad. From an empirical standpoint, the forward-looking framework adopted here also turns out to be superior to the conventional currency-substitution model.

Aghevli, Bijan B.

PD January 1992. **TI** Stabilization and Structural Reform in Czechoslovakia: An Assessment of the First Stage. **AU** Aghevli, Bijan B.; Borensztein, Eduardo; van der Willigen, Tessa. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/2; International Monetary Fund, Washington, DC 20431. **PG** 36. **PR** not available. **JE** O52, L33, O15, P34. **KW** Economic Reform. Privatization. Financial Markets. Market Reform.

AB This paper analyzes the Czechoslovakia reform program which was launched on January 1, 1991. Under this program, Czechoslovakia has taken decisive steps to establish a market economy, while achieving price stability and a viable external position through restrictive financial policies. But there has been a sharp decline in output. The eventual output recovery is predicted on completing structural market reforms, such as the development of financial markets and the safeguard of their stability, privatization of large enterprises, minimizing government interference with economic signals, and the imposition of the "hard" budget constraint.

Aghion, P.

PD November 1991. **TI** Dynamic Duopoly with Learning through Market Experimentation. **AU** Aghion, P.; Paz Espinoza, M.; Jullien, B. **AA** Aghion: DELTA. Paz Espinoza: University of Bilbao. Jullien: CEPREMAP, Paris. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9202; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 43. **PR** no charge. **JE** D83, D43, D81. **KW** Oligopoly. Uncertainty. Duopoly. Imperfect Information.

AB This paper analyzes how learning behaviors can substantially modify the outcome of competition in an oligopolistic industry facing demand uncertainty. We consider the case of a symmetric duopoly game where firms have imperfect information about market demand and learn through observing the volume of their sales. The main body of the paper consists in showing how market experimentation can explain the existence of price dispersion in an oligopolistic industry. We study this phenomenon and its dynamic evolution in the context of a Hotelling duopoly model; we then extend the analysis to general demand functions and to N-firm oligopolies. We discuss several implications of the public good aspect of information about market demand. We then conclude with a few comments on what happens when the value of information in the oligopolistic industry is negative.

Ahmad, Ehtisham

PD July 1991. **TI** Inequality and Poverty in China: Institutional Change and Public Policy 1978-1988. **AU** Ahmad, Ehtisham; Wang, Yan. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: CP/14; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 53. **PR** no charge. **JE** P24, I32, O15. **KW** Living Standard. Income Distribution. Poverty. China.

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AB The analysis of poverty and living standards poses some interesting problems in an economy in transition from centrally planned allocations to a more market-oriented basis, as in China. There is a trade-off between a guaranteed living standard, albeit at a low income level and with low inequality, and much higher money incomes, but which involve greater income variability and vulnerability amongst the population, particularly during periods of high inflation. The Chinese experience highlights this dilemma, and strongly suggests the need for appropriate social safety nets in ensuring rapid growth, without unacceptable burdens on the poor and vulnerable.

Akhtar, M. A.

TI The Uruguay Round of GATT Trade Negotiations. **AU** Hickok, Susan A.; Orr, James; Akhtar, M. A.; Wulfekuhler, Kurt C.

PD November 1991. **TI** The Supply-Side Consequences of U.S. Fiscal Policy in the 1980's. **AU** Akhtar, M. A.; Harris, Ethan S. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9129; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** not available. **PR** no charge. **JE** E62, O41, E65. **KW** Taxes. Budget Deficit. Fiscal Policy. Economic Growth.
AB This paper argues that Federal fiscal actions in the 1980's, taken as a whole, hurt the long-run growth potential of the U.S. economy. While cuts in personal tax rates stimulated labor supply and potential output, this was more than offset by the depressing effect of the rising budget deficit on private investment. Empirical evidence suggests that by the end of the decade the drop in marginal tax rates had increased potential output by about 1 1/2 percent, but the deficit had lowered potential output by 2 1/2 to 3 1/2 percent. In addition, the decline in public spending on infrastructure and nonmilitary research and development during the 1980's had a modest depressing impact on potential GNP. Other policy changes had a small or roughly neutral impact on productive capacity. The shift in the composition of transfer payments in favor of the elderly increased the incentive to work for the non-elderly, but encouraged earlier retirements. Incentives to save and invest created in the 1981 tax law (ERTA) were generally reversed under the 1986 Tax Reform, implying no net improvement in investment incentives.

Alexander, Arthur J.

PD June 1990. **TI** Perestroika and Change in Soviet Weapons Acquisition. **AA** RAND Corporation. **SR** Rand Report: R-3821-USDP; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 84. **PR** not available. **JE** H56, P31, O53. **KW** Military Expenditures. Defense Industry. Privatization. Market Reform.
AB Focusing on two major issues -- the "conversion" of defense industry resources to civilian uses and the influence of contemporary weapons technology and complexity on the Soviet Union's ability to meet military requirements -- this report identifies and explains the major elements of continuity and change in Soviet military research and development and production evolved from the 1930's to the 1980's in a political-military doctrine and economic base that supported it. Now, with the dramatic changes in Soviet political choices, doctrine, economics, and technology, the Soviet Union's defense production complex is engaged in adapting to a conversion to civilian production as it tries to meet military demands for higher performance, increased reliability, lower costs, and the application of new technologies. Analysts must now shift from dealing with established and familiar elements to grappling with the uncertainties of evolving Soviet politics and policies.

PD September 1990. **TI** Adaptation to Change in the U.S. Machine Tool Industry and the Effects of Government Policy. **AA** RAND Corporation. **SR** Rand Note: N-3079-USJF/RC; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 49. **PR** not available. **JE** L11, L64, L52. **KW** Market Structure. Pricing. Industrial Policy.
AB This note presents research into adjustments made by the U.S. machine tool industry as it faced the challenges of a secular decline in domestic demand compounded by the effects of economic recession and acceleration of foreign competition. It presents a picture of the industry's response and adaptation to events, the path of output and the movement of capital and labor, and the influence of government policies on these adaptations. The author considered both government policies directly related to trade effects and to declining industries, and also more general policies that may have influenced the ability of U.S. machine tool firms to react to a variety of forces unlike anything the industry had witnessed in its long history.

Alexander, Lewis

TI German Unification and the European Monetary System: A Quantitative Analysis. **AU** Adams, Gwyn; Alexander, Lewis; Gagnon, Joseph E.

Allen, Beth

PD December 1991. **TI** Price and Quantity Competition in Homogeneous Duopoly Markets. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-28; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 12. **PR** no charge. **JE** D43, D21, L13. **KW** Noncooperative Game. Duopoly. Oligopoly. Nash Equilibrium.
AB A noncooperative duopoly game is formulated in which the quantity player sells its entire amount (up to consumer demand) while the price player supplies residual demand; both firms transact at the same price. Depending on the ordering, two-stage subgame perfect equilibria are equivalent to simultaneous price and quantity Nash equilibria or include also the Stackelberg equilibrium. In any case, a firm prefers to be the quantity player.

Altman, Edward I.

PD 1992. **TI** Rating Drift in High Yield Bonds. **AU** Altman, Edward I.; Kao, Duen Li. **AA** Altman: New York University. Kao: General Motors. **SR** New York University Salomon Brothers Center Working Paper: S-92-5; 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** 9. **PR** $5.00. **JE** G12, G14. **KW** Bond Market.
AB Our detailed study of rating changes in the high yield sector produces the following key findings: Bonds that originally come to market with non-investment grade ratings

have neither a tendency to be upgraded nor a tendency to be downgraded subsequent to issuance. If an original issue high yield bond is downgraded, however, the direction of the next rating change is likely to be negative. Conversely, if an original issue high yield bond is upgraded, its next change is likely to be positive, although this tendency is not as strong as the link between two or more downgrades. Among the fallen angels, utilities have a superior record for upgrading subsequent to the initial descent into the non-investment grade category.

PD 1992. **TI** Emerging Trends in Bankruptcy-Reorganization. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-92-6; 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** 25. **PR** $5.00. **JE** G33, G34, M21. **KW** Bankruptcy. Restructuring. Business Economics.
AB The bankruptcy "game" is a big, complex business in the United States as we progress into the 1990's. As the legal-political-economic system concentrates more resources into the rehabilitation of ailing firms, it is not surprising to observe increased creativity and innovation within the evolving confines of bankruptcy law and its practice. This chapter will examine several major trends in the distressed firm arena which have either evolved into high stakes issues and/or have been created to deal with the complexities of the multi-stakeholder Chapter 11 process. We will explore three major evolving trends: Fraudulent Conveyance, Debtor-in-Possession (D-I-P) Financing, and Prepackaged Chapter 11's.

Amihud, Yakov

PD January 1991. **TI** Liquidity, Maturity and the Yields on U.S. Treasury Securities. **AU** Amihud, Yakov; Mendelson, Haim. **AA** Amihud: New York University and Tel Aviv University. Mendelson: Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1116; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 25. **PR** not available. **JE** G12. **KW** Liquidity. Bonds. Asset Pricing. Yield Differentials.
AB The effects of asset liquidity on expected returns, shown by Amihud and Mendelson (1986, 1989) for assets with infinite maturities (stocks), are examined for bonds - Treasury notes and bills with matched maturities of less than 6 months. The yield to maturity is higher on notes, which have lower liquidity. The yield differential between notes and bills is a decreasing and convex function of the time to maturity. The results provide a robust confirmation of the liquidity effect in asset pricing.

PD January 1991. **TI** Volatility, Efficiency and Trading: Evidence from the Japanese Stock Market. **AU** Amihud, Yakov; Mendelson, Haim. **AA** Amihud: New York University and Tel Aviv University. Mendelson: Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1117; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 36. **PR** not available. **JE** G12, G14. **KW** Trading. Stock Market.
AB We study the joint effect of the trading mechanism and the time at which transactions take place on the behavior of stock return using data from Japan. The Tokyo Stock Exchange employs a periodic clearing procedure twice a day, at the opening of both the morning and afternoon sessions. This enables us to discern the effect of the clearing mechanism from the effect of the overnight trading halt. While the periodic clearing at the beginning of the trading day is noisy and inefficient, the mid-day clearing transaction appears to be no worse than the two closing transactions.

Anderson, M.

TI Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative. **AU** Hosek, Susan D.; Anderson, M.; Dixon, L.; Thomas, N.; Zwanziger, J., et. al.

Anderson, Patricia M.

PD January 1992. **TI** Linear Adjustment Costs and Seasonal Labor Demand: Unemployment Insurance Experience Rating in Retail Trade. **AA** Dartmouth College. **SR** Princeton Industrial Relations Section Working Paper: 293; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 18. **PR** $2.00. **JE** J23, J64, J65. **KW** Unemployment. Retail Trade. Labor Demand. Adjustment Costs. Employment.
AB Standard models of dynamic labor demand rely on the presence of adjustment costs to explain the observed smoothness in employment patterns, although the costs are often difficult to quantify. The experience rating feature of the U.S. Unemployment Insurance (UI) system provides a measurable linear cost of adjustment. Using a unique data set with administrative data on over 8,000 firms, I estimate the effect of a UI-induced linear adjustment cost on seasonal labor demand in retail trade. I find strong support for the large role of adjustment costs in reducing the employment response of firms to seasonal fluctuations in demand.

Anderson, Simon P.

PD November 1991. **TI** Multiproduct Firms: A Nested Logit Approach. **AU** Anderson, Simon P.; de Palma, Andre. **AA** Anderson: University of Virginia. de Palma: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 973; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 20. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** L23, L11, D43. **KW** Discrete Choice Model. Multiple Products. Demand Model. Oligopoly.
AB The paper proves the existence of a symmetric equilibrium with multiproduct firms using a nested logit model of demand. The demand model is parameterized by two variables which characterize different dimensions of preference for variety. These reflect intra-group heterogeneity and inter-group heterogeneity, a group (or nest) being the set of products produced by a firm. There are then two dimensions to market performance: the total number of firms and the range of products produced per firm. It is shown that the market equilibrium involves an excessive number of firms, but each firm provides too few products.

Andrade, I. C.

PD December 1991. **TI** Cointegration and the Gains from International Portfolio Diversification in Bonds and Equities. **AU** Andrade, I. C.; Clare, A. D.; Thomas, S. H. **AA** Andrade: Southampton University and Universidade Tecnica de Lisboa. Clare and Thomas: University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9119; Department of

Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 12. **PR** no charge. **JE** G11, G15, G14, G12. **KW** Portfolio Choice. Bonds. International Markets. Asset Market.
AB This paper uses the Johansen (1988) procedure for the analysis of cointegrated systems to assess the gains from diversifying an investment portfolio between domestic bonds and equity for the domestic investor in the U.S., U.K., Germany, and Japan, and between international bonds and equity for the sterling based investor. We find that there are long-run gains for the sterling investor from holding an internationally diversified portfolio. This finding is in contrast to existing results which find no gains from diversifying into international equities for the sterling investor. There are also gains for domestic investors in the U.S., U.K., and Germany from holding domestic bonds and equity, but this is not the case for domestic investors in Japan. These findings also have implications for asset market efficiency. In particular we find that the Japanese equity market drives the Japanese bond market.

Aoki, Masanao

PD February 1992. **TI** Analysis of U.S. Real GNP and Unemployment Interactions: State Space Approach. **AU** Aoki, Masanao; Fiorito, Riccardo. **AA** Aoki: University of California, Los Angeles. Fiorito: University of Siena. **SR** University of California at Los Angeles Department of Economics Working Paper: 647; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 11. **PR** $2.50; checks payable to U.C. Regents. **JE** E24, E32, E13. **KW** Business Cycle. Unemployment Rate. Macroeconomics. Okun's Law.
AB Instead of the more common unemployment rate, the time series data of the level of U.S. unemployment is used together with U.S. real GNP, and later also with the U.S. money stock, to identify a bivariate and trivariate structural model. The model is then used to examine the interaction of the unemployment level of real GNP in the business cycle frequencies. The commonly perceived Okun's law is shown to disappear in the trivariate model.

Arnott, Richard

PD November 1991. **TI** Properties of Dynamic Traffic Equilibrium Involving Bottlenecks, Including a Paradox and Metering. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin. **AA** Arnott: Boston College. de Palma: Northwestern University. Lindsey: University of Alberta. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 976; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 36. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** R11, R13, R41. **KW** Traffic. Commuting. Transportation. Congestion.
AB Braess and others have shown that creating a new link in a congested network, or adding capacity to an existing link, can raise total travel costs if drivers switch routes. We show that a paradox can also result when routes are fixed but users choose when to travel. As is true of the Braess paradox, the paradox here arises when the inefficiency due to underpricing of congestion increases by more than the direct benefit of the new capacity. For a corridor with two groups of drivers, we show that expanding capacity of an upstream bottleneck raises travel costs when the reduction in congestion upstream is more than offset by increased congestion downstream. Metering can thus improve efficiency. Optimal upstream capacity is equal to or smaller than downstream capacity for the user equilibrium. Total construction costs equal total variable travel costs when capacities are optimal and construction costs are independent of scale.

PD January 1992. **TI** Information and Usage of Congestible Facilities under Free Access. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin. **AA** Arnott: Boston College. de Palma: Northwestern University. Lindsey: University of Alberta. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 974; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 44. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** R41, D83. **KW** Congestible Facilities. Imperfect Information. Transportation. Congestion.
AB We investigate the effect of information about congestion on participation and time-of-use decisions in a free access delay system subject to predictable and unpredictable fluctuations in capacity and demand intensity. Expected welfare is greater with perfect than with zero information, while optimal design capacity is greater if and only if demand elasticity is less than one. Imperfect information can reduce welfare by inducing concentration in the arrival times of users at the facility. This suggests that route guidance systems for automobile travel and other public information dissemination schemes must be designed and implemented with care.

Asch, Beth J.

PD June 1990. **TI** Navy Recruiter Productivity and the Freeman Plan. **AA** RAND Corporation. **SR** Rand Report: R-3713-FMP; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 54. **PR** not available. **JE** H56, J45, J24. **KW** Military Enlistment. Productivity. Compensation. Labor Supply.
AB The Navy's pool of potential 17 to 21-year-old recruits is expected to diminish. A strategy for aiding the Navy's future recruiting effort is to alter its recruiter management techniques, particularly its incentive program, the Freeman Plan. Data from Chicago in 1986 were examined to analyze the Freeman Plan's effects on productivity. The study found that recruiting behavior is consistent with the Plan's incentives but may not be consistent with the Navy's goals. The author suggests several ways to change recruiter behavior, including increasing the point differential between high and low-quality recruits, thereby motivating recruiters to enlist more of them; and shortening the production cycle, thereby giving recruiters less time between cycles.

Ashenfelter, Orley

PD November 1991. **TI** How Convincing is the Evidence Linking Education and Income? **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 292; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 14. **PR** $2.00. **JE** I21, J24, J31. **KW** Schooling. Human Capital. Wage Differentials. Education.
AB Is the correlation between income and educational attainment a result of the payoff to investments in schooling?

Since the experiment of randomly selecting individuals to go to school cannot be performed, non-experimental methods must be used to estimate the economic returns to schooling. This paper reviews new studies that measure the effect of schooling on income (1) by using comparisons of brothers, fathers and sons, and twins and (2) that focus on natural experiments. These studies provide very credible evidence that schooling does increase incomes and that earlier studies may have underestimated the role of schooling in determining incomes.

PD January 1992. **TI** Testing for Price Anomalies in Real Estate Auctions. **AU** Ashenfelter, Orley; Genesove, David. **AA** Ashenfelter: Princeton University. Genesove: Massachusetts Institute of Technology. **SR** Princeton Financial Research Center Memorandum: 128; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 14. **PR** $3.00 U.S.; $6.00 Foreign. **JE** D44, R21. **KW** Auctions. Housing Demand. Negotiations.
AB This paper reports on the results of an auction sale of 83 condominium apartment units in New Jersey. At the auction every unit was hammered down, but, unknown to the 2,348 registered bidders, 40% of the sales fell through. Prices in the subsequent sale of condominium units in face to face negotiations resulted in identical units selling for 13% less than they fetched at auction and the discount was largest for those units hammered down early in the auction. These results are inconsistent with the usual predictions from the theory of common value auctions and suggest that uninformed bidders in this auction may have been the subject of a "winner's curse" which generated considerable profit for the seller.

PD January 1992. **TI** Testing for Price Anomalies in Real Estate Auctions. **AU** Ashenfelter, Orley; Genesove, David. **AA** Ashenfelter: Princeton University and National Bureau of Economic Research. Genesove: Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 598; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139. **PG** 9. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** R21, D44. **KW** Auction. Housing Demand.
AB See other entry.

Atkeson, Andrew

PD November 1991. **TI** Wealth-Varying Intertemporal Elasticities of Substitution: Evidence from Panel and Aggregate Data. **AU** Atkeson, Andrew; Ogaki, Masao. **AA** Atkeson: University of Chicago. Ogaki: University of Rochester. **SR** University of Rochester Center for Economic Research Working Paper: 303; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 54. **PR** no charge. **JE** E21, O57, O11, D91. **KW** Intertemporal Substitution. Savings. Aggregation Bias. Wealth Distribution. Consumption.
AB This paper constructs and estimates a model in which the intertemporal elasticity of substitution of consumption expenditure (IES) rises with the level of wealth. The purpose of this paper is to measure the effect that systematic variation in the IES of poor and rich consumers has on the intertemporal elasticity of substitution of aggregate consumption expenditure. The principal innovation embodied in our method of measuring the differences in the IES of poor and rich consumers is that our model for estimation allows us to directly measure the impact that these differences at the individual level have on the allocation of aggregate consumption expenditure over time. We estimate and test the specification of our model using Indian panel data on the consumption of individual households. We re-estimate the model using aggregate times series data from India and the U.S. and check for aggregation bias by comparing parameter estimates in individual-level and aggregate-level data and to make an international comparison of preferences.

Atkinson, Anthony B.

PD October 1991. **TI** Social Insurance. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: WSP/65; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 31. **PR** no charge. **JE** H55, I38. **KW** Social Insurance. Pensions. Welfare State.
AB What are the essential elements of social insurance and how can we best model its economic consequences? This is the question discussed in this paper. The first part criticizes what has come to be the conventional view that social insurance can be explained and justified by reference to the incompleteness of insurance markets. Instead, it suggests that the analysis should begin with the labor market, tracing the historical evolution of unemployment insurance and retirement pensions, drawing attention to the fact that the private provision of pensions was more developed than employer protection against unemployment. The paper goes on to develop a model of the labor market, which goes beyond the standard dual economy treatment in allowing for different types of employment within the two sectors. This provides a rather different perspective of the role of social insurance.

PD November 1991. **TI** The Social Safety Net. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: WSP/66; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 43. **PR** no charge. **JE** I38, P24. **KW** Welfare State. Economic Reform. Europe. Welfare Programs.
AB In the debate about the transition process of Eastern European economies, there are recurrent references to a social safety net. Such a safety net is necessary to prevent the hardship associated with the move to a market economy and the removal of existing government intervention. The form of the safety net, however, is much less discussed, and people have in mind rather different types of minimum provision. The purpose of this paper is to examine the rationale for a safety net, the main institutional features of a minimum income guarantee, and what can be learned from the experiences with minimum income protection in Western market economies. One important conclusion is that social insurance and economic policy cannot be divorced, and that, if there are major obstacles to the establishment of an effective social safety net, then this may call into question the process of economic reform.

Baba, Yoshihisa

PD November 1991. **TI** Multivariate Simultaneous Generalized ARCH. **AU** Baba, Yoshihisa; Engle, Robert F.; Kraft, Dennis F.; Kroner, Kenneth F. **AA** Baba: Soka University. Engle: University of California, San Diego. Kraft: Travelers Insurance Co. Kroner: University of Arizona. **SR** University of Arizona Economics Working Paper: 92-5; Department of Economics, Building #23, University of

Arizona, Tucson, AZ 85721. **PG** 27. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** C32, C13. **KW** ARCH. Simultaneous Equations. Maximum Likelihood.
AB This paper presents theoretical results in the formulation and estimation of multivariate generalized ARCH models within simultaneous equations systems. A new parameterization of the multivariate ARCH process is proposed and equivalence relations are discussed for the various ARCH parameterizations. Constraints sufficient to guarantee the positive definiteness of the conditional covariance matrices are developed. Maximum likelihood estimation of these parameters is discussed in the simultaneous equations context, and instrumental variables estimators and limited information estimators are also proposed.

Baker, Paul
TI Dynamic Specification and Household Characteristics in Demand Analysis. **AU** Pashardes, Panos; Baker, Paul.

Banks, James
PD June 1991. **TI** Life-Cycle Expenditure Allocations and the Consumption Costs of Children. **AU** Banks, James; Blundell, Richard; Preston, Ian. **AA** Banks: Institute for Fiscal Studies. Blundell: University College London and Institute for Fiscal Studies. Preston: Nuffield College, Oxford and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/12; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 32. **PR** 3 pounds. **JE** D91, I31, J13, D12. **KW** Intertemporal Substitution. Households. Consumer Economics.
AB In this paper we construct lifetime expenditure paths for households with different demographic profiles and consider the implications of these paths for welfare measures. Once such paths have been constructed additional assumptions are required if we are to measure the level of welfare and corresponding equivalence scale for the entire lifetime of the household. Given that a shorter time period is often required for policy purposes, one might also want to consider the welfare of households at any one point on their expenditure path. This is a single-period measure that is consistent with the households intertemporal decisions, and therefore utilizes more information than a standard "snapshot" measure.

Barham, Brad
PD October 1991. **TI** A Sequential Entry Model with Strategic Use of Excess Capacity. **AU** Barham, Brad; Ware, Roger. **AA** Barham: University of Wisconsin, Madison. Ware: Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 835; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 21. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** L22, L11, D21, L21. **KW** Excess Capacity. Entry Model. Industrial Organization. Market Share. Leontief Costs.
AB A model of sequential entry with Leontief costs is studied in which demand is iso-elastic. Some or all firms may hold excess capacity in the perfect equilibrium to the entry game. Firms with a first mover advantage trade off the positioning value of a large investment in capacity, leading to a large market share, against the possible costs of bearing the burden of entry deterrence through holding excess capacity in equilibrium.

Barkema, Alan
PD July 1991. **TI** The Realignment in Farm Lending: Strategic Issues for the 1990's. **AU** Barkema, Alan; Drabenstott, Mark. **AA** Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-01; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 40. **PR** no charge. **JE** Q14, Q12. **KW** Agricultural Loans. Agriculture. Farm Finance. Farm Debt.
AB The farm financial crisis of the mid-1980's and the subsequent rebound in the farm economy have set the stage for a healthy, competitive farm lending market in the 1990's. The farm recovery has restored agriculture's financial health. Still, the decade ahead promises to be challenging for farm lenders. Farm debt is likely to grow slowly, after declining nearly a third from its peak in the early 1980's. The sluggish market will be crowded with lenders competing for market share. Recent trends suggest larger banks--both agricultural and nonagricultural--will strengthen their market positions, while traditional small agricultural banks will play a diminishing role. The Farm Credit System may maintain the position it now holds, although some parts of the system may continue to lose market share.

Bartelsman, Eric J.
PD February 1992. **TI** Productivity Dynamics: U.S. Manufacturing Plants, 1972-1986. **AU** Bartelsman, Eric J.; Dhrymes, Phoebus J. **AA** Bartelsman: Board of Governors of the Federal Reserve System. Dhrymes: Columbia University. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 92-1; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 26. **PR** no charge. **JE** D24, L60. **KW** Productivity. Manufacturing.
AB This paper presents an analysis of the dynamics of total factor productivity measures for large plants in SICs 35, 36, and 38. Several TFP measures, derived from production functions and Solow type residuals are computed and their behavior over time is compared, using various nonparametric tools. Aggregate TFP, which has grown substantially over the time period, is compared with average plant level TFP, which has declined or remained flat. Using transition matrices, the persistence of plant productivity is examined, and it is shown how the transition probabilities vary by industry, plant age, and other characteristics.

Bartolini, Leonardo
PD December 1991. **TI** Government Ponzi Games and Debt Dynamics under Uncertainty. **AU** Bartolini, Leonardo; Cottarelli, Carlo. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/126; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** H62, E62. **KW** Public Debt. Government Spending. Budget Deficit.
AB We investigate the conditions for sustainability of debt roll-over schemes under uncertainty. In contrast with the requirements identified in recent research, we show that a necessary and sufficient condition for sustainability of such schemes is that the asymptotic interest rate on government debt be lower than the asymptotic growth rate of the economy, a natural extension of a familiar criterion in a deterministic framework. However, we also show that for realistic parameter values, Ponzi games that are sustainable in the long-run may

display explosive patterns over relatively long horizons. This may explain why governments may be reluctant to play Ponzi games even when they are feasible in the long-run.

Bates, Timothy

TI Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies. **AU** Grown, Caren; Bates, Timothy.

Bayoumi, Tamim

PD January 1992. **TI** Taxation and Inflation: A New Explanation for Current Account Imbalances. **AU** Bayoumi, Tamim; Gagnon, Joseph E. **AA** Bayoumi: Bank of England. Gagnon: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 420; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** F21, F32, H31, E32. **KW** Capital Mobility. Inflation. Fiscal Policy. Fisher Effect. Taxes.

AB In a world of mobile capital, the current system of nominal interest taxation implies that the cost of capital and the return to saving in each country are strongly and negatively correlated with the rate of inflation. It follows that a country's net foreign asset position (and its current account balance) ought to be negatively correlated with its inflation rate. The magnitude of these effects is shown to be large, both theoretically and empirically. For OECD countries, cross-sectional regressions confirm that inflation rates are good predictors of current accounts, even after controlling for business cycles and government budget deficits. These results imply that existing current account imbalances largely reflect tax distortions rather than an optimal allocation of world savings.

PD January 1992. **TI** Shocking Aspects of European Monetary Unification. **AU** Bayoumi, Tamim; Eichengreen, Barry. **AA** Bayoumi: Bank of England. Eichengreen: University of California at Berkeley, National Bureau of Economic Research, and Centre for Economic Policy Research. **SR** University of California at Berkeley Working Paper in Economics: 92-187; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 51. **PR** $3.50 plus applicable sales tax. **JE** F15, F36, E32. **KW** European Community. Monetary Union. Economic Integration. Economic Fluctuations.

AB Data on output and prices for 11 EC member nations are analyzed to extract information on underlying aggregate supply and demand disturbances using a VAR decomposition. The coherence of the underlying shocks across countries and the speed of adjustment to these shocks are then compared to the results from U.S. regional data. We find that the underlying shocks are significantly more idiosyncratic across EC countries than across U.S. regions, which may indicate that the EC will find it more difficult to operate a monetary union. However a core of EC countries, made up of Germany and her immediate neighbors, experience shocks of similar magnitude and cohesion as the U.S. regions. EC countries also exhibit a slower response to aggregate shocks than U.S. regions, presumably reflecting lower factor mobility.

PD January 1992. **TI** Is There a Conflict between EC Enlargement and European Monetary Unification? **AU** Bayoumi, Tamim; Eichengreen, Barry. **AA** Bayoumi: Bank of England. Eichengreen: University of California at Berkeley, National Bureau of Economic Research, and Centre for Economic Policy Research. **SR** University of California at Berkeley Working Paper in Economics: 92-188; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 31. **PR** $3.50 plus applicable sales tax. **JE** F15, F14, F33. **KW** European Community. Economic Integration. Trade Policy. Monetary Union.

AB Recent proposals for enlarging the European Community to include the EFTA countries raise the question of whether the new members should participate in a European Monetary Union. In part, the issue hinges on the incidence of aggregate supply and demand disturbances. We use data on prices and output and a VAR decomposition to analyze this issue empirically, grouping economies according to the magnitude of the disturbances, their cross-country correlation, and speeds of response. This leads us to distinguish an EC "core" (made up of Germany and its immediate neighbors) and an EC periphery (made up of the U.K. and the Southern European members of the Community). Austria, Sweden and Switzerland behave more similarly to the EC core than do Norway, Finland, and Iceland. This suggests that the case for EMU participation is stronger for Austria, Sweden, and Switzerland than for the EFTA countries.

Bebchuk, Arye Lucian

PD January 1992. **TI** The Effects of Insider Trading on Insiders' Effort in Good and Bad Times. **AU** Bebchuk, Arye Lucian; Fershtman, Chaim. **AA** Bebchuk: Harvard University and National Bureau of Economic Research. Fershtman: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 2-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 20. **PR** no charge. **JE** D21, L21. **KW** Insider Trading. Managers. Labor Productivity.

AB We analyze the effect of insider trading on insiders' effort decisions. We consider a situation in which the final output of a firm and the productivity of managerial effort will depend on whether the firm is in a good or a bad state. When the state is not verifiable, the managerial contract cannot be made explicitly contingent on it; consequently, a contract that does not allow for insider trading would lead to the insiders' facing the same incentives in good and bad times. Whether this effect is desirable depends on how the marginal productivity of managerial effort in good times compares with that in bad times. In particular, we show that allowing insider trading may improve mangers' effort decisions and consequently may increase corporate value and benefit shareholders.

Becker, Gary S.

PD October 1991. **TI** Fertility and the Economy. **AA** University of Chicago. **SR** Economics Research Center/NORC Population Research Center Discussion Paper: 92-3; Economics Research Center, NORC/University of Chicago, 1155 E. 60th Street, Chicago, IL 60637. **PG** 28. **PR** $2.00, send requests to NORC Librarian. **JE** J13, J11. **KW** Children. Child Care.

AB I have related the demand for children to parental incomes and the cost of rearing children -- especially to the value of the time spent on child care and to public policies that change the cost of children. This paper also links the demand for children to investments in their human capital and other dimensions of the so-called quality of children. Fertility is shown to depend on child and adult mortality, uncertainty about the sex of children -- if there is a preference for boys, girls or for variety -- uncertainty about how long it takes to produce a conception, and other variables. Since biological necessity dictates that succeeding generations overlap, it is not surprising that fertility in one generation influences the fertility of succeeding generations. The overlapping generations approach provides a useful framework for relating fertility choices to population growth and macroeconomic changes.

Berger, Allen N.

PD December 1991. **TI** Securitization, Risk, and the Liquidity Problem in Banking. **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: 181; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 70. **PR** no charge. **JE** G21, G14, G28, D82. **KW** Banks. Profits. Concentration. Financial Intermediaries. Mergers.
AB This paper extends the modern information based theory of financial intermediation to explain securitization as a reaction to improvements in monitoring and information technology. This "monitoring technology hypothesis" is tested against several other theories of securitization using over 400,000 quarterly observations on banks from 1983 to 1991. The data are largely consistent with the monitoring technology hypothesis as an explanation of loan sales, and with the risk-shifting version of the collateralization hypothesis as an explanation of standby letters of credit. Loan sales also appear to represent an expansion of banking into a new form of securities underwriting.

PD December 1991. **TI** Securitization, Risk, and the Liquidity Problem in Banking. **AU** Berger, Allen N.; Udell, Gregory F. **AA** Berger: Board of Governors of the Federal Reserve System. Udell: New York University and the Board of Governors of the Federal Reserve System. **SR** New York University Salomon Brothers Center Working Paper: S-92-2; 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** 46. **PR** $5.00. **JE** G21. **KW** Monitoring. Banking. Securities. Information Technology.
AB See other entry.

Bergin, J.

PD September 1991. **TI** Anonymous Sequential Games with General State Space. **AU** Bergin, J.; Bernhardt, Dan. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 847; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 30. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** D81, C70. **KW** Uncertainty. Sequential Games. Game Theory.
AB In this paper we consider anonymous sequential games with aggregate uncertainty. We prove existence of equilibrium when there is a general state space representing aggregate uncertainty. When the economy is stationary and the underlying process governing aggregate uncertainty Markov, we provide Markov representations of the equilibria.

Bernhardt, Dan

TI Anonymous Sequential Games with General State Space.
AU Bergin, J.; Bernhardt, Dan.

PD November 1991. **TI** Intraday Trade in Dealership Markets. **AU** Bernhardt, Dan; Hughson, Eric. **AA** Bernhardt: Queen's University. Hughson: California Institute of Technology. **SR** Queen's Institute for Economic Research Discussion Paper: 841; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 62. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** G12, G14, C51. **KW** Asymmetric Information. Asset Pricing. Stock Market.
AB We develop and test a structural asymmetric information transaction model to characterize the price impact of information on the NYSE. Unlike previous literature, we allow for mixed entry strategies on the part of informed traders and obtain an equilibrium where trades are temporally separated. In addition, when it is costly to transact, informed agents will not trade small quantities. Estimation of the structural parameters is performed using a maximum likelihood procedure. The price impact of information and the average informational innovation are found to be positive and significant. However, when the overidentifying restrictions are tested, the model is rejected with probability one.

Bertail, P.

PD November 1991. **TI** Le Bootstrap: Une Revue de la Litterature. **AA** CREST-INRA. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9201; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 60. **PR** no charge. **JE** C14, C15. **KW** Bootstrap. Confidence Intervals. Simulations.
AB The aim of this article is to present an up-to-date survey of the literature on the Bootstrap and the main statistical interests of the method. After having introduced the foundations and the basic tools of this method we give the main theoretical results, firstly on the mean in an i.i.d. setting and then on more general statistics. We emphasize how it is possible to adapt the basic ideas to non i.i.d. cases. The applications to the construction of nonparametric confidence intervals is then surveyed. This paper is written in French.

PD November 1991. **TI** Un Test Bootstrap dans un Modele AR(1). **AA** CREST-INRA. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9203; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 44. **PR** no charge. **JE** C15, C12, C22. **KW** Bootstrap. Autoregressive Model. Unit Roots. Simulation Model.
AB We study a Bootstrap test of the unit root hypothesis, based on residual resampling, in a simple AR(1) model. The bootstrap is performed under the null hypothesis and under local alternatives which allows me to construct a power function estimator. We study the asymptotic validity of the method theoretically and give some empirical evidence through a simulation model. This paper is written in French.

PD January 1992. **TI** Une Application du Bootstrap dans un Modele Lineaire avec Autocorrelation des Residus. **AA** CREST-INRA. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9204; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 33. **PR** no charge. **JE** C12, C22, C52. **KW** Autocorrelation. Linear Model. Bootstrap. Hypothesis

Testing. Simulation Model.
AB The Bootstrap is used to construct a test of the hypothesis of serial correlation, i.e. the null hypothesis that rho=rho naught in a linear model. The idea is to construct the Bootstrap distribution of the Durbin-Watson test under the null hypothesis and local alternatives to determine the power of the test. We show the asymptotic validity of the method and study it through a simulation model. When testing the null hypothesis that rho=0, the Bootstrap test is concurrent to the inconclusive Durbin-Watson test. This paper is written in French.

Bester, Helmut

PD November 1991. **TI** The Missing Equilibria in Hotelling's Location Game. **AU** Bester, Helmut; de Palma, Andre; Leininger, Wolfgang; von Thadden, Ernst-Ludwig; Thomas, Jonathan. **AA** Bester: Tilburg University. de Palma: Northwestern University. Leininger: Dortmund University. von Thadden: Basel University. Thomas: Warwick University and Tilburg University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 975; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 21. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** R11, D21, L11. **KW** Nash Equilibrium. Spatial Theory. Hotelling's Model.
AB We study the location equilibrium in Hotelling's model of spatial competition. As d'Aspremont et al. (1979) have shown, with quadratic consumer transportation cost the two sellers will seek to move as far away from each other as possible. This generates a coordination problem which the literature typically ignores by restricting firm 1 to locate in the first half and firm 2 in the second half of the market. We study the noncooperative outcome in the absence of such a coordination device and find that the location game possesses an infinity of mixed strategy Nash equilibria. In these equilibria coordination failure invalidates the principle of "maximum differentiation" and firms may even locate at the same point.

Binger, Brian R.

PD January 1992. **TI** An Experimetric Study of the Cournot Model. **AU** Binger, Brian R.; Hoffman, Elizabeth; Libecap, Gary D.; Shachat, Keith M. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-13; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 55. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** C92, D43. **KW** Experimental Economics. Cournot Model. Panel Data.
AB This paper uses a new experimental design to study the effects of numbers of sellers (2 or 5) and explicit coordination on outcomes in markets in which firms offer quantities for sale and the market demand schedules determine market prices. The data generate a panel set, in which the treatments represent the cross-sectional data and the market periods represent the time series data. We find that two sellers, with communication, generally collude to offer the joint-profit maximizing market quantity for sale. Two sellers, without communication, learn over time to offer the joint-profit maximizing quantity. In contrast, five sellers without communication, become more competitive over time. Market quantity converges toward the competitive equilibrium. No treatment converges to the Cournot equilibrium. A remarkable result emerges from the panel data study: a high variance on the intercept coefficients and a low variance on the slope coefficients. This suggests path dependence: the level of cooperation is set by each individual group in the first few periods; the treatment determines the direction of change over time.

Blackburn, Keith

PD March 1992. **TI** Speculative Currency Attacks and Balance of Payments Crises: A Survey. **AU** Blackburn, Keith; Sola, Martin. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9204; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 43. **PR** no charge. **JE** F31, E42, F33. **KW** Exchange Rate. Monetary Regime. Monetary Policy.
AB This paper reviews the recent theoretical literature on collapsing exchange rate regimes. Using a combination of technique, intuition and real world observation, we discuss the literature's main insights, point out some unresolved questions and offer suggestions for future research. The survey should be of interest to both specialists and non-specialists in the field of international macroeconomics.

PD March 1992. **TI** Exponential Smoothing and Spurious Correlation: A Note. **AU** Blackburn, Keith; Orduna, Felipe; Sola, Martin. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9205; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 9. **PR** no charge. **JE** C22, E32, C52. **KW** Autocorrelation. Trend. Smoothing. Time Series Analysis.
AB Exponential smoothing can introduce spurious autocorrelation in detrended data. The extent of this depends on the length of lag, the value of the smoothing parameter and the nature of the input process. The most widely-used version of exponential smoothing is the Hodrick-Prescott low frequency filter.

Blackorby, Charles

PD October 1991. **TI** The Conjunction of Direct and Indirect Separability. **AU** Blackorby, Charles; Russell, R. Robert. **AA** Blackorby: University of British Columbia and GREQE. Russell: University of California, Riverside. **SR** University of British Columbia Department of Economics Discussion Paper: 91-38; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 18. **PR** $.20 per page Canadian to other than educational institutions. **JE** D11. **KW** Utility Functions. Separability. Consumer Economics.
AB This paper provides a closed-form characterization of the conjunction of direct and indirect separability, presented in terms of the expenditure and distance functions as well as the direct and indirect utility functions. It corrects and extends Haque's [1981] earlier theorem (which does not yield a closed-form solution to the problem). We also use our results to provide a simple proof of Lau's [1969] groupwise additivity theorem.

PD October 1991. **TI** Samuelson's "Shibboleth" Revisited: Proportional Budgeting among Agents and Rank-Two Demand Systems. **AU** Blackorby, Charles; Russell, R.

Robert. **AA** Blackorby: University of British Columbia and GREQE. Russell: University of California, Riverside. **SR** University of British Columbia Department of Economics Discussion Paper: 91-39; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 13. **PR** $.20 per page Canadian to other than educational institutions. **JE** D61, D63, D11. **KW** Social Welfare Function. Consumption. Budgets. Utility Functions.

AB Samuelson [1956] argued that a budgeting procedure whereby each individual agent in a household, community, or organization is allocated a certain proportion of total expenditure to spend as he or she sees fit is a "shibboleth." In using this term, he meant that the procedure could not be rationalized by the maximization of a social welfare function defined over the utilities of the individuals. This note provides a complete characterization of the budgeting procedure described by Samuelson, in terms of the necessary and sufficient restrictions on individual utility functions-given that the social welfare function is generalized utilitarian. The restrictions needed are closely related to the results of recent research on weaker forms of aggregation across agents. In particular, it requires that the Engel curves have rank two-equivalently, that they belong to Muellbauer's generalized linear class of utility functions.

PD November 1991. **TI** Measuring the Costs of Children: A Theoretical Framework. **AU** Blackorby, Charles; Donaldson, David. **AA** University of British Columbia. **SR** University of British Columbia Department of Economics Discussion Paper: 91-40; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** not available. **PR** $.20 per page Canadian to other than educational institutions. **JE** J13, D12, C43. **KW** Children. Child Care. Consumer Economics.

AB Parenthood has costs as well as benefits. Children must be fed, clothed, housed, and educated, and the resulting expenditures leave parents with less to spend on themselves. In addition, because some governments attempt to compensate families for the costs of children, reasonable estimates of the costs of children are a prerequisite for sensible policies. This paper presents necessary and sufficient conditions for relative and absolute cost-of-children indexes to be exact. In addition we provide necessary and sufficient conditions for the Rothbarth and Iso-Prop methods to be exact as well as a complete characterization of demographic separability.

PD November 1991. **TI** A Choice-Theoretic Rationalisation of the Permanent Income Hypothesis. **AU** Blackorby, Charles; Russell, R. Robert. **AA** Blackorby: University of British Columbia and GREQE. Russell: University of California, Riverside. **SR** University of British Columbia Department of Economics Discussion Paper: 91-41; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** not available. **PR** $.20 per page Canadian to other than educational institutions. **JE** D91, D12, E21. **KW** Consumption. Life Cycle Model. Consumer Economics.

AB Friedman's [1957] permanent income hypothesis (PIH) was originally formulated to explain the apparent disparity between the short-run and long-run responses of consumption to changes in measured income. Although empirical tests of the hypothesis have become increasingly sophisticated, little effort has been aimed at the choice-theoretic rationalization of the hypothesis. The only analysis of this question of which we are aware was published by Gorman [1964] who solved this problem for the case of a single optimizing agent. We extend Gorman's analysis to aggregate data in several ways. We investigate the conditions under which a competitive economy composed of utility maximizing consumers could generate data that, when summed over consumers, satisfy the PIH. The class of such economies is quite large. We also examine the preferences of a planner who maximizes a generalized utilitarian social welfare function and satisfies the PIH. Finally, we investigate the relationship between intertemporal consistency and the PIH.

Blanchard, Olivier Jean

PD February 1992. **TI** The Flow Approach to Labor Markets. **AU** Blanchard, Olivier Jean; Diamond, Peter. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4000; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 15. **PR** $5.00. **JE** J63, E24, J41, J23. **KW** Labor Demand. Matching Model. Wage Determination. Unemployment.

AB The "flow approach" to labor markets builds up from the flows of workers and of jobs. It is based on three essential components, a specification of labor demand in terms of flows of job creation/destruction, a process of matching between workers and firms, and a process of wage determination where wages depend on the labor market prospects of employed workers and firms. We think that this approach gives the right basic picture of unemployment and unemployment dynamics, and of the relation between wage movements and the state of the labor market. The additional richness it naturally delivers also captures important implications of labor market mechanisms for macroeconomics. Finally, its structure is realistic enough to allow for a productive interaction with - and use of - micro-work and micro-evidence in both labor and product markets. This paper shows the structure of the approach and some of its implications. The first section develops a bare bones model; the second adds the flesh.

Blitzer, C. R.

PD December 1991. **TI** Growth and Welfare Losses from Carbon Emissions Restrictions: A General Equilibrium Analysis for Egypt. **AU** Blitzer, C. R.; Eckaus, R. S.; Lahiri, S.; Meeraus, A. **AA** Blitzer: World Bank. Eckaus: Massachusetts Institute of Technology. Lahiri: University of Massachusetts, Lowell. Meeraus: GAMS Development Corporation. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 600; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139. **PG** 72. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** Q25, Q28. **KW** Air Pollution. Pollution. Greenhouse Effect.

AB This paper is an assessment for a particular country, Egypt, of the economic effect, under various conditions, of carbon emission restrictions. Like other work, it is an exemplification of some of the economic possibilities. However, it extends the domain of possibilities and suggests some issues that have not been considered in other studies. The model is used to assess the sensitivity of the results to alternative specifications: changes in the level of the rate of discount of future welfare and the presence or absence of "alternative" technologies for power generation. Since greenhouse warming is a function of the accumulated stock of greenhouse gases in the atmosphere, a more fundamental specification for the control of greenhouse warming than the limitation of annual emissions is analyzed: constraints on the accumulated emissions of carbon dioxide.

Blundell, Richard

TI Life-Cycle Expenditure Allocations and the Consumption Costs of Children. **AU** Banks, James; Blundell, Richard; Preston, Ian.

PD August 1991. **TI** Taxation in Empirical Labour Supply Models: Lone Mothers in the U.K. **AU** Blundell, Richard; Duncan, Alan; Meghir, Costas. **AA** Blundell and Meghir: University College London and Institute for Fiscal Studies. Duncan: Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/9; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 16. **PR** 3 pounds. **JE** J22, H23, H21. **KW** Taxes. Tax System. Labor Supply.
AB Taxation has become an integral part of the empirical specification of labor supply models. The opportunity set available to workers is made significantly nonlinear by the workings of the tax (and benefit) system and this, in turn, complicates an individual's optimal choice of labor supply. In such a framework the relationship between hours of work, gross wages and other income is necessarily nonlinear. In this paper we focus on two issues. The first relates to the specification of a flexible model allowing backward-bending labor supply. The second issue relates to the statistical coherency of such a model in the presence of nonlinear taxation.

Boldrin, Michele

PD January 1992. **TI** Indeterminancy of Equilibrium in Dynamic Models with Externalities. **AU** Boldrin, Michele; Rustichini, Aldo. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 955R; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 30. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** O41, O33, D92. **KW** Economic Growth. Externalities. Technology. Capital Stock.
AB In this paper we study the indeterminacy of equilibria in infinite horizon capital accumulation models with technological externalities. Our investigation encompasses both models with bounded and unbounded accumulation paths, and models with one and two sectors of production. Under reasonable assumptions we find that equilibria are locally unique in the one sector economies, at least as long as cycles are not present and trajectories are therefore monotone. On the other hand we show (by means of an example) that persistent oscillations are possible when the external effect is particularly strong and capital accumulation is bounded. In this case indeterminacy may be present as we are unable to rule out the existence of a continuum of equilibria converging to the cycle. The situation is different in economies with two sectors of production. Here it is very easy to construct analytical examples where a positive external effect induces a two dimensional manifold of equilibria converging to the same steady state (in the bounded case) or to the same constant growth rate (in the unbounded case).

Boote, A. R.

PD February 1992. **TI** Assessing Eastern Europe's Capital Needs. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/12; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** O11, O52, E22. **KW** Production Function. Capital Stock. Europe. Living Standards.
AB The paper aims at assessing the capital needs of Eastern Europe in catching up to EC standards of living using the framework of a constant elasticity of substitution production function model. This function, parameterized on the EC, is assumed to apply with certain inefficiency factors in Eastern Europe in 1992. Quantitative results, given the heroic set of assumptions required, are bounded by large ranges. The approach provides a framework for assessing the factors which will determine the future capital needs in Eastern Europe and underscore the crucial role of efficiency gains in this process.

Boozer, Michael A.

PD February 1992. **TI** Race and School Quality since "Brown vs. Board of Education". **AU** Boozer, Michael A.; Krueger, Alan B.; Wolkon, Shari. **AA** Boozer: Princeton University. Krueger: Princeton University and National Bureau of Economic Research. Wolkon: Cornell University. **SR** Princeton Industrial Relations Section Working Paper: 301; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 82. **PR** $2.00. **JE** I21, J15, J71. **KW** Education. Minorities. Discrimination. Segregation.
AB This paper presents evidence on the quality of schooling by race and ethnic origin in the United States. Although substantial racial segregation across schools exists, the average pupil-teacher ratio is approximately the same for black and white students. Hispanic students, however, on average have 10 percent more students per teacher. Relative to whites, blacks and Hispanics are less likely to use computers at school and at work. The implications of these differences in school quality for labor market outcomes are examined. We conclude by examining reasons for the increase in the black-white earnings gap since the mid-1970's.

Borenstein, Severin

PD January 1992. **TI** Prospects for Competitive European Air Travel. **AA** University of California, Davis. **SR** University of California at Davis Economics Department Working Paper: 395; Department of Economics, University of California at Davis, Davis, CA 95616-8578. **PG** 23. **PR** no charge. **JE** L93, F15, L43, L52. **KW** Free Trade. Transportation. Europe. Regulation.
AB The free trade tenets of the Treaty of Rome and the Single European Market agreements have only recently begun to be applied to air transportation. This paper analyzes prospects for successful liberalization or deregulation of European air transport leading to a competitive market for intra-EEC air travel. I conclude that network economies and hub scheduling will be less important in Europe than they have been in the U.S., because far fewer passengers will change planes on intra-EEC travel than currently do in U.S. domestic travel. Still, the prospects for a competitive European air travel system are not encouraging, because countries will continue to protect and subsidize their own airlines, and because the larger carriers have already begun to adopt a U.S. style marketing

strategy that puts smaller airlines at a substantial disadvantage.

Borensztein, Eduardo

TI Stabilization and Structural Reform in Czechoslovakia: An Assessment of the First Stage. **AU** Aghevli, Bijan B.; Borensztein, Eduardo; van der Willigen, Tessa.

Bos, Dieter

PD January 1992. **TI** Privatization in East Germany: A Survey of Current Issues. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/8; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** L33, O52, H11. **KW** Germany. Privatization. Ownership Structure.

AB This paper deals with the privatization, restructuring, and liquidation of East German industrial firms. A partnership model is suggested for privatization where the Government's property trust (Treuhandanstalt) is made a silent partner of the private investors. The application of a general scheme of wage subsidies is rejected in the paper. Furthermore, the paper argues against restructuring policies of the Government's property trust and proposes to set decreasing limits on the trust's finances for the years following 1993. The decreasing financial inflow will force the Government's trust to close firms, and will also signal the commitment of the Government to liquidate the trust itself by, say, the year 2000.

Boschen, John F.

PD October 1991. **TI** The Effects of Countercyclical Monetary Policy on Money and Interest Rates: An Evaluation of Evidence from FOMC Documents. **AU** Boschen, John F.; Mills, Leonard O. **AA** Boschen: College of William and Mary. Mills: Federal National Mortgage Association. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-20; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 25. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** E31, E52, E51, E43. **KW** Business Cycle. Monetary Policy. Money Supply. Interest Rate.

AB An important but unsettled issue in business cycle research is the extent that monetary policy decisions, as opposed to the real shocks, explain the variation in money growth and interest rates over the business cycle. In this paper we test the hypothesis that countercyclical monetary decisions have a direct and significant impact on inside money growth, outside money growth, and interest rates. The analysis draws on research that classifies monetary policy decisions using FOMC directives and related documents. We evaluate the validity of this approach with new tests on the consistency of interpretation of policy directives. Using monthly data over the post-Korean War period, we find that monetary policy decisions significantly influenced contemporaneous inside money growth, reserve growth, and the federal funds rate.

Boughton, James M.

PD December 1991. **TI** The CFA Franc Zone: Currency Union and Monetary Standard. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/133; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** E42, F33, F42. **KW** Currency Union. Exchange Rate. Africa.

AB The CFA franc zone comprises a group of countries in central and west Africa whose currencies have been firmly linked to the French franc since 1948. It combines the features of a currency union with those of an exchange rate peg, and an analysis of its effectiveness must examine both dimensions. Viewed from the perspective of a currency union among the African countries, it would appear that the zone would not constitute an optimum currency area. But when France is viewed as an integral part of the system, the benefits--including discipline, credibility, and stability in international competitiveness--become clearer.

PD January 1992. **TI** International Comparisons of Money Demand: A Review Essay. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/7; International Monetary Fund, Washington, DC 20431. **PG** 12. **PR** not available. **JE** E41, O57, F41, E42. **KW** Money Demand. Financial Markets. Monetary Policy. Open Economy.

AB Many studies of the demand for money, covering a wide variety of economies, have demonstrated the importance of financial innovations and shifts in monetary policy regimes, but they have also illustrated the difficulty of measuring and assessing such changes. Because innovations and regime shifts have differed markedly across countries, international comparisons can help identify their effects. This paper reviews the literature on money demand comparisons, focusing primarily on industrial countries. It finds that innovations and regime shifts have had widespread effects, but also that the demand for money is not generally less stable now than it was before those changes occurred.

Breece, James H.

PD July 1991. **TI** Using the Murphy Model to Provide Short-Run Macroeconomic Closure for ORANI. **AU** Breece, James H.; McLaren, Keith R.; Murphy, Chris W.; Powell, Alan A. **AA** Breece: University of Maine and University of Melbourne. McLaren: Monash University. Murphy: Australian National University. Powell: University of Melbourne. **SR** Monash Department of Econometrics Working Paper: 6/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 33. **PR** no charge. **JE** D58, E13. **KW** Macroeconomic Model. General Equilibrium.

AB This paper give details of an interface constructed to allow the coupling of the ORANI applied general equilibrium model and the Murphy macrodynamic model. It shows how the previously developed methodology for interfacing a continuous time macro model with a comparative static general equilibrium model (Cooper, McLaren and Powell (1985)) can be adapted to accommodate a macro model formulated in discrete time.

Brender, Adi

PD January 1992. **TI** China's Foreign Trade Behavior in the 1980's: An Empirical Analysis. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/5; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** not available. **JE** F14, L33, O53, P33. **KW** China. International Trade. Imports.

AB This paper studies the behavior of China's foreign trade in the 1980's. Chinese customs data are used to construct, for the first time, quarterly unit value and volume series that are then used to estimate foreign trade income and price elasticities. The estimated export supply price elasticities are negative and became even more negative after the reforms in 1985. The import price elasticity is very close to minus one. These results suggest that administrative controls still have a dominant effect on China's trade and may also suggest that reforms in the management system of Chinese enterprises were not sufficient to create profit maximizing behavior by managers.

Brito, Dagobert L.

PD December 1991. **TI** Heterogeneity and Distribution in the Commons. **AU** Brito, Dagobert L.; Intriligator, Michael D.; Sheshinski, Eytan. **AA** Brito: Rice University. Intriligator: University of California, Los Angeles. Sheshinski: Hebrew University of Jerusalem. **SR** University of California at Los Angeles Department of Economics Working Paper: 643; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 33. **PR** $2.50; checks payable to U.C. Regents. **JE** L33, D62. **KW** Privatization. Commons. Externalities.

AB This paper analyzes the problem of the commons in a model in which the individual users are heterogeneous. Explicit treatment of heterogeneity leads to five results, some that differ from those of the previous literature: 1) The free-access equilibrium Pareto dominates the equilibrium in which the commons is prohibited. 2) The optimum level of employment in the commons can be supported by taxes or subsidies. 3) Examples exist where private ownership leads to a higher level of income to the free factor than that in the free-access equilibrium. 4) Under reasonable conditions, the income of the variable factor that remains employed in the commons will be higher in the private ownership equilibrium. 5) A nondiscriminatory proportional reduction of the use of the commons can be inferior to the free-access equilibrium.

PD December 1991. **TI** The Impact of Technological Change on the Distribution of Labor Income. **AU** Brito, Dagobert L.; Intriligator, Michael D. **AA** Brito: Rice University. Intriligator: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 644; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 14. **PR** $2.50; checks payable to U.C. Regents. **JE** D33, O33, D61, D24, O15. **KW** Technology. Income Distribution. Economic Development.

AB To address the question of the impact of technological change on the distribution of labor income, we develop a model of an economy in which two types of workers, "skilled" workers and "unskilled" workers furnish different types of labor. The social welfare function, to be maximized by government redistribution, is given as the sum of the utilities of the two types of workers, where the government cannot distinguish between workers of different types. The initial technology for this economy is given by an aggregate production function where the two types of workers enter in the production process in a symmetric way. We then introduce into this "Garden of Eden" a "serpent" in the form of a new technology for which skilled workers can produce the good using this technology without using any of the unskilled workers. In this new economy the old technology uses both types of workers, while the new technology uses only skilled workers. Using this framework we prove that an increase in the marginal product of labor of the skilled workers in the new technology will change the market equilibrium in such a way that all skilled workers will benefit at the expense of the unskilled workers, social welfare may be reduced, and the level of output at the competitive equilibrium will increase as a result of the introduction of the new technology.

Brock, Philip L.

PD March 1992. **TI** The Growth and Welfare Consequences of Differential Tariffs with Endogenously-Supplied Capital and Labor. **AU** Brock, Philip L.; Turnovsky, Stephen J. **AA** Brock: University of Washington. Turnovsky: University of Washington and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4011; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $5.00. **JE** F41, F13. **KW** Protectionism. Trade Policy. Tariff Reform.

AB This paper analyzes the impact of differential tariffs on consumption and investment in a specific factors model of a small open economy in which capital is accumulated over time. Particular attention is devoted to the welfare aspects, highlighting the cost of the intertemporal distortions produced by protective trade policies. Several specific welfare propositions are obtained. First, tariff protection is shown to create short-run benefits but long-run costs in welfare. Secondly, the second-best policy for the two tariffs is characterized. Finally, several propositions summarizing the implications of our analysis for tariff reform are derived.

Brooks, Robert D.

PD October 1991. **TI** Alternative Point Optimal Tests for Regression Coefficient Stability. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 10/91; Department of Econometrics, Faculty of Economics, Commerce and Management, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 14. **PR** no charge. **JE** C12, C22, C52. **KW** Point Optimal Test. Linear Regression Model. Time Series Model.

AB In the context of the linear regression model, Shively (1988) has constructed a point optimal test for constant coefficients against the alternative of return to normalcy coefficients. This paper considers alternative methods for the choice of values of the unknown parameters required to conduct the test. These alternatives are based on Cox and Hinkley's (1974, p.102) idea of maximizing some weighted average of powers. The paper explores the use of some simple weighting schemes and demonstrates by an empirical power comparison the usefulness of maximizing some weighted average of powers in solving this testing problem.

TI Economic Motivations for Limited Dependent and Qualitative Variable Models. **AU** Fry, Timothy R. L.; Brooks, Robert D.; Comley, B. R.; Zhang, J.

Brown, Donald

PD June 1991. **TI** Arbitrage and Existence of Equilibrium in Infinite Asset Markets. **AU** Brown, Donald; Werner, Jan. **AA** Brown: Stanford University. Werner: University of Minnesota. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-344; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 19. **PR** no charge. **JE** D51, G12. **KW** General Equilibrium. Exchange Economies. Arbitrage. Asset Market.

AB This paper develops a model for the general equilibrium analysis of markets with infinitely many assets. A partial equilibrium model of large asset markets, with prices exogenously given, has been analyzed by Chamberlain and Rothschild (1983) and Chamberlain (1983) in their investigation of the Arbitrage Pricing Theory of Ross (1976). A complete presentation of the APT requires an infinite number of assets, optimizing investors, and an endogenous determination of equilibrium prices as a consequence of the lack of arbitrage opportunities. Our paper provides such a model. We combine two recent developments in equilibrium theory: the existence of equilibrium in economies with infinite dimensional commodity spaces, and the existence of equilibria in economies with finite dimensional commodity spaces where the consumption sets are not bounded below.

Buddin, Richard

PD October 1990. **TI** The 2+2+4 Recruiting Experiment: Design and Initial Results. **AU** Buddin, Richard; Polich, J. Michael. **AA** RAND Corporation. **SR** Rand Note: N-3187-A; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 28. **PR** not available. **JE** H56, J22, J45. **KW** Public Sector. Military Enlistment. Labor Supply.

AB This note describes the design and first six months of experience for a national experiment on a proposed new recruiting program for the U.S. Army. The program, called the "2+2+4" recruiting option, is one of the tools the Army believes could help sustain its ability to attract high-quality young people during difficult recruiting periods in the future. The authors present RAND's design for the test as a controlled experiment, similar to earlier enlistment incentive tests, and present preliminary tabulations of results during the first six months of the test. The test established a framework for systematic assessment of the 2+2+4 program and set up a precise mechanism for possible future tests of other enlistment options through individually randomized assignment in the REQUEST system. The test showed that a substantial number of recruits are willing to commit for two years in the Selected Reserve to obtain an Army College Fund Benefit. It also showed that offering the 2+2+4 option has led relatively few recruits to choose a short-term of service in place of a long-term or to move from a combat to a non-combat skill. It is too soon to determine whether the program led to a significant increase in the total number of high-quality recruits entering the Army.

Bullard, James

PD May 1991. **TI** Collapsing Exchange Rate Regimes: A Reinterpretation. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-003A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 30. **PR** no charge. **JE** F31, F41, E42. **KW** Balance of Payments. Exchange Rate. Monetary Regime.

AB Microfoundations are provided for a common model of balance of payments crises by showing formal equivalence to a standard overlapping generations model. Certain domestic policy rules are inconsistent with fixed exchange rate equilibrium, which is in agreement with previous results. However, when policy is consistent with a fixed exchange rate equilibrium: (1) there are multiple stationary equilibria, and the fixed exchange rate equilibrium is generally unstable under rational expectations; (2) the fixed exchange rate equilibrium is the attractor when agents learn over time; (3) complicated exchange rate paths cannot be ruled out by utility maximization and rational expectations alone.

PD August 1991. **TI** Nonlinearity and Chaos in Economic Models: Implications for Policy Decisions. **AU** Bullard, James; Butler, Alison. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-002A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 37. **PR** no charge. **JE** B41, E61, E32. **KW** Nonlinear Model. Chaos. Economic Policy.

AB This survey paper discusses the policy implications that can be expected from the recent research on nonlinearity and chaos in economic models. Expected policy implications are interpreted as a driving force behind the recent proliferation of research in this area. In general, it appears that no new justification for policy intervention is developed in models of endogenous fluctuations, although this conclusion depends in part on the definition of equilibrium. When justified, however, policy tends to be very effective in these models.

PD August 1991. **TI** Learning Equilibria. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-004A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 38. **PR** no charge. **JE** D83, C62, E32. **KW** Hopf Bifurcation. Learning. Overlapping Generations Model.

AB This paper employs the Hopf bifurcation theorem to prove the existence of complicated equilibrium trajectories under least squares learning in a standard version of the overlapping generations model. The periodic and quasiperiodic learning equilibria exist when the locally unique perfect foresight equilibrium is the monetary steady state, and thus are induced by the introduction of learning alone. Learning equilibria can be stable or unstable depending on higher order derivatives of the underlying utility function not specified by economic theory; examples of both attracting and repelling invariant closed curves are provided. This research confirms the intuition of some previous authors, who have suggested that stationary equilibrium trajectories under learning may differ from those under rational expectations.

Burfisher, Mary E.

TI Agricultural Policies and Migration in a U.S.-Mexico Free Trade Area: A Computable General Equilibrium Analysis. **AU** Robinson, Sherman; Burfisher, Mary E.; Hinojosa-Ojeda, Raul; Thierfelder, Karen E.

Butler, Alison

PD 1990. **TI** Endogenous Innovation in a North-North Model of the Product Cycle. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-007; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 30. **PR** not available. **JE** O31, E32, L11. **KW** Product Cycle. Patents. Innovation.

AB This paper examines the effect of endogenous innovation in a two-country model of the product cycle, in which countries that innovate also produce goods for which the technology to produce them is internationally available. Innovation is a dynamic process that requires skilled labor to be diverted from production to research and development for innovation to occur. Technology transfer is derived from an exogenous patent length, which can differ in the two countries. The results show that when product cycle effects are looked at in a North-North context, the innovation and technology transfer rates in these countries affect both the economic incentives as well as the relative wages between sectors in each country. In addition, changes in the patent length in a country affect the optimal amount of innovation in that country.

TI Nonlinearity and Chaos in Economic Models: Implications for Policy Decisions. **AU** Bullard, James; Butler, Alison.

Butler, Robert A.

TI *Estimating the Costs of Changes in the Active/Reserve* Balance. **AU** Gotz, Glenn A.; Shanley, Michael G.; Butler, Robert A.; Fishman, Barry

Caillaud, B.

PD September 1991. **TI** Managerial Incentives Based on Insider Information. **AU** Caillaud, B.; Jullien, B. **AA** CEPREMAP, Paris. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9122; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 42. **PR** no charge. **JE** D82, G35, J33. **KW** Moral Hazard. Revelation. Stock Options. Compensation.
AB In a moral hazard situation, we model the fact that the agent may get private signals about the final outcome of his effort (insider information), before the actual and public realization of this outcome. The optimal contract we analyze is equivalent to allowing the agent to realize an option on the final profits before the realization of these profits: it makes the agent bet on the final outcome. Such a contract, which effectively uses messages about signals, will be optimal if the pure moral hazard contract (without messages) involves a large cost to the principal because output allows a poor inference on actions, and if bad actions (for the principal) are not "more informative" about output than good actions (actions that the principal wants to implement) in the sense of Blackwell. The theory provides a justification of the widespread use of stock options (or phantom stock options) in managerial compensation schemes, as opposed to compensation schemes that only rely on salary, bonus and (restricted) stock plans.

PD October 1991. **TI** The Use of an Agent in a Signalling Model. **AU** Caillaud, B.; Hermalin, Benjamin E. **AA** Caillaud: CEPREMAP, Paris. Hermalin: University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 91-183; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 25. **PR** $3.50 plus applicable sales tax. **JE** D23, L16, G32, D82. **KW** Principal-Agent Model. Finance Theory. Management. Signaling.
AB In many models in finance and industrial organization, a firm's manager signals information. Typically, any agency problems are assumed away. In contrast, we assume there is an agency problem and explore the consequences. We derive conditions under which models with agency problems yield qualitatively similar predictions to models without agency problems. These conditions are stronger than the standard assumptions in signaling models, which raises doubt about the robustness of the earlier literature to agency problems. Fortunately, in some well-studied models, our conditions are met. We also show that, in some circumstances, the principal does better by hiring an agent to signal for her than by signaling herself. We even show that it is possible that the principal's expected profit is increasing in the cost of agency.

PD October 1991. **TI** Competing Vertical Structures: Precommitment and Renegotiation. **AU** Caillaud, B.; Jullien, B.; Picard, P. **AA** Caillaud: CERAS and CEPREMAP, Paris. Jullien: ENSAE-CREST and CEPREMAP, Paris. Picard: Universite Paris X and CEPREMAP, Paris. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9121; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 42. **PR** no charge. **JE** D82, L16. **KW** Principle-Agent Theory. Strategic Complementarity.
AB We consider a model where two agents play a (normal form) game on behalf of two principals. We analyze the existence of precommitment effects through public announcement of the contract, in a model where agency contracts, designed under incomplete information between principal and agent, can be secretly renegotiated. We show that the existence of precommitment effects depends both on the strategic complementarity of the agents' actions and on the direct effect of the opponent's action on each principal's welfare. In our model, the possibility of renegotiation is crucial for the existence of precommitment effects. Applications to the field of industrial organization are discussed.

Card, David

PD January 1992. **TI** Bargaining Power, Strike Durations, and Wage Outcomes: An Analysis of Strikes in the 1880's. **AU** Card, David; Olson, Craig A. **AA** Card: Princeton University. Olson: Princeton University and the University of Wisconsin, Madison. **SR** Princeton Industrial Relations Section Working Paper: 294; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 47. **PR** $2.00. **JE** J51, J52, N31. **KW** Strikes. Strike Duration. Bargaining. Bargaining Power.
AB We study strike durations and outcomes for some 2000 disputes that occurred between 1881 and 1886. Most post-strike bargaining settlements in the 1880's fell into one of two categories: either a union "victory," characterized by a significant wage gain or hours cut, or a union "defeat," characterized by the resumption of work at the previous terms of employment. We find a strong negative relation between strike duration and the value of the settlement to workers, reflecting the declining probability of a union victory among longer strikes. For the subset of strikes over wage increases we estimate a structural model that includes equations for the capitulation times of the two parties and a specification of the wage increase conditional on a union victory. We find strong support for a relative bargaining power hypothesis: factors that enhance the workers' ability to withstand a strike tend to raise the wage increase in the event of a successful strike, while factors that enhance the employer's ability to withstand a strike tend to lower the wage increase in the event of a union victory.

PD January 1992. **TI** A Comparative Analysis of Unemployment in Canada and the United States. **AU** Card, David; Riddell, W. Craig. **AA** Card: Princeton University. Riddell: University of British Columbia. **SR** Princeton Industrial Relations Section Working Paper: 297; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 37. **PR** $2.00. **JE** J64, J65, J21, J22. **KW** Unemployment. Labor Supply. Unemployment Insurance.

AB Throughout the late 1980's unemployment rates remained 2-3 percentage points higher in Canada than the U.S. We use individual microdata from the U.S. Current Population Survey and the Canadian Survey of Consumer Finances to study the emerging unemployment gap between the two countries. For women, we find that the relative rise in Canadian unemployment occurred with relative increases in per capita weeks of work. The unemployment gap for Canadian women was driven by a rise in the probability that non-workers are classified as "unemployed" as opposed to "out of the labor force." For men, the increase in unemployment was accompanied by a relative decrease in Canadian employment rates, and an increase in the probability that men with no weeks of work are classified as "in the labor force." A comparison of annual work patterns and income recipiency in the two countries suggests that Canadians of both sexes have increasingly adjusted their labor supply to the parameters of the Canadian Unemployment Insurance system.

PD March 1992. **TI** Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 300; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 22. **PR** $2.00. **JE** J31, J38, J23. **KW** Wages. Wage Differentials. Labor Demand. Employment.

AB The imposition of a national wage standard sets up a useful natural experiment in which the "treatment effect" varies across states depending on the fraction of workers earning less than the new minimum. I use this idea to evaluate the effect of the April 1990 increase in the Federal minimum wage on teenage wages, employment, and school enrollment. Interstate variation in teenage wages was high at the end of the 1980's, in part because 16 states had enacted state-specific minimums above the prevailing Federal rate. Comparisons of grouped and individual state data confirm that the rise in the minimum wage significantly increased teenage wages. There is no evidence of corresponding losses in teenage employment or changes in teenage school enrollment.

Case, Karl E., Jr

PD December 1991. **TI** Index-Based Futures and Options Markets in Real Estate. **AU** Case, Karl E., Jr.; Shiller, Robert J.; Weiss, Allan N. **AA** Case: Wellesley College. Shiller: Yale University. Weiss: CSW, Inc. **SR** Yale Cowles Foundation Discussion Paper: 1006; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 21. **PR** no charge. **JE** G11, L85. **KW** Real Estate. Prices. Portfolio Choice.

AB Most institutional and individual portfolios are very undiversified in real estate: many hold no real estate at all, many have holdings highly concentrated in certain regions or types of real estate. The risk of these concentrated holdings is not hedged. We propose here that cash-settled futures and options markets be opened on real estate to better allow diversification and hedging, and show that these markets solve problems that have hampered other real estate hedging media in the past. Related institutions, such as home equity insurance, might develop around the futures and options markets. The establishment of these markets is likely to increase the quantity of reproducible real estate, and lower rents on real estate. It may also reduce the amplitude of speculative real estate price movements and dampen the business cycle.

Cass, David

PD November 1991. **TI** Individual Risk and Mutual Insurance: A Reformulation. **AU** Cass, David; Chichilinsky, Graciela; Wu, Ho-Mou. **AA** Cass: University of Pennsylvania. Chichilnisky: Columbia University. Wu: Stanford University and Tulane University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-27; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 17. **PR** no charge. **JE** D11, G22, D81. **KW** Insurance. Risk. Households. Consumer Economics.

AB We presume that the reader is familiar with the justly well-known studies of individual risk by Malinvaud (1972, 1973). In those papers, the ideal operation of a large but finite economy in which similar types of households (and firms) each face identical individual risk is approximated by introducing actuarially fair insurance contracts, and then postulating that materials balance or market clearing need only hold in the sense of expected value. The basic shortcoming with such an approximation is pretty clear: Since (average) market clearing ex ante does not ensure (specific) market clearing ex post, while, no matter how large the economy, the tail of the distribution across households has positive probability, the market may in reality perform very badly. The main contribution of this paper is to describe precisely such "an appropriate variety of insurance contracts," a combination of mutual insurance policies (closely related to Malinvaud's actuarially fair insurance contracts) and pure Arrow securities.

PD December 1991. **TI** Mini-Symposium on "The Structure of Sunspot Equilibria in the Presence of Incomplete Financial Markets". **AU** Cass, David; Pietra, Tito; Suda, Shinichi; Tallon, Jean-Marc; Villanacci, Antonio. **AA** Cass, Suda, Tallon, and Villanacci: University of Pennsylvania. Pietra: Rutgers University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-37; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 89. **PR** no charge. **JE** D52, D51, G10. **KW** Incomplete Markets. Financial Markets.

AB Associating sunspot equilibria with incomplete markets is both obvious and natural. Practical theories of potential market behavior frequently -- if not invariably -- invoke sunspot-like explanations. As they become widely accepted, such theories themselves generate incompleteness; additional means are required simply to hedge against possible effects of the newly embraced sunspot beliefs. But with the ensuing proliferation of financial instruments, the increasing complexity of financial markets in turn inspires even more imaginative theories of causality. And the process continues. Based on insights contained in earlier analyses, the papers in this mini-symposium demonstrate precisely how important this association can be.

PD December 1991. **TI** Equilibria with Incomplete Markets and Overlapping Generations. **AU** Cass, David; Green, Richard C.; Spear, Stephen E. **AA** Cass: University of Pennsylvania. Green and Spear: Carnegie-Mellon University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working

Paper: 91-34; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 35. **PR** no charge. **JE** D52, D51, E44, G14. **KW** Incomplete Markets. General Equilibrium Models. Financial Markets.

AB Recent work on (static) general equilibrium models with incomplete financial markets has demonstrated that when assets pay off in units of account, equilibrium prices and allocations are indeterminate. The equilibria in such models are also (generically) constrained suboptimal: A central planner can typically reallocate assets in such a way as to Pareto dominate the competitive equilibrium. In this paper, we consider an overlapping generations model with incomplete markets in which one asset is fiat money. We show that when outside money has value in equilibrium, the stationary equilibrium prices and allocations are both locally isolated and constrained optimal.

Chakravorti, Bhaskar

PD November 1991. **TI** Dynamic Public Goods Provision with Coalitional Manipulation. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 72; Room 2Q-382, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 27. **PR** not available. **JE** D63, H41, C71. **KW** Dynamic Equity. Public Good. Coalition. Perfect Equilibrium.

AB We study dynamic procedures for the provision of an efficient level of a public good with time-dependent surplus distribution. In general, such procedures are prone to manipulation via pre-play communication among coalitions of agents. We begin with a generalization of Truchon's (1984) elegant non-myopic MDP procedure and provide a new procedure that exhibits finite, monotone convergence to Pareto-efficiency in Subgame-Perfect Coalition-proof equilibrium. This procedure also implements any "regular" surplus distribution rule that is dependent on the public good level. The solution concept of Subgame-Perfect Coalition-proof equilibrium is also new. It is an extension of the semi-stability characterizations of Coalition-proof equilibrium for infinite strategy games due to Kahn and Mookherjee (1989). The coalition-proofing device given is more generally applicable.

Challier, M. C.

PD December 1991. **TI** Labour Supply in Finland: Participation and Distribution of Weekly Working Time of Married Women. **AU** Challier, M. C.; Jouhki, H. **AA** Challier: GREQE, Marseille. Jouhki: University of Jyvaskyla, Finland. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TIDI/153; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 42. **PR** no charge. **JE** J22, D11, D12. **KW** Labor Supply. Time Allocation. Leisure.

AB The purpose of this note is to clarify the microeconomic analysis of labor supply taking into account the calendar of labor time. The rational choice which the individual must make consists in simultaneously determining two functions of labor supply because there are two forms of leisure. The supposition that these two forms of leisure are imperfect substitutes is confirmed by econometric tests which therefore gives importance to the organization of labor time during the week.

PD December 1991. **TI** Unemployment Duration: Long-Term and Recurrent Unemployment Spells. **AU** Challier, M. C.; Jellal, M. **AA** Challier: GREQE, Marseilles. Jellal: GREMAQ, Toulouse. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TIDI/154; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 32. **PR** no charge. **JE** J21, J63, J64. **KW** Unemployment Spells. Unemployment.

AB Almost all recent discussions concerning unemployment duration are about probabilities of leaving unemployment, also called exit rates or hazard functions. To take a fresh look at the duration of unemployment spells, we introduce the rate of growth of unemployment and we examine its influence on different variables (the average uncompleted duration, the entry rate, the proportion of the unemployed with uncompleted duration of different lengths, the degree of spell recurrence...). We also analyze the relationship between unemployment dynamics and types of unemployment (long-term, recurrent, hidden...). We present theoretical evidence in support of the proposition that changes in the size and distribution of the inflow are the most important determinant of the unemployment dynamics.

Chamley, Christophe

PD October 1991. **TI** Efficient Constraints on Foreign Borrowing in a Model of Endogenous Growth. **AA** Boston University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9148; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 20. **PR** not available. **JE** O47, F34, F43. **KW** Productivity. Open Economy. Externalities. Production. Taxation.

AB In an open economy with a trade-off between production and productivity growth, and with externalities in productivity growth, it is shown that a restriction on foreign borrowing in the short-run can increase welfare. In the long-run a small subsidy is efficient. When the fiscal instrument is the tax on foreign borrowing, it is possible that non-dampened cycles of tax rates are efficient.

Charrette, Susan M.

PD May 1991. **TI** A Theoretical Analysis of Capital Flight from Debtor Nations. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9113; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 16. **PR** no charge. **JE** F34, F21, F11, F41. **KW** Capital Mobility. Public Debt. Interest Rate. Exchange Rate.

AB This paper develops a model which demonstrates that countries with a large overhang of debt may run into debt-servicing difficulties if the private sector is exporting capital. The crucial feature of the model is that debt must be repaid with tax revenue and there is a limit to how much citizens can be taxed without sending them below the subsistence wage. We consider two types of shocks which send the economy to the minimum wage constraint: an increase in world interest rates and a depreciation of the domestic currency. When this constraint is hit, there is a deviation between the private return to domestic capital and the social return. The private return only takes into account the marginal productivity of capital, while the social return also takes into account a measure of the social cost of a decreasing capital stock. The analysis suggests that capital controls could be used to induce the private sector to invest in the socially optimal capital stock.

PD September 1991. **TI** Capital Flight from Debtor Nations when Labor is Mobile. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9126; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 6. **PR** no charge. **JE** F11, F21, F22, F31. **KW** Exchange Rate. Capital Mobility. Currency. Depreciation.
AB This paper formally models the long-run effects of a depreciation of the domestic currency on outflows of capital when both capital and labor have had sufficient time to adjust to the shock. We introduce a government resource constraint which is endogenized by linking the maximum tax rate to a minimum subsistence level of consumption. Once the economy has hit the government resource constraint, the socially optimal level of investment in the domestic capital stock will no longer be made. We also show that the government resource constraint will in fact be hit when there is a depreciation of the currency caused by a negative shock to the production of the tradable good. The analysis suggests that either a subsidy on domestic investment or capital controls could be used to induce the private sector to invest the socially optimal level of capital.

Chatterjee, Satyajit
PD 1991. **TI** A Neoclassical Model of Seasonal Fluctuations. **AU** Chatterjee, Satyajit; Ravikumar, B. **AA** Chatterjee: Federal Reserve Bank of Philadelphia. Ravikumar: University of Virginia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-23; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 24. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** E13, E22. **KW** Capital Stock. Neoclassical Model. Seasonality.
AB We develop a neoclassical capital accumulation model with seasonal perturbations in tastes and technology. We calibrate the model and use it to study the impact of seasonal demand and supply perturbations on economic activity. We find that the impact is largely limited to a single quarter. We also use our model to isolate the seasonal movements in U.S. quarterly data and then compute the seasonal variations in tastes and technology that approximately explain these movements. We find comovements in productivity and taste perturbations that are very similar to the seasonal comovements of aggregate data.

PD September 1991. **TI** The Effect of Transitional Dynamics on the Distribution of Wealth in a Neoclassical Capital Accumulation Model. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-22; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 19. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** D31, E13, E21, E22. **KW** Wealth Distribution. Capital Stock. Consumption.
AB This paper studies the evolution of wealth distribution along the transition path to steady state of a standard neoclassical capital accumulation model. It is shown that if the economy is growing toward the steady state and preference are such that marginal utility from consumption is infinite (finite) at some (all) positive (non-negative) consumption level(s) then the average saving propensity of an agent is positively (negatively) related to his wealth. These results are reversed if the economy is declining toward the steady state. The monotonic relationship between average saving propensity and wealth implies that the sequence of wealth distributions generated by the optimal adjustment of the economy to the steady state can be Lorenz ranked. Specifically, if the relationship between wealth and average saving propensity is positive (negative) then the current period's wealth distribution Lorenz dominates (is dominated by) the next period's distribution.

Chi-fu, Huang
TI Optimal Consumption and Portfolio Rules with Local Substitution. **AU** Hindy, Ayman; Chi-fu, Huang.

Chichilinsky, Graciela
TI Individual Risk and Mutual Insurance: A Reformulation. **AU** Cass, David; Chichilinsky, Graciela; Wu, Ho-Mou.

Choong, Foong Chee
PD June 1991. **TI** The Evaluation of Forecast Accuracy of a Non Statistical Method of Forecasting. **AU** Choong, Foong Chee; Snyder, Ralph D. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 5/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 8. **PR** no charge. **JE** C22, C52. **KW** Business Forecasting. Time Series Analysis.
AB It is often assumed that the accuracy of formal statistical methods of forecasting is naturally superior to methods which are not based on statistical principles. Nevertheless, non-statistical methods of forecasting are very widely employed in practice, especially within small businesses, because they are generally less sophisticated and easier to understand. This paper evaluates the accuracy of a simple rule of thumb that was employed by a British company in its forecasting procedure. The results are compared with the performance of statistical methods under different conditions in order to ascertain whether any improvements in forecast accuracy could be gained.

Church, Jeffrey
PD October 1991. **TI** The Role of Limit Pricing in Sequential Entry Models. **AU** Church, Jeffrey; Ware, Roger. **AA** Church: University of Calgary. Ware: Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 836; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 45. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** L22. **KW** Firm Behavior. Industrial Organization. Entry Deterrence.
AB In this paper we establish a complete characterization of the strategic interaction of firms in sequential entry models. The limit price plays an important coordinating role in noncooperative sequential entry models. We show that for many firms in a large range of sequential entry equilibria, the limit price is effectively parametric, so that firms make investment decisions in a quasi-competitive manner. Entry deterrence is only pursued by firms at the beginning of the sequence if it is profitable; otherwise it is delegated to the last

firms to enter.

PD January 1992. **TI** Integration, Complementary Products and Variety. **AU** Church, Jeffrey; Gandal, Neil. **AA** Church: University of Calgary. Gandal: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 3-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 21. **PR** no charge. **JE** L13, L22, L86. **KW** Vertical Integration. Computers. Market Structure. Oligopoly.

AB This paper examines the incentives for integration when the market for both consumer durables and supporting or complementary services is oligopolistic. We find that the equilibrium industry structure will depend on the value that consumers place on variety. If the value of additional software is relatively small, the equilibrium industry structure is for both hardware firms to remain unintegrated, while if the value of additional software is relatively large, the equilibrium industry structure is for both hardware firms to integrate. Under the integrated industry structure, profits are lower, less varieties are provided, and hardware prices are lower than under the unintegrated industry structure.

Clare, A. D.

PD November 1991. **TI** The CAPM, the APT and a Contingent Claims Model of a Securities House. **AA** Southampton University. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9118; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 18. **PR** no charge. **JE** G12, G15. **KW** Asset Pricing. Securities.

AB As regulators turn their attention to harmonizing international regulations for securities houses it is becoming increasingly apparent that few attempts have been made to model these heterogeneous firms. This paper builds directly upon recent evidence for the APT in the U.K. contained in Clare and Thomas (1991). A contingent claims model of a securities house is developed which incorporates the APT and the CAPM (as a special case of the APT) and a measure of the probability of securities experiments show that the measure is sensitive to changes in the quality of the securities house balance sheet. More importantly, for practical purposes it is found that the CAPM version of the model is preferable to the APT version.

TI Cointegration and the Gains from International Portfolio Diversification in Bonds and Equities. **AU** Andrade, I. C.; Clare, A. D.; Thomas, S. H.

Clements, Benedict J.

PD December 1991. **TI** Growth Strategies, Employment, and Income Distribution in Brazil: An Input-Output Assessment. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/122; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** O15, O54, O11. **KW** Poverty. Brazil. Income Distribution. Employment.

AB With a view to analyzing the ability of different sectors to alleviate poverty, this paper analyzes the distributive and employment consequences of expanded production in 90 different sectors of the Brazilian economy. The paper shows that sectors that generate a large number of jobs per unit of capital are also those that distribute a large share of their income to low income groups. Sectors with good distributive performance are also likely to be the most efficient. Hence, it is possible to craft a growth strategy that simultaneously promotes efficiency, employment growth, and income equality.

Cohen, Gail

PD January 1992. **TI** Credit Cards and Buyer Price Protection. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 978; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 34. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** L13, D43. **KW** Credit Cards. Imperfect Competition. Prices.

AB In a duopoly model with homogeneous products, I show that allowing credit cards to offer buyer price protection will have both pro- and anti-competitive effects. Because of the buyer price protection, customers will be indifferent between purchasing an inexpensive and an expensive product as long as the difference in price is less than the cap on the refund allowed by the credit card. In order to obtain the entire market, a more efficient firm must charge prices lower than the marginal cost of the more inefficient firm. This is in contrast to the results obtained in pure Bertrand competition or when the firms themselves offer "meet the best price" clauses. The anti-competitive effects are similar to the results obtained when firms themselves offer "meet the best price" clauses. The anti-competitive effects strengthen as the cost difference between the firms decreases and as the cap on the refund allowed by the credit card increases.

Comley, B. R.

TI Economic Motivations for Limited Dependent and Qualitative Variable Models. **AU** Fry, Timothy R. L.; Brooks, Robert D.; Comley, B. R.; Zhang, J.

Cook, William

PD August 1991. **TI** An Implementation of the Generalized Basis Reduction Algorithm for Integer Programming. **AU** Cook, William; Rutherford, Thomas; Scarf, Herbert E.; Shallcross, David. **AA** Cook: Bell Communications Research. Rutherford: University of Western Ontario. Scarf: Yale University. Shallcross: IBM T.J. Watson Research Center. **SR** Yale Cowles Foundation Discussion Paper: 990; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 14. **PR** no charge. **JE** C61, C63. **KW** Linear Programming. Mixed Integer Problems.

AB In recent years many advances have been made in solution techniques for specially structured 0-1 integer programming problems. In contrast, very little progress has been made on solving general (mixed) integer problems. This, of course, is not true when viewed from the theoretical side: Lenstra (1981) made a major breakthrough, obtaining a polynomial-time algorithm when the number of integer variables is fixed. We discuss a practical implementation of a Lenstra-like algorithm, based on the generalized basis reduction method of Lovasz and Scarf (1988). This method allows us to avoid the ellipsoidal approximations required in Lenstra's algorithm. We report on the solution of a number of small (but difficult) examples, with up to 100 integer variables.

Our computer code uses the linear programming optimizer CPlex as a subroutine to solve the linear programming problems that arise.

Cooper, Russel J.

PD July 1991. **TI** A System of Demand Equations Satisfying Effectively Global Curvature Conditions. **AU** Cooper, Russel J.; McLaren, Keith R.; Parameswaran, Priya. **AA** Cooper: University of Western Sydney, Nepean. McLaren: Monash University. Parameswaran: Australian Treasury. **SR** Monash Department of Econometrics Working Paper: 7/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 21. **PR** no charge. **JE** D12. **KW** Demand Systems. Duality. Utility Theory.

AB The MPIGLOG specification of an indirect utility function leads to a parametric representation in terms of expenditure and two unit cost functions. Specification of these unit cost functions in terms of regular, flexible functions leads to the notion of an "effectively globally regular" system of demand equations. Three examples demonstrate the success of such a specification in achieving regularity and flexibility.

Cordella, Tito

PD October 1991. **TI** Trade Liberalization: Consumers Gains and Losses. **AA** Universite Catholique de Louvain and Universita di Bologna. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9146; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 16. **PR** not available. **JE** F15, O15, O52, F14. **KW** Common Market. European Community.

AB One of the most usual claims in the debate on European unification is that trade liberalization and a fortiori the creation of the Common Market is to the advantage of consumers in all the countries. In this paper we show that this statement should be tempered if the countries differ considerably with respect to per capita income. If this is the case it can happen that only the consumers of the richest countries gain from the creation of the common market; while, in the poorest countries, the firms gain but the consumers are worse off. The analysis confirms some worries about the short-run effects and the distributive problems induced by the economic integration of heterogeneous areas.

Cottarelli, Carlo

TI Government Ponzi Games and Debt Dynamics under Uncertainty. **AU** Bartolini, Leonardo; Cottarelli, Carlo.

Courchane, Marsha

TI Precommitment and Random Rates in Symmetric Duopoly: A New Theory of Multinational Production. **AU** Nickerson, David B.; Courchane, Marsha; Sadanand, Venkatraman.

Crabbe, Leland

PD January 1992. **TI** The Effect of a Rating Change on Commercial Paper Outstandings. **AU** Crabbe, Leland; Post, Mitchell A. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 185; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** G12, G14. **KW** Stock Market. Bond Market. Bonds.

AB The results of this paper suggest that downgrades of bank holding companies by Moody's are associated with abnormal run-offs in commercial paper outstandings. Cumulative declines average 15.7 percent in the first weeks after the downgrade and 12.2 percent in the ten weeks prior to the downgrade. Commercial paper outstandings also decline around downgrades of bond ratings, but only for bond downgrades that are accompanied by commercial paper downgrades. Outstandings increase after commercial paper upgrades, but the sample of upgrades is small and no increase is detected after bond rating upgrades.

Craig, R. Sean

PD February 1992. **TI** Fiscal Implications of the Transition from Planned to Market Economy. **AU** Craig, R. Sean; Mann, Catherine L. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 424; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 24. **PR** no charge. **JE** O57, E62, E63. **KW** Europe. Economic Reform. Taxes. Government Spending.

AB The transition from a centrally planned to a market based economic system should change fundamentally the roles of government and public enterprises in the East-Central European countries of Hungary, Poland and the Czech and Slovak Federated Republic. The size of government should diminish, and that of the private sector increase, as subsidies, which are difficult to justify at market prices, are phased out. Taxes in centrally planned economies tend to be highly distortionary relative to those in market economies, making a restructuring of the tax system desirable to improve efficiency and growth prospects. These changes, in combination with competitive pressures and the objective of eventual membership in the European Community, should cause expenditure and tax systems in East-Central Europe to resembly the Western European model. This paper attempts to establish the extent to which these systems are moving towards the Western European model, and the structure of taxes and expenditures likely to result.

Cremer, H.

PD September 1991. **TI** Investment in Local Public Services: Nash Equilibrium and Social Optimum. **AU** Cremer, H.; Marchand, M.; Pestieau, P. **AA** Cremer: Virginia Polytechnic Institute. Marchand: IAG and Universite Catholique de Louvain. Pestieau: Universite de Liege and Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9138; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 21. **PR** not available. **JE** H41, D71, H73. **KW** Social Welfare Function. Public Good. Externalities. Spatial Economics.

AB Within a two-community setting, we study the optimal provision of a local public good which is indivisible and generates interjurisdictional spillovers. Each community has to decide whether or not to invest in this public good. The resulting Nash equilibrium is compared with an optimal solution based on a Benthamian welfare function. We then analyze to what extent conditional grants are able to restore optimality when needed.

Crettol, Vincent

PD September 1990. **TI** Attributions des Permis de Travail: Un Systeme D'Encheres? **AA** Universite de Lausanne. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 9107; Departement d'econometrie et d'economie politique, Universite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 23. **PR** no charge. **JE** F22, J22, J61. **KW** Immigration. Labor Mobility. Work Permits. Switzerland.

AB The first part of the paper describes the drawbacks of the current Swiss labor migration policy. In the second part, the author examines if an auction on work permits would be better adapted, and develops two possible types of auction systems. Paper in French.

Cristea, Carrie

TI Estimates of the Effect of FAS 106 on Corporate Earnings. **AU** Warshawsky, Mark J.; Mittelstaedt, H. Fred; Cristea, Carrie.

Currie, Janet

PD January 1992. **TI** Is Arbitration Addictive? Evidence from the Laboratory and the Field. **AU** Currie, Janet; Farber, Henry S. **AA** Currie: Massachusetts Institute of Technology. Farber: Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 295; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 9. **PR** $2.00. **JE** J52. **KW** Arbitration. Bargaining.

AB We test for the presence of an addictive effect of arbitration (positive state dependence) using data both from a laboratory bargaining experiment and from the field. We find no evidence of state dependence in the experimental data, and we find weak evidence of positive state dependence in the field data on teachers in British Columbia. Hence, we reject the view that use of arbitration per se leads to state dependence either through reducing uncertainty about the arbitration process or through changing the bargaining parties perceptions about their opponents. The results further suggest that an explanation for any positive state dependence we find in the British Columbia field data must lie in an aspect of the arbitration process which is not captured by our simple experimental design.

Daniel, Kermit

PD March 1992. **TI** Does Marriage Make Men More Productive? **AA** University of Chicago. **SR** Economics Research Center/NORC Population Research Center Discussion Paper: 92-2; Economics Research Center, NORC/University of Chicago, 1155 E. 60th Street, Chicago, IL 60637. **PG** 39. **PR** $2.00, send requests to NORC Librarian. **JE** J12, J31, J24. **KW** Marriage. Wage Differentials. Labor Productivity.

AB Married men receive higher wages than single men. It is well-documented that this difference remains even when one controls for a vast array of worker and job traits. The remaining marriage premium is as large as differences associated with race or union status, and it exhibits features suggesting that it reflects systematic differences in productivity between married and single men. In order to explore whether being married causes men to be more productive, I develop and test a model of productivity augmentation within marriage. The model is based on the idea that whatever the exact mechanism, productivity augmentation is likely to require the input of the spouse's time. The model produces several testable implications, and preliminary empirical results from the National Longitudinal Survey of Youth support the model. It is consistent with differences in the marriage premium associated with sex and race, as well as with individual-level variation in the marriage premium and with its aggregate time series behavior.

de Caen, D.

PD November 1991. **TI** The Maximum Size of 4- and 6-Cycle Free Bipartite Graphs on (m,n) Vertices. **AU** de Caen, D.; Szekely, Laszlo A. **AA** de Caen: Queen's University. Szekely: Eotvos University, Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 91733-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 7. **PR** no charge. **JE** C60. **KW** Graph Theory. Bipartite Graphs.

AB Let f(n,m) denote the maximum size of a bipartite graph, whose vertex sets are of sizes (n,m), not containing any 4- or 6-cycle. In this paper we prove f(n,m) = O[(n to the 2/3)(m to the 2/3)].

de Janvry, Alain

TI Agricultural Trade Liberalization for the Low Income Countries: A General Equilibrium-Multimarket Approach. **AU** Sadoulet, Elisabeth; de Janvry, Alain.

De Long, J. Bradford

PD November 1991. **TI** The Marshall Plan: History's Most Successful Structural Adjustment Program. **AU** De Long, J. Bradford; Eichengreen, Barry. **AA** De Long: National Bureau of Economic Research and Harvard University. Eichengreen: University of California at Berkeley, National Bureau of Economic Research, and Center for Economic Policy Research. **SR** University of California at Berkeley Working Paper in Economics: 91-184; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 44. **PR** $3.50 plus applicable sales tax. **JE** F35, F01. **KW** Foreign Aid. Europe. Marshall Plan.

AB Perhaps the greatest success of the post-World War II period was the establishment of representative institutions and "mixed economies" in that half of Europe not occupied by the Red Army. A similar opportunity is open today in Eastern Europe, with the possibility of replacing Stalinist systems with market-oriented industrial democracies. The future will judge politicians today as extraordinarily farsighted if they are only half as successful as Acheson and his peers. Many argue that the West should seize this opportunity by extending aid to the nations of Eastern Europe in exchange for a commitment to reform. Advocates evoke as a precedent the Marshall Plan - the program that transferred $13 billion in aid from the United States to Western Europe in the years from 1948 to 1951. They argue that we should emulate the steps taken by the founders of the postwar order half a century ago by extending aid to Eastern Europe. Any such argument by analogy hinges on two links. First, that the Marshall Plan in fact played a key role in inaugurating the postwar era of prosperity and political stability in Western Europe. Second, that the lessons of the postwar era translate to present-day Eastern Europe. In this paper we examine both propositions. The bulk of this paper evaluates the Marshall Plan.

de Palma, Andre

TI Multiproduct Firms: A Nested Logit Approach. **AU** Anderson, Simon P.; de Palma, Andre.

TI The Missing Equilibria in Hotelling's Location Game. **AU** Bester, Helmut; de Palma, Andre; Leininger, Wolfgang; von Thadden, Ernst-Ludwig; Thomas, Jonathan.

TI Properties of Dynamic Traffic Equilibrium Involving Bottlenecks, Including a Paradox and Metering. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin.

TI Information and Usage of Congestible Facilities under Free Access. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin.

Deacon, Robert T.

PD August 1991. **TI** Rent-Seeking and the Common Pool. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 3-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 36. **PR** no charge. **JE** Q25, D61, Q15, Q28. **KW** Water Conservation. Irrigation. Water. Government Policy. Natural Resources.

AB The act of withdrawing a resource from a common pool is modeled as a transaction, and in equilibrium the marginal transaction cost clears the market by equating supply and demand for the common resource. Given a transaction technology, the long-run equilibrium level of welfare is determined. The structure of the transaction cost can be affected by constraints on the inputs used to withdraw it from the common pool. Constraints that are optimal in the second-best sense of maximizing welfare, given that the resource itself is unpriced, are characterized. The model is then used to examine the welfare effects of several government policies that affect the individual's incentive to extract groundwater from the common aquifers. Several common government policies, such as efforts to improve the technical efficiency of pumps, attempts to reduce the percolation of applied irrigation water into aquifers, government provision of roads for shipping crops to market, and prescriptions to price surface sources of irrigation water at marginal cost, are found to reduce welfare in the long-run.

PD September 1991. **TI** Taxation, Depletion, and Welfare: A Simulation Study of the U.S. Petroleum Resource. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 2-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 30. **PR** no charge. **JE** H21, Q32, Q38. **KW** Exhaustible Resources. Energy. Corporate Taxes.

AB Exhaustible resources in the U.S. are subject to taxes on property value, production, and corporate income. As applied in practice each tax can cause high-grading -- the elimination of incentives to explore, develop, and produce marginal resources -- and each can tilt the time path of production towards the present or the future. The potential for such tax-induced distortions has been shown in the theoretical literature. Due to the dynamic nature of resource exploitation and the resulting complexity of models developed to study it, however, purely theoretical exercises have been unable to provide detailed results of a sort that could help guide tax policy. The present paper develops a simulation model of the U.S. petroleum resource and uses it to study the effects of taxation on exploration and production.

PD January 1992. **TI** Controlling Tropical Deforestation: An Analysis of Alternative Policies. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 4-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 52. **PR** no charge. **JE** Q23, Q28, O13. **KW** Developing Countries. Conservation. Natural Resources. Forestry. Economic Development. Property Rights.

AB The impact of government decisions on the fate of tropical forests and other environmental resources in developing countries is examined. The role of monitoring and enforcement costs in determining the scope and operation of property rights is explored. Prescriptions to redefine nominal property rights in ways that appear to correct inefficiencies are seen to address symptoms of misallocation, rather than fundamental causes. A simple conceptual framework is developed to assess the effects of a variety of public policies, such as tax incentives to promote economic development, trade protection for domestic industries, and policies that enhance employment opportunities.

Dhrymes, Phoebus J.

TI Productivity Dynamics: U.S. Manufacturing Plants, 1972-1986. **AU** Bartelsman, Eric J.; Dhrymes, Phoebus J.

Di Nicola, Fernando

TI Tax Policy and Income Redistribution in Italy. **AU** Lugaresi, Sergio; Di Nicola, Fernando.

Diamantaras, Dimitrios

PD October 1991. **TI** Ratio Equilibrium in the Presence of Many Private Goods. **AU** Diamantaras, Dimitrios; Wilkie, Simon. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 73; Room 2Q-370, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 15. **PR** not available. **JE** D51, H41. **KW** Public Goods. Prices.

AB A public good is one for which one consumer's use does not affect the amount that other consumers can use, for example, knowledge obtained through basic research, or national defense. A solution to the public goods problem is a map that associates with each economy a list of production levels for the public goods, and allocates the costs among the users. We introduce an extension of Kaneko's ratio equilibrium in the case economies with many public and many private goods. Specifically we employ a general production model where public goods may be inputs into the production of public goods. Using the accounting concept of transfer prices, we propose a definition of ratio equilibrium that generalizes Kaneko's. We prove that, under standard assumptions, ratio equilibria exist, are Pareto efficient, and are core allocations, and so every subset of the users benefits from the provision of the public goods.

Diamond, Peter

PD January 1992. **TI** Economic Aspects of Optimal Disability Benefits. **AU** Diamond, Peter; Sheshinski, Eytan. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 601; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive,

Cambridge, MA 02139. **PG** 22. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** H55, J22. **KW** Labor Supply. Disability Benefits. Social Security. Retirement.
AB While it has long been recognized that disability benefits also affect labor supply, we are unaware of any studies of the optimal design of disability and retirement benefits on labor supply. This paper begins such a study, using a simple static model to analyze optimal levels of disability and welfare (or retirement) benefits with recognition of the imperfect nature of disability evaluation.

TI The Flow Approach to Labor Markets. **AU** Blanchard, Olivier Jean; Diamond, Peter.

Diwan, Ishac

TI Debt Buybacks Signal Sovereign Countries' Creditworthiness: Theory and Tests. **AU** Acharya, Sankarshan; Diwan, Ishac.

PD March 1992. **TI** Debt Reduction, Adjustment Lending, and Burden Sharing. **AU** Diwan, Ishac; Rodrik, Dani. **AA** Diwan: The World Bank. Rodrik: Stanford University, Harvard University, and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4007; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $5.00. **JE** F34, F41, F21. **KW** Debt Overhang. Public Debt. International Investment.
AB We argue that the disincentive effect of a debt overhang is generally small and consequently that debt reduction does not lead to important efficiency gains on this account. Instead, we develop a framework that highlights the inefficiency created by the liquidity constraint faced by over-indebted countries. Often, adjustment/investment opportunities that are profitable at the world interest rate cannot be undertaken for lack of sufficient funds. New creditors are deterred from investing as they expect to be "taxed" by the old creditors who stand to gain disproportionately. This leads to an inefficient situation when a class of new creditors have a comparative advantage relative to the old creditors. We focus on the time inconsistency introduced by the shortage of liquidity. New (unconditional) loans will be consumed rather than invested. In this context conditional lending can release the liquidity constraint in a time consistent way and lead to efficiency gains that can be shared between the debtor, the old creditors, and the new creditors. The role of debt reduction then is to create the "headroom" needed for these new and more efficient creditors to step in.

Dixit, Avinash

PD August 1991. **TI** Switching Costs, Sectoral Adjustments and the Welfare-Relevance of Pecuniary Externalities. **AU** Dixit, Avinash; Rob, Rafael. **AA** Dixit: Princeton University. Rob: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-30; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 42. **PR** no charge. **JE** O33, J62, J24. **KW** Technology. Occupational Choice. Labor Mobility.
AB We consider a two-sector economy subject to recurring technological shocks. The shocks affect earnings in the two sectors, creating incentives for workers to switch occupations. We assume that switching is costly (for instance, training costs). Individuals are risk averse and cannot diversify their income risk. We characterize the rational expectations equilibrium of the economy, and illustrate the extent to which uncertainty and fixed switching costs magnify the degree of labor immobility. We also study a constrained social planner's program with constraints analogous to those in the rational expectations equilibrium. Assuming that individuals are risk averse, we show that the constrained optimum exhibits a greater degree of labor mobility than the equilibrium.

PD December 1991. **TI** Risk-Sharing, Adjustment and Trade. **AU** Dixit, Avinash; Rob, Rafael. **AA** Dixit: Princeton University. Rob: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-29; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 34. **PR** no charge. **JE** F13, F22, F41. **KW** Labor Mobility. Immigration. Open Economy. Trade Policy.
AB This paper considers a dynamic model of labor mobility in a small open economy with stochastic terms of trade. Migration is costly and markets for labor income risk are absent. Risk aversion slows down the movement of the most productive workers into the risky sector, and speeds up that of the least productive ones. The effect of trade policy on risk-bearing is examined. A given policy may improve social welfare for some initial conditions and lower it for others. Thus policy design for such an economy is context specific and can be time inconsistent.

Dixon, L.

TI Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative. **AU** Hosek, Susan D.; Anderson, M.; Dixon, L.; Thomas, N.; Zwanziger, J., et. al.

Domowitz, Ian

PD April 1992. **TI** A Consistent Test of Stationary Ergodicity. **AU** Domowitz, Ian; El-Gamal, Mahmoud A. **AA** Domowitz: Northwestern University. El-Gamal: California Institute of Technology. **SR** Caltech Social Science Working Paper: 794; Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 13. **PR** no charge. **JE** C22, C63. **KW** Markov Process. Time Series Model. Ergodic Theory.
AB A formal statistical test of stationary-ergodicity is developed for known Markovian processes. This makes it applicable to testing models and algorithms, as well as estimated time series processes ignoring the estimation error. The analysis is conducted by examining the asymptotic properties of the Markov operator on density space generated by the transition in the state space. The test is developed under the null of stationary-ergodicity, and it is shown to be consistent against the alternative of nonstationary-ergodicity. The test can be easily performed using any of a number of standard statistical and mathematical computer packages.

Donaldson, David

TI Measuring the Costs of Children: A Theoretical Framework. **AU** Blackorby, Charles; Donaldson, David.

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Drabenstott, Mark

TI The Realignment in Farm Lending: Strategic Issues for the 1990's. **AU** Barkema, Alan; Drabenstott, Mark.

Dreze, Jean

PD September 1991. **TI** Hunger and Poverty in Iraq, 1991. **AU** Dreze, Jean; Gazdar, Haris. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: DEP/32; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 65. **PR** no charge. **JE** O53, I32, H56. **KW** War. Sanctions. Shortages. Purchasing Power. Food. Poverty.

AB More than a year of sanctions, war and internal conflicts have had a disastrous impact on the economy of Iraq and the well-being of its population. The destruction of the economic infrastructure and an acute shortage of imported inputs have caused a considerable decline of output and wage employment. Overall, money earnings have remained more or less unchanged for the majority of the population since August 1990. Over the same period, consumer prices have sharply increased, due to trade restrictions, exchange rate depreciation and reductions in subsidies. The food price index has risen by 1,500 to 2,000 per cent. Correspondingly, real earnings have fallen to less than 7 per cent of their pre-crisis level, in terms of purchasing power over food. The paralysis of economic activity and basic public services, inadequately compensated by food rationing, has led to widespread nutritional deprivation and a sharp increase in mortality. While some improvement is taking place in particular sectors, the prospects of sustained economic recovery are bleak if sanctions continue in their present form.

Duncan, Alan

TI Taxation in Empirical Labour Supply Models: Lone Mothers in the U.K. **AU** Blundell, Richard; Duncan, Alan; Meghir, Costas.

Dunne, Timothy

PD November 1991. **TI** Technology Usage in U.S. Manufacturing Industries: New Evidence from the Survey of Manufacturing Technology. **AA** U.S. Bureau of the Census. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 91-7; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 16. **PR** no charge. **JE** O32, L60. **KW** R&D. Technological Change. Manufacturing.

AB Using a new data set on technology usage in U.S. manufacturing plants, this paper describes how technology usage varies by plant and firm characteristics. The paper extends the previous literature in three important ways. First, it examines a wide range of relatively new technologies. Second, the paper uses a much larger and more representative set of firms and establishments than previous studies. Finally, the paper explores the role of firm R&D expenditures in the process of technology adoption. The main findings indicate that larger plants more readily use new technologies, plants owned by firms with high R&D-to-sales ratios adopt technologies more rapidly, and the relationship between plant age and technology usage is relatively weak.

Durlauf, Steven N.

PD February 1992. **TI** Local Versus Global Convergence across National Economies. **AU** Durlauf, Steven N.; Johnson, Paul A. **AA** Durlauf: Stanford University and National Bureau of Economic Research. Johnson: University of Oregon. **SR** National Bureau of Economic Research Working Paper: 3996; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $5.00. **JE** F41, F43, O47. **KW** Growth Model. Economic Growth. Economic Development.

AB This paper reexamines the ability of the Solow-type growth models to explain the pattern of cross-country growth rates. Recent authors, most notably Mankiw, Romer and Weil [1990], have argued that differences in national growth rates are compatible with the view that each country has access to a common, neoclassical aggregate production function. Such models imply that, conditional on population growth and savings rates, disparate economies are converging over time to the same level of per capita output. We argue that cross-country growth is better explained by a model of local versus global convergence. Countries converge locally in the sense that economies with similar initial conditions tend to converge to one another. However, we find little evidence of convergence across economies with substantially different initial conditions as measured by per capita output or literacy rates.

Eckaus, R. S.

PD December 1991. **TI** Central Issues in the Negotiations on Limiting Greenhouse Warming. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 599; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139. **PG** 25. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** F01, Q25, Q28. **KW** Pollution. Negotiations. Global Outlook. Air Pollution. Greenhouse Effect.

AB The three central questions in the international negotiations on greenhouse warming are: (1) How much global warming should be tolerated? (2) How much responsibility for past emissions should be assigned to present generations? (3) How should quotas for future additions to total radiative forcing be allocated among countries? In principle, if these issues could be settled, the "command and control" procedure of regulation of the annual rate of emissions by each country, which has, so far been the focus of attention, would be unnecessary. Determination of annual rates of greenhouse gas emissions could and should be left to individual countries. Sales or leases of emissions "permits" among countries may be used to reallocate emissions rights. The international negotiations may be thought as a means of asserting international control of the characteristic atmosphere responses to greenhouse gas accumulations.

TI Growth and Welfare Losses from Carbon Emissions Restrictions: A General Equilibrium Analysis for Egypt. **AU** Blitzer, C. R.; Eckaus, R. S.; Lahiri, S.; Meeraus, A.

Edison, Hali J.

PD March 1992. **TI** Purchasing Power Parity and Uncovered Interest Rate Parity: The United States 1974-1990. **AU** Edison, Hali J.; Melick, William R. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 425; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 14. **PR** no charge. **JE** F31, E43, E32. **KW** Purchasing Power Parity. Exchange Rate. Interest Rate. Prices. International Finance.

AB This paper examines the factors behind long-run movements of the dollar. Most recent work has concluded that structural exchange rate models explain only a small proportion of exchange rate movements. However, many economists still find the theory that links exchange rates and interest rates persuasive. We investigate the relationship between exchange rates, prices, and interest rates using multivariate maximum likelihood cointegration tests. In particular, we explicitly test for purchasing power parity and uncovered interest rate parity when using nominal exchange rates, and implicitly test for these two hypothesis when using real exchange rates. The conclusion that emerges from this study is that we almost identify at least one cointegrating vector among the variables, but we can not verify the theoretical models that show how exchange rates and interest rates are linked.

Eichengreen, Barry

PD October 1991. **TI** European Monetary Unification and the Regional Unemployment Problem. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 91-181; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 32. **PR** $3.50 plus applicable sales tax. **JE** F33, F41, E24, F36. **KW** Monetary Unification. Exchange Rate. Economic Integration. Unemployment.

AB In this paper I consider the implications of currency unification for regional unemployment differentials within countries. Why should the real exchange rate have implications for regional unemployment differentials within EC member states? The real exchange rate is the relative price of traded and non-traded goods. Insofar as different regions specialize in the production of traded or non-traded goods, a change in the real exchange rate will have a differential impact on their economic condition. In this paper I analyze the regional unemployment problems that arise within Great Britain and Italy as a result of changes in the real exchange rate. One reason for focusing on these two countries is that loss of monetary autonomy is a new development for both. Sterling and the lira are newly tied to the DM. In the first half of the 1980's Italy repeatedly devalued the lira against the other EMS currencies in order to address her inflation and competitiveness problems; with the removal of capital controls and reaffirmation of her commitment to pegged exchange rates, this is now a more difficult option.

TI The Marshall Plan: History's Most Successful Structural Adjustment Program. **AU** De Long, J. Bradford; Eichengreen, Barry.

TI Shocking Aspects of European Monetary Unification. **AU** Bayoumi, Tamim; Eichengreen, Barry.

TI Is There a Conflict between EC Enlargement and European Monetary Unification? **AU** Bayoumi, Tamim; Eichengreen, Barry.

PD January 1992. **TI** The Marshall Plan: Economic Effects and Implications for Eastern Europe and the Soviet Union. **AU** Eichengreen, Barry; Uzan, Marc. **AA** Eichengreen: University of California at Berkeley, National Bureau of Economic Research, and Centre for Economic Policy Research. Uzan: University of Paris. **SR** University of California at Berkeley Working Paper in Economics: 92-189; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 108. **PR** $3.50 plus applicable sales tax. **JE** F35, N14, F33. **KW** International Policy. Foreign Aid. Europe.

AB The present paper is a first attempt to evaluate the Marshall Plan's economic effects. The central questions have obvious relevance for the current situation in Eastern Europe and the Soviet Union. Was the Marshall Plan instrumental in initiating European economic recovery from World War II? Did it not only initiate the recovery but also have permanent growth effects? How important were the conditions attached to U.S. aid in shaping its effects? Could a concerted program of foreign aid have a similar impact in Eastern Europe and the Soviet Union today?.

El-Gamal, Mahmoud A.

TI A Consistent Test of Stationary Ergodicity. **AU** Domowitz, Ian; El-Gamal, Mahmoud A.

Emery, Robert F.

PD March 1992. **TI** Central Banks' Use in East Asia of Money Market Instruments in the Conduct of Monetary Policy. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 426; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 31. **PR** no charge. **JE** E52, E58, E44. **KW** Central Bank. Monetary Policy. Money Market.

AB The paper examines the greater use in the past decade of money market instruments in the conduct of monetary policy by the central banks, or their equivalent, in six of the main East Asian developing economies. Some of these economies have been successful in using various money market instruments to control liquidity, while others have been much less successful. A common theme in the case of the successful economies has been one of employing money market instruments that have yields based on actual market demand and supply. In those cases where the yields have been unrealistic due to not being based on market conditions, the open market operations have generally not been successful.

Engel, Charles

PD December 1990. **TI** Tests of Mean-Variance Efficiency of International Equity Markets. **AU** Engel, Charles; Rodrigues, Anthony. **AA** Engel: University of Virginia and Federal Reserve Bank of Kansas City. Rodrigues: Federal Reserve Bank of New York. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 90-05; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 25. **PR** no charge. **JE** G15, G12. **KW** Asset Pricing. Asset Market.

AB The mean-variance optimizing model is a popular description of investors' behavior, but one which has received mixed support empirically. As applied to international asset markets, it implies that demand for foreign assets depends on expected returns and variability of returns, which may arise from exchange rate risk and other factors. In this paper we propose some Wald tests of the mean-variance models, and apply the tests to a ten country asset pricing model of equities.

PD December 1990. **TI** On the Foreign Exchange Risk Premium in a General Equilibrium Model. **AA** University of Virginia and Federal Reserve Bank of Kansas City.

SR Federal Reserve Bank of Kansas City Research Working Paper: 90-06; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 30. **PR** no charge. **JE** F31, D58. **KW** Cash-in-Advance. Monetary Shocks. Output Shocks.

AB This paper investigates the nature of the foreign exchange risk premium in the Lucas cash-in-advance general equilibrium model. The paper first reviews the definition of the risk premium, and points out some weaknesses of the definition generally used. The paper then shows that the primary source of foreign exchange risk is from the covariance of monetary shocks with real output shocks. It is noted that several studies have assumed this covariance is zero, and hence assumed away the major (and in some cases, the only) source of risk in the models they study. Finally, the paper argues that the size of the risk premium generated from this model with time separable preferences is likely to be very small, because it involves terms that are about the order of magnitude of covariances of money growth rates and output growth rates (which are small even if their correlations are high).

PD December 1990. **TI** The Risk Premium and the Liquidity Premium in Foreign Exchange Markets. **AA** University of Virginia and Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 90-07; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 28. **PR** no charge. **JE** F31, G12, G15. **KW** General Equilibrium Model. Foreign Exchange. Efficiency Hypothesis.

AB Tests of the risk-neutrality, efficiency hypothesis in foreign exchange markets generally do not take account of the implications of the degree of liquidity of financial assets. In particular, interest bearing assets are less liquid than money, and their effective return relative to money is therefore lower than their nominal return. These issues are explored in the context of Svensson's cash-in-advance general equilibrium models. Expressions for the forward exchange rate and the foreign exchange risk premium are derived which include liquidity costs.

PD July 1991. **TI** Is Real Exchange Rate Variability Caused by Relative Price Changes? An Empirical Investigation. **AA** University of Virginia and Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-02; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 42. **PR** no charge. **JE** F31, E31, O57. **KW** Exchange Rate. Prices.

AB The past two decades have witnessed extremely high variability in real exchange rates. If this variability arises from relative supply and demand shocks with no frictions in setting prices, one would expect much variability in relative prices of different goods within the same country, but not much variability in the price of a good in one country relative to the price of the same good in another country (particularly if the good is easily traded). This hypothesis is examined empirically using consumer price data from six countries. The data show that the frictionless model does not describe medium to high frequency movements in real exchange rates. Evidence is also presented on the difficulty of making sensible conclusions from the data about low frequency movements. The data argue for the primary of such factors as costs of setting prices, transportation costs and adjustment costs in models of real exchange rates.

PD September 1991. **TI** Can the Markov Switching Model Forecast Exchange Rates? **AA** University of Washington and Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-04; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 38. **PR** no charge. **JE** F31, F47. **KW** Exchange Rate. Efficient Markets.

AB A Markov switching model is fit for eighteen exchange rates at quarterly and monthly frequencies. The model fits well in-sample at the quarterly frequency for many exchange rates. By the mean squared error criterion, the Markov model does not generate superior forecasts to a random walk or the forward rate. There appears to be some evidence that the forecasts of the Markov model are superior at predicting the direction of change of the exchange rate.

Engle, Robert F.

TI Multivariate Simultaneous Generalized ARCH. **AU** Baba, Yoshihisa; Engle, Robert F.; Kraft, Dennis F.; Kroner, Kenneth F.

Erdos, Peter L.

PD October 1991. **TI** On Weighted Multiway Cuts. **AU** Erdos, Peter L.; Szekely, Laszlo A. **AA** Erdos: University of Groningen. Szekely: Eotvos University, Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 91727-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 17. **PR** no charge. **JE** C61, C63, C60. **KW** Algorithm. Linear Programming.

AB We provide an algorithm to find a minimum weight multiway cut in an edge-weighted graph, whose cycles are covered by the vertices that must be separated by the cut. A min-max theorem is derived, it implies that a related covering linear program has an integer solution for the graphs above. We conjecture that this linear program has an integer solution for all graphs, this conjecture would imply NP=co-NP.

Espinosa, Marco

TI The Inflationary Effects of the Use of Reserve Ratio Reductions, or Open Market Purchases, to Reduce Market Interest Rates: A Theoretical Comparison. **AU** Russell, Steven; Espinosa, Marco.

Eswaran, Mukesh

PD August 1991. **TI** A Theory of Real Wage Growth. **AU** Eswaran, Mukesh; Kotwal, Ashok. **AA** University of British Columbia. **SR** University of British Columbia Department of Economics Discussion Paper: 91-33; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 45. **PR** $.20 per page Canadian to other than educational institutions. **JE** O11, O15, D31, E24. **KW** Wages. Economic Development. Wealth Distribution. Consumption.

AB A general equilibrium framework is presented to explain a variety of development experiences. The demand side is modeled by assuming a system of preferences that incorporate Engel's Law in a stark way. The framework explains why poverty might be impervious to industrial progress in some countries. It also explains why countries exporting manufactured goods have been more successful in raising real

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wages in their economies than countries exporting primary goods. The framework indicates how the initial conditions in terms of the level and distribution of wealth influence the growth of real wages in an economy.

Evans, Martin D. D.

PD September 1991. **TI** Do Expected Shifts in Inflation Policy Affect Real Rates? **AU** Evans, Martin D. D.; Lewis, Karen K. **AA** Evans: New York University. Lewis: University of Pennsylvania and National Bureau of Economic Research. **SR** New York University Salomon Brothers Center Working Paper: S-91-47; 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** 46. **PR** $5.00. **JE** E31, E43, E37. **KW** Interest Rate. Expectations. Forecasting. Prices.

AB Empirical studies have found that real interest rates and inflation rates are negatively correlated, an observation that has led to various theoretical explanations. This paper empirically examines a different explanation. We ask whether economic agents incorporate anticipated shifts in inflation policy into nominal interest rates. If so, then a shift to lower inflation will lead to systematically high ex post real rates. We use new time series techniques to test the hypothesis of no anticipated shifts in inflation policy. Surprisingly, we reject this hypothesis. To evaluate the impact of anticipated switches in policy, we simulate the effects of inflationary expectations upon real rates using a Markov switching model of inflation. We find that inflation forecasts based upon this rational model behave similarly to inflation forecasts from the Livingston survey. Measuring ex ante real rates with these expectations, permanent movements in real rates and inflation are no longer negatively correlated.

PD December 1991. **TI** The Response of Exchange Rates to Permanent and Transitory Shocks under Floating Exchange Rates. **AU** Evans, Martin D. D.; Lothian, James R. **AA** Evans: New York University. Lothian: Fordham University. **SR** New York University Salomon Brothers Center Working Paper: S-92-1; 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** 21. **PR** $5.00. **JE** F31, E44. **KW** Exchange Rate. Purchasing Power Parity.

AB Traditional explanations of exchange rate behavior have not fared well over the past two decades. Simple time series models have generally outperformed theoretically based models of exchange rates in forecasting nominal exchange rates during the floating rate period. Movements in real and nominal exchange rates have been highly correlated. Perhaps most importantly, in all but a few instances, researchers have been unable to reject the hypothesis that real exchange rates have followed random walks during this period. As a consequence, purchasing power parity is now regarded by many, if not most, researchers as of virtually no use empirically. To explain exchange rate movements under the float, there has been widespread resort to models in which real shocks play the dominant role. Our purpose in this paper is to investigate these issues.

Evans, Merran A.

PD November 1991. **TI** Burr Critical Value Approximations for Tests of Autocorrelation and Heteroskedasticity. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 13/91; Department of Econometrics, Faculty of Economics, Commerce and Management, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 22. **PR** no charge. **JE** C12, C22, C52. **KW** Linear Regression Model. Burr Distributions.

AB The accuracy of Burr approximations of critical values and p-values is evaluated for tests of autocorrelation and heteroskedasticity in the linear regression model.

Fair, Ray C.

PD February 1992. **TI** The Cowles Commission Approach, Real Business Cycle Theories, and New Keynesian Economics. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1004; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 22. **PR** no charge. **JE** B41, B22. **KW** Macroeconomic Models. Specification Testing. Model Specification.

AB The Cowles Commission approach is reviewed and compared to the approaches of real business cycle (RBC) theorists and new Keynesian economists. It is argued that RBC models are not tested in a serious enough way and that the new Keynesian literature is not empirical enough for testing even to be a serious possibility. Macroeconomics seems to be moving away from its traditional empirical basis, which is sad. This paper argues for returning to the path that was abandoned by most macroeconomists around 1970, namely the specification and testing of structural macroeconometric models.

Farber, Henry S.

TI Is Arbitration Addictive? Evidence from the Laboratory and the Field. **AU** Currie, Janet; Farber, Henry S.

Fare, Rolf

PD September 1991. **TI** The Malmquist Productivity Index and the Circular Test. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9142; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 7. **PR** not available. **JE** D24, C43. **KW** Distance Functions. Productivity. Productivity Index.

AB The Malmquist productivity (change) index in general does not satisfy the so-called Circular Test. In this paper a necessary and sufficient condition on the parent distance function is obtained for the Malmquist index to meet the circular test.

Faust, Jon

PD April 1992. **TI** Whom can We Trust to Run the Fed? Theoretical Support for the Founders' Views. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 429; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** E58, E52. **KW** Monetary Policy. Inflation. Federal Reserve.

AB The Federal Reserve Act erected a unique structure of government decision-making, independent with elaborate rules balancing internal power. Historical evidence suggests that this outcome was a response to public conflict over inflation's redistributive powers. This paper documents and formalizes this argument: in the face of conflict over redistributive inflation, policy by majority can lead to policy that is worse, even for the majority, than obvious alternatives. The bargaining solution of an independent board with properly balanced interests leads to a better outcome. Technically, this paper extends earlier work in making policy preferences fully endogenous and in extending the notion of equilibrium policy to such a world. Substantively, this work provides a simple grounding of policy preferences linking game theoretic models of policy to historical evidence about the formation of an independent monetary authority.

Fershtman, Chaim

PD October 1991. **TI** Random Liquidity, Price Dispersion and Inflation. **AU** Fershtman, Chaim; Fishman, Arthur. **AA** Fershtman: Tel Aviv University. Fishman: Tel Aviv University and University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-32; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 26. **PR** no charge. **JE** E13, E31, E21. **KW** Inflation. Prices. Consumption.

AB This paper investigates the relationship between inflation, equilibrium price dispersion and consumer welfare. We consider an economy with a search good and a competitively supplied good. The market for the search good is characterized by price dispersion due to incomplete information. Since the price of this good is random, consumers cannot predict the cost of future consumption. Given that consumption requires retaining nominal resources, which are subject to inflationary erosion, this uncertainty has the effect of reducing the incentives to save for future consumption. We refer to this effect as the random liquidity effect. In equilibrium, however, firms internalize this disincentive to save, thereby affecting the shape of the real price distribution.

TI The Effects of Insider Trading on Insiders' Effort in Good and Bad Times. **AU** Bebchuk, Arye Lucian; Fershtman, Chaim.

Fiorito, Riccardo

TI Analysis of U.S. Real GNP and Unemployment Interactions: State Space Approach. **AU** Aoki, Masanao; Fiorito, Riccardo.

Fishman, Arthur

PD September 1991. **TI** Planned Obsolescence as an Engine of Technological Progress. **AU** Fishman, Arthur; Gandal, Neil; Shy, Oz. **AA** Fishman: University of Pennsylvania and Tel Aviv University. Gandal and Shy: Tel Aviv University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-33; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 19. **PR** no charge. **JE** O31, O21, P11, L21. **KW** Capitalism. Product Quality. Product Innovation. Technology.

AB Critics of capitalism contend that products are designed to have uneconomically short lives, with the intention of forcing consumers to repurchase to frequently. This phenomenon is commonly referred to as "planned obsolescence." In this paper, we show that planned obsolescence may be a necessary condition for the achievement of technological progress and that a pattern of rapidly deteriorating products and fast innovation may be preferred to long-lasting products and slow innovation.

TI Random Liquidity, Price Dispersion and Inflation. **AU** Fershtman, Chaim; Fishman, Arthur.

PD November 1991. **TI** The Durability of Information, Market Efficiency and the Size of Firms: Search with Repeated Transactions. **AU** Fishman, Arthur; Rob, Rafael. **AA** Fishman: Tel Aviv University. Rob: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-39; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 26. **PR** no charge. **JE** D21, D24, L11. **KW** Search Model. Production. Firm Behavior.

AB We consider a dynamic model of search where firms are heterogeneous with respect to their unit costs of production. For an individual firm, these costs vary from period to period (as a consequence of idiosyncratic technology shocks, perhaps), but for the market as a whole the distribution of costs remains intact. Despite this constancy we show that both the price level as well as the efficiency of market outcomes depends on the variability of costs--at the individual-firm level. We also show how the history of cost realizations segments the set of firms into large and small ones. Hence, firms which are ex-ante identical end up having different size clientele, and different profitabilities. Finally, we show that steady-state equilibria are highly indeterminate.

PD January 1992. **TI** The Durability of Information, Market Efficiency and the Size of Firms: Search with Repeated Transactions. **AU** Fishman, Arthur; Rob, Rafael. **AA** Fishman: Tel Aviv University. Rob: University of Pennsylvania. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 4-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 24. **PR** no charge. **JE** L11, D83, D23, L16. **KW** Search Model. Production. Firm Size. Market Structure.

AB See other entry.

Fishman, Barry

TI Estimating the Costs of Changes in the Active/Reserve Balance. **AU** Gotz, Glenn A.; Shanley, Michael G.; Butler, Robert A.; Fishman, Barry

Flood, Mark D.

PD December 1991. **TI** Market Structure and Inefficiency in the Foreign Exchange Market. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-001B; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 25. **PR** not available. **JE** G15, G14. **KW** Foreign Exchange. Simulation Model.

AB This paper investigates the intra-daily operational efficiency of the U.S. foreign exchange market by conducting experiments with market composition (the numbers of market-makers, brokers and customers in the market) in a computer simulation model. The results suggest significant operational inefficiencies which can be explained by temporary inventory imbalances inherent in a decentralized market.

Florens, J.-P

PD August 1991. **TI** Bayesian Analysis of Mixtures: Some Results on Exact Estimability and Identification. **AU** Florens, J.-P.; Mouchart, M.; Rolin, J.-M. **AA** Florens: GREMAQ, Universite des Sciences Sociales. Mouchart and Rolin: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9133; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 19. **PR** not available. **JE** C11, G22. **KW** Dirichlet Process. Insurance. Automobiles. Insurance Model.

AB Models frequently used for car insurance portfolios assume that the distribution of the expected number of accidents caused by a client is a mixture of Dirichlet processes. Given that the number of clients is typically rather large, insurance companies may find it relevant to inquire whether the posterior distributions (given the number of individual accidents) of the mixture, of the mixing parameter and the predictive distribution of a new observation, given the number of individual accidents, are consistently convergent. For most models of this rather general class, answering these questions require unfathomable manipulations. In this paper, it is shown that answers are "easily" obtainable from general results, presented in the authors' monograph Elements of Bayesian Statistics. These answers rely on no specific assumption on the form of the distribution but only on simple conditions on latent processes. Some problems of approximations are also discussed.

Folkerts-Landau, David

PD March 1992. **TI** The European Central Bank: A Bank or a Monetary Policy Rule. **AU** Folkerts-Landau, David; Garber, Peter M. **AA** Folkerts-Landau: International Monetary Fund. Garber: Brown University. **SR** National Bureau of Economic Research Working Paper: 4016; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $5.00. **JE** F33, F36, F42. **KW** Banking System. European Community. Financial Market. Central Bank.

AB A European central banking institution will be an essential feature of the final stage of the European Economic and Monetary Union. The EC Committee of Central Bank Governors has recently produced a Draft Statute of the European System of Central Banks and of the European Central Bank. The draft Statue clearly subscribes to a "narrow" concept of the System of Central Banks with a single objective -- monetary stability -- rather than a "broad" concept with the additional objective of financial market stability. In this paper we examine the consequences of a "narrow" central banking system for Community financial markets. We conclude that in the absence of such banking functions it will be necessary to slow or even prevent the ongoing development of Community-wide liquid, securitized financial markets, supported by a large volume wholesale payments system. Instead, the historically prevalent bank-intermediated financial system will have to be maintained to lower the likelihood of liquidity crises that demand central bank intervention.

PD March 1992. **TI** The Private ECU: A Currency Floating on Gossamer Wings. **AU** Folkerts-Landau, David; Garber, Peter M. **AA** Folkerts-Landau: International Monetary Fund. Garber: Brown University. **SR** National Bureau of Economic Research Working Paper: 4017; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $5.00. **JE** F31, F33. **KW** European Community. Exchange Rate. Interest Rate.

AB Today's value of the private ECU is driven by expectations that a European monetary authority will at some future date declare itself willing to convert the private ECU into the official basket at par. Until then, its value is not limited by any existing institutional arrangements in the European Communities, such as the Exchange Rate Mechanism of the European Monetary System. We address the question of what determines the exchange rate between the private ECU and the official Basket, and what determines ECU interest rates. The Bank for International Settlements sets the ECU overnight interest rate on clearing balances as a weighted and lagged average of the money market rates in the EC currencies, thereby fixing a point on the ECU term structure. This exogenous fixing of the ECU interest rate and the expectation of a future fixing of the exchange rate satisfy the fundamental requirements for a obtaining a determinate real value of what is otherwise an undefined private ECU unit of account.

Folkertsma, Carsten

PD November 1991. **TI** On the Structure of Economies with Production. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-350; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 15. **PR** no charge. **JE** D51. **KW** Production Economy. Aggregation. Excess Demand.

AB The structure of exchange economies is well understood: homogeneity, continuity, and Walras' Identity characterize their excess demand functions. Far less is known about the structure of production economies. In this paper it is shown that the excess demand function of a production economy is characterized by the same three properties, if the technology exhibits decreasing returns to scale. The results concerning the case of constant returns to scale are less satisfactory. The question by which properties the excess demand correspondence of an economy with constant returns to scale can be described, is still open. As a first step we consider a class of these economies which can be "reduced" to exchange economies preserving the information about equilibria. For technologies without substitution we show that the excess demand of these reduced economies has no additional properties.

Follmer, Hans

PD November 1991. **TI** Probabilistic Aspects of Options. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-202; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 34. **PR** no charge. **JE** G13, G11. **KW** Financial Markets. Contingent Claims. Brownian Motion.

AB This survey gives an introduction to those aspects of the theory of options which seem particularly interesting from a probabilistic point of view. In section 1 we describe the mathematical model of a complete financial market where contingent claims can be represented as stochastic integrals of the underlying price fluctuation. A fundamental representation theorem of K. Ito implies that the standard diffusion model for

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risky assets is indeed complete. In section 2 we consider situations which are incomplete: A typical claim now carries an intrinsic risk, and hedging strategies can only reduce the actual risk to that intrinsic component. Section 3 comments on some relations between option pricing, actuarial premium principles and economic equilibrium analysis. In section 4 we take a closer look at the structure of the probability measure P which models the price fluctuations of the underlying asset. We review some of the arguments in favor of geometric Brownian motion and conclude with a few tentative remarks on possible modifications.

Forges, Francoise

PD 1991. **TI** Correlated Equilibrium and Sunspot Equilibrium. **AU** Forges, Francoise; Peck, J. **AA** Forges: Universite Catholique de Louvain. Peck: Northwestern University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9153; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 22. **PR** not available. **JE** C62, D50. **KW** Overlapping Generations. Market Game.

AB We show that the sunspot equilibrium allocations of a standard overlapping generations economy coincide with the (strategic form) correlated equilibrium allocations of a natural market game mimicking the economy.

PD October 1991. **TI** Posterior Efficiency. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9145; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 25. **PR** not available. **JE** D81, D71, D83. **KW** Collective Choice. Social Choice. Incomplete Information.

AB Efficiency in Bayesian collective choice problems is reinvestigated in a way which does not fit in any of the six categories pointed out by Holmstrom and Myerson (1983). A mechanism is posterior efficient if it never selects a decision which appears as Pareto-dominated to the agents when they know this decision. Posterior efficient mechanisms are characterized and their properties (e.g., existence of incentive compatible posterior efficient mechanisms) are studied. In general, the new mechanisms are not related to the classically (ex post) efficient ones, which select a Pareto-efficient outcome at every state of nature, independently of the information conveyed by this outcome.

Franciosi, Robert

PD January 1992. **TI** An Experimental Investigation of the Hahn-Noll Revenue Neutral Auction for Emissions Licenses. **AU** Franciosi, Robert; Isaac, R. Mark; Pingry, David E.; Reynolds, Stanley S. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-9; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 52. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** D44, C92. **KW** Pollution Permits. Auctions.

AB This paper reports on three series of laboratory experiments designed to test the performance of the Hahn-Noll revenue neutral auction (RNA). An alternative institution, a no-rebate uniform price auction (UPA), is also examined as a benchmark. In these experiments, the RNA markets were little different from UPA markets in terms of either prices or market efficiencies. The two institutions did differ in terms of the distribution of the gains from exchange and of the propensity of bidders to engage in a certain type of overbidding.

Frank, Richard G.

PD November 1991. **TI** Organizational Failure and Incentive Contracts in the Public Sector: Evidence from an Experiment in the Financing of Mental Health Care. **AU** Frank, Richard G.; Gaynor, Martin. **AA** Johns Hopkins University and National Bureau of Economic Research. **SR** Johns Hopkins Department of Economics Working Paper: 272; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 34. **PR** no charge. **JE** H77, I11, I18. **KW** Intergovernmental Transfers. Public Health. Health Economics.

AB This paper makes use of a unique "natural experiment" in the design of intergovernmental grants. The State of Ohio has dramatically altered the method by which local public mental health care is financed. The manner in which the grant mechanism has been altered allows for the estimation of income compensated subsidy responses of local governmental entities. The empirical results indicate strong responses to the "new" incentives suggesting a direction for policy-makers for dealing with some of the most vexing problems in mental health policy.

Frankel, Allen B.

PD December 1991. **TI** A Primer on the Japanese Banking System. **AU** Frankel, Allen B.; Morgan, Paul B. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 419; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 49. **PR** no charge. **JE** G21, G28. **KW** Banking. Commercial Banks. Japan. Financial System.

AB This paper examines the effects of the liberalization of the Japanese financial system in the past twenty years. The changes are viewed in terms of their current and potential future impact on the Japanese banking industry. The purpose of this paper is to provide a discussion of the situation facing the banking system during the present transition period between the highly segmented and regulated financial system of the post-war high growth period, and the liberalized, financially deregulated environment toward which the Japanese regulatory authorities aspire.

Frankel, Jeffrey A.

PD June 1991. **TI** An Indicator of Future Inflation Extracted from the Steepness of the Interest Rate Yield Curve along its Entire Length. **AU** Frankel, Jeffrey A.; Lown, Cara S. **AA** Frankel: University of California, Berkeley. Lown: Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9122; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 11. **PR** no charge. **JE** E43, E31, E32. **KW** Inflation. Interest Rate. Yield Curve.

AB It is often suggested that the slope of the term structure of interest rates contains information about the expected future path of inflation. Mishkin (1990) has recently shown that the spread between the 12-month and 3-month interest rates helps to predict the difference between the 12-month and 3-month inflation rates. His approach, however, lacks a theoretical foundation, other than the (rejected) hypothesis that the real interest rate is constant. This paper applies a simple existing theoretical framework, which allows the real interest rate to vary in the short-run but converge to a constant in the long-run, to the problem of predicting the inflation spread. It is shown that the appropriate indicator of expected inflation can make use of the entire length of the yield curve, in particular by estimating the steepness of a specific nonlinear transformation of the curve, rather than being restricted to a spread between two points. The resulting indicator, besides having a firmer theoretical foundation, does a relatively good job of predicting the inflation rate over the period 1960 to 1988.

Frech, H. E., III

TI Firm Growth and Failure in Increasingly Competitive Markets: Theory and Application to Hospital Markets. **AU** Mobley, Lee Rivers; Frech, H. E., III.

Fries, S. M.

PD December 1991. **TI** Banking Policy and the Pricing of Deposit Guarantees: A New Approach. **AU** Fries, S. M.; Perraudin, W. R. M. **AA** Fries: International Monetary Fund. Perraudin: University of Cambridge. **SR** International Monetary Fund Working Paper: WP/91/131; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** not available. **JE** G21, G28. **KW** Banking. Deposit Insurance. Commercial Banks. Bank Regulations.

AB This paper describes a new approach to pricing government deposit guarantees that uses techniques of stochastic process switching employed in the recent literature on exchange rate determination. Our model avoids inconsistent assumptions about the information available to investors and the government common in previous work based on an option pricing approach. We derive actuarially fair deposit insurance premia and optimal financial reorganization rules and examine the role of banking policies such as capital requirements.

Fry, Timothy R. L.

TI An Analysis of Fines Default in English Magistrates' Courts. **AU** Stagoll, Jane M.; Fry, Timothy R. L.

PD February 1992. **TI** Economic Motivations for Limited Dependent and Qualitative Variable Models. **AU** Fry, Timothy R. L.; Brooks, Robert D.; Comley, B. R.; Zhang, J. **AA** Fry and Comley: Monash University. Brooks: Royal Melbourne Institute of Technology and Monash University. Zhang: University of Western Ontario. **SR** Monash Department of Econometrics Working Paper: 6/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 24. **PR** no charge. **JE** C35. **KW** Microeconomics. Utility Maximization. Microeconometrics.

AB The greater availability of survey data, a succession of papers dealing with the statistical issues arising from the analysis of such data and the appearance of software packages, such as LIMDEP (Greene (1991)), have led to a remarkable increase in the application of limited dependent and qualitative variable models in economics. Economic analysis of the behavior of individual decision-makers often leads to models which are of a limited dependent or qualitative variable nature. This paper attempts to show how the use of limited dependent and qualitative variable models naturally arises from the more general framework of modifications to traditional economic optimization problems.

Funk, Peter

PD September 1991. **TI** Bertrand and Walras Equilibria in Large Economies. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-348; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 25. **PR** no charge. **JE** D21, D41. **KW** Bertrand Equilibrium. Perfect Competition.

AB This paper studies the approximate Bertrand equilibria of a large but finite economy with free entry for firms and small efficient scales. It establishes the equivalence of the set of regular Walras equilibria of a limit economy and the set of limits of regular sequences of approximate Bertrand equilibria. This gives a foundation to the Walrasian hypothesis of perfect competition in explaining why firms behave as if they were price-takers and why they set prices that clear markets.

Gagnon, Joseph E.

PD December 1991. **TI** How Pervasive is the Product Cycle? The Empirical Dynamics of American and Japanese Trade Flows. **AU** Gagnon, Joseph E.; Rose, Andrew, K. **AA** Gagnon: Board of Governors of the Federal Reserve System. Rose: University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 91-186; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 17. **PR** $3.50 plus applicable sales tax. **JE** F11, F14, F12. **KW** International Trade. Product Cycle.

AB This paper looks for dynamic patterns in international trade flows using comprehensive multilateral American and Japanese data disaggregated to the four-digit SITC level. Little evidence is found of product cycle dynamics between 1962 and 1988. Rather, goods that begin the sample in surplus (deficit) almost always remain in surplus (deficit) throughout the sample.

TI Taxation and Inflation: A New Explanation for Current Account Imbalances. **AU** Bayoumi, Tamim; Gagnon, Joseph E.

TI German Unification and the European Monetary System: A Quantitative Analysis. **AU** Adams, Gwyn; Alexander, Lewis; Gagnon, Joseph E.

PD March 1992. **TI** Stochastic Behavior of the World Economy under Alternative Policy Regimes. **AU** Gagnon, Joseph E.; Tryon, Ralph W. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 428; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 34. **PR** no charge. **JE** E42, E52, F41, F47. **KW** Monetary Policy. Monetary Regimes. Open Economy.

AB This paper uses a multicountry econometric model with rational expectations to analyze the effects of alternative monetary policy regimes on the stability of various macroeconomic variables in the face of stochastic shocks to the economy. The policy regimes use a short-term interest rate instrument to respond to deviations of various target variables from their targeted values. The principal conclusions are that there are significant trade-offs between stabilizing output and stabilizing prices, and that more aggressive targeting can lead to large increases in interest rate variability with only small reductions in the variability of the target variable.

Gandal, Neil

TI Planned Obsolescence as an Engine of Technological Progress. **AU** Fishman, Arthur; Gandal, Neil; Shy, Oz.

PD January 1992. **TI** Tickling the Tolerance: Incentives for Producing Low Quality Coins in French Medieval Mints. **AU** Gandal, Neil; Sussman, Nathan. **AA** Gandal: Tel Aviv University. Sussman: University of Western Ontario. **SR** Tel Aviv Sackler Institute of Economic Studies Working Paper: 2-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 21. **PR** no charge. **JE** N23. **KW** Gold Coins. Currency. Seigniorage.
AB In this paper, we describe features of an elaborate minting system in which the production of coins in France was transformed during the thirteenth century from a highly localized to a centrally controlled system. We then investigate whether the systematic underprovision of gold in gold coins was simply compensation given by the crown to private mint masters to offset risk incurred by the mint masters or whether the crown employed a scheme that encouraged the mint masters to produce low quality coins in such a way that it earned rents. The historical evidence indicates that the latter scenario prevailed.

TI Integration, Complementary Products and Variety. **AU** Church, Jeffrey; Gandal, Neil.

Garber, Peter M.

TI The European Central Bank: A Bank or a Monetary Policy Rule. **AU** Folkerts-Landau, David; Garber, Peter M.

TI The Private ECU: A Currency Floating on Gossamer Wings. **AU** Folkerts-Landau, David; Garber, Peter M.

Garfinkel, Michelle R.

PD June 1990. **TI** When and How Much 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** Federal Reserve Bank of St. Louis Working Paper: 90-004; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 19. **PR** not available. **JE** E52, E58, D83. **KW** Monetary Policy. Public Announcements. 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 it possible to "tie" the hands of 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.

Garnick, Deborah

TI The Study of Preferred Provider Organizations: Executive Summary. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth; Garnick, Deborah; Luft, Harold.

TI The Study of Preferred Provider Organizations: Executive Summary. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth; Garnick, Deborah; Luft, Harold.

Garratt, Rod

PD February 1992. **TI** Income Redistribution without Catastrophes. **AU** Garratt, Rod; Goenka, Aditya. **AA** Garratt: University of California, Santa Barbara. Goenka: University of Essex. **SR** University of California at Santa Barbara Department of Economics Working Paper: 9-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 20. **PR** no charge. **JE** H21, D31. **KW** Taxes. Income Distribution. Transfers.
AB This paper examines how tax policies can be constructed using information about the equilibrium manifold. The idea that simple lump sum taxes and transfers may encounter multiplicity and instability of equilibria, and counterintuitive utility changes has long been recognized. We, however, construct a (finite) sequence of lump-sum taxes and transfers which avoids these problems. In addition, the equilibrium in each period of the sequence changes continuously with changes in taxes and transfers. The income redistribution policies are constructed to avoid catastrophes in the equilibrium manifold.

Gaske, M. Ellen

PD July 1991. **TI** Sources of Fluctuations in Long-Term Expected Real Rates of Interest: Evidence from the U.K. Indexed Bond Market. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9123; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 21. **PR** no charge. **JE** E43, E31, E32, E51. **KW** Interest Rate. Inflation. Money Supply. Business Cycle.
AB This paper analyzes the sources of movements in long-term real interest rates using data provided by the U.K. government indexed bond market. The results of various time series analysis techniques are presented and the same techniques are then applied to after-tax long-term real rates. One of the most interesting results is that only long-term inflation is consistently found to be correlated with or to contribute to movements in long-term real rates. This correlation persists, even when tax effects are considered. Another striking result is that short-run changes in the money supply, whether anticipated or not, consistently fail to be an important explanatory variable. When holding period returns are then analyzed to see if one source of the correlation between long-term real rates and long-term inflation is actually an inflation risk premium, no statistically significant premia, positive or negative are found in the returns on conventional nominal bonds relative to the returns on indexed bonds. The results of previous analyses conducted under the assumption of risk neutrality thus appear to be robust.

Gaynor, Martin

TI Organizational Failure and Incentive Contracts in the Public Sector: Evidence from an Experiment in the Financing of Mental Health Care. **AU** Frank, Richard G.; Gaynor, Martin.

Gazdar, Haris

TI Hunger and Poverty in Iraq, 1991. **AU** Dreze, Jean; Gazdar, Haris.

Geadah, Sami

PD January 1992. **TI** The Credibility of Nordic Exchange Rate Bands: 1987-91. **AU** Geadah, Sami; Saavalainen, Tapio; Svensson, Lars E. O. **AA** Geadah and Saavalainen: International Monetary Fund. Svensson: Stockholm University. **SR** International Monetary Fund Working Paper: WP/92/3; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** E42, F31, F33. **KW** Exchange Rate. Europe. Monetary Regime.

AB The credibility of the exchange rate bands in the Nordic countries during 1987-91 is examined with two tests. The results suggest that the credibility of Finland's exchange rate band within a twelve-month horizon could not be rejected except in the fall of 1991; however, the band lacked credibility within a five-year horizon throughout the period. Denmark's and Norway's bands lacked both short- and long-term credibility at the beginning of the period, but credibility could not be rejected from 1989 for Norway and as of 1990 for Denmark. The credibility of Sweden's band within a one-year horizon could not be rejected up to fall 1989, but thereafter its credibility deteriorated sharply.

Genesove, David

TI Testing for Price Anomalies in Real Estate Auctions. **AU** Ashenfelter, Orley; Genesove, David.

TI Testing for Price Anomalies in Real Estate Auctions. **AU** Ashenfelter, Orley; Genesove, David.

George, Donald A. R.

PD October 1991. **TI** Funding Self-Management. **AA** Queen's University and University of Edinburgh. **SR** Queen's Institute for Economic Research Discussion Paper: 840; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 37. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** J54, P13. **KW** Workers' Cooperatives. Capitalism. Labor-Managed Firms.

AB The paper briefly summarizes those arguments which explain the paucity of workers' cooperatives under capitalism in terms of their financing arrangements. The possibility is considered that a wage-earners' investment fund, of Scandinavian type, could act as an external funding agency for a "cooperative sector" within a capitalist economy. A simple model is developed of such an economy with a fund in place. The dynamics of the model are analyzed and a number of simulation results reported. These results indicate the economic costs and consequences of various policies which such a fund might pursue.

PD October 1991. **TI** The Political Economy of Wage-Earner Funds: Policy Debate and Swedish Experience. **AA** Queen's University and University of Edinburgh. **SR** Queen's Institute for Economic Research Discussion Paper: 839; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 40. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** P16, P13, J54. **KW** Cooperatives. Unions. Labor-Managed Firms.

AB A wage-earners' investment fund receives income from taxation and uses it to accumulate capital on behalf of wage-earners. The paper briefly surveys the various wage-earner fund proposals advanced in Europe during the 1970's and 1980's. It then analyzes the arguments for and against wage-earner funds and shows that the European debate on this issue has involved much more than a purely rational appraisal of the economic costs and benefits of the various policy options. The paper then examines the experience of wage-earner funds in Sweden, the only country in which such funds have actually been established. Institutional aspects of the Swedish funds are discussed, as are their behavior and performance.

Georgiou, Andreas

PD November 1991. **TI** Foreign Currency Deposits: Implications for Macroeconomic Policies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/108; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** not available. **JE** E42, E51, E52, F41. **KW** Money Supply. Exchange Rate. Inflation.

AB This paper discusses the relationship between foreign currency deposits and money, and it shows that the indexation of part of the nominal money supply to the exchange rate, as a result of the presence of foreign currency deposits, will increase the inflationary effects of monetary disequilibria under a floating exchange rate system and will reduce the effect of a devaluation of a usually fixed exchange rate. When a real exchange rate rule is followed, the presence of foreign currency deposits implies that there is less of a trade-off between the rate of nominal depreciation/inflation and the level of the real exchange rate. The paper shows how certain aspects of financial programming may be affected by the presence of these deposits.

Geralavicius, Vaidievutis

PD April 1991. **TI** Efficiency in an Equilibrium Model with a Continuous Pricing Function. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-185; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 18. **PR** no charge. **JE** D51, D41, D24. **KW** General Equilibrium Model. Prices. Technology. Production.

AB We consider in this paper efficiency problems of the equilibrium models with a continuous price function introduced in previous papers. It is shown that there exists a price function ensuring existence of a Pareto efficient equilibrium where production is described by any purpose function given on a convex technological set.

Gilbert, Adam

TI Clearance and Settlement in U.S. Securities Markets. **AU** Parkinson, Patrick; Gilbert, Adam; Gollob, Emily; Hargraves, Lauren; Mead, Richard; Stehm, Jeff; Taylor, Mary Ann.

Giovannini, Alberto

PD February 1992. **TI** Bretton Woods and its Precursors: Rules Versus Discretion in the History of International Monetary Regimes. **AA** Columbia University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4001; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $5.00. **JE** F31, F33, E42. **KW** Gold Standard. Monetary Reform. Exchange Rate. Monetary Regimes.

AB In recent years, the theory of rules and discretion in monetary policy has fascinated scores of academic economists and policy-makers alike. This paper asks whether it can be applied to understand the history of the world monetary system, by focusing on the setup and the experience of the Bretton Woods regime, and comparing it with its predecessors, in particular the classical gold standard. The paper first discusses the underpinnings, and some of the problems, of a theory of the evolution of the international monetary regime based on alternating rules and discretion. It then assesses the ability of such theories to explain the historical record. It first reviews the rules that characterized the classical gold standard, and the motivations to return to gold in the interwar period. Then it evaluates the British and U.S. plan for world monetary reform published in 1943, and the IMF Articles of Agreement. Finally, the paper analyzes the data on interest rates and exchange rates during the classical gold standard and the Bretton Woods period to assess the stabilizing properties of the two exchange rate regimes.

Goenka, Aditya

TI Income Redistribution without Catastrophes. **AU** Garratt, Rod; Goenka, Aditya.

Gollob, Emily

TI Clearance and Settlement in U.S. Securities Markets. **AU** Parkinson, Patrick; Gilbert, Adam; Gollob, Emily; Hargraves, Lauren; Mead, Richard; Stehm, Jeff; Taylor, Mary Ann.

Gotz, Glenn A.

PD September 1990. **TI** Estimating the Costs of Changes in the Active/Reserve Balance. **AU** Gotz, Glenn A.; Shanley, Michael G.; Butler, Robert A.; Fishman, Barry **AA** RAND Corporation. **SR** Rand Report: R-3748-PA&E/FMP/JCS; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 43. **PR** not available. **JE** H56, J45. **KW** Military Enlistment. Defense Spending. Public Sector. Military Reserves.

AB Management of the total military force requires a determination of the proper role of the Selective Reserve. Both the executive and legislative branches of the government have increasingly looked to an expansion of the reserves as a potentially cost-effective way of maintaining the capability requirements of the total force. This trend has created the need for a cost methodology capable of supporting active/reserve force-mix decisions. This report presents a methodology for assessing the cost consequences of changing the mix of active and reserve units in the total force. The authors argue that the key to the usefulness of active/reserve force structure cost studies lies in a proper specification of the problem. Toward that end, they developed a structured accounting methodology for identifying and costing the resource, activity, and mission consequences of force structure change.

Gourieroux, C.

PD June 1991. **TI** M-Estimateurs Ponderes ou Comment Corriger des Biais de Sondage. **AA** CEPREMAP, Paris. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9111; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 31. **PR** no charge. **JE** C42, C13. **KW** M-Estimators. Survey Method. Consistency. Sampling.

AB In the case of unequal probability sampling the usual estimation methods are generally nonconsistent. We explain how to modify the usual M-estimators to recover the consistency and also to get some optimal estimators. Finally we extend the correction method when a self-selection phenomenon also exists. This paper is written is French.

PD July 1991. **TI** Tests Sur le Noyau, L'image et le Rang de la Matrice des Coefficients D'un Modele Lineaire Multivarie. **AU** Gourieroux, C.; Monfort, A.; Renault, E. **AA** Gourieroux: CEPREMAP, Paris. Monfort: INSEE. Renault: GREMAQ. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9119; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 32. **PR** no charge. **JE** C12. **KW** Kernel. Linear Model. Likelihood Ratio Test. Canonical Analysis.

AB In this paper we are interested in inference problems on the matrix of coefficients in a multivariate linear model; in particular we consider tests on the kernel, the range, and the rank of this matrix. Various test procedures are explicited and compared: (pseudo) likelihood ratio, Wald (or generalized Wald), and score. Each test procedure is put in a canonical analysis framework. This paper is written in French.

PD October 1991. **TI** Modeles de Duree et Effets de Generation. **AU** Gourieroux, C.; Monfort, A. **AA** Gourieroux: CEPREMAP, Paris. Monfort: INSEE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9125; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 40. **PR** no charge. **JE** C41, C81. **KW** Duration. Unemployment. Prepayment. Micro Data.

AB Some surveys or files updating methodology which seem to be natural, may be unsuitable for a descriptive or a structural analysis of the produced data. It is such an example concerning duration data, which is described in this paper. We compute the biases of classical estimation methods applied to such data, we discuss the impossibility in some cases to derive valuable results without auxiliary information and we present several methods of bias correction. This paper is written in French.

PD November 1991. **TI** Les Transitions en Economie: Les Changements de Prix en Russie dans les Annees Vingt. **AU** Gourieroux, C.; Peaucelle, I. **AA** CEPREMAP, Paris. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9130; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 32. **PR** no charge. **JE** P22, P27, N15. **KW** Economic Policy. Prices. Volatility. Economic Reform.

AB From 1921 to 1929, Russia experienced two transitions. The first one, with the New Economic Policy (NEP), was a transition from a very centralized economy to a wide market one. The second one went in the opposite direction, through an increase of the state control and mostly through a price policy. We will develop a descriptive analysis of the retail, wholesale, industrial, agricultural, and local price indexes in order to detect some stable relations between them and to characterize those transitions. The specificity of this paper lies: 1) in the use of data provided by the Conjuncture Institute of Moscow rarely analyzed; 2) in the methods seldom used in macroeconometric studies: the moving average, the smoothing of initial curves, the moving representation of variability which are applied here because of the highly variable nature of the data. This paper is written in French.

Green, Richard C.

TI Equilibria with Incomplete Markets and Overlapping Generations. **AU** Cass, David; Green, Richard C.; Spear, Stephen E.

Grossman, Gene M.

PD November 1991. **TI** Environmental Impacts of a North American Free Trade Agreement. **AU** Grossman, Gene M.; Krueger, Alan B. **AA** Princeton University and National Bureau of Economic Research. **SR** Princeton Woodrow Wilson School Discussion Paper in Economics: 158; Woodrow Wilson School, Princeton University, Princeton, NJ 08544. **PG** 56. **PR** no charge. **JE** F13, Q25, Q28. **KW** Environment. Trade Policy. Mexico. Air Pollution. Pollution. Trade Liberalization.

AB A reduction in trade barriers generally will affect the environment by expanding the scale of economic activity, by altering the composition of economic activity, and by bringing about a change in the techniques of production. We present empirical evidence to assess the relative magnitudes of these three effects as they apply to further trade liberalization in Mexico. In Section 1 we use comparable measures of three air pollutants in a cross-section of urban areas located in 42 countries to study the relationship between air quality and economic growth. Section 2 studies the determinants of the industry pattern of U.S. imports from Mexico and of value added by Mexico's maquiladora sectors. In Section 3 we use the results from a computable general equilibrium model to study the composition effect of a NAFTA. The model predicts that trade liberalization will cause the utilities sector in Mexico to contract. Since this sector generates many air pollutants, the impact on air quality may be positive.

Grown, Caren

PD December 1991. **TI** Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies. **AU** Grown, Caren; Bates, Timothy. **AA** Grown: U.S. Bureau of the Census. Bates: New School for Social Research. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 91-9; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 16. **PR** no charge. **JE** J71, J15, L74, M13. **KW** Discrimination. Entrepreneurship. Minorities. Bank Loans. Construction.

AB Although the construction industry has been a tremendous growth industry for black entrepreneurs in recent years, black-owned construction firms on average, are less than half the size of those owned by non-minorities. Previous findings suggest that limited access to financial capital - particularly bank loans - has restricted the size of black-owned businesses. Examination of nationwide random samples of construction companies reveals that black firms are treated differently than non-minorities. when they borrow from commercial banks: they get smaller loans than non-minorities who have otherwise identical traits. Undercapitalization, in turn, is shown to increase the likelihood of firm discontinuance. Alleviation of undercapitalization problems would help promote the development of black-owned businesses in the construction industry.

Grund, B.

PD September 1991. **TI** On the Choice of Kernel Regression Estimators: A Discussion. **AU** Grund, B.; Hardle, W. **AA** Grund: Universite Catholique de Louvain and Humboldt-Universitat Berlin. Hardle: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9139; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 16. **PR** not available. **JE** C14, C22, C51. **KW** Consistency. Efficiency. Kernel Estimation.

AB We compare two different kernel type estimators, the "convolution" and the "evaluation" estimator. An example is constructed in which they behave inconsistently. For some constellations one is better than the other and vice versa. We conclude by constructing a high spread WARPed estimator.

Gulde, Anne-Marie

PD December 1991. **TI** Sticky Exchange Rates and Flexible Prices--A Heretic View from the Interwar Period. **AU** Gulde, Anne-Marie; Wolf, Holger C. **AA** Gulde: International Monetary Fund. Wolf: Massachusetts Institute of Technology and Harvard University. **SR** International Monetary Fund Working Paper: WP/91/124; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** not available. **JE** E31, F33, N14, E10. **KW** Exchange Rate. Prices.

AB Real exchange rate variability tends to be higher under flexible than under fixed exchange rates. The neo-Keynesian view attributes the higher variability to the combination of volatile nominal exchange rates with sticky prices. The neoclassical approach regards an increased incidence of real shocks as the culprit. We test the crucial assumptions underlying the two models for the interwar period. Prices and exchange rates are found to be equally flexible. We hence reject the neo-Keynesian sticky price view for our sample period. In contrast, our results are consistent with, while not constituting evidence for, the neoclassical equilibrium approach.

Gurbaxani, Vijay

PD January 1991. **TI** An Empirical Analysis of Software and Hardware Spending. **AU** Gurbaxani, Vijay; Mendelson, Haim. **AA** Gurbaxani: University of California, Irvine. Mendelson: Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1119; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 42. **PR** not available. **JE** O47, E22, O33, D24. **KW** Technological Change. Information Systems. Computers. Firm Investment.

AB The growth in information systems budgets and in their primary components, hardware and software effort, are analyzed empirically. It is demonstrated that while a large component of the growth is due to technology related factors, these expenditures, and in particular, hardware spending, are sensitive to the growth rate of the economy and fluctuate around the technology driven growth path due to general business conditions. The validity of the popular belief that software effort (including both software development and maintenance) represents a growing proportion of information systems expenditures is tested versus the competing view that software effort and hardware expenditures consume relatively constant budget shares. It is shown that after controlling for macroeconomic effects, hardware and software expenditures grow exponentially at the same rate. The analysis also suggests that in the aggregate, it is primarily the hardware outlays that adjust in response to unexpected business conditions.

Hajivassiliou, Vassilis A.

PD December 1991. **TI** Simulation Estimation Methods for Limited Dependent Variable Models. **AA** Yale

University. **SR** Yale Cowles Foundation Discussion Paper: 1007; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 35. **PR** no charge. **JE** C13, C15, C51. **KW** Simulation Methods. Econometric Modeling. Model Estimation. Correlation Structures.

AB This chapter discusses simulation estimation methods that overcome the computational intractability of classical estimation of limited dependent variable models with flexible correlation structures in the unobservable stochastic terms. These difficulties arise because of the need to evaluate accurately very high dimensional integrals. The methods based on simulation do not require the exact evaluation of these integrals and hence are feasible using computers of even moderate power. I first discuss a series of ideas that had been used in efforts to circumvent these computational problems either by considering more restrictive econometric models or by employing standard numerical analysis approximation methods. I then show how simulation techniques solve the computational problems without the need to resort to either untenable restrictions on the correlation structures or to rely on generally unsatisfactory numerical approximations. All currently known simulation algorithms are then compared in terms of theoretical properties and practical performance.

Hakkio, Craig S.

PD December 1990. **TI** Cointegration: How Short is the Long Run? **AU** Hakkio, Craig S.; Rush, Mark. **AA** Hakkio: Federal Reserve Bank of Kansas City. Rush: University of Florida. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 90-08; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 26. **PR** no charge. **JE** C22, C15, C52. **KW** Monte Carlo Model. Time Series Model. Cointegration.

AB How short is the long-run? The answer is important in testing for cointegration because cointegration is a long-run property of the data and so requires a long sample period. Our results suggest that moving from annual data to quarterly or monthly data without changing the sample length yields little additional information. In other words, since cointegration is a long-run property of the data, it makes little difference if one uses 120 monthly observations or 10 annual observations. The reason is that simply increasing the frequency of observation yields no additional observations on the long-run fluctuations in the data. We make this point using Monte Carlo techniques: we use four tests for cointegration (the Durbin Watson test, the Dickey-Fuller test, the augmented Dickey-Fuller test, and the Phillips modification to the augmented Dickey-Fuller test) with "monthly" data, "quarterly" data, and "annual" data. All the tests show that if the long-run is "long," there is only a marginal increase in power by moving to more frequently sampled data.

PD August 1991. **TI** A Comment on William Poole's Paper "Exchange Rate Management and Monetary Policy Mismanagement: A Study of Germany, Japan, United Kingdom, and the United States after Plaza". **AA** Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-03; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 24. **PR** no charge. **JE** F31, F33, E52, F42. **KW** Exchange Rate. Monetary Policy. International Coordination.

AB This paper was prepared as a comment on "Exchange Rate Management and Monetary Policy Mismanagement: A Study of Germany, Japan, United Kingdom, and United States after Plaza," a paper by William Poole that was presented at the Carnegie-Rochester Conference Series on Public Policy. Contrary to Poole's paper, this paper argues that U.S. monetary policy was unaffected by exchange rate policy, but was on occasion affected by the behavior of exchange rates. Exchange rate agreements cannot directly affect monetary policy, although they can indirectly affect monetary policy. Furthermore, while the Plaza agreement had an immediate effect on exchange rates, the Louvre agreement did not. The observation that exchange rates and interest rates were not affected by G7 meetings is consistent with the market believing that these meetings were unimportant for monetary policy.

Han, Hsiang-Ling

PD December 1991. **TI** Consumption, Income, and Cointegration: Further Analysis. **AU** Han, Hsiang-Ling; Ogaki, Masao. **AA** University of Rochester. **SR** University of Rochester Center for Economic Research Working Paper: 305; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 24. **PR** no charge. **JE** E21, D91. **KW** Permanent Income Hypothesis. Cointegration. Consumption.

AB The paper reexamines the long-run relation between consumption and income in the U.S. that King, Plosser, Stock, and Watson (1991, KPSW) studied. KPSW showed that a version of the permanent income hypothesis (PIH) implies that the log of consumption and the log of income are cointegrated with a known cointegrated vector of (1,-1)'. They also showed that this cointegrating vector also eliminates the deterministic trends arising from drift terms. This restriction, which we call deterministic cointegration restriction, was not tested by KPSW. The purpose of the present paper is to test this restriction. The test results indicate overwhelming evidence against this restriction.

Hanley, Nick

PD January 1992. **TI** Efficiency and Distributional Aspects of Market Mechanisms in the Control of Pollution: An Empirical Analysis. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 842; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 31. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** Q25, Q28. **KW** Pollution. Environmental Policy. Emission Taxes. Water Pollution.

AB The cost-saving advantages of market mechanisms such as tradable permits and emission taxes have been promoted by economists since the early 1970's. The research reported in this paper simulates their application to the Forth Estuary in Scotland, comparing such policies with regulation of output levels for emissions. Potential resource cost savings are identified under two alternative targets. However, there are serious obstacles to the attainment of these savings. We also consider the distributional aspects of the policy alternatives.

Hardle, W.

TI On the Choice of Kernel Regression Estimators: A Discussion. **AU** Grund, B.; Hardle, W.

PD September 1991. **TI** On an Efficient Smoothing Parameter Selector Proposed by Hall and Johnstone. **AU** Hardle, W.; Park, Byeong U. **AA** Hardle: Universite Catholique de Louvain. Park: Universite Catholique de Louvain and Seoul National University. **SR** Universite Catholique de

Louvain CORE Discussion Paper: 9140; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 4. **PR** not available. **JE** C51, C13, C22. **KW** Cross Validation. Smoothing. Regression Analysis.
AB The difficulty in selecting smoothing parameters is discussed. A proposed selector by Hall and Johnstone avoids the negative correlation with the desired smoothing parameter. This selector is compared with cross-validation and extended to the case of regression with nonuniform covariates.

PD September 1991. **TI** Fast and Simple Scatterplot Smoothing. **AU** Hardle, W.; Marron, J. S. **AA** Hardle: Universite Catholique de Louvain. Marron: Universite Catholique de Louvain and University of North Carolina, Chapel Hill. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9143; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 20. **PR** not available. **JE** C51, C22, C13. **KW** Parabolic Fitting. Smoothing. Regression Analysis. Least Squares.
AB An important element of both exploratory data analysis and many dimensionality reduction techniques is a scatter plot smoother. In both areas there is a strong need for fast and simple procedures. A major hurdle is choice of the amount of smoothing. In this paper we propose a fast and simple choice of the scatter plot smoothing parameter, based on blockwise least squares parabolic fitting. Our method provides both global and location adaptive smoothing methods. The "local method" meets the needs of different trade-offs between variability of the errors and curvature of the underlying regression function, as tempered by the design.

PD September 1991. **TI** How Sensitive are Average Derivatives? **AU** Hardle, W.; Tsybakov, A. B. **AA** Hardle: Universite Catholique de Louvain and CentER, Tilburg. Tsybakov: Universite Catholique de Louvain and Academy of Sciences, USSR. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9144; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 23. **PR** not available. **JE** C13, C22, C51. **KW** Smoothing Parameters. Kernel Estimation. Regression Analysis.
AB The average derivative is the mean slope of a regression curve. In discrete choice analysis average derivatives provide useful parameter estimation in models with fixed link functions. It is well-known that the average derivative can be root-n estimated when e.g. kernel estimators are used. These involve a smoothing parameter that controls the finite sample behavior. The performance of average derivatives is quite sensitive to the choice of this parameter. This sensitivity of the average derivatives is quantified here via second-order expansion of the mean squared error. From this expansion an optimal strategy for estimating average derivatives can be deduced.

PD October 1991. **TI** Bandwidth Choice for Average Derivative Estimation. **AU** Hardle, W.; Hart, J.; Marron, J. S.; Tsybakov, A. B. **AA** Hardle: Universite Catholique de Louvain. Hart: Texas A&M University. Marron: University of North Carolina, Chapel Hill. Tsybakov: Academy of Sciences, USSR. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9149; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 25. **PR** not available. **JE** C51, C22, C13. **KW** Kernel Estimators. Kernel Estimation. Regression Function. Asymptotic Theory.
AB The average derivative is the expected value of the derivative of a regression function. Kernel methods have been proposed as a means of estimating this quantity. The problem of bandwidth selection for these kernel estimators is addressed here. Asymptotic representations are found for the variance and squared bias. These are compared with each other to find an insightful representation for a bandwidth optimizing terms of lower order than $1/n$. It is interesting that for dimensions greater than one, negative kernels have to be used in order to prevent domination of bias terms in the asymptotic expression of the mean squared error. The extent to which the theoretical conclusions apply in practice is investigated in an economic example related to the so-called Law of Demand.

Hardouvelis, Gikas A.

PD December 1991. **TI** Margin Requirements, Price Fluctuations, and Market Participation in Metal and Stock Index Futures. **AU** Hardouvelis, Gikas A.; Kim, Dongcheol. **AA** Hardouvelis: Rutgers University and Federal Reserve Bank of New York. Kim: Rutgers University. **SR** Federal Reserve Bank of New York Research Paper: 9131; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 47. **PR** no charge. **JE** G13, G14. **KW** Futures Pricing. Stock Market.
AB Margin requirements in metal and stock index futures contracts have a negative impact on market participation which seems causal because it is absent from a benchmark group of metals or stock indexes that do not undergo similar margin changes. The relation of margins to prices and volatility cannot discriminate between hypotheses of rational and irrational trading behavior. Although there is a negative relation between margins and the trend in prices - a relation absent from the benchmark group, there is a positive relation between margins and the average level of both ordinary and jump volatility that is significantly stronger than a similar relation with the benchmark group.

Hardy, Daniel C.

PD January 1992. **TI** Bank Insolvency and Stabilization in Eastern Europe. **AU** Hardy, Daniel C.; Lahiri, Ashok Kumar. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/9; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** not available. **JE** O52, G21, P34. **KW** Europe. Banking.
AB The profound structural reform underway in Eastern Europe has revealed the weakness of the banking sector there; macroeconomic stability and other reforms are thereby threatened. After an overview of recent developments in the banking sectors of these countries, a model is developed that clarifies the role of banking in an emerging market economy, and the danger that the disturbances inherent to it may be magnified and prolonged by a banking collapse. The implication is that priority must be given to mobilizing fiscal resources to cover the costs of restructuring the banking sector.

Hargraves, Lauren

TI Clearance and Settlement in U.S. Securities Markets. **AU** Parkinson, Patrick; Gilbert, Adam; Gollob, Emily; Hargraves, Lauren; Mead, Richard; Stehm, Jeff; Taylor, Mary Ann.

TI Clearance and Settlement in U.S. Securities Markets.

AU Parkinson, Patrick; Gilbert, Adam; Gollob, Emily; Hargraves, Lauren; Mead, Richard; Stehm, Jeff; Taylor, Mary Ann.

Harrell, Thomas W.

PD February 1991. **TI** Marital Status and MBA Careers. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1124; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 21. **PR** not available. **JE** J44, J12, J11, J31. **KW** Wage Differentials. Wages. Marriage.

AB Marital status appears to have made significant differences in the careers of Stanford MBAs. Marriage helps the careers of men and hurts the careers of women. This is a study of how women MBAs have done in comparison to their male classmates.

Harris, Ethan S.

PD August 1991. **TI** Tracking the Economy with the Purchasing Managers Index. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9124; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 13. **PR** no charge. **JE** C43, E32, E37, E27. **KW** Business Cycle. Index Numbers. Manufacturing. Forecasting.

AB Despite its growing popularity as an economic indicator the Purchasing Managers Index has undergone remarkably little statistical scrutiny. Our results suggest that the Index has been oversold by its proponents, but still is a useful indicator. It is a poor leading indicator, with long and variable lead times and numerous false signals. On its own it can be a misleading measure of short-run movements in the economy. As regression models show, however, it can add to the predictive power of simple models of manufacturing activity. The Purchasing Managers data can also be used to improve on consensus forecasts of employment and real GNP. The Purchasing Manager survey could be even more useful to forecasters if the sampling and statistical methodologies were improved in some relatively straightforward ways.

TI The Supply-Side Consequences of U.S. Fiscal Policy in the 1980's. **AU** Akhtar, M. A.; Harris, Ethan S.

Hart, J.

TI Bandwidth Choice for Average Derivative Estimation. **AU** Hardle, W.; Hart, J.; Marron, J. S.; Tsybakov, A. B.

Hart, Oliver

PD October 1991. **TI** A Theory of Debt Based on the Inalienability of Human Capital. **AU** Hart, Oliver; Moore, John. **AA** Hart: Massachusetts Institute of Technology. Moore: London School of Economics and Princeton University. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TE/91/233; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 63. **PR** no charge. **JE** G32, G33, M13. **KW** Private Debt. Business Finance. Business Investment. Entrepreneur.

AB Consider an entrepreneur who needs to raise funds from an investor, but cannot commit not to withdraw his human capital from the project. The possibility of a default or quit puts an upper bound on the total future indebtedness from the entrepreneur to the investor at any date. We characterize the optimal repayment path and show how it is affected both by the maturity structure of the project return stream and by the durability and specificity of project assets. Our results are consistent with the conventional wisdom about what determines the maturity structure of (long-term) debt contracts.

Harvey, Andrew C.

PD June 1991. **TI** Detrending, Stylized Facts and the Business Cycle. **AU** Harvey, Andrew C.; Jaeger, Albert. **AA** Harvey: London School of Economics. Jaeger: Institute for Advanced Studies, Vienna. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: EM/91/230: London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 27. **PR** no charge. **JE** C22, C51. **KW** Detrending. Filters. Time Series Models.

AB The stylized facts of macroeconomic time series can be presented by fitting structural time series models. Within this framework, we analyze the consequences of the widely used detrending technique popularized by Hodrick and Prescott (1980). It is shown that mechanical detrending based on the Hodrick-Prescott filter can lead investigators to report spurious cyclical behavior, and this point is illustrated with empirical examples. Structural time series models also allow investigators to deal explicitly with seasonal and irregular movements which may distort estimated cyclical components. Finally, the structural framework provides a basis for exposing the limitations of ARIMA methodology and models based on a deterministic trend with a single break.

Helkie, William L.

PD November 1991. **TI** External Adjustment in Selected Developing Countries in the 1990's. **AU** Helkie, William L.; Howard, David H. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 417; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 59. **PR** no charge. **JE** F17, F32, F34, O57, F14. **KW** Debt. Developing Countries. Exchange Rate. External Debt.

AB An analytic and accounting framework is presented for examining the evolution of the external positions of eight developing countries: Argentina, Brazil, Chile, Korea, Mexico, Peru, the Philippines, and Venezuela. The framework is used to analyze the historical paths of external debts in these countries. Then, under fairly conventional baseline specifications, and assuming that no other relevant factors change significantly, projections for the debt-export ratios in these eight developing countries are generated, using the analytic framework and a simple simulation model. The baseline projections indicate cases in which external adjustment might be warranted. Through the simulation of some alternative scenarios, the analysis then suggests ways and means of effecting the necessary adjustments, including a rough idea of what magnitudes might be involved.

Hens, Thorsten

PD November 1991. **TI** Sunspot Equilibria in Finite Horizon Models with Incomplete Markets. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-354; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1,

GERMANY. **PG** 51. **PR** no charge. **JE** D51, D52. **KW** General Equilibrium. Asset Market.
AB The purpose of this paper is to clarify the relationship between the uniqueness of spot market equilibria and the existence of sunspot equilibria in a two period general equilibrium model with incomplete real asset markets and no first period consumption. It is shown by an example with Cobb-Douglas preferences and numeraire assets that sunspot equilibria exist even though spot market equilibria are unique for all distributions of ex post endowments which can be reached by using ex ante asset trade. Moreover it is shown that generically non-sunspot equilibria are locally unique so that there do not exist local sunspot equilibria.

PD December 1991. **TI** Structure of General Equilibrium Models with Incomplete Markets and a Single Consumption Good. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-353; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 40. **PR** no charge. **JE** D51, D52, D58. **KW** Finance Theory. General Equilibrium Model.
AB The topic of this paper is to analyze the structure of a finance model from a general equilibrium point of view. With complete financial markets the model is formally equivalent to the contingent markets Arrow-Debreu general equilibrium model. However with incomplete markets, in general, one loosens Walras Law, boundary behavior and continuity of the market excess demand function. We therefore impose assumptions which are stronger than those in the Arrow-Debreu setting but weaker than those usually used in the incomplete markets literature to prove existence of equilibria. The main point of this paper is to show that besides being generically regular, the market excess demand function can, in general, have any structure. Finally, we make the point that although being allocational equivalent, the complete markets finance model and the contingent markets model differ with respect to local asymptotic stability of equilibria.

PD January 1992. **TI** Stability of General Equilibria with Incomplete Markets: The Case of a Mutual Fund. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-355; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 41. **PR** no charge. **JE** D51, D52. **KW** General Equilibrium. Mutual Fund. Tatonnement Processes.
AB The purpose of this paper is to compare local asymptotic stability of tatonnement processes in a general equilibrium with incomplete markets (abbreviated: GEI) model. The various processes differ with respect to various market organizations. One important distinction will be whether the Walrasian auctioneer who conducts the tatonnement process quotes contingent commodity prices or asset and spot market prices. Another important difference is whether he quotes current assets prices, current spot prices and future spot prices, or just current spot prices and leaves the agents' price expectations up to their minds. The comparison is done for economies which are special in the sense that all agents will be satisfied with the same mutual fund. In the GEI model the single mutual fund property guarantees that agents trade assets such that ex post spot market endowment vectors become collinear across agents.

Hermalin, Benjamin E.

PD October 1991. **TI** The Effects of Competition on Executive Behavior. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 91-182; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 23. **PR** $3.50 plus applicable sales tax. **JE** D23, L22, M12. **KW** Principal-Agent Model. Firm Organization. Competition. Executive Management.
AB Economists presume that competition spurs a firm to be more efficient by forcing it to reduce its agency problems. This article investigates this presumption. It finds that the effects of competition on executive behavior can be decomposed into four effects, each of which is of potentially ambiguous sign. Theory, thus, offers no definitive defense of this presumption. This article also derives sets of conditions under which increased competition has the presumed effect of reducing agency problems. In some sets, important conditions are that increased competition reduce the executive's expected income and that agency goods (e.g., shirking) be normal goods for the executive. The article shows that an increase in the shareholders' bargaining strength can both reduce the agency problem and make it more sensitive to competition.

TI The Use of an Agent in a Signalling Model. **AU** Caillaud, B.; Hermalin, Benjamin E.

Hickok, Susan A.

PD June 1991. **TI** The Uruguay Round of GATT Trade Negotiations. **AU** Hickok, Susan A.; Orr, James; Akhtar, M. A.; Wulfekuhler, Kurt C. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9119; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 25. **PR** no charge. **JE** F13, F14. **KW** Trade Policy. Trade Theory.
AB This paper begins with a brief discussion of the global trade background shaping the Uruguay Round dynamics. The paper then considers the goals and costs perceived by each of the major participants in the Round and reviews the current status of the negotiations. The next section of the paper provides a perspective on potential benefits to the U.S. economy of a successful completion of the Uruguay Round. Following this, an attempt is made to assess, in qualitative terms, the likely consequences of an Uruguay Round failure for both the United States and for the world as a whole. An appendix chronicles pervious GATT negotiating rounds.

PD June 1991. **TI** An Expanded, Cointegrated Model of U.S. Trade. **AU** Hickok, Susan A.; Hung, Juann H.; Wulfekuhler, Kurt C. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9121; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 28. **PR** no charge. **JE** F14, F31, F32. **KW** Exports. Trade Theory. Trade Policy. Exchange Rate.
AB This paper studies the importance of some nontraditional as well as traditional determinants of U.S. export and import volumes, using cointegration tests to ensure that the estimated relationships are not spurious and the coefficient estimates are consistent. In particular, this paper examines the effect of factors such as hysteresis, direct foreign investment and domestic capital formation on the volume of U.S. exports and imports. Three findings stand out from this examination. First,

supply factors are important determinants of U.S. trade. In particular, supply factors appear to have a much stronger influence on U.S. exports than on U.S. imports, suggesting a marked difference in the foreign trade strategy of U.S. producers compared to foreign producers. Second, the large dollar exchange rate change in the early 1980's had a hysteretic effect on both U.S. export and import flows. Hysteresis appears to be an important factor explaining why standard trade volume regressions are not cointegrated. Third, the estimated foreign income elasticity of demand for U.S. exports is slightly greater than the estimated U.S. income elasticity of demand for imports, contrary to the standard Houthakker-Magee results.

Hindy, Ayman

PD January 1991. **TI** Optimal Consumption and Portfolio Rules with Local Substitution. **AU** Hindy, Ayman; Chi-fu, Huang. **AA** Hindy: Stanford University. Chi-fu: Massachusetts Institute of Technology. **SR** Stanford Graduate School of Business Research Paper: 1120; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 34. **PR** not available. **JE** D11, D91, G11. **KW** Asset Pricing. Consumption. Utility Functions. Intertemporal Model. Portfolio Choice.

AB We study the problem of optimal consumption and portfolio choice for a class of utility functions that capture the notion that consumptions at nearby dates are almost perfect substitutes. The class we consider excludes all time additive and almost all the non time additive utility functions used in the literature. We provide necessary and sufficient conditions for a consumption and portfolio policy to be optimal. Furthermore, we demonstrate our general theory by solving in a closed form the optimal consumption and portfolio policy for a particular felicity function when the prices of the assets follow a geometric Brownian motion process. The optimal consumption policy in our solution consists of a possible initial "gulp" of consumption, or a period of no consumption, followed by a process of accumulated consumption with singular sample paths. In almost all states of nature, the agent consumes periodically and invests more in the risky assets than an agent with time additive utility whose felicity function has the same curvature and the same time discount parameter.

Hinojosa-Ojeda, Raul

TI Agricultural Policies and Migration in a U.S.-Mexico Free Trade Area: A Computable General Equilibrium Analysis. **AU** Robinson, Sherman; Burfisher, Mary E.; Hinojosa-Ojeda, Raul; Thierfelder, Karen E.

TI Agricultural Policies and Migration in a U.S.-Mexico Free Trade Area: A Computable General Equilibrium Analysis. **AU** Robinson, Sherman; Burfisher, Mary E.; Hinojosa-Ojeda, Raul; Thierfelder, Karen E.

Hirshleifer, Jack

PD February 1992. **TI** Selection, Mutation, and the Preservation of Diversity in Evolutionary Games. **AU** Hirshleifer, Jack; Martinez Coll, Juan Carlos. **AA** Hirshleifer: University of California, Los Angeles. Martinez Coll: Universidad de Malaga. **SR** University of California at Los Angeles Department of Economics Working Paper: 648; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 25. **PR** $2.50; checks payable to U.C. Regents. **JE** C71, C72. **KW** Evolution. Cooperative Games. Mutation. Game Theory.

AB Evolutionary models suggesting that in mixed-motive situations only a single strategy, or only a single type of behavior, will ultimately prevail cannot be regarded as satisfactory. Among the forces supporting diversity of strategies and of behaviors are: (i) multiple and/or mixed evolutionary equilibria, (ii) mutation pressure, and (iii) transient dynamic processes. For the Prisoners' Dilemma and the Chicken payoff environments, this paper studies the degree to which "nice" and "mean" behaviors are supported by the alternative reactive strategies Tit for Tat and Bully. Only in exceptional limiting cases does a single strategy or a single form of behavior come to extinguish all others. Tit for Tat tends to support the predominance of "nice" behaviors in Prisoners' Dilemma (but not Chicken), while Bully tends to support a predominance of "mean" behaviors generally.

Hoffmaister, Alexander

PD December 1991. **TI** Credibility and the Cost of Export Subsidies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/129; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** F13, F32. **KW** Exports. Commercial Policy. Subsidies.

AB Recurring balance of payments crises in countries that pursued import substitution have led some of them to establish a variety of export incentives, in particular subsidies, as a way to revive and re-orient their economies. However, exporters are likely to be uncertain of the government's commitment to export promotion because of the years of neglect. This paper analyzes the issue of the credibility of export subsidies and suggests that a government is able to convince exporters of its commitment only at a cost, which reduces the attractiveness of promoting exports by means of subsidies.

Hoffman, Elizabeth

PD December 1991. **TI** Preferences, Property Rights and Anonymity in Bargaining Games. **AU** Hoffman, Elizabeth; McCabe, Kevin; Shachat, Keith M.; Smith, Vernon L. **AA** Hoffman, Shachat, and Smith: University of Arizona. McCabe: University of Minnesota. **SR** University of Arizona Economics Working Paper: 92-8; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 41. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** C78, C92, C72. **KW** Ultimatum. Noncooperative Games. Bargaining. Experimental Economics.

AB Recent experimental research on ultimatum and dictator games has found that first movers in such games tend to offer more to their counterparts than noncooperative game theory would predict. In fact, the modal offer is generally half the pie to be divided, while noncooperative game theory would suggest an offer of the smallest monetary unit. It is often argued that these results suggest a taste for fairness on the part of students participating in these experiments. In this paper we report the results of ultimatum and dictator games experiments designed to explore the underlying reasons for this apparent taste for "fairness." We find that if the right to be the first mover is earned by scoring high on a general knowledge quiz, and that right is reinforced by the instructions as being earned, then first movers behave in a significantly more self-regarding manner.

TI An Experimetric Study of the Cournot Model. **AU** Binger, Brian R.; Hoffman, Elizabeth; Libecap, Gary D.; Shachat, Keith M.

Holtz-Eakin, Douglas

PD February 1992. **TI** Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S. **AA** Holtz-Eakin: Syracuse University. Joulfaian: U.S. Department of the Treasury. Rosen: Princeton University. **SR** Princeton Financial Research Center Memorandum: 129; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 28. **PR** $3.00 U.S.; $6.00 Foreign. **JE** D31, J44, D12, M13. **KW** Wealth Distribution. Self-Employment. Entrepreneur.

AB This paper analyzes the role of liquidity constraints in the formation of new entrepreneurial enterprises. The basic empirical strategy is to determine whether an individual's wealth affects the probability of becoming an entrepreneur, and the conditional amounts of depreciable assets and interest deductions, ceteris paribus. If so, liquidity constraints are likely to be present. To be successful, such a research strategy requires a measure of asset variation that is both precisely measured and exogenous to the entrepreneurial decision. Our data are uniquely well-suited for this purpose. The sample consists of the 1981 and 1985 federal tax returns of a group of people who received inheritances in 1982 and 1983, along with information on the size of those inheritances from a matched set of estate tax returns. Hence, we can examine how the exogenous receipt of capital affects the decision to become an entrepreneur and important financial characteristics of new enterprises.

PD February 1992. **TI** Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S. **AA** Holtz-Eakin: Syracuse University. Joulfaian: U.S. Department of the Treasury. Rosen: Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 299; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 28. **PR** $2.00. **JE** D31, J44, D12, M13. **KW** Wealth Distribution. Self-Employment. Entrepreneur.

AB See other entry.

PD March 1992. **TI** The Carnegie Conjecture: Some Empirical Evidence. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S. **AA** Holtz-Eakin: Syracuse University. Joulfaian: U.S. Department of the Treasury. Rosen: Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 302; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 18. **PR** $2.00. **JE** J22. **KW** Labor Supply. Inheritances. Labor Force Participation.

AB This paper examines tax return data on the labor force behavior of people before and after they receive inheritances. The results are consistent with Andrew Carnegie's century old assertion that large inheritances decrease a person's labor force participation. For example, a single person who receives an inheritance of about $150,000 is roughly four times more likely to leave the labor force than a person with an inheritance below $25,000. Additional, albeit weaker, evidence suggests that large inheritances depress labor supply, even when participation is unaltered.

Horsley, Anthony

PD December 1991. **TI** Marginal Analysis and Bewley Equilibria: The Use of Subgradients. **AU** Horsley, Anthony; Wrobel, Andrzej. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TE/91/231; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 36. **PR** no charge. **JE** D51, C62, D58. **KW** Bewley Equilibrium. Production Economy. Marginal Analysis.

AB Using subdifferentials we develop a marginal analytic approach to equilibrium and use it in the commodity space (L-infinity) to derive new results on the representation of prices by a density. Apart from conferring advantages when the interpretation of prices as marginal costs is required, the calculus approach gives scope for improved techniques. For example, in production economies Bewley (1972) shows only that any price singularities can be removed from any equilibrium price, but the method of "containment of singularities" that we introduce can be used to establish, in equilibrium, the absence of price singularity from the outset. This is achieved in the marginal analysis by identifying concentration sets for singularities of subgradients of cost and utility/production functions. By keeping to bounded subsets of (L-infinity), we also simplify Bewley's Mackey continuity condition on preferences to the transparent condition of continuity for convergence in measure, which, unlike Mackey continuity, can be fully accounted for in terms of comprehensible economic properties. We apply our methods to examples which illustrate the cardinal points.

PD December 1991. **TI** Price Singularities: Representation vs. Exclusion. **AU** Horsley, Anthony; Wrobel, Andrzej. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TE/91/232; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 35. **PR** no charge. **JE** D51, C62, D58. **KW** Commodity Space. Bewley Equilibrium. Price Distribution.

AB Bewley's program of excluding price singularities in equilibrium solutions for commodity spaces of bounded functions is reconsidered. From two recent examples in which singularities are indispensable, viz. marginal cost pricing in continuous time and an overlapping generations model we conclude that though the L-infinity-model makes sense only when prices are represented by densities, price singularities can be incorporated by restricting the commodity space to a subspace of L-infinity. We alter Bewley's approach for use in continuous time by weakening his Exclusion Assumption to obtain a price density result with extended applicability; also, we replace the Mackey topology by the topology of convergence in measure, which is simpler and more closely matches the economic properties modeled.

Hosek, James R.

TI PACER SHARE Productivity and Personnel Management Demonstration: First-Year Evaluation. **AU** Orvis, Bruce R.; Hosek, James R.; Mattock, Michael G.

Hosek, Susan D.

PD January 1990. **TI** Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative. **AU** Hosek, Susan D.; Anderson, M.; Dixon, L.; Thomas, N.; Zwanziger, J., et. al. **AA** RAND Corporation. **SR** Rand Note: N-3069-HA; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 40. **PR** not available. **JE** H51, I11. **KW** Health Care. Health Insurance. Medical

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Care.
AB The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) -- a health plan for military dependents, retirees, and retirees' dependents -- has experienced significant problems in recent years. The costs of the program have risen to well over $2 billion per year, and its beneficiaries have complained about the amount they must pay for services, and the complexity of the program. In 1987, in an effort to improve health care delivery and contain costs, the Department of Defense proposed a set of modifications, known as the CHAMPUS Reform Initiative Before initiating the CRI nationwide, Congress required a test of the initiative's feasibility and cost effectiveness. This note presents preliminary findings concerning the operations of the major CRI programs and their effects on CHAMPUS costs in California and Hawaii. The findings suggest that the CRI has, for the most part, dealt with significant problems in implementing important program elements. The program appears to be in place as designed and has attracted the beneficiary participation necessary for a meaningful trial. The limited information available suggests that program costs are running substantially below costs in other areas.

PD February 1990. **TI** Participation and Satisfaction in Employer Plans with Preferred Provider Organization Options. **AU** Hosek, Susan D.; Marquis, M. Susan. **AA** RAND Corporation. **SR** Rand Report: R-3799-HHS/NIMH; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 55. **PR** not available. **JE** I11, I12, J32. **KW** Medical Care. Health Care. Health Insurance.
AB Preferred provider organizations (PPOs) are growing rapidly in number and enrollment as an alternative to health maintenance organizations (HMOs) and traditional indemnity plans. Through their selective contracting and patient channeling mechanisms, PPOs may become an important competitive force in the health market. Their competitive impact will depend on whether they are successful in channeling a representative cross-section of patients to selected providers. Using data from five employers who offer their employees PPOs, this report investigates (1) levels of employee participation in the PPO option; (2) selection effects in the choice of health maintenance organization (HMO) vs. indemnity plans and, among those covered by an indemnity plan PPO vs. non-PPO options; and (3) satisfaction for PPO vs. non-PPO and HMO participants. The results show that PPOs can achieve significant patient channeling without experiencing strong adverse or favorable selection. If they can also contain costs, they should continue to grow and affect competition among health care providers.

PD February 1990. **TI** Health Care Utilization in Employer Plans with Preferred Provider Organization Options. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth **AA** RAND Corporation. **SR** Rand Report: R-3800-HHS/NIMH; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 46. **PR** not available. **JE** I11, I12, J32. **KW** Medical Care. Health Care. Health Insurance.
AB Using data from five employers who were among the first to offer their employees preferred provider organization (PPO) options, this study estimates the PPOs' effects on participants' use of health care services in general and mental health care services in particular. The employers offered different incentives to use PPO providers: two waived all cost sharing, one waived the deductible, one waived the coinsurance, and one cut the coinsurance for physician services in half. Unlike some other PPO plans, however, none covered additional services in the PPO. The research was based on data from personnel records, medical claims records, and an employee survey. Approximately two years after the PPO options were first offered, they had attracted 24-65 percent of the employees and covered dependents enrolled in indemnity plans. Among users, there was a consistent pattern of lower levels of use, as measured by total charges and reimbursements. Only three employee groups were large enough to warrant a separate analysis for mental health services. In the first post-PPO year, two of the three groups showed a lower propensity to use mental health services in the PPO, but the difference all but disappeared by the second year.

PD June 1990. **TI** The Study of Preferred Provider Organizations: Executive Summary. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth; Garnick, Deborah; Luft, Harold. **AA** RAND Corporation. **SR** Rand Report: R-3798-HHS/NIMH; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 12. **PR** not available. **JE** I11, I12, J32. **KW** Medical Care. Health Care. Health Insurance.
AB This report summarizes the results of a study of five employers who included a preferred provider organization (PPO) in their employee health-benefit plans. The study analyzed employee participation in and satisfaction with the PPOs, differences between PPO and non-PPO participants in their use of health care services and the costs of those services, and provider experiences with PPO membership. All the PPO plans studied were successful in attracting indemnity plan enrollees to PPO providers, although the participation rate was significantly lower in the one plan that offered a small PPO and little incentive to use it. The PPOs successfully curbed the level of outpatient use in general and mental health care in particular. Results for inpatient services are inconclusive. The two enrollment PPOs and the optional PPO with the smallest and most cost-sensitive provider panel showed the largest savings. The authors found no evidence that favorable health selection accounted for their findings of lower utilization levels. Both patients and providers seem satisfied with the PPO experience. Very few PPO physicians would change their original decision to join the PPO.

Howard, David H.

TI External Adjustment in Selected Developing Countries in the 1990's. **AU** Helkie, William L.; Howard, David H.

Howes, Stephen

PD October 1991. **TI** Regional Variations in Living Standards in Urban China. **AU** Howes, Stephen; Lanjouw, Peter. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: CP/17; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 62. **PR** no charge. **JE** D31, I32, R11. **KW** Regional Analysis. Living Standards. China. Income Distribution.
AB This paper examines regional variations in living standards in urban China, using a cross-sectional household income survey data set from 1986. On the basis of super-provincial and provincial divisions, partial welfare and equality orderings are developed based on a second-order stochastic

dominance and "e-dominance" to address three issues. The first concerns the relationship between urban economic reform and inequality. The second is the correlation between a province's welfare ranking and its mean income ranking. The third concerns the extent to which interprovincial variations in urban welfare can be explained by reference to the standard tripartite division of China into East, Middle and West. The paper also derives provincial urban cost-of-living indices.

Hughes, Joseph P.

PD November 1991. **TI** A Quality and Risk-Adjusted Cost Function for Banks: Evidence on the "Too-Big-To-Fail" Doctrine. **AU** Hughes, Joseph P.; Mester, Loretta J. **AA** Hughes: Rutgers University. Mester: Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-21; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 20. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** G21. **KW** Commercial Bank. Banking.

AB We estimate a multiproduct cost function model that incorporates measures for the quality of bank output and the probability of failure, which can influence a bank's costs in a variety of ways. We model a bank's price of uninsured deposits as an endogenous variable depending on the bank's output level, output quality, financial capital level, and risk measures. Incorporating these aspects into the cost function has a significant effect on measures of scale and scope economies when compared with results of previous studies that did not take quality and default risk into account. We find constant returns to scale at the mean-sized bank and at banks in four different size categories. We also find evidence of diseconomies of scope at the larger banks.

Hughson, Eric

TI Intraday Trade in Dealership Markets. **AU** Bernhardt, Dan; Hughson, Eric.

Hung, Juann H.

PD May 1991. **TI** The Effectiveness of Sterilized U.S. Foreign Exchange Intervention: An Empirical Study Based on the Noise Trading Approach. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9118; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 34. **PR** no charge. **JE** F31, E42. **KW** Exchange Rate. Monetary Policy. Monetary Regime.

AB This paper tests the effect of sterilized U.S. foreign exchange intervention on the level and volatility of the exchange rate in two sub-periods: January 1985 to December 1986, and January 1987 to December 1989. We find that intervention significantly affected the Yen/$ rate in both periods, and affected the DM/$ rate significantly only in the second period. We also find that intervention reduced exchange rate volatility in the first period and increased it in the second. The findings corroborate two implications of the noise trading channel proposed by Hung (1991): (1) the effect of sterilized intervention depends critically on market conditions and intervention strategy; and (2) under certain policy and market environments, authorities would use volatility-enhancing strategies to manage the exchange rate because they are more effective than volatility-reducing strategies.

TI An Expanded, Cointegrated Model of U.S. Trade. **AU** Hickok, Susan A.; Hung, Juann H.; Wulfekuhler, Kurt C.

Husain, Aasim M.

PD January 1992. **TI** Distortionary Taxation and the Debt Laffer Curve. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/10; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** not available. **JE** F34, H21. **KW** Tax System. External Debt.

AB This paper highlights the importance of the role of the domestic tax system in determining the economic consequences of an external debt overhang. A simple taxation scheme is specified and it is shown that a country can be on the "wrong side" of its debt Laffer curve only if it is on the wrong side of its tax Laffer curve. The analysis indicates that fairly strong, and probably unrealistic, assumptions about the domestic tax system are needed to argue that the investment disincentives associated with the debt overhang are large enough to place a country on the wrong side of its debt Laffer curve.

PD February 1992. **TI** Does Sequencing of Privatization Matter in Reforming Planned Economies? **AU** Husain, Aasim M.; Sahay, Ratna. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/13; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** P21, L33, O12. **KW** Private Enterprise. Economic Reform. Planned Economy. Europe.

AB Although a centerpiece of the reform process in Central and Eastern Europe, large-scale privatization cannot be undertaken all at once and policy-makers inevitably face the choice of privatizing some sectors before others. This paper analyzes the allocative efficiency implications of alternate sequences of privatization in a reforming planned economy with two sectors - an input-producing upstream sector and a final goods-producing downstream sector. The model focuses on the link, through a market for intermediate inputs, between the two sectors. The impact of exogenous shocks to the two sectors are highlighted to show how the inflexibility of public firms in responding to shocks constrains the production response of private firms operating in perfectly as well as imperfectly competitive markets.

Hussain, Athar

PD November 1991. **TI** Income Inequalities in China: Evidence from Household Survey Data. **AU** Hussain, Athar; Lanjouw, Peter; Stern, Nicholas. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: CP/18; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 40. **PR** no charge. **JE** D31, O15, R11. **KW** Income Inequality. Income Distribution.

AB This paper presents an analysis of income inequality in China on the basis of a major household survey. The results bear out the common presumption that income inequality in China is lower than in many other countries. The pattern of income inequality in China seems to be the converse of that in India: the distribution of income in urban areas is significantly more equal than the income distribution in the countryside. Although average per capita incomes vary widely across provinces, inequality of incomes within provinces contributes more to aggregate inequality than differences in average incomes. Also, provinces in the forefront of economic reforms do not have higher inequality than the rest. Finally, on decomposing income inequality into various components of income, it is found that nonfarming activities are major determinants of rural inequality, and that the contribution played by bonuses in urban income inequality is relatively minor.

Inder, Brett

PD December 1991. **TI** Estimating Long Run Relationships in Economics: A Comparison of Different Approaches. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 18/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 24. **PR** no charge. **JE** C22, C15, C13, C51. **KW** Cointegration. Unit Roots. Error Correction Models.

AB One of the benefits of the Engle and Granger (1987) two-step procedure for modeling the relationship between cointegrated variables is that the "long-run equilibrium" relationship can be estimated consistently by a straightforward OLS regression involving the levels of the variables. Test statistics with appropriate asymptotic distributions can also be computed fairly easily by applying the modifications of Park and Phillips (1988). However, the omission of dynamics may well be detrimental to the performance of the estimator in finite samples. In this paper we use a Monte Carlo study to compare various estimators of the long-run parameters. It is found that estimates which include the dynamics are much more reliable, even if the dynamic structure is overspecified.

PD February 1992. **TI** Does the Fisher Effect Apply in Australia? **AU** Inder, Brett; Silvapulle, Param. **AA** Inder: Monash University. Silvapulle: La Trobe University. **SR** Monash Department of Econometrics Working Paper: 5/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 14. **PR** no charge. **JE** E43, E31, D84. **KW** Interest Rate. Inflation. Expectations. Unit Roots. Cointegration.

AB The Fisher effect forms the foundation for any economic theory of interest rates. Many empirical studies, though, have questioned its validity. There is conflicting evidence in recent studies based on Australian data. This paper examines the interaction of the real interest rate and inflationary expectations using quarterly Australian data from 1965 to 1990. Using recently developed econometric techniques for the analysis of nonstationary variables, this paper shows that interest rates do not respond fully to changes in inflationary expectations. That is, the evidence suggests a rejection of the Fisher effect. The results also show a rise in real interest rates after deregulation of the financial sector and the floating of the Australian dollar, and a strong dependence of real interest rates on the level of foreign interest rates.

Intriligator, Michael D.

TI Heterogeneity and Distribution in the Commons. **AU** Brito, Dagobert L.; Intriligator, Michael D.; Sheshinski, Eytan.

TI The Impact of Technological Change on the Distribution of Labor Income. **AU** Brito, Dagobert L.; Intriligator, Michael D.

Isaac, R. Mark

TI An Experimental Investigation of the Hahn-Noll Revenue Neutral Auction for Emissions Licenses. **AU** Franciosi, Robert; Isaac, R. Mark; Pingry, David E.; Reynolds, Stanley S.

Jaeger, Albert

TI Detrending, Stylized Facts and the Business Cycle. **AU** Harvey, Andrew C.; Jaeger, Albert.

Janeba, Eckhard

PD December 1991. **TI** Corporate Income Tax Competition, Double Taxation Treaties, and Foreign Direct Investment. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-361; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 25. **PR** no charge. **JE** F21, H87, H21. **KW** Income Taxation. Tax Rules. Capital Mobility. Taxes. International Investment.

AB In the presence of international capital mobility corporate income taxation and the rules how taxes paid in the host country are treated at home influence foreign direct investment. First, it is shown that a certain configuration of tax rules and tax rates can lead to a reversal of capital flows compared to a free trade situation. Moreover, it is argued that taxation sharply restricts cross-hauling. In the second part of the paper, the decision on the tax rule and the corporate tax rate is endogenized as outcome in a noncooperative game. All tax rules lead to the same inefficient outcome. Therefore, for each tax rule we analyze the conditions for Pareto-improving tax cooperation if the government's possibility to pay compensations is restricted to the corporate income tax revenues.

Jellal, M.

TI Unemployment Duration: Long-Term and Recurrent Unemployment Spells. **AU** Challier, M. C.; Jellal, M.

John, Kose

PD January 1992. **TI** Cross-Border Liability of Multinational Enterprises, Border Taxes, and Capital Structure. **AU** John, Kose; Senbet, Lemma W.; Sundaram, Anant K. **AA** John: New York University. Lemma: University of Maryland. Sundaram: Dartmouth College. **SR** New York University Salomon Brothers Center Working Paper: S-92-8; 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** 30. **PR** $5.00. **JE** F23, K12, F13. **KW** Multinational Firms. Contract Law. Liability.

AB Under incomplete contracting, limited liability creates differential valuations of investments from private and government perspectives. Managers in the private sector tend to overinvest in risky technologies, compared to levels of investment that are optimal from the standpoint of the society as a whole. This problem is exacerbated from the point of view of the host government when a multinational enterprise (MNE) engages in cross-border investments but faces incomplete cross-border liability, since there is the likelihood of

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localization of costs and globalization of benefits. Depending on whether the technology transferred by the MNE is corporate and personal taxes, the host government will impose a border tax on MNE profits in order to equate private and social investment valuations. The host country is also likely to provide incentives for debt financing in the form of tax subsidization or concessionary credit to the MNE, an apparently paradoxical policy but consistent with observed reality. This paper explores financial management implications of these policies for the MNE and derives some empirically testable predictions.

Johnson, Leland L.

PD June 1990. **TI** Residential Broadband Services by Telephone Companies? Technology, Economics, and Public Policy. **AU** Johnson, Leland L.; Reed, David P. **AA** RAND Corporation. **SR** Rand Report: R-3906-MF/RL; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 96. **PR** not available. **JE** L51, L96, L41. **KW** Technological Innovation. Telecommunications. Regulation.

AB This report assesses telephone companies' prospects for providing integrated broad band networks for voice, data, and television services to homes. Currently, they are prohibited from competing with cable companies in offering television services. The analysis suggests that lifting the restrictions on telephone company entry into the cable market would lead neither to increased competition in the television market nor to emergence of new services. Telephone and television services would continue to be offered on separate networks. Switched video -- a switched on a one-to-one basis to selections from a multitude of program sources -- is the only new residential service that telephone companies might provide with fiber.

Johnson, Paul A.

TI Local Versus Global Convergence across National Economies. **AU** Durlauf, Steven N.; Johnson, Paul A.

Johnson, S. R.

TI The Influence of Location on Productivity: Manufacturing Technology in Rural and Urban Areas. **AU** Martin, S. A.; McHugh, Richard; Johnson, S. R.

Joines, Douglas H.

PD October 1991. **TI** IRAs and Saving: Evidence from a Panel of Taxpayers. **AU** Joines, Douglas H.; Manegold, James G. **AA** Joines: University of Southern California. Manegold: University of Southern California. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-05; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 52. **PR** no charge. **JE** E21, G11, H24, H31. **KW** Individual Retirement Account. Savings. Households. Retirement. Taxation.

AB This paper employs data on a panel of taxpayers to examine the effect of expanded IRA eligibility on saving. In contrast to other research, the paper reports reliable evidence that IRA contributions are financed in part by reductions in other assets. Estimates of the fraction of contributions financed by reductions in consumption are smaller than those reported in several previous studies based on cross-sectional data. Because these results are thus far the only ones derived from a data set that incorporated meaningful variation in IRA eligibility rules, they provide the most direct evidence to date on the saving effects of changes in those eligibility rules.

Jones, Jackie

PD October 1991. **TI** Modeling Benefit Expenditures Using the FES. **AU** Jones, Jackie; Stark, Graham; Webb, Steven. **AA** Jones: St. Hilda's College, Oxford and Institute for Fiscal Studies. Stark and Webb: Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/13; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 36. **PR** 3 pounds. **JE** C81, H55, J11. **KW** Sampling Error. Simulation Model. Social Security. England. Pensions.

AB When modeling the effects of reforms to the U.K. benefit system, it is common to use survey data such as the Family Expenditure Survey. Problems arise when the characteristics of the survey sample are not representative of those of the population as a whole, as is the case with the FES. This paper uses an FES-based simulation model to assess whether a correction only for the demographic unrepresentativeness of the sample provides an adequate basis for modeling government expenditures on social security. We find that the adequacy of this approach varies greatly for different categories of benefit.

Joskow, Paul L.

PD December 1991. **TI** What does a Negawatt Really Cost? **AU** Joskow, Paul L.; Marron, Donald B. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 596; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139. **PG** 56. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** Q41, Q43, L94. **KW** Energy. Conservation. Electricity.

AB We use data from ten utility conservation programs to calculate the cost per Kwh of electricity saved -- the cost of a "negawatt hour" -- resulting from these programs. We first compute the life cycle cost per Kwh saved based on utility experience and expectations associated with these conservation programs. The resulting figures indicate that the cost of a negawatt hour is substantially higher than previously suggested by standard sources such as Lovins and EPRI which are routinely cited by policy-makers. The costs calculated for residential programs in particular are much higher than conservation advocates have suggested. We find substantial variation in costs for similar programs between utilities as well as significant intra-utility variation in the cost per Kwh saved for specific sub-programs.

Jouhki, H.

TI Labour Supply in Finland: Participation and Distribution of Weekly Working Time of Married Women. **AU** Challier, M. C.; Jouhki, H.

Joulfaian, David

TI Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

TI Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

TI The Carnegie Conjecture: Some Empirical Evidence. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

Jullien, B.

TI Managerial Incentives Based on Insider Information. **AU** Caillaud, B.; Jullien, B.

TI Competing Vertical Structures: Precommitment and Renegotiation. **AU** Caillaud, B.; Jullien, B.; Picard, P.

TI Dynamic Duopoly with Learning through Market Experimentation. **AU** Aghion, P.; Paz Espinoza, M.; Jullien, B.

Kahn, James A.

PD December 1991. **TI** A Consistent Test for the Null of Stationarity against the Alternative of a Unit Root. **AU** Kahn, James A.; Ogaki, Masao. **AA** University of Rochester. **SR** University of Rochester Center for Economic Research Working Paper: 304; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 7. **PR** no charge. **JE** C22, C15, C12. **KW** Unit Roots. Stationarity. Monte Carlo. Simulation. Small Sample Properties.

AB This paper constructs a consistent test for stationarity against unit root nonstationarity, utilizing the regression properties we investigated in Kahn and Ogaki (1990). In Kahn and Ogaki (1990), we used the regression properties to develop a chi-square test for the null of a unit root. We found that our test is more powerful than standard Dickey-Fuller tests when the sample size was small and the autoregressive root is close to one. Thus it is of interest to see if these regression properties will lead us to a powerful test in small samples when we flip the null to stationarity.

Kajii, Atsushi

PD October 1991. **TI** Large Random Economies. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-22; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 32. **PR** no charge. **JE** D51, D41. **KW** Exchange Economy. Endowment. Prices.

AB We shall consider an exchange economy with a continuum of consumers whose initial endowments are given by mutually independently distributed random variables. We deal with the measurability problem resulting from a continuum of independent random variables by relaxing the notion of aggregate demand. We shall show that market clearing prices of this economy are not random.

PD October 1991. **TI** On the Role of Paper Money in General Equilibrium Models with Incomplete Markets. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-23; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 26. **PR** no charge. **JE** D52, E44, D51. **KW** Incomplete Markets. Money.

AB We observe that paper money can have positive value in a finite horizon economy without transactions costs if markets are incomplete. Further, we shall show that not only does money have a positive price, but also it ensures the existence of equilibria in our model. We shall give an example of a sequential trade model in which there is no equilibrium without money but there is an equilibrium with money. This role of money in incomplete markets has not been emphasized in the literature.

PD October 1991. **TI** On the Role of Options in Sunspot Equilibria. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-24; 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** G12, G14, D52. **KW** Options. Trading. Asset Markets.

AB It is known that generically, equilibria are efficient if a large enough variety of options can be traded in the markets because options substitute for missing assets. In other words, options can complete the markets. We shall argue that this is inaccurate since options can not hedge extrinsic risks, i.e., sunspots. We shall show that generically, inefficient equilibria are eliminated because agents can hedge payoff relevant risks through options and because the existence of options is enough to convince agents with rational expectations that there should be no inefficient equilibrium caused by extrinsic risks.

PD October 1991. **TI** Anonymity and Optimality of Competitive Equilibria when Markets are Incomplete. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-25; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 59. **PR** no charge. **JE** D52, G12, G14, D51. **KW** Incomplete Markets. Asset Pricing. Asset Markets.

AB We shall consider the optimality, or efficiency, of competitive equilibria when markets are incomplete. We say a competitive equilibrium is "anonymous constrained optimal" if a social planner can not Pareto improve upon the equilibrium allocation by intervening in asset markets with any asset trade rule satisfying anonymity, or incentive compatibility. We find that there are robust examples of an economy whose equilibrium is anonymous constrained optimal as well as robust examples of an economy whose equilibrium is not anonymous constrained optimal. We also provide a partial characterization of economies with equilibria which are not anonymous constrained optimal.

Kanbur, Ravi

PD May 1991. **TI** Jeux sans Frontieres: Tax Competition and Tax Coordination when Countries Differ in Size. **AU** Kanbur, Ravi; Keen, Michael. **AA** Kanbur: World Bank. Keen: University of Essex and Queens University. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/8; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 40. **PR** 3 pounds. **JE** F42, H21, F36. **KW** Tax Structures. Economic Integration. Taxes. Tax System.

AB Closer international integration is putting increasing pressure on existing national tax structures. This paper uses a simple two-country model to address a range of policy concerns that consequently arise, focusing particularly on the role of national size. Differences in size exacerbate the inefficiency due to noncooperative behavior, harming both countries. The smaller country would lose from harmonization to any tax rate between those of the noncooperative equilibrium, but both countries would gain from the imposition of a minimum tax anywhere in that range. The fully optimal response to free cross-border trade, however, may be to do absolutely nothing.

Kandori, Michihiro

PD January 1992. **TI** Learning, Mutation, and Long Run Equilibria in Games. **AU** Kandori, Michihiro; Mailath, George J.; Rob, Rafael. **AA** Kandori: Princeton University. Mailath and Rob: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-01R; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 40. **PR** no charge. **JE** C72, D83. **KW** Extensive Form Game. Game Theory. Information Sets.

AB Different extensive form games with the same reduced normal form can have different information sets and subgames. This generates a tension between a belief in the strategic relevance of information sets and subgames and a belief in the sufficiency of the reduced normal form. We identify a property of extensive form information sets and subgames which we term strategic independence. We show that strategic independence is captured by the reduced normal form, and can be used to define normal form information sets and subgames. We prove a close relationship between these normal form structures and their extensive form namesakes. Using these structures, we are able to motivate and implement solution concepts corresponding to subgame perfection, sequential equilibrium, and forward induction entirely in the reduced normal form.

Kao, Duen Li

TI Rating Drift in High Yield Bonds. **AU** Altman, Edward I.; Kao, Duen Li.

Karni, Edi

PD December 1991. **TI** On the Uniqueness of Subjective Probabilities. **AU** Karni, Edi; Schmeidler, David. **AA** Karni: Johns Hopkins University. Schmeidler: Tel Aviv University and Ohio State University. **SR** Tel Aviv Sackler Institute of Economic Studies Working Paper: 1-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 21. **PR** no charge. **JE** D11. **KW** Utility Theory. Preferences. Consumer Economics.

AB The purpose of this paper is twofold: First, within the framework of Savage (1954), we suggest axiomatic foundations for the representation of event-dependent preference relations over acts. This representation has the form of expectation of event-dependent utility with resopect to non-unique subjective probabilities on the set of states. Second, we give an economic-theoretic motivation for selecting a unique probability distribution as an appropriate concept of "subjective probabilities." However, unlike in Savage's theory, this notion of subjective probabilities does not necessarily represent the decision-maker's belief regarding the likelihood of events.

PD January 1992. **TI** On the Uniqueness of Subjective Probabilities. **AU** Karni, Edi; Schmeidler, David. **AA** Karni: Johns Hopkins University. Schmeidler: Tel Aviv University and Ohio State University. **SR** Johns Hopkins Department of Economics Working Paper: 274; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 20. **PR** no charge. **JE** D81, D11. **KW** Expected Utility. Utility Theory. Uncertainty.

AB See other entry.

Karp, Larry

PD December 1991. **TI** Polish Agriculture in Transition: Does it Hurt to be Slapped by an Invisible Hand? **AU** Karp, Larry; Stefanou, Spiro. **AA** Karp: University of California at Berkeley, University of Southampton, and Centre for Economic Policy Research. Stefanou: Pennsylvania State University. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 618; Department of Agricultural and Resource Economics, 313 Giannini Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 57. **PR** $11.40. **JE** Q18, Q13, Q12. **KW** Poland. Economic Reform. Industrial Organization. Agriculture.

AB Polish economic data is assembled in order to assess the impact on the agricultural sector of the recent reforms. Evidence of recovery in this sector is slight, but the decline seems to have halted. Policy issues for agricultural reform are discussed, emphasizing regulation of the monopolistic input and processing sectors. The evidence for the existence and nature of these monopolies is reviewed. The goals of the chief regulatory body in Poland, the Antimonopoly Office, are summarized. A selection of recent models in industrial organization, dealing with entry, horizontal mergers, and vertical control, are used to provide a basis for assessing the direction of Polish regulatory policy.

Katz, Lawrence F.

PD February 1992. **TI** The Effect of the Minimum Wage on the Fast Food Industry. **AU** Katz, Lawrence F.; Krueger, Alan B. **AA** Katz: Harvard University and National Bureau of Economic Research. Krueger: Princeton University and National Bureau of Economic Research. **SR** Princeton Industrial Relations Section Working Paper: 298; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 22. **PR** $2.00. **JE** J31, J23, J38. **KW** Minimum Wage. Wages. Labor Demand. Wage Distribution.

AB Using data from a longitudinal survey of fast food restaurants in Texas, the authors examine the impact of recent changes in the federal minimum wage on a low wage labor market. The authors draw three main conclusions. First, the survey results indicate that less than 5 percent of fast food restaurants use the new youth subminimum wage even though the vast majority paid a starting wage below the new hourly minimum wage immediately before it went into effect. Second, although some restaurants increased wages by an amount exceeding that necessary to comply with higher minimum wages in both 1990 and 1991, recent increases in the federal minimum wage have greatly compressed the distribution of starting wages in the Texas fast food industry. Third, employment increased relatively in those firms likely to have been most affected by the 1991 minimum wage increase, while price changes appear to be unrelated to mandated wage changes. These employment and price changes do not seem consistent with conventional views of the effects of increases in a binding minimum wage.

Kaur, Ravjeet

TI The Social Opportunity Cost of Consumption for Australia, 1960-61 to 1988-89. **AU** McDonald, Ian M.; Tacconi, Luca; Kaur, Ravjeet.

Kawai, Masahiro

PD September 1991. **TI** The Effects of Anticipated Switches in Budget-Deficit Financing Methods in a Small Open Economy. **AU** Kawai, Masahiro; Maccini, Louis J. **AA** Kawai: University of British Columbia and University of Tokyo. Maccini: Johns Hopkins University. **SR** University of British Columbia Department of Economics Discussion Paper: 91-35; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** not available. **PR** $.20 per page Canadian to other than educational institutions. **JE** E62, E42, F41, F32, F31. **KW** Budget Deficit. Fiscal Policy. Current Account. Open Economy. Exchange Rate.

AB This paper studies the dynamic behavior of fiscal deficits, current account imbalances, and the exchange rate in a small open economy. Suppose the economy is populated by households with finite lives, and suppose the government is currently running a bond financed fiscal deficit. We analyze the effects on the economy when the public anticipates that the government will switch in the future to some combination of tax and money finance. Our main finding is that, if tax finance is anticipated primarily to be used to close the deficits in the future, then current fiscal deficits will be associated with current trade deficits. But, if money finance is anticipated primarily to be used, then the current fiscal deficits will be associated with trade surpluses.

PD September 1991. **TI** The Strategic Choice of an International Monetary System: Policy Instruments and Commitments. **AU** Kawai, Masahiro; Murase, Hideaki. **AA** Kawai: University of British Columbia and University of Tokyo. Murase: Yokohama National University. **SR** University of British Columbia Department of Economics Discussion Paper: 91-36; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 32. **PR** $.20 per page Canadian to other than educational institutions. **JE** E42, E52, F33. **KW** Exchange Rate. Monetary Policy. Monetary System.

AB The paper develops a game theoretic model to examine the strategic choice problem of international monetary regimes in a world economy of two interdependent countries. Two types of international monetary regimes, i.e., a freely flexible exchange rate system and a managed exchange rate system, are considered depending on whether monetary authorities choose money supplies (and/or interest rates) or the exchange rate as their monetary policy instrument. A combination of monetary policy instruments determines the nature of domestic and international monetary regimes. An intuitive discussion is given as to the choice of monetary policy commitments. The paper shows how an international monetary system is shaped endogenously through the rational calculations of the authorities.

PD September 1991. **TI** Japanese Investment in Foreign Securities in the 1980's. **AA** University of British Columbia and University of Tokyo. **SR** University of British Columbia Department of Economics Discussion Paper: 91-37; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 52. **PR** $.20 per page Canadian to other than educational institutions. **JE** F32, F12, F34. **KW** Japan. Current Account. International Lending.

AB Japan experienced massive current account surpluses and accumulated a considerable amount of foreign securities, particularly those denominated in the U.S. dollar, in the 1980's. Japanese net investment in foreign securities rose very sharply in 1983-86, remained large in 1987. In the latter part of the 1980's, however, as the Japanese current account surplus started to shrink, the net outflow of securities investments also began to fall. The paper attempts to explain why Japanese net securities investment abroad rose so sharply and stayed at a high level during 1985-1987 at the time when Japanese investors incurred substantial exchange losses on their holdings of foreign currency denominated securities. It also attempts to explain why net securities investment started to decline in 1988 and fell sharply to low levels in 1989-90.

Keen, Michael

TI Jeux sans Frontieres: Tax Competition and Tax Coordination when Countries Differ in Size. **AU** Kanbur, Ravi; Keen, Michael.

Khan, Mohsin S.

PD December 1991. **TI** Financial Sector Reforms and Monetary Policy. **AU** Khan, Mohsin S.; Sundararajan, V. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/127; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** E52, E51, E44, E58. **KW** Financial Markets. Monetary Policy.

AB In recent years a number of countries have undertaken far-reaching reforms of their financial sectors. Generally speaking, financial sector reforms aim at achieving greater flexibility of interest rates, an enhanced role for market forces in credit allocation, increased independence for the central bank, and a deepening of money and securities markets. Such reforms, and the developments that follow, have important implications for the design and conduct of monetary policy. This paper provides an overview of the linkages between financial sector reforms and the monetary policy framework, focusing in particular on the objectives, instruments, and operating procedures of monetary policy.

TI Foreign Currency Deposits and the Demand for Money in Developing Countries. **AU** Agenor, Pierre-Richard; Khan, Mohsin S.

Kim, Dongcheol

TI Margin Requirements, Price Fluctuations, and Market Participation in Metal and Stock Index Futures. **AU** Hardouvelis, Gikas A.; Kim, Dongcheol.

King M. L.

TI Choice of Time Series Forecasting Method Using Discriminant Scores. **AU** Shah, C.; King M. L.

King, Maxwell L.

PD May 1991. **TI** Locally Optimal Testing when a

Nuisance Parameter is Present Only under the Alternative. **AU** King, Maxwell L.; Shively, Thomas S. **AA** King: Monash University. Shively: University of Texas at Austin. **SR** Monash Department of Econometrics Working Paper: 4/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 17. **PR** no charge. **JE** C12. **KW** Power. Linear Regression. Hypothesis Testing.

AB We consider hypothesis testing problems in which a nuisance parameter is present only under the alternative hypothesis. Standard asymptotic tests, such as likelihood ratio, Lagrange multiplier and Wald tests, are difficult to apply because of problems incurred in obtaining their asymptotic distributions. To overcome this difficulty, we reparameterize the testing problem to one for which an exact small sample test can be constructed using existing hypothesis testing procedures. The reparameterization technique is applied to two examples from the econometrics literature, and an empirical power comparison shows that our test has better power properties than tests previously proposed in the literature. Further, p-values for our test can be computed in O(n) operations so the test can be implemented efficiently.

TI Testing for ARMA(1,1) Disturbances in the Linear Regression Model. **AU** Rahman, Shahidur; King, Maxwell L.

Kleidon, Allan W.

PD December 1991. **TI** One Market? Stocks, Futures and Options during October 1987. **AU** Kleidon, Allan W.; Whaley, Robert E. **AA** Kleidon: Stanford University. Whaley: Duke University. **SR** Stanford Graduate School of Business Research Paper: 1114; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 44. **PR** not available. **JE** G12, G13, G14, G18. **KW** Asset Market. Regulation. Stock Market. Market Crash.

AB We provide new evidence regarding the degree of integration between the markets for stocks, future and options prior to and during the October 1987 market crash. Where previous analyses have resulted in recommendations for the implementation of circuit breakers, the coordination of margin requirements across markets, and changes in regulatory jurisdiction, our analysis indicates that delinkage between markets during the crash was primarily caused by an antiquated mechanism for processing stock market orders. The results suggest that market integration may be better served by efficient order execution than by further restricting markets.

Klein, Roger W.

PD November 1991. **TI** An Efficient Semiparametric Estimator for Binary Response Models. **AU** Klein, Roger W.; Spady, Richard H. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 70; Room 2A-355, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 34. **PR** not available. **JE** C14, C35. **KW** Semiparametric Estimation. Discrete Choice Models.

AB This paper proposes an estimator for discrete choice models that makes no assumption concerning the functional form of the choice probability function, where this function can be characterized by an index. The estimator is shown to be consistent, asymptotically normally distributed, and to achieve the semiparametric efficiency bound. Monte Carlo evidence indicates that there may be only modest efficiency losses relative to maximum likelihood estimation when the distribution of the disturbances is known, and that the small sample behavior of the estimator in other cases is good.

PD December 1991. **TI** Specification Tests for Binary Choice Models Based on Index Quantiles. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 71; Room 2A-355, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 26. **PR** not available. **JE** C12, C14, C35. **KW** Binary Choice Models. Semiparametric Estimation.

AB In testing choice models, there are contexts in which it is important to focus on choice probabilities as opposed to the parameters of choice models. This paper examines the former by formulating a distance measure between parametric choice probabilities under the null hypothesis and either a nonparametric or a semiparametric alternative. To access where the parametric model is "unsatisfactory," we apply the distance measure to ordered data subsets ("index quantiles"). We establish the large sample distribution of the test statistics, examine their asymptotic local power properties, and apply the tests to a model of labor force participation.

Kneip, Alois

PD November 1991. **TI** Nonparametric Estimation of Common Regressors for Similar Curve Data. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-351; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 43. **PR** no charge. **JE** C14, C51, C21, C22. **KW** Model Specification. Linear Model. Principal Components. Asymptotic Theory. Regression Analysis.

AB The paper is concerned with data from a collection of different, but related regression curves (m(j)), j=1,...,N. In statistical practice analysis of such data is most frequently based on low dimensional linear models. It is then assumed that each regression curve m(j) is a linear combination of a small number L << N of common functions g(l), l=1,...,L. For example, if all m(j)'s are straight lines this holds with L = 2, g(1)=1 and g(2)=x. In this paper the assumption of a prespecified model is dropped. A nonparametric method is presented which allows us to estimate the smallest L and corresponding functions g(l) from the data. The procedure combines smoothing techniques with ideas related to Principal Component Analysis. An asymptotic theory is presented which yields detailed insight into properties of the resulting estimators. An application to household expenditure data illustrates the approach.

Korobow, Leon

PD December 1991. **TI** Using Cluster Analysis as a Tool for Economic and Financial Analysis. **AU** Korobow, Leon; Stuhr, David P. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9132; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 13. **PR** no charge. **JE** L21, D21. **KW** Firm Theory. Firm Behavior.

AB This paper describes how cluster analysis can be used in a more definitive manner than has been the case thus far to identify from financial data the distinct business strategies of individual firms. The method employed rests on widely accepted behavioral concepts and requires minimal assumptions with regard to statistical inference. The results indicate that a business strategy may have several key components and that the evaluation of how well these separate components mesh may prove to be a useful way of analyzing the overall strategy.

Korosi, Gabor

PD December 1991. **TI** Cointegration and Aggregation. **AU** Korosi, Gabor; Matyas, Laszlo. **AA** Korosi: La Trobe University. Matyas: Monash University. **SR** Monash Department of Econometrics Working Paper: 16/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 3. **PR** no charge. **JE** C43, E13, D11. **KW** Cointegration. Aggregation Bias. Representative Agent Model. Aggregation. Panel Data.

AB Macroeconometric models frequently assume that the behavior of economic agents is uniform, and thus the behavior of a single agent characterizes the aggregate behavior of the agents. This assumption of the existence of a representative agent renders modeling simpler, and frequently feasible. It was always recognized that there may be some outliers, some agents who, for any particular reason, may behave differently, but the maintained hypothesis is that the effects of these perturbations cancel out each other, and hence they can be ignored. If a macroeconometric model is based on microeconomic theory and the data generating process is a dynamic nonstationary one, even one single outlier may change the characteristics of the aggregate model. The assumed microeconomic behavior may not be observed in the aggregate time series, and the dynamic characteristics of the aggregate time series may reflect the behavior of one single extreme agent. If there are several agents with extreme behavior the characteristics of the aggregate series may not correspond to any of its components. In such cases any inference from the aggregate time series may be severely biased, and thus useless.

Kostoris, Fiorella Padoa Schioppa

PD February 1992. **TI** A Cross-Country Analysis of the Tax-Push Hypothesis. **AA** University of Rome. **SR** International Monetary Fund Working Paper: WP/92/11; International Monetary Fund, Washington, DC 20431. **PG** 39. **PR** not available. **JE** J51, O57, E24, E62. **KW** Unions. Europe. Open Economy. Wages.

AB This paper presents a microeconomic theoretical model of union optimizing behavior which is then used to test the relevance of the tax-push hypothesis for wage formation in nine Western European countries. Two factors -- the compensation and the progressivity effects -- are shown by the model to account for the effect (if any) of tax rates on wage formation. A wage equation tested for the period 1960-1988 shows that in general small open economies have negligible compensation and progressivity effects, while in larger economies direct, indirect and social security tax rates are transferred onto the real labor cost. All countries show a weakening of the tax shifting starting at the end of the 1970's or the beginning of the 1980's.

Kotwal, Ashok

TI A Theory of Real Wage Growth. **AU** Eswaran, Mukesh; Kotwal, Ashok.

Kouwenaar, Arend

PD December 1991. **TI** Price and Volume Effects of a Devaluation in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/130; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** E62, E13, E31, E17. **KW** Exchange Rate. Budget Deficit. Inflation. Africa. Government Spending. Fiscal Policy.

AB This paper develops a simple tool to assess the medium-term effects of a devaluation on domestic price and output levels in developing countries. It focuses on the formation of the wage rate and on government expenditure and tax policies under a devaluation, as the main determinants of the "pass-through" process, which is described by a simple general equilibrium dependent economy model. The main characteristic of the model is that a nominal devaluation will only bring the economy closer toward external and internal equilibria if it is accompanied by reductions in the real government deficit and the real wage. The insertion of key parameters, available for most countries, into the reduced form of the model permits a quick and easy quantification of both price and volume effects and allows a sensitivity analysis applied numerically to five African countries.

Kraft, Dennis F.

TI Multivariate Simultaneous Generalized ARCH. **AU** Baba, Yoshihisa; Engle, Robert F.; Kraft, Dennis F.; Kroner, Kenneth F.

Kroner, Kenneth F.

PD October 1991. **TI** The Relationship between Firm Size and Screening Ability in an Automobile Insurance Market. **AU** Kroner, Kenneth F.; West, Douglas S. **AA** Kroner: University of Arizona. West: University of Alberta. **SR** University of Arizona Economics Working Paper: 92-4; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 20. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L11, G22. **KW** Screening. Insurance Markets. Firm Size.

AB We modify the Carlson and McAfee (1983) model of price dispersion to allow for screening in an insurance market. This gives us a theoretical relationship between a firm's ability to screen out bad risks and its size. This relationship, which is shaped approximately like an inverted U, is tested empirically using data from that automobile insurance market in Alberta. Support for the theory is found.

TI Multivariate Simultaneous Generalized ARCH. **AU** Baba, Yoshihisa; Engle, Robert F.; Kraft, Dennis F.; Kroner, Kenneth F.

Krueger, Alan B.

TI Environmental Impacts of a North American Free Trade Agreement. **AU** Grossman, Gene M.; Krueger, Alan B.

TI The Effect of the Minimum Wage on the Fast Food Industry. **AU** Katz, Lawrence F.; Krueger, Alan B.

TI Race and School Quality since "Brown vs. Board of Education". **AU** Boozer, Michael A.; Krueger, Alan B.; Wolkon, Shari.

Kuan, Chung-Ming

PD October 1991. **TI** Strong Convergence of Recursive M-Estimators for Models with Dynamic Latent Variables. **AU** Kuan, Chung-Ming; White, Halbert. **AA** Kuan: University of Illinois, Urbana-Champaign. White: University of California, San Diego. **SR** Stanford Institute for Theoretical Economics Technical Report Series: 25; Stanford Institute for

Theoretical Economics, Fourth Floor, Encina Hall, Stanford University, Stanford, CA 94305. **PG** 48. **PR** not available. **JE** C32, C22, C13. **KW** Time Series Model. Unobserved Variables. Model Specification.

AB Latent variables are variables entering the formulation of an econometric or statistical model that are not directly observable (e.g. Aigner, Hsiao, Kapteyn and Wansbeek, 1983); dynamic latent variables are latent variables determined in time by their own previous values and the previous values of other variables in the system. Such variables play a fundamental role in modeling economic time series, especially in contexts involving intertemporal optimization, search, error correction and state dependence. (See Heckman (1981) for examples in discrete choice modeling and Quandt (1988) for disequilibrium models.) In particular, state dependence plays a central role in models of economic agents learning about a system under their partial or complete control, as in the recent important work of Marcet and Sargent (1987, 1989) and Woodford (1990). Dynamic latent variables can also be used to dramatically simplify or enrich time series models used for forecasting. In this paper we present a theory of strong convergence for a class of recursive m-estimators for dynamic latent variables models.

Kujal, Praveen

PD February 1992. **TI** Removal of Firm-Specific Output Limits and Dynamic Market Power. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-14; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 12. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L11, L16. **KW** Market Structure. Market Quotas. Market Power.

AB In this paper we look at the issue of dynamic market power as a consequence of removing firm-specific output limits. We show that by removing firm-specific binding quotas we create market power, however, the lower bound of the equilibrium mixed strategy distribution decreases. That is, we show that creation of market power can result in a decrease in the lower bound of the noncooperative prices for a given range of capacities.

PD February 1992. **TI** Firm-Specific Output Limits in a Posted Offer Market: Distributive and Efficiency Effects. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-15; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 35. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L14, L43. **KW** Quotas. Contracts.

AB In this paper we look at the effect of the removal of firm-specific binding and non-binding quotas in posted offer markets. In the experiments we see that the affect of the binding and non-binding quotas is carried over to the deregulated regime. The effect of non-binding quotas on the number of units contracted is statistically significant (while they are in effect). It is also seen that distribution of surplus/binding quotas may actually affect the convergence path of contracted prices.

PD February 1992. **TI** Firm-Specific vs. Market Quotas: The Non-Equivalence of Price Outcomes. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-16; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 10. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L13, D43. **KW** Quotas. Oligopoly.

AB In this paper we show that pure strategy outcomes and noncooperative cumulative price distribution functions with firm-specific quotas stochastically dominates the cdf with market quantity restrictions (quotas). The game is modeled as a sequential move (oligopoly) price choice game.

PD February 1992. **TI** The Impact of Regulatory Controls on Industry Structure: A Study of the Car and Scooter Industry in India. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-17; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 21. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L11, L15, L52, L43i]. **KW** Regulation. Deregulation. Quotas. Licensing.

AB In this paper we look at the impact of regulatory controls on the Car and Scooter industry in India. We see that the industrial policy was molded by the experience (of the Indians) with the British rule. Evidence suggests that the industrialists played a major role in the formulation of the industrial policy. Due to the entry barriers we see that neither industry made any major effort to invent or innovate. Both industries had excess capacity and maintained delivery queues while the quotas were in effect. After the quotas were lifted, both industries became competitive, most product queues vanished, and the firms improved product choice and product quality.

PD February 1992. **TI** Gainers and Losers in Indian Deregulatory Experience. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-18; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 13. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L11, L43, L15. **KW** Regulation. Product Quality. Deregulation. Consumer Welfare.

AB In this paper we study the gainers and the losers from the regulatory-deregulatory experience in the Indian Car and Scooter Industry. We see that the product quality prior to easing quantity limits was relatively poor to the quality after the quantity limits were removed. The markets became competitive after the output limits were eased. Consumers welfare increases as regards product choice and quality. The incumbent producers suffered after the quotas were removed due to the inactiveness shown (by them) while the quotas were in effect.

Kumar, Manmohan S.

PD December 1991. **TI** Energy Pricing in the Soviet Union. **AU** Kumar, Manmohan S.; Osband, Kent. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/125; International Monetary Fund, Washington, DC 20431. **PG** 13. **PR** not available. **JE** P22, Q43, Q48, F32. **KW** Energy. Exports. Consumption.

AB Energy exports, which are already the primary source of Soviet convertible currency earnings and an important contributor to the budget, could bring in much more revenue if the Soviet Union were to reduce its extremely high levels of energy consumption. To encourage this process, energy prices need to be raised substantially. Under plausible assumptions, it is shown that an increase in prices could yield sizable foreign exchange earnings. Large increases in energy prices could, however, threaten the solvency of industrial enterprises, precipitate major economic and social dislocation, and severely strain inter-republican economic relationships.

PD January 1992. **TI** Econometric Analysis of Industrial Country Commodity Exports. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/4; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** O57, F14, Q17. **KW** Exports. Developing Countries. Commodities. Agriculture. Economic Development.
AB This paper examines the composition of primary commodity exports by industrial countries and contrasts this composition with that of the exports by developing countries. Both the share of industrial countries' commodity merchandise exports, is examined over time and across different commodities and geographical areas. The paper then specifies and empirically estimates an econometric model of the demand for and the supply of commodity exports by industrial countries. The model is estimated for five groups of industrial countries and the parameters of the model are compared with those available for the developing countries.

Kumbhaker, Subal C.

TI Which Banks Choose Deposit Insurance? Evidence of Adverse Selection and Moral Hazard in a Voluntary Insurance System. **AU** Wheelock, David C.; Kumbhaker, Subal C.

TI Which Banks Choose Deposit Insurance? Evidence of Adverse Selection and Moral Hazard in a Voluntary Insurance System. **AU** Wheelock, David C.; Kumbhaker, Subal C.

TI The Slack Banker Dances: Deposit Insurance and Risk-Taking in the Banking Collapse of the 1920's. **AU** Wheelock, David C.; Kumbhaker, Subal C.

Lahiri, Ashok Kumar

TI Bank Insolvency and Stabilization in Eastern Europe. **AU** Hardy, Daniel C.; Lahiri, Ashok Kumar.

Lahiri, S.

TI Growth and Welfare Losses from Carbon Emissions Restrictions: A General Equilibrium Analysis for Egypt. **AU** Blitzer, C. R.; Eckaus, R. S.; Lahiri, S.; Meeraus, A.

Lane, Timothy D.

PD January 1992. **TI** Household Demand for Money in Poland: Theory and Evidence. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/6; International Monetary Fund, Washington, DC 20431. **PG** 21. **PR** not available. **JE** E41, P34, O52. **KW** Money Demand. Households. Currency.
AB This paper examines the household demand for narrow money in Poland during the 1980's. At that time, there were shortages, but informal trade in both goods and foreign exchange was common, and holdings of foreign currency were substantial. Household money demand in this environment is first examined at the theoretical level: a representative household's holding of domestic and foreign money is analyzed in a cash-in-advance model in which domestic currency is needed to purchase goods in the official shops while either domestic or foreign currency can be used in the black market. This model gives rise to a formulation of money demand which is then estimated using household-level data from 1979 to 1988.

Lanjouw, Peter

TI Regional Variations in Living Standards in Urban China. **AU** Howes, Stephen; Lanjouw, Peter.

TI Income Inequalities in China: Evidence from Household Survey Data. **AU** Hussain, Athar; Lanjouw, Peter; Stern, Nicholas.

Leininger, Wolfgang

TI The Missing Equilibria in Hotelling's Location Game. **AU** Bester, Helmut; de Palma, Andre; Leininger, Wolfgang; von Thadden, Ernst-Ludwig; Thomas, Jonathan.

TI The Missing Equilibria in Hotelling's Location Game. **AU** Bester, Helmut; de Palma, Andre; Leininger, Wolfgang; von Thadden, Ernst-Ludwig; Thomas, Jonathan.

LeRoy, Stephen F.

PD February 1992. **TI** Volatility. **AU** LeRoy, Stephen F.; Steigerwald, Douglas G. **AA** LeRoy: University of Minnesota. Steigerwald: University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 6-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 26. **PR** no charge. **JE** G14, G12. **KW** Market Efficiency. Capital Market.
AB Sections 2-4 of this paper survey the variance bounds literature and the parallel evolution of the literature on returns tests of market efficiency, taking power as the organizing principle. In section 5 we present some new results on the comparative power of volatility and returns tests.

Lewis, Karen K.

TI Do Expected Shifts in Inflation Policy Affect Real Rates? **AU** Evans, Martin D. D.; Lewis, Karen K.

Libecap, Gary D.

PD December 1991. **TI** Institutions and Economic Growth: The Contributions of Douglass C. North. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-6; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 30. **PR** \$2.00 Canada and U.S.; \$3.00 Overseas by air. **JE** O17, F43. **KW** Property Rights. Economic Development. Institutions.
AB The paper summarizes the development of Douglass North's views on institutions and the critical role they play in economic development. It also summarizes some of the key issues in property rights contracting and institutional change. North's argument that greater consideration of institutional constraints is necessary for understanding why some societies are successful in economic growth while others are not is re-emphasized.

TI An Experimetric Study of the Cournot Model. **AU** Binger, Brian R.; Hoffman, Elizabeth; Libecap, Gary D.; Shachat, Keith M.

Lieberman, Offer

PD December 1991. **TI** On the Approximation of Saddlepoint Expansions in Statistics. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 17/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 17. **PR** no charge. **JE** C12, C13, C22. **KW** Asymptotic Theory. Polynomials. Probability

Distributions.
AB The exact saddlepoint approximation as developed by Daniels (1954), is an extremely accurate method for approximating probability distributions. Recent applications of the technique to densities of statistics of interest have been hindered by the requirement of explicit knowledge of the cumulant generating function, and the need to obtain an analytic solution to the saddlepoint defining equation. In this paper we show the conditions under which any approximation to the saddlepoint is justified, and suggest a solution that does not affect the usual merits of the exact expansion. We illustrate with an approximate saddlepoint expansion of the Durbin-Watson test statistic.

Limin, Wang

TI Rationing and Consumer Demand in China: Simulating the Effects of a Reform of the Urban Food Pricing System. **AU** Pudney, Stephen; Limin, Wang.

Lin, Justin Yifu

PD March 1992. **TI** The Needham Puzzle: Why the Industrial Revolution did not Originate in China. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 650; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 29. **PR** $2.50; checks payable to U.C. Regents. **JE** O11, O31, O14. **KW** Innovation. Industrialization. Technological Change. Economic Development.
AB This paper attempts to answer two questions which form a seeming paradox: why were China's science and technology so far in advance of other civilizations historically, and why have they fallen so far behind in modern times? The fundamental hypothesis is as follows: In premodern times, technological inventions for the most part stemmed from the experiences of artisans and farmers, and scientific findings were made spontaneously by a few geniuses with "innate acumen" in observing nature. In modern times, technological inventions are mainly obtained through experiment cum science, and scientific discovery is achieved primarily by the technique of mathematized hypotheses about nature in conjunction with controlled experiments, which can be performed only by scientists with special training. In the former model, the larger was the population in a given society, the more experienced artisans and farmers, and the more geniuses it would produce. Thus, societies with larger populations could be expected to achieve greater advances in science and technology.

PD March 1992. **TI** Technological Change and Agricultural Household Income Distribution: Evidence from Hybrid Rice Innovation in China. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 651; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 15. **PR** $2.50; checks payable to U.C. Regents. **JE** Q12, Q16. **KW** Agriculture. Agriculture Technology. Farm Household.
AB This paper applies a simple two-household two-product general equilibrium model to analyze the impact of new rice technology on household income and uses agriculture household survey data from China to test the implications of this model. The theoretical model and the empirical results show that, when a new rice technology becomes available, the agricultural households with comparative advantages in adopting this new technology will adopt it and reallocate resources to increase rice production and reduce the production of other goods. Meanwhile, the non-adopting households will do just the opposite.

Lindsey, Robin

TI Properties of Dynamic Traffic Equilibrium Involving Bottlenecks, Including a Paradox and Metering. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin.

TI Information and Usage of Congestible Facilities under Free Access. **AU** Arnott, Richard; de Palma, Andre; Lindsey, Robin.

Lohmann, Susanne

PD April 1991. **TI** Electoral Cycles and International Policy Coordination. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1128; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 31. **PR** not available. **JE** F42, E61, E52, D72. **KW** Monetary Policy. Policy Coordination. International Coordination. Politics. Electoral Cycle. Inflation.
AB This paper analyzes the interaction between domestic politics and international policy coordination as a two-level repeated prisoners' dilemma. At the domestic level, political competition generates an electoral cycle in monetary growth rates and real output. At the international level, the policy-makers' desire to promote domestic expansion by devaluing the currency gives rise to an inflationary bias in their monetary policies. The policy-makers' incentives to cooperate at one level are affected by the extent to which they are engaged in cooperation at the other level. It is shown that a move towards international cooperation, which reduces the inflationary bias in monetary policy, may increase the amplitude of the electoral cycle. The conditions are derived under which international cooperation has a stabilizing effect on domestic politics by strengthening the incentives of domestic policy-makers to avoid generating an electoral cycle in the first place.

PD April 1991. **TI** Optimal Commitment in Monetary Policy: Credibility Versus Flexibility. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1129; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 32. **PR** not available. **JE** E58, E52. **KW** Central Bank. Inflation. Monetary Policy. Commitment.
AB This paper examines the optimal design of a central banking institution which lends credibility to a low inflation monetary policy while allowing for a flexible response to unforeseen contingencies. A policy-maker appoints a conservative central banker, who generates a lower average time consistent inflation rate at the cost of a distorted response to output shocks. By retaining the option to dismiss the central banker at a cost, the policy-maker forces the central banker to accommodate when extreme shocks are realized.

PD April 1991. **TI** Information Aggregation through Costly Political Action. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1130; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 40. **PR** not available. **JE** D72, D82, D71. **KW** Private Information. Voting.

Majority Rule. Social Choice. Signaling.
AB This paper examines a situation where information is dispersed among the members of a society. The information is pertinent to the individuals' voting decisions in a two candidate election that is decided by majority rule. While the incumbent is committed to maintain the status quo, the challenger will implement a policy alternative if she is elected. By engaging in political action prior to the election, individuals signal their private information to the electorate in order to affect the election outcome. Based on the number of individuals who are publicly observed to take political action, the electorate rationally updates on the benefits to be derived from overturning the status quo in favor of the policy alternative. If the number of individuals engaged in political action exceeds a critical level, a majority votes in favor of a change in policy.

PD April 1991. **TI** Information Versus Manipulation: A Signaling Theory of Political Action. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1131; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 40. **PR** not available. **JE** D72, D82, D71. **KW** Private Information. Political Process. Political Action.
AB This paper examines a situation where information is dispersed among the heterogeneous members of a society. Some individuals with moderate preferences take political action to signal their private information to the political leader and induce her to shift policy. Extremists on one side of the issue attempt to manipulate the policy decision by taking political action independently of their private information. Extremists on the other side expect to benefit from the status quo bias built into uninformed political decision-making and thus abstain from political action. The political leader extracts information from the aggregate number of political actions taking into account the individuals' incentives to engage in political action as a function of their private information. She is responsive to political protest if her estimate of the number of activist moderates exceeds a critical level.

PD September 1991. **TI** A Welfare Analysis of Political Action. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1132; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 64. **PR** not available. **JE** D72, D71, D61, D82. **KW** Private Information. Political Process. Decision Theory. Signaling. Deadweight Loss.
AB In earlier work, I examine the situation where information pertinent to political decisions is dispersed among the members of a society. Rational, self-interested individuals may take costly political action to signal their private information to political decision-makers. The revelation of information reduces the variability of policy outcomes, but involves deadweight costs privately incurred by the activists. This paper develops a welfare analysis of the political action equilibria characterized in my earlier work. I identify a number of sources that render the equilibrium supply of political action socially suboptimal. Perhaps surprisingly, costly political action can be under or oversupplied in equilibrium.

Lothian, James R.

TI The Response of Exchange Rates to Permanent and Transitory Shocks under Floating Exchange Rates. **AU** Evans, Martin D. D.; Lothian, James R.

Love, David R. F.

PD November 1991. **TI** Exhaustible Resources in an Overlapping Generations Economy. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 844; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 30. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** Q32, D51, Q31. **KW** Natural Resources. Planning Problem. Production Economy.
AB This paper explores the natural resource consumption behavior of a competitively determined economy relative to a socially planned benchmark when agents are characterized as having finite lifespans which overlap. A general equilibrium model of a production economy which uses inputs from a finite stock of an aggregate natural resource is formulated and solved for the rates of resource extraction associated with the competitive outcome and the socially planned one. It is shown that resource extraction in the competitive economy can exceed that of the socially planned optimum and that intergenerational inequities result.

Lovrics, Laszlo

TI Simultaneous Error Components Models when Panel Data are Incomplete. **AU** Matyas, Laszlo; Lovrics, Laszlo.

Lown, Cara S.

TI An Indicator of Future Inflation Extracted from the Steepness of the Interest Rate Yield Curve along its Entire Length. **AU** Frankel, Jeffrey A.; Lown, Cara S.

Lugaresi, Sergio

PD December 1991. **TI** Tax Policy and Income Redistribution in Italy. **AU** Lugaresi, Sergio; Di Nicola, Fernando. **AA** ISPE, Rome. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TIDI/152; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 41. **PR** no charge. **JE** H23, H24, H26, H21. **KW** Income Redistribution. Tax Reform. Italy. Taxes. Tax System.
AB The present Italian tax system is the result of a broad tax reform that was implemented in 1973-74. The main result of the reform has been the large increase of the tax revenue, public debt has risen over the period and it is now as big as the GDP. Dissatisfaction with the present tax structure and the experience of tax reforms in other countries, were at the origin of several reform proposals. In the past years the Italian government has chosen a softened version of the switch from direct to indirect taxation. Since 1990 the system of personal income taxation has been fully indexed. Until the mid-1980's very few studies on income redistribution were carried out in Italy. Only the last few years there have been several studies on income redistribution based on microdata. The aim of the paper is to explore the redistributive impact of the Italian tax system drawing on some of these studies. Such impact seems to be very weak because of extensive tax evasion. In the light of these analyses the paper briefly examines the perspectives of the Italian tax system.

Lye, Jenny N.

PD December 1991. **TI** Non-Linear Time Series Modelling and Distributional Flexibility. **AU** Lye, Jenny N.; Martin, Vance L. **AA** University of Melbourne.

SR Monash Department of Econometrics Working Paper: 14/91; Department of Econometrics, Faculty of Economics, Commerce and Management, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 24. **PR** no charge. **JE** C22, C51, C52. **KW** Exponential Distribution. Time Series Model. Nonlinear Model.

AB Most of the existing work in nonlinear time series analysis has concentrated on generating flexible functional models by specifying nonlinear specifications for the mean of a particular process without much, if any, attention given to the distributional properties of the model. However, as Martin (1991) has shown, greater flexibility in perhaps a more natural way, can be achieved by consideration of distributions from the generalized exponential class. This paper represents an extension of the earlier work of Martin by introducing a flexible class of nonlinear time series models which can capture a wide range of empirical behavior such as skewed, fat-tailed and even multimodal distributions. This class of models is referred to as GENTS: Generalized Exponential Non-linear Time Series. A maximum likelihood algorithm is given for estimating the parameters of the model, and the framework is applied to estimating the distribution of the movements of the exchange rate.

Maccini, Louis J.

TI The Effects of Anticipated Switches in Budget-Deficit Financing Methods in a Small Open Economy. **AU** Kawai, Masahiro; Maccini, Louis J.

Machin, Stephen

PD June 1991. **TI** Dynamic Models of Employment Based on Firm-Level Panel Data. **AU** Machin, Stephen; Manning, Alan; Meghir, Costas. **AA** Machin and Meghir: University College London and Institute for Fiscal Studies. Manning: London School of Economics. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/10; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 48. **PR** 3 pounds. **JE** E24, J51, J23. **KW** Collective Bargaining. Labor Demand. Unions.

AB In this paper we derive empirical dynamic models of employment in the presence of firm-union bargaining. The distinctive feature of our theoretical approach is that both the firm and the union are allowed to be forward looking. We derive the Euler equation for alternative bargaining structures and these Euler equations are then estimated using a panel of 232 British companies over the period 1980-86. Our main conclusion is that a dynamic version of the labor demand model best describes the data.

Magnac, T.

PD July 1991. **TI** A Dynamic Model of Choice between Wage-Work and Self-Employment with Liquidity Constraints. **AU** Magnac, T.; Robin, J. M. **AA** Magnac: INRA and DELTA. Robin: CREST and INRA. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9116; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris Cedex 14, FRANCE. **PG** 42. **PR** no charge. **JE** D11, J23, D91. **KW** Liquidity Constraints. Uncertainty. Consumption. Occupational Choice.

AB The static model of occupational choice with liquidity constraints of Evans and Jovanovic (1989) is extended to an intertemporal framework with uncertainty. Specifically, liquidity constraints take here the form of increasing interest rates with respect to borrowing amounts. Three conclusions may be drawn from this work: first, the consumption function as a function of wealth, usually increasing in concave problems, may here exhibit regions where it is decreasing. Secondly, we show that if the liquidity constraint is strong enough an increase in the "entrepreneurial ability" of an agent, although raising average future incomes, may induce the agent to lower his present consumption and raise his savings. Namely, the agent expects that liquidity will help decreasing borrowing costs in the future and he accumulates more. Finally, a formal test of liquidity constraints in this dynamic model may be made precise along the lines of the Evans and Jovanovic (1989)'s procedure.

Maheswaran, S.

PD January 1992. **TI** Empirical Implications of Arbitrage-Free Asset Markets. **AU** Maheswaran, S.; Sims, C. A. **AA** Maheswaran: Washington University. Sims: Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1008; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 29. **PR** no charge. **JE** G12. **KW** Asset Market. Asset Pricing.

AB The martingale-equivalence condition delivered by a non-arbitrage assumption in complete asset markets has implications for fine-time-unit asset price behavior that can be rejected with finite spans of data. A class of stochastic processes that could model such deviations from martingale-equivalence is proposed.

Mailath, George J.

PD November 1991. **TI** When do Regulators Close Banks? When Should They? **AU** Mailath, George J.; Mester, Loretta J. **AA** Mailath: University of Pennsylvania. Mester: Federal Reserve Bank of Philadelphia. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-35; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 26. **PR** no charge. **JE** G21, G28. **KW** Banking. Commercial Banks. Bank Regulations.

AB When does a regulator close a bank and how does the bank respond to the regulator's closure policy? The recent Treasury Department proposal on banking industry reform suggests allowing regulators to a close a bank before its capital is exhausted. But will a regulator act on this authority? The recent experience in the S&L industry, where numerous S&Ls were permitted to remain in operation with negative capital, suggests the regulator's closure decision is a complicated one. This paper investigates the incentives of a regulator to close depository institutions, recognizing an institution's risk-taking will be influenced by the closure policy. We consider two different objective functions for the regulator: maximizing society's welfare, or minimizing the costs of closure.

PD November 1991. **TI** When do Regulators Close Banks? When Should They? **AU** Mailath, George J.; Mester, Loretta J. **AA** Mailath: University of Pennsylvania. Mester: Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-24; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 24. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve

Bank of Philadelphia. **JE** G21, G28. **KW** Banking. Commercial Banks. Bank Regulations. Bank Failures.
AB See other entry.

TI Learning, Mutation, and Long Run Equilibria in Games.
AU Kandori, Michihiro; Mailath, George J.; Rob, Rafael.

PD January 1992. **TI** Normal Form Structures in Extensive Form Games. **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M. **AA** Mailath: University of Pennsylvania. Samuelson: University of Wisconsin, Madison. Swinkels: Stanford University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 92-01; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 35. **PR** no charge. **JE** C72, C70. **KW** Extensive Form Game. Game Theory. Information Set.
AB This paper continues the investigation of the relationship between extensive form and normal form games begun in Mailath, Samuelson, and Swinkels (1991). Mailath, Samuelson, and Swinkels (1991) introduce the notion of strategic independence and argue that it is a central feature of information sets. In this paper, we say that an extensive form game represents a normal form game if the extensive form information set structure captures the normal form strategic independence that decision-theoretic considerations suggest are important. We show that normal form games exist that cannot be represented. We present an algorithm that generates a representation whenever one exists and present a simple necessary and sufficient condition for a normal form game to be representable.

Makowski, Louis

PD December 1991. **TI** An Arbitrage Approach to Competitive Equilibrium in an Exchange Economy. **AU** Makowski, Louis; Ostroy, Joseph M. **AA** Makowski: University of California, Davis. Ostroy: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 649; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 40. **PR** $2.50; checks payable to U.C. Regents. **JE** D51, D46, D41. **KW** Perfect Competition. Preferences. Arbitrage.
AB We formulate the notion of competitive behavior in a nonatomic exchange economy as exploiting arbitrage possibilities. We show that arbitrage is an alternative to the standard description of how equilibrium is achieved: competitive equilibrium can be regarded as the elimination of arbitrage opportunities rather than the elimination of excess demands. Characterization and existence theorems for the arbitrage version of competitive equilibrium are given under various assumptions, e.g., with and without convexity of preferences, and comparisons with Walrasian and the core are made. We also make some historical connections between the arbitrage approach adopted here and its antecedents in the work of Jevons and Edgeworth. Pointing out certain strengths and weaknesses in this earlier work, we reach a different position on just where the margin is that links "marginalism" to the competitive theory of value.

Manegold, James G.

TI IRAs and Saving: Evidence from a Panel of Taxpayers.
AU Joines, Douglas H.; Manegold, James G.

Mann, Catherine L.

TI Fiscal Implications of the Transition from Planned to Market Economy. **AU** Craig, R. Sean; Mann, Catherine L.

Manning, Alan

TI Dynamic Models of Employment Based on Firm-Level Panel Data. **AU** Machin, Stephen; Manning, Alan; Meghir, Costas.

Marceau, Nicolas

PD August 1991. **TI** Unemployment Insurance and Market Structure. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 833; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 38. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** J65, E24, J23, D41. **KW** Unemployment. Market Power. Employment. Labor Demand.
AB This paper examines the impact of unemployment insurance (UI) on employment and unemployment in an industry in which the prices can vary due to some market power or general equilibrium (GE) effects. First, it is shown that in an industry in which firms have some market power, average industrial employment may be a decreasing function of the experience rating because the number of firms in the industry is itself a decreasing function of the experience rating. This contradicts the conventional view according to which employment should be an increasing function of the experience rating. Second, the case of an industry characterized by perfect competition and general equilibrium effects on prices is examined. It is shown that the GE effects mitigate the conventional results as well as those obtained by Burdett and Wright (1989b). The general conclusion is that for industries with different degrees of market power, the same UI scheme has different impacts on employment and unemployment.

Marchand, M.

TI Investment in Local Public Services: Nash Equilibrium and Social Optimum. **AU** Cremer, H.; Marchand, M.; Pestieau, P.

Marquez, Jaime

PD January 1992. **TI** The Autonomy of Trade Elasticities: Choice and Consequences. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 422; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 16. **PR** no charge. **JE** F11, F14, O57. **KW** Trade Theory. International Trade. Imports. Trade Model.
AB Fifty years of econometric work on trade assumes that trade elasticities are invariant to changes in spending patterns, that prices can be taken as given, and that expenditures on domestic and foreign goods can be studied independently of each other. To relax these assumptions, this paper assembles a simultaneous model explaining trade among Canada, Japan, and the United States. Spending behaves according to the Rotterdam model which, by design, embodies all of the

properties of utility maximization and does not treat trade elasticities as autonomous parameters. Pricing behaves according to the pricing-to-market hypothesis which recognizes exporters' incentives to discriminate across export markets.

PD March 1992. **TI** Real Exchange Rates: Measurement and Implications for Predicting U.S. External Imbalances. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 427; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 12. **PR** no charge. **JE** F14, F17, F31. **KW** Exchange Rate. International Trade. Imports. Exports.
AB That international trade flows respond to changes in real exchange rates is beyond question. What is less clear is whether the measurement of real exchange rates matters for characterizing and predicting such responses. To identify the implications of choosing a given measure of the real exchange rate, I examine how the parameter estimates and the forecast performance of a given model vary in response to alternative measures of real exchange rates. I reject a given measure if its use (a) implies estimates inconsistent with economic theory; (b) contradicts the assumptions needed for statistical inference; (c) leads to systematic forecast errors; or (d) entails a loss of information relative to an alternative measure. Although the analysis rejects several measures of real exchange rates, it cannot identify a unique measure suitable for explaining U.S. trade: relative unit labor costs and relative consumer prices are equally suited for modeling and predicting U.S. trade.

Marquis, M. Susan
TI Participation and Satisfaction in Employer Plans with Preferred Provider Organization Options. **AU** Hosek, Susan D.; Marquis, M. Susan.

TI Health Care Utilization in Employer Plans with Preferred Provider Organization Options. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth

TI The Study of Preferred Provider Organizations: Executive Summary. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth; Garnick, Deborah; Luft, Harold.

Marron, Donald B.
TI What does a Negawatt Really Cost? **AU** Joskow, Paul L.; Marron, Donald B.

Marron, J. S.
TI Fast and Simple Scatterplot Smoothing. **AU** Hardle, W.; Marron, J. S.

TI Bandwidth Choice for Average Derivative Estimation. **AU** Hardle, W.; Hart, J.; Marron, J. S.; Tsybakov, A. B.

Martin, S. A.
PD December 1991. **TI** The Influence of Location on Productivity: Manufacturing Technology in Rural and Urban Areas. **AU** Martin, S. A.; McHugh, Richard; Johnson, S. R. **AA** Martin and Johnson: Iowa State University. McHugh: University of South Florida. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 91-10; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 24. **PR** no charge. **JE** R32, O18, R11, L60. **KW** Rural Development. Rural Economics. Productivity. Manufacturing.
AB Policies to counter the growing discrepancy between economic opportunities in rural and urban areas have focused predominantly on expanding manufacturing in rural areas. Fundamental to the design of these strategies are the relative costs of production and productivity of manufacturing in rural and urban areas. This study aims to develop information that can be used to assess the productivity of manufacturing in rural and urban areas. Production functions are estimated in the meat products and household furniture industries to investigate selected aspects of the effect of rural, small urban, and metropolitan location on productivity. The results show that the effect of location on productivity varies with industry, size, and the timing of the entry of the establishment into the industry. While the analysis is specific to two industries, it suggests that development policies targeting manufacturing can be made more effective by focusing on industries and plants with characteristics that predispose them to locations being supported.

Martin, Vance L.
TI Non-Linear Time Series Modelling and Distributional Flexibility. **AU** Lye, Jenny N.; Martin, Vance L.

Martinez Coll, Juan Carlos
TI Selection, Mutation, and the Preservation of Diversity in Evolutionary Games. **AU** Hirshleifer, Jack; Martinez Coll, Juan Carlos.

Mas-Colell, Andreu
PD September 1991. **TI** The Existence of Security Market Equilibrium with an Nonatomic State Space. **AU** Mas-Colell, Andreu; Zame, William R. **AA** Mas-Colell: Harvard University. Zame: Johns Hopkins University. **SR** Johns Hopkins Department of Economics Working Paper: 273; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 31. **PR** no charge. **JE** D52, D51. **KW** Incomplete Markets. Securities. Commodities.
AB We establish the existence of equilibrium in a model of an incomplete security market with a nonatomic state space. We treat a multi-period model with real securities (i.e., securities paying dividends in physical commodities, rather than in units of account). Our key assumptions are that utility functions are separable (across states but not across time) and that short sales are constrained by endowments. Surprisingly, the latter assumption is necessary; we construct an example to show that, without it, equilibria may fail to exist. The difficulty is that, when, the state space is infinite, the demand correspondence may fail to be lower hemicontinuous. This might be viewed as providing a parallel to well-known examples of Hart (with a finite state space), which show that equilibria may fail exist because the demand correspondence may fail to be upper hemi-continuous.

Masson, Paul R.
PD December 1991. **TI** Effects of Long-Run Demographic Changes in a Multi-Country Model. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/123; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** J11, E21, F41, F21. **KW** Demographic Trends. Elderly. Consumption.

AB The macroeconomic effects of population aging are explored using data for the G-7 countries and Australia. The link between changes in birth and mortality rates on the one hand, and dependency ratios on the other, is first discussed, then empirical evidence on the effects of dependency ratios on net foreign asset positions and on consumption is presented. Simulations of changes in dependency ratios are then reported, using demographic projections to the year 2025. Finally, the plausibility of the implied changes in net foreign asset positions is discussed.

PD December 1991. **TI** Evaluating Policy Rules under Imperfect Credibility. **AU** Masson, Paul R.; Symansky, Steven A. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/128; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** not available. **JE** E52, E61, E32, D84. **KW** Inflation. Monetary Policy.
AB Evaluation of policy rules using empirical macroeconomic models is usually done on the assumption that the rules are perfectly credible. However, there are usually circumstances that cause the authorities to abandon any given rule. The public's expectations reflect this possibility. In the paper, credibility is assumed to depend on the probability that the authorities will abandon a rule because the resulting utility exceeds that from maintaining the rule. Simulations of a disinflation policy leading to price stability are presented. Its credibility varies over time, depending on the paths for output and inflation.

Matsui, Akihiko

PD November 1991. **TI** Evolution, Rationality and Equilibrium Selection in Societal Games. **AU** Matsui, Akihiko; Rob, Rafael. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-31; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 32. **PR** no charge. **JE** C71, D83, D84. **KW** Learning. Cooperative Games. Expectations.
AB We consider a dynamic adjustment process operating on a societal game, where players are repeatedly and randomly matched to play a two-person game. Players maximize their expected discounted payoffs given a set of conceivable expectations about the future; players with identical information are not assumed to entertain identical expectations. Players' choices of strategies are subject to friction in the sense that it can only occur at discrete and stochastic points in time. We show that the social behavior pattern locks sometimes into certain absorbing states. We also exhibit evolution paths which permit the society to escape from a state of defection in the prisoner's dilemma. Neither of these features occur in non-rational evolutionary learning processes.

PD December 1991. **TI** An Approach to Equilibrium Selection. **AU** Matsui, Akihiko; Matsuyama, Kiminori. **AA** Matsui: University of Pennsylvania. Matsuyama: Northwestern University and Stanford University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 970; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 15. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** C72. **KW** Nash Equilibrium. Noncooperative Games. Matching Games.
AB We consider equilibrium selection in 2x2 bimatrix games with two strict Nash equilibria in a random matching framework. The players seek to maximize the discounted payoffs, but are restricted to make a short-run commitment. Modeling the friction this way yields equilibrium dynamics of the behavior patterns in the society. We define and characterize an absorbing and globally attractive state in this dynamics. It is shown that, as friction becomes arbitrarily small, a strict Nash equilibrium outcome becomes uniquely absorbing and globally attractive if and only if it satisfies the Harsanyi/Selten notion of risk-dominance criterion.

PD December 1991. **TI** An Approach to Equilibrium Selection. **AU** Matsui, Akihiko; Matsuyama, Kiminori. **AA** Matsui: University of Pennsylvania. Matsuyama: Northwestern University. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-36; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 24. **PR** no charge. **JE** C72, C78. **KW** Nash Equilibrium. Noncooperative Games. Matching Game.
AB See other entry.

Matsuyama, Kiminori

TI An Approach to Equilibrium Selection. **AU** Matsui, Akihiko; Matsuyama, Kiminori.

TI An Approach to Equilibrium Selection. **AU** Matsui, Akihiko; Matsuyama, Kiminori.

Mattock, Michael G.

TI PACER SHARE Productivity and Personnel Management Demonstration: First-Year Evaluation. **AU** Orvis, Bruce R.; Hosek, James R.; Mattock, Michael G.

Matyas, Laszlo

PD November 1991. **TI** Simultaneous Error Components Models when Panel Data are Incomplete. **AU** Matyas, Laszlo; Lovrics, Laszlo. **AA** Matyas: Monash University and Budapest University of Economics. Lovrics: Budapest University of Economics. **SR** Monash Department of Econometrics Working Paper: 11/91; Department of Econometrics, Faculty of Economics, Commerce and Management, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 13. **PR** no charge. **JE** C33, C81. **KW** Missing Observations. Panel Data. Simultaneous Equations.
AB The purpose of this paper is to investigate the loss of efficiency of the simultaneous error components model's estimators in the case of incomplete panels. The static and the dynamic cases were analyzed, when from a panel data base those individuals are dropped for which the observations are not complete.

TI Cointegration and Aggregation. **AU** Korosi, Gabor; Matyas, Laszlo.

PD February 1992. **TI** An Alternative Approach for the Estimation of Distributed Lag Models in Panel Data. **AU** Matyas, Laszlo; Rahman, Shahidur. **AA** Monash University. **SR** Monash Department of Econometrics

Working Paper: 4/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 12. **PR** no charge. **JE** C33, C43. **KW** Maximum Likelihood. Estimation. Generalized Least Squares. Panel Data.

AB The aggregation problem is a well-known difficulty in macroeconometric modeling. It is frequently assumed in these models that the behavior of economic agents is uniform, thus the behavior of a single agent characterizes the aggregate behavior of the agents (representative agent). However, there may always be some "outliers," some uncharacteristically behaving agents. Such outliers may well determine the time dynamics of the aggregate time series. This phenomenon may have an utmost significance in models assuming the cointegration of the variables.

Maxwell, John W.

PD October 1991. **TI** Testing a Signalling Theory of Advertising. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 838; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 52. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** L15, L62, M37. **KW** Automobile Industry. Advertising. Product Quality. Manufacturing.

AB The signaling theory of advertising predicts that levels of dissipative advertising may be used by a firm to signal to consumers the quality level of its products. This paper develops such a theory within a durable goods framework. It is shown that, subject to refinements of beliefs, the model predicts a strong positive rank order correlation between firm type and the level of dissipative advertising it conducts. Data on the levels of television and total media advertising as well as quality ratings for different model automobiles sold in Canada over the period (1980-1988) are used to test this result using nonparametric procedures.

McAfee, R. Preston

PD January 1992. **TI** Updating the Reserve Price in Common Value Auctions. **AU** McAfee, R. Preston; Vincent, Daniel R. **AA** McAfee: University of Texas, Austin. Vincent: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 977; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 14. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** D82, D44, H82. **KW** Auctions. Prices. Oil.

AB We consider a common value auction model with bidder participation determined jointly by nature and by bidder optimization. In this framework, an increase in the reserve price has two effects: it deters marginal bidders and it deters bidders from becoming informed. We then derive a test statistic for establishing when it is optimal to raise the reserve price. This statistic is independent of the distribution of valuations. We then apply the analysis to U.S. offshore oil sales and find evidence that the reserve price is dramatically too low.

McAllister, Patrick H.

PD January 1992. **TI** Floating Ceilings on Deposit Interest Rates. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 186; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 20. **PR** no charge. **JE** G21, E43. **KW** Interest Rate. Commercial Banks. Banking.

AB This paper examines the relationship between interest rates that banks offer on insured deposits and the financial strength of the offering bank and of other banks in the local market. There is little evidence that weakness of the offering bank has an effect on interest rates. It appears that the overall weakness of banks in the same market may affect the interest rates offered by stronger ones, contradicting the often-heard claim that weak banks are likely to bid up overall interest rates. Finally, offering high interest rates does not appear to signal that a bank is engaged in risky lending practices, once current accounting information about the bank is taken into consideration. These results imply that proposed policies limiting bank interest rate offerings are not likely to reduce risks to the bank insurance fund.

McCabe, Kevin

TI Preferences, Property Rights and Anonymity in Bargaining Games. **AU** Hoffman, Elizabeth; McCabe, Kevin; Shachat, Keith M.; Smith, Vernon L.

McCurdy, Thomas H.

PD May 1991. **TI** A Comparison of Risk-Premium Forecasts Implied by Parametric Versus Nonparametric Conditional Mean Estimators. **AU** McCurdy, Thomas H.; Stengos, Thansis. **AA** McCurdy: Queen's University. Stengos: University of Guelph and European University Institute, Italy. **SR** Queen's Institute for Economic Research Discussion Paper: 843; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 25. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** G12, C14, G15. **KW** Kernel Estimation. Asset Pricing. Risk Premium. ARCH. Forecasting.

AB This paper computes parametric estimates of a time-varying risk premium model and compares the one-step-ahead forecasts implied by that model with those given by a nonparametric kernel estimator of the conditional mean function. The conditioning information used for the nonparametric analysis is that implied by the theoretical model of time-varying risk. Thus, the kernel estimator is used, in conjunction with a nonparametric diagnostic test for in-sample residual nonlinear structure in the excess returns. Our results support the parametric specification of an asset pricing model in which the conditional beta is the ratio of the relevant components of the conditional covariance matrix of returns modeled as a bivariate generalized ARCH process. Although the predictable component of the conditional moments is relatively small, the parametric estimator of the risk premia has somewhat more out-of-sample forecasting ability than does the kernel estimator. Hence, the superior in-sample performance of the latter may be attributed to overfitting.

PD September 1991. **TI** Single Beta Models and Currency Futures Prices. **AU** McCurdy, Thomas H.; Morgan, Ieuan G. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 845; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 30. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** G13, G15, G14. **KW** Risk Premium. ARCH. Asset Pricing. International Market. Portfolio Choice.

AB The conditional capital asset pricing model is applied to foreign currency futures prices, covariance risk being measured relative to excess returns from a broadly diversified international portfolio of equities. Positive time-varying risk premia are found in all five currencies tested when the difference between the U.S. and the average foreign interest rates is used as an instrumental variable for the expected excess return from the common stock portfolio.

TI An International Economy with Country-Specific Money and Productivity Growth Processes. **AU** Ricketts, Nicholas; McCurdy, Thomas H.

McDonald, Ian M.

PD December 1991. **TI** The Social Opportunity Cost of Consumption for Australia, 1960-61 to 1988-89. **AU** McDonald, Ian M.; Tacconi, Luca; Kaur, Ravjeet. **AA** McDonald and Tacconi: University of Melbourne. Kaur: Monash University. **SR** Monash Department of Econometrics Working Paper: 15/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 31. **PR** no charge. **JE** D91, E21. **KW** Firm Investment. Opportunity Costs. Consumption.

AB The social opportunity cost of consumption (SOCC) for an economy is the rate at which current consumption can be traded for consumption in the future. The SOCC is an important determinant of the socially optimal levels of investment and the current account surplus and should be an input into the framing of government economic policy. Using overseas interest rates, the SOCC for Australia is calculated in this paper. The calculated series is fairly constant for the 1960's and then has a pronounced cyclical pattern from the late 1960's to 1988-89. The average value of the SOCC for Australia is about four per cent.

McGuckin, Robert H.

PD December 1991. **TI** Multiple Classification Systems for Economic Data: Can a Thousand Flowers Bloom? And Should They? **AA** U.S. Bureau of the Census. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 91-8; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 32. **PR** no charge. **JE** C81. **KW** Data Collection. Data Classification. Microdata.

AB The principle that the statistical system should provide flexibility -- possibilities for generating multiple groupings of data to satisfy multiple objectives -- if it is to satisfy users is universally accepted. Yet in practice, this goal has not been achieved. This paper discusses the feasibility of providing flexibility in the statistical system to accommodate multiple uses of the industrial data now primarily examined within the Standard Industrial Classification (SIC) system. In one sense, the question of feasibility is almost trivial. With today's computer technology vast amounts of data can be manipulated and stored at very low cost. Reconfigurations of the basic data are very inexpensive compared to the cost of collecting the data. Although the categories used to report data must be flexible, practical considerations dictate that data collection proceed within a fixed classification system. It is simply too expensive for both respondents and statistical agencies to process survey responses in the absence of standardized forms, data entry programs, etc. I argue for a basic classification centered on commodities -- products, services, raw materials, and labor inputs -- as the focus of data collection. The idea is to make the principle variables of interest - the commodities- the vehicle for the collection and processing of the data. For completeness, the basic classification should include labor usage through some form of occupational classification.

McGuire, Sumiye O.

PD May 1990. **TI** Soviet-Japanese Economic Relations. **AA** RAND Corporation. **SR** Rand Report: R-3817; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 106. **PR** not available. **JE** F02, F14, F21. **KW** International Trade. International Investment. Balance of Payments.

AB This report analyzes the potential for increased economic relations between Japan and the Soviet Union, and the importance of such a relationship to each country, by examining both the economic and the political factors influencing trade and investment. Historically, economic relations between the two countries have been limited. Chances for improvement seem to depend on Japan's willingness to invest in the development of resources in Siberia and the Soviet Far East, which in turn hinges on the resolution of long-standing territorial disputes. Perhaps of more immediate value would be Japan's ability to help the Soviet Union respond to demands for consumer goods and improve manufacturing efficiency and quality control. Obstacles in these areas include the Soviet Union's difficulties in paying for Japanese goods and technology and constraints resulting from Japan's acceptance of U.S. leadership in mandating East-West trade. The author concludes that improved economic relations between the Soviet Union and Japan are most likely to be realized gradually on a long-term basis.

McHugh, Richard

TI The Influence of Location on Productivity: Manufacturing Technology in Rural and Urban Areas. **AU** Martin, S. A.; McHugh, Richard; Johnson, S. R.

McLaren, Keith R.

TI Using the Murphy Model to Provide Short-Run Macroeconomic Closure for ORANI. **AU** Breece, James H.; McLaren, Keith R.; Murphy, Chris W.; Powell, Alan A.

TI A System of Demand Equations Satisfying Effectively Global Curvature Conditions. **AU** Cooper, Russel J.; McLaren, Keith R.; Parameswaran, Priya.

Meeraus, A.

TI Growth and Welfare Losses from Carbon Emissions Restrictions: A General Equilibrium Analysis for Egypt. **AU** Blitzer, C. R.; Eckaus, R. S.; Lahiri, S.; Meeraus, A.

Meghir, Costas

TI Dynamic Models of Employment Based on Firm-Level Panel Data. **AU** Machin, Stephen; Manning, Alan; Meghir, Costas.

TI Taxation in Empirical Labour Supply Models: Lone Mothers in the U.K. **AU** Blundell, Richard; Duncan, Alan; Meghir, Costas.

Mei, Jianping

PD October 1991. **TI** Bank Risk and Real Estate: An Asset Pricing Perspective. **AU** Mei, Jianping; Saunders, Anthony. **AA** New York University. **SR** New York

University Salomon Brothers Center Working Paper: S-91-50; 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** 33. **PR** $5.00. **JE** G12, G21, G28. **KW** Bank Stocks. Commercial Banks. Stock Market. Banking.

AB While a number of papers have investigated the ex post variables driving the return-generating process of bank stock returns, no study has comprehensively studied: (i) the ex ante risk premiums on bank stocks and (ii) the time varying nature of such premiums. In this study, we investigate how the changing nature of bank risk taking (especially in the real estate market) along with the presence of a federal safety net (like deposit insurance) has affected the ex ante pricing of risk in the market for bank stocks. Our major finding is that a premium for real estate risk is increasingly apparent in the market for bank stocks, presumably reflecting these banks' growing exposures in this area; however, factor risks for the biggest money center banks are underpriced. This underpricing is consistent with the presence of "too-big-to-fail" safety-net subsidies for the nation's largest banks.

Melick, William R.

TI Purchasing Power Parity and Uncovered Interest Rate Parity: The United States 1974-1990. **AU** Edison, Hali J.; Melick, William R.

Mendelsohn, Robert

PD February 1992. **TI** The Impact of Climate on Agriculture: A Ricardian Approach. **AU** Mendelsohn, Robert; Nordhaus, William D.; Shaw, Daigee. **AA** Mendelsohn and Nordhaus: Yale University. Shaw: Institute of Economics Academia Sinica, China. **SR** Yale Cowles Foundation Discussion Paper: 1010; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 27. **PR** no charge. **JE** Q12, R32, Q15. **KW** Climate. Agriculture. Land Productivity. Land Prices.

AB Because of the potential for global warming, there are widespread concerns about the impact of changing climate upon the productivity of land in farming and other sectors. This paper develops a new approach for measuring the economic impact of environmental factors such as climate on production by examining the direct impact of the environmental factor on land productivity as measured by land prices. This new method is applied to examine the effect of climate on agriculture using cross-sectional farm data for almost 3000 counties in the United States. It finds substantial impacts of climatic variation on both land values and farm revenues. Among the central findings are that higher temperatures in all seasons except autumn reduce all seasons except autumn increases farm values. The relationships are, however, nonlinear and complex.

Mendelson, Haim

TI Liquidity, Maturity and the Yields on U.S. Treasury Securities. **AU** Amihud, Yakov; Mendelson, Haim.

TI Volatility, Efficiency and Trading: Evidence from the Japanese Stock Market. **AU** Amihud, Yakov; Mendelson, Haim.

TI An Empirical Analysis of Software and Hardware Spending. **AU** Gurbaxani, Vijay; Mendelson, Haim.

Mendoza, Enrique G.

PD February 1992. **TI** A Quantitative Examination of Current Account Dynamics in Equilibrium Models of Barter Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/14; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** not available. **JE** F41, F32, F11. **KW** Open Economy. Exchange Rate. Trade Balance.

AB This paper provides a numerical analysis of an intertemporal equilibrium model of a small open, barter economy that is subject to random shocks affecting endowments, the terms of trade, and the real interest rate. Equilibrium stochastic processes for macroeconomic aggregates are computed and their properties are compared with observed stylized facts. The model mimics the Harberger-Laursen-Metzler effect, but cannot account for a countercyclical trade balance, the variability of the real exchange rate, and and the income elasticity of imports. The results also show that the correlation between the trade balance and the terms of trade, given incomplete insurance markets, is sensitive to changes in preference parameters and in the persistence of exogenous shocks.

Mester, Loretta J.

TI When do Regulators Close Banks? When Should They? **AU** Mailath, George J.; Mester, Loretta J.

TI A Quality and Risk-Adjusted Cost Function for Banks: Evidence on the "Too-Big-To-Fail" Doctrine. **AU** Hughes, Joseph P.; Mester, Loretta J.

TI When do Regulators Close Banks? When Should They? **AU** Mailath, George J.; Mester, Loretta J.

Mills, Leonard O.

TI The Effects of Countercyclical Monetary Policy on Money and Interest Rates: An Evaluation of Evidence from FOMC Documents. **AU** Boschen, John F.; Mills, Leonard O.

Mitchell, Bridger M.

PD July 1990. **TI** Incremental Costs of Telephone Access and Local Use. **AA** RAND Corporation. **SR** Rand Report: R-3909-ICTF; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 75. **PR** not available. **JE** L96. **KW** Telecommunications. Cost Function. Telephones.

AB Marginal and incremental costs are well-established concepts in economics, but are less familiar to local telephone companies and regulators. Incremental costs are the additional costs a firm will incur to expand service in the future. This report develops a methodology for assessing the incremental costs of local telephone services and provides initial estimates of those costs for conditions 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. Data for the model are drawn from a wide range of GTE, Pacific Bell, and other industry sources, and are aggregated and combined to obtain values representative of California conditions. In addition, the author examines the salient characteristics of four other services -- centrex, private line, voice mail, and common-channel signaling -- and identifies functional components and sources of data that can be employed to extend the model developed in this study.

Mittelstaedt, H. Fred

TI Estimates of the Effect of FAS 106 on Corporate Earnings. **AU** Warshawsky, Mark J.; Mittelstaedt, H. Fred; Cristea, Carrie.

Mobley, Lee Rivers

PD February 1992. **TI** Firm Growth and Failure in Increasingly Competitive Markets: Theory and Application to Hospital Markets. **AU** Mobley, Lee Rivers; Frech, H. E., III. **AA** Mobley: Oakland University. Frech: University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 7-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 41. **PR** no charge. **JE** L11, G33. **KW** Firm Growth. Bankruptcy.

AB Recent models of firm failure and growth have ignored demand factors. In this paper, we generalize these theoretical analyses to include demand factors in explaining failure and growth for heterogeneous firms in local markets facing imperfect but increasing competition. The model is then applied empirically to the hospital industry in California over the 1980's during which time competition has intensified. We model the closure decision based on expectations of future growth, explicitly accounting for self-selection and simultaneity. We find that both size and demand factors are important determinants of survival and growth.

Molho, Lazaros E.

PD February 1992. **TI** Reserve Requirements on Bank Deposits as Implicit Taxes: A Case Study of Italy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/18; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** not available. **JE** G21, G28, M41, H21. **KW** Bank Regulations. Banking. Taxation.

AB This paper analyzes the quasi-fiscal effects of Italy's relatively high bank reserve requirements, against the background of growing pressure to align them with those of other EC countries. The paper develops an integrated accounting framework for the measurement of implicit and explicit taxes on the banking system and applies that framework to the Italian experience during the 1980's. Pointing to a lack of transparency in the yield and incidence of the reserve requirement tax, the results reinforce the case for lowering the attendant burden on the Italian banking system. It is estimated that that burden could be halved at a cost to the budget of no more than 0.2 percent of GDP.

Monfort, A.

TI Tests Sur le Noyau, L'image et le Rang de la Matrice des Coefficients D'un Modele Lineaire Multivarie. **AU** Gourieroux, C.; Monfort, A.; Renault, E.

TI Modeles de Duree et Effets de Generation. **AU** Gourieroux, C.; Monfort, A.

Mongin, Phillippe

PD July 1991. **TI** Harsanyi's Aggregation Theorem: Multi-Profile Version and Unsettled Questions. **AA** Unite Mixte de Recherche and Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9136; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 27. **PR** not available. **JE** D71, D63, D61. **KW** Social Welfare Function. Utilitarianism.

AB Harsanyi's Aggregation Theorem states that if the individuals' as well as the moral observer's utility functions are von Neumann-Morgenstern, and a Pareto condition holds, then the latter function is affine in terms of the former. Sen and others have objected to Harsanyi's use of this result as an argument for utilitarianism. The present article proves an analogue of the Aggregation Theorem within the multi-profile formalism of social welfare functionals. This restatement and two closely related results provide a framework in which the theorem can be compared with well-known characterizations of utilitarianism, and its ethical significance can be better appreciated. While several interpretative questions remain unsettled, it is argued that at least one major objection among those raised by Sen has been answered.

Moore, John

TI A Theory of Debt Based on the Inalienability of Human Capital. **AU** Hart, Oliver; Moore, John.

PD November 1991. **TI** The Firm as a Collection of Assets. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TE/91/234; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 22. **PR** no charge. **JE** D23, G32, G33. **KW** Private Debt. Capital Structure. Business Finance. Property Rights.

AB The thesis of this paper is that human capital is inalienable: it cannot be bought or sold. Control of physical capital proves the means by which one agent influences another. That is, the pattern of property rights over physical assets is important in the determination of incentives. Recent joint work with Oliver Hart uses this idea in two interrelated ways; see Hart and Moore (1990 and 1991). Viewing the firm as a collection of assets, our first paper analyzes how the incentives of employees are affected by changes in ownership. In Section 2 below, I present an extended example to show that the theory can explain some basic notions -- e.g., why firms may initially have increasing returns, and then have decreasing returns. The analysis here assumes away wealth constraints. Once the need for firms to raise money is taken into account, the control of physical capital has another function -- that of providing incentives to repay investors. This is the topic of Section 3, which looks at a simple variant of a model of debt taken from our second paper.

PD January 1992. **TI** Implementation in Environments with Complete Information. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: TE/91/235; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 146. **PR** no charge. **JE** D71, D78, D82. **KW** Implementation. Contracts. Renegotiation.

AB There are two parts to this paper. Part One introduces the subject of implementation, and provides applications (in particular, to the theory of contracts). This part is written so as to be accessible to the general reader. Part Two surveys the literature, and is somewhat more formal.

Morgan, Donald P.

PD December 1990. **TI** Bank Credit Commitments. **AA** Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 90-10; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 24. **PR** no charge. **JE** G21, G32, G33. **KW** Commitment Pricing. Firm Investment. Bankruptcy. Borrowing. Debt Contracts.

AB We consider the optimal financing of investment projects when costs and returns are costly to observe. We show that commitments written before costs are known dominate ordinary debt contracts written afterward. Under ordinary debt contracts, banks charge more the more they lend to a borrower. This is inefficient because expected bankruptcy costs are convex in the amount borrowers owe. Commitment pricing is more efficient: the fees charged on commitments allows lenders to charge lower interest rates, which reduces expected bankruptcy costs. If project costs were observable, banks would reduce the interest rate to zero and charge only fees. Because loan needs are unobservable, however, banks must charge a positive interest rate to prevent overborrowing. Under the optimal contract, banks charge the lowest interest rate that prevents overborrowing and charge fees in order to break even.

Morgan, Ieuan G.

TI Single Beta Models and Currency Futures Prices. **AU** McCurdy, Thomas H.; Morgan, Ieuan G.

Morgan, Paul B.

TI A Primer on the Japanese Banking System. **AU** Frankel, Allen B.; Morgan, Paul B.

Motta, M.

PD October 1991. **TI** International Trade and Investments in a Vertically Differentiated Industry. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9150; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 41. **PR** not available. **JE** F12, L15, F21. **KW** Product Quality. Trade. Foreign Investment.

AB A model of vertical product differentiation is applied to the study of trade and investments between two economies of differing sizes. At equilibrium, firms in the smaller country are shown to produce lower quality. Intra-industry trade and reciprocal investments may arise when the quality gap is not too wide. Further, the paper emphasizes the strategic role of foreign investments. In particular, the establishment of a subsidiary abroad can crowd out both sales by local firms and exports by the co-national firm. "Follow-the-leader" investments may then occur as a reaction to counter the first investor's move.

PD October 1991. **TI** Quality Choice and Cournot Competition: Minimum Differentiation Revisited. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9151; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 14. **PR** not available. **JE** L13, L15, D21, D43. **KW** Nash Equilibrium. Product Quality. Imperfect Competition.

AB A model of vertical differentiation in the tradition of Mussa and Rosen (1978) is analyzed. At the first stage of the game firms choose the quality of their good, at the second they choose the quantity to be brought to the market. Unlike earlier works which suggested the existence of a symmetric solution of this game, we prove that at the Nash-perfect equilibrium firms choose to produce distinct qualities. This result holds under both the case of fixed costs and that of variable costs increasing with quality.

PD October 1991. **TI** Endogenous Quality and Coordination of Decisions. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9152; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 20. **PR** not available. **JE** L15, L13, D21, D43. **KW** Cournot Competition. Product Quality. Bertrand Competition. Vertical Differentiation.

AB A model of vertical product differentiation in the tradition of Mussa and Rosen (1978) is analyzed to consider how different degrees of coordination among the decisions of the firms affect equilibrium qualities and prices. Product differentiation is proved to arise under all the alternative hypotheses, contrasting previous findings of symmetric quality choices under Cournot behavior. Producer and consumer surpluses under the different cases are compared. Among other results, it is found that total profits in the industry are higher under Bertrand than under Cournot competition. This mirrors higher differentiation occurring in the former case to relax harsher price competition.

Mouchart, M.

TI Bayesian Analysis of Mixtures: Some Results on Exact Estimability and Identification. **AU** Florens, J.-P.; Mouchart, M.; Rolin, J.-M.

Murase, Hideaki

TI The Strategic Choice of an International Monetary System: Policy Instruments and Commitments. **AU** Kawai, Masahiro; Murase, Hideaki.

Murphy, Chris W.

TI Using the Murphy Model to Provide Short-Run Macroeconomic Closure for ORANI. **AU** Breece, James H.; McLaren, Keith R.; Murphy, Chris W.; Powell, Alan A.

Nakamura, Leonard I.

PD December 1991. **TI** Commercial Bank Information: Implications for the Structure of Banking. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-1; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 31. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** G21, G32, D82, G28. **KW** Banking. Commercial Banks. Bank Regulations. Bank Loans. Lending.

AB The asymmetric information banks possess about borrowers and banks' role in the payments system determine the "specialness" of banks and their unique regulatory treatment. Much of the informational advantage of banks in lending, I argue, comes from their role in payments -- their unique access to the information in commercial checking accounts. I argue further that this information is primarily of value in lending to small and medium size borrowers -- but not large borrowers. The information banks derive from checking accounts of small and medium commercial firms is relatively complete and comprehensible while remaining exclusive. Similar information on large borrowers is not nearly as comprehensive; large borrowers do business in many locations and, under current law, banks cannot branch widely enough to capture a large borrower's full checking business. As a consequence, the market for loans to large borrowers is quite competitive.

Narwold, Andrew

PD March 1992. **TI** State Income Taxes and Homeownership: A Test of the Tax Arbitrage Theory. **AU** Narwold, Andrew; Sonstelie, Jon. **AA** Narwold: University of San Diego. Sonstelie: University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 8-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 28. **PR** no charge. **JE** H31, H24, R21. **KW** Housing Demand. Income Taxes. Taxes.

AB Since states have different income taxes, the marginal tax rate in the top tax bracket varies across states. According to the tax arbitrage theory of homeownership, the frequency of homeownership in any given tax bracket ought to be lower in states with higher top tax rates. To test this hypothesis, we estimated a probit model of homeownership using data on over 16,000 families from 38 different states. As hypothesized, we found that a family was less likely to own its home if it lived in a state with a high top tax rate. We also found that it was more likely to own its home if it had a high marginal tax rate.

Nett, Lorenz

PD December 1991. **TI** R&D Innovation in a Mixed Duopolistic Market. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-357; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 20. **PR** no charge. **JE** D43, L13, O33. **KW** Oligopoly. Duopoly. Technology. Imperfect Competition.

AB The paper provides an explanation why public firms produce at higher average costs than private firms. To establish this result we deal with a mixed duopoly allowing both firms to choose among various technologies. The corresponding cost functions can be interpreted as the consequence of different investment levels in research and development. We will see that a private firm has an incentive to operate at lower variable costs but higher fixed costs than a public firm. Comparisons of a mixed duopoly with duopolies of two private and of two public firms, respectively, indicate how the allocation is affected by public production. In particular, the paper proves that destructive competition is more likely in the presence of public firms.

Neu, C. R.

PD July 1990. **TI** Medium Term Prospects for the Mexican Economy. **AA** RAND Corporation. **SR** Rand Note: N-3035-USDP; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 63. **PR** not available. **JE** F43, O54, O41, F47. **KW** Growth Model. Exchange Rate. Economic Growth.

AB A simple model simulates developments in the Mexican economy over the next 20 years. When there is uncertainty, the model errs in the direction of optimism about Mexican prospects. A base case scenario illustrates that without a net inflow of foreign capital, the peso cannot be sustained at current real levels. This case also serves as a point of reference in assessing the effects of changes in other exogenous factors. A variety of positive factors creates an optimistic scenario that represents the best one might hope for over the medium-term future, one in which there is only a minor devaluation of the peso and no decline in real income. The model can also produce a pessimistic scenario that suggests the worst that might happen to the Mexican economy. The scenarios demonstrate that the Mexican economy is on something of a knife edge. Whether Mexico undergoes robust or slow growth will be determined largely by factors that only the Mexican government can affect directly. The U.S. government can provide technical assistance and encouragement, facilitate foreign capital inflows, and reduce barriers to imports of Mexican products.

PD October 1990. **TI** Defense Spending and the Civilian Economy. **AA** RAND Corporation. **SR** Rand Note: N-3083-PCT; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 59. **PR** not available. **JE** H56, E62. **KW** Defense Spending. Government Expenditures.

AB This note describes the circumstances in which defense spending might generate economic gains or losses that are not reflected in defense budgets. The author generates a kind of checklist for analysts trying to assess the non-military consequences of defense spending -- a list of generic situations in which the social costs and benefits of defense spending may be larger or smaller than the defense budget suggests. The note presents a general framework for thinking about how defense spending may affect the civilian economy; describes some specific circumstances in which defense spending may have beneficial consequences for the civilian economy; details some frequently alleged benefits of defense spending that are difficult to credit; and considers circumstances in which defense spending may harm the civilian economy, circumstances in which the social costs of defense spending are likely to exceed the budgetary costs. Finally, it considers how defense spending may or may not be different from other types of government spending in its effects on the civilian economy, and identifies circumstances in which defense spending may generate benefits for the civilian economy.

Nickerson, David B.

PD April 1990. **TI** Optimal Monopoly Investment and Capacity Utilization under Random Demand. **AU** Nickerson, David B.; Reynolds, Stanley S. **AA** Nickerson: University of British Columbia and Federal Reserve Bank of St. Louis. Reynolds: University of Arizona. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-003; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 21. **PR** not available. **JE** D21, D24. **KW** Monopoly. Excess Capacity. Consumer Demand.

AB Unique value-maximizing programs of irreversible capacity investment and capacity utilization are described and shown to exist under general conditions for a monopolist exhibiting capital adjustment costs and serving random consumer demand for a nondurable good over an infinite horizon. Stationary properties of these programs are then fully characterized under the assumption of serially independent demand disturbances. Optimal monopoly behavior in this case includes acquisition of a constant and positive level of capacity, the maintenance of a positive expected value of excess capacity in each period, and an asymmetrical response of price to unanticipated fluctuations in consumer demand.

PD June 1990. **TI** Precommitment and Random Rates in Symmetric Duopoly: A New Theory of Multinational Production. **AU** Nickerson, David B.; Courchane, Marsha; Sadanand, Venkatraman. **AA** Nickerson: Federal Reserve Bank of St. Louis. Courchane: University of British Columbia. Sadanand: University of Guelph. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-005; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 21. **PR** not available. **JE** F31, F23, F21. **KW** Exchange Rate. Multinational Firms.

AB Recent volatility in real exchange rates has renewed interest in the nature of multinational firms. One increasingly common phenomenon involves the foreign sourcing of production, in which certain domestic firms choose to produce part or all of their product abroad and then export the commodity for domestic sale. Multinational production has been rationalized on the basis of inherent asymmetries between firms, such as the possession of certain firm-specific assets for differences between firms in their perceptions of foreign production costs, access to foreign subsidy programs, and the possibility of tariff preemption. Such behavior has also been rationalized in terms of corporate risk aversion and a desire to hedge real exchange rate risk through the diversification of production locations. This paper presents an entirely novel explanation for the existence of multinational firms and the foreign sourcing of production.

Ning, Miao

PD September 1991. **TI** Foreign Trade of China: A Survey and Data Tables. **AA** University of Aarhus. **SR** Aarhus Institute of Economics Memo: 1991-34; Institute of Economics, University of Aarhus, Building 350, Universitetsparken, DK-8000 Aarhus C, DENMARK. **PG** 101. **PR** no charge. **JE** F14, O53. **KW** China. Foreign Trade. Trade Patterns. Trade Structure.

AB This paper presents a survey of the Chinese foreign trade in the period of 1982-1989 and some statistical data. The trade survey consists of some preliminary investigations into the general development and trade structure, by commodities and destinations. Some trade patterns are revealed.

Noldeke, Georg

PD December 1991. **TI** On the Informational Efficiency of a Monopolistic Financial Market. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-203; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 53. **PR** no charge. **JE** C71, G14, G12. **KW** Signaling Game. Cooperative Games. Financial Market. Monopoly. Asset Pricing. Information.

AB This paper introduces a class of signaling games with response intersection to discuss the informational efficiency of a monopolistic financial market. For these games a necessary and sufficient condition for the existence of fully revealing sequential equilibrium outcomes is derived. Furthermore a complete characterization of the set of Riley outcomes, which correspond to a refinement of the sequential equilibrium concept, is given. These results are then applied to a model of trade in a risky asset to identify conditions under which the market outcome will fully reveal the private information of an insider. The model also yields a simple necessary and sufficient condition for the "no trade" outcome to be the unique Riley outcome thus allowing some insight into the circumstances which lead to the collapse of trade due to the presence of inside information.

Nordhaus, William D.

PD February 1992. **TI** The "Dice" Model: Background and Structure of a Dynamic Integrated Climate-Economy Model of the Economics of Global Warming. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1009; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 73. **PR** no charge. **JE** F01, Q25, Q28. **KW** Air Pollution. Conservation. Environment. Climate.

AB This study is designed to present the methodological and technical assumptions and the results behind the Dynamic Integrated model of Climate and the Economy (the DICE model). It is a model that attempts to use the tools of modern economics to determine an efficient strategy for coping with the threat of global warming. The fundamental premise behind this study is that societies should undertake environmental policies only when their benefits, broadly construed, exceed their costs and that the level of environmental control should be at that point where the incremental benefits of additional controls no longer exceed the incremental costs. In the area of global warming, this general strategy is easy to articulate and difficult to execute. The work embodied in this study lays out one approach -- the use of dynamic economic optimization -- to the construction of an efficient control strategy.

TI The Impact of Climate on Agriculture: A Ricardian Approach. **AU** Mendelsohn, Robert; Nordhaus, William D.; Shaw, Daigee.

O'Callaghan, Gary

PD December 1991. **TI** The Structure and Operation of the World Gold Market. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/120; International Monetary Fund, Washington, DC 20431. **PG** 43. **PR** not available. **JE** L72, E42. **KW** Gold. Futures Pricing.

AB This paper describes the structure of the world gold market, its sources of supply and demand, and how it functions. The market has three principal functions in three major locations: the New York futures market speculates on spot prices, which are largely determined in London, whereas physical gold is in large part shipped through Zurich. The market is dominated by large suppliers and gold holders, including monetary authorities. Some unique characteristics of the gold market ensure confidentiality, and as a result, there are gaps in existing knowledge and data. The paper identifies and attempts to fill these gaps.

Ogaki, Masao

TI Wealth-Varying Intertemporal Elasticities of Substitution: Evidence from Panel and Aggregate Data. **AU** Atkeson, Andrew; Ogaki, Masao.

TI A Consistent Test for the Null of Stationarity against the Alternative of a Unit Root. **AU** Kahn, James A.; Ogaki, Masao.

TI Consumption, Income, and Cointegration: Further Analysis. **AU** Han, Hsiang-Ling; Ogaki, Masao.

Oh, Seonghwan

TI When and How Much to Talk: Credibility and Flexibility in Monetary Policy with Private Information. **AU** Garfinkel, Michelle R.; Oh, Seonghwan.

Olley, G. Steven

PD February 1992. **TI** The Dynamics of Productivity in the Telecommunications Equipment Industry. **AU** Olley, G. Steven; Pakes, Ariel. **AA** Olley: Bureau of the Census and New York University. Pakes: Bureau of the Census and Yale University. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 92-2; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 51. **PR** no charge. **JE** L63, L11, L43, O33. **KW** Deregulation. Technological Change. Productivity. Manufacturing.

AB Technological change and deregulation have caused a major restructuring of the telecommunications equipment industry over the last two decades. We estimate the parameters of a production function for the equipment industry and then use those estimates to analyze the evolution of plant-level productivity over this period. The restructuring involved significant entry and exit and large changes in the sizes of incumbents. Since firms choices on whether to liquidate and on quantities of inputs demanded should they continue depend on their productivity, we develop an estimation algorithm that takes into account the relationship between productivity on the one hand, and both input demand and survival on the other.

Olson, Craig A.

TI Bargaining Power, Strike Durations, and Wage Outcomes: An Analysis of Strikes in the 1880's. **AU** Card, David; Olson, Craig A.

PD January 1992. **TI** Arbitrator Decision-Making in Multi-Issue Disputes. **AA** Princeton University and University of Wisconsin, Madison. **SR** Princeton Industrial Relations Section Working Paper: 296; Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 11. **PR** $2.00. **JE** J52, K41. **KW** Wages. Arbitration. Dispute Resolution. Dispute Settlement.

AB Most research on arbitrator decision-making has used a model that assumes there is only one disputed issue. This study shows this model is not appropriate in multi-issue disputes under a final-offer by package law. Using data from Wisconsin, I find arbitrators do give substantial weight to non-wage issues in multi-issue disputes. However, the written awards of arbitrators substantially understate the weight given to non-wage issues in the final offer selection.

Olson, Mark

PD January 1992. **TI** Queues When Balking is Strategic. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-11; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 17. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** C72, C44. **KW** Game Theory. Queueing Theory.

AB A last-come first-served (LCFS) queueing discipline with preemption leads to socially optimal outcomes, since the entry decision of an arrival to the queue does not impose costs on future arrivals. However, a LCFS queue has the property that the person whose service has been preempted is motivated to balk (leave the queue) and re-enter the system. This strategic behavior disrupts the queue discipline and results in nonoptimal outcomes. In this paper I demonstrate that a LCFS queueing discipline, without re-entry and with preemption, is optimal. Also I make some comparisons between the first-come first-served (FCFS) and the LCFS queueing discipline. Further, recognizing the motivation of preempted customers to balk and re-enter the queue, a bribing mechanism is designed for a queueing discipline with preemption and re-entry which induces the optimal LCFS service order as a Nash equilibrium.

Orduna, Felipe

TI Exponential Smoothing and Spurious Correlation: A Note. **AU** Blackburn, Keith; Orduna, Felipe; Sola, Martin.

Orr, James

TI The Uruguay Round of GATT Trade Negotiations. **AU** Hickok, Susan A.; Orr, James; Akhtar, M. A.; Wulfekuhler, Kurt C.

Orvis, Bruce R.

PD 1991. **TI** PACER SHARE Productivity and Personnel Management Demonstration: First-Year Evaluation. **AU** Orvis, Bruce R.; Hosek, James R.; Mattock, Michael G. **AA** RAND Corporation. **SR** Rand Report: R-3943-FMP; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 104. **PR** not available. **JE** J45, M12. **KW** Civil Service. Public Sector. Employee Evaluation. Wages.

AB This report describes the PACER SHARE Productivity and Personnel Management Demonstration, the plan that has been developed to evaluate it, and presents statistical results concerning the effects of the demonstration through its first year. PACER SHARE's purpose is to determine whether several experimental changes (job series consolidation, revised base pay determination, revised supervisory grading criteria, and productivity gain sharing) in federal civil service practices will improve organizational productivity, flexibility, and quality of work life while sustaining or improving the quality and timeliness of work. In these very preliminary, first-year results the authors did not find strong evidence of cost savings. In contrast, organizational flexibility improved, although the pattern was not universal across all measures. Attitudes toward pay and advancement declined while attitudes toward noneconomic aspects of the work environment changed equivalently or improved relative to the comparison sites. Work quality remained superior at Sacramento.

Osband, Kent

TI Energy Pricing in the Soviet Union. **AU** Kumar, Manmohan S.; Osband, Kent.

Ostroy, Joseph M.

TI An Arbitrage Approach to Competitive Equilibrium in an Exchange Economy. **AU** Makowski, Louis; Ostroy, Joseph M.

Pakes, Ariel

TI The Dynamics of Productivity in the Telecommunications Equipment Industry. **AU** Olley, G. Steven; Pakes, Ariel.

Papadakis, Elim

TI Citizen Preference and Public Education in Australia: An Analysis of Interstate Differences. **AU** Shapiro, Perry; Papadakis, Elim.

Parameswaran, Priya

TI A System of Demand Equations Satisfying Effectively Global Curvature Conditions. **AU** Cooper, Russel J.; McLaren, Keith R.; Parameswaran, Priya.

Park, Byeong U.

TI On an Efficient Smoothing Parameter Selector Proposed by Hall and Johnstone. **AU** Hardle, W.; Park, Byeong U.

Park, Sangkyun

PD December 1991. **TI** The Behavior of Uninsured Deposits: Market Discipline or "Too Big to Fail"? **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9130; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 14. **PR** no charge. **JE** G21. **KW** Banking. Interest Rate. Commercial Banks.

AB This paper investigates the behavior of uninsured deposits using the Call Report data of 1988, 1989, 1990, and 1991. The focus is on the relationship between the quantity of uninsured deposits, interest rate, and the riskiness of banks. Cross-section analyses for each of the four years present two major findings: (1) The importance of bank size increased over time in explaining the quantity of uninsured deposits; and (2) riskier banks that offered higher interest rates on uninsured deposits attracted more uninsured deposits. Given these findings, uninsured deposits do not appear to be a reliable source of market discipline.

Parkinson, Patrick

PD March 1992. **TI** Clearance and Settlement in U.S. Securities Markets. **AU** Parkinson, Patrick; Gilbert, Adam; Gollob, Emily; Hargraves, Lauren; Mead, Richard; Stehm, Jeff; Taylor, Mary Ann. **AA** Parkinson and Stehm: Board of Governors of the Federal Reserve System. Gilbert, Gollob, Hargraves, Mead, and Taylor: Federal Reserve Bank of New York. **SR** Board of Governors of the Federal Reserve System Staff Studies Paper: 163; Publication Services, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 37. **PR** no charge. **JE** G21, G12, G14. **KW** Default. Securities. Commercial Banks.

AB Interest in clearance and settlement arrangements in securities markets by the Federal Reserve and other central banks reflects an increasing awareness that disturbances in settlement processes in those markets can adversely affect the stability of payment systems and the integrity of the financial system generally. Such interest had been growing throughout the 1980's, but it clearly was heightened by the worldwide collapse of equity prices in October 1987. In the United States, for example, many observers, including senior officials of the Federal Reserve, concluded that the potential for a default by a major participant in the settlement systems for equities and equity derivatives had posed the greatest threat to the financial system during that turbulent period.

Pashardes, Panos

PD July 1991. **TI** Dynamic Specification and Household Characteristics in Demand Analysis. **AU** Pashardes, Panos; Baker, Paul. **AA** Pashardes: City University and Institute for Fiscal Studies. Baker: Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W91/11; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 36. **PR** 3 pounds. **JE** D12. **KW** Consumer Demand. Demand System. Cohort Data. Households. Consumer Economics.

AB This paper investigates the link between dynamic effects at the macro level and the effects of household characteristics at the micro level of consumer demand. The effects of household characteristics are included in a dynamic version of the Almost Ideal Demand System through the Barten Type equivalence hypothesis. For the empirical analysis we use cohort data from the U.K. Family Expenditure Survey 1970-86. The results suggest that dynamic effects may not be significant in the analysis of micro data. They also suggest that dynamic effects may be absorbed by seasonal dummy variables.

Paz Espinoza, M.

TI Dynamic Duopoly with Learning through Market Experimentation. **AU** Aghion, P.; Paz Espinoza, M.; Jullien, B.

Peaucelle, I.

TI Les Transitions en Economie: Les Changements de Prix en Russie dans les Annees Vingt. **AU** Gourieroux, C.; Peaucelle, I.

Peck, J.

TI Correlated Equilibrium and Sunspot Equilibrium. **AU** Forges, Francoise; Peck, J.

Perraudin, W. R. M.

TI Banking Policy and the Pricing of Deposit Guarantees: A New Approach. **AU** Fries, S. M.; Perraudin, W. R. M.

Pestieau, P.

TI Investment in Local Public Services: Nash Equilibrium and Social Optimum. **AU** Cremer, H.; Marchand, M.; Pestieau, P.

Peters, Wolfgang

PD July 1991. **TI** Using Right Incentives When Cheating can be Detected: The Case of Disability Insurance. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-342; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 21. **PR** no charge. **JE** D82, G22, J26. **KW** Incentive Compatibility. Moral Hazard. Insurance. Disability.

AB If all agents in an economy are affected by the same risk factor, the risk can be reduced by insurance. This is especially important in the case of disability, since inability to work has a great impact on the potential income flow. Hence, these individuals will, through an insurance institution, attempt to reduce the disability risk. As with every kind of insurance, moral hazard must be taken into account when designing an insurance contract, in which it is impossible to verify the person's actual disability. This is precisely what we want to analyze; it can be found in the literature under the heading "incentive compatibility." The insurance institution offers such a contract so nobody has an incentive to lie to the insurance institution or to commit "insurance fraud." Even in the case where a test enables the insurance to monitor the actual status of health the phenomenon of moral hazard does not vanish if the test is not faultless and costless at the same time.

Phillips, Llad

PD January 1992. **TI** Stabilization of the Canadian Dollar: 1975-1986. **AU** Phillips, Llad; Pippenger, John. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 1-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 25. **PR** no charge. **JE** F31, G15. **KW** Foreign Exchange. Exchange Rate.

AB Pippenger and Phillips (1973) analyze Canadian intervention in the market for U.S. dollars during the 1950's and conclude that it moderated day-to-day movements without affecting long-run fluctuations. Like most work at the time, their analysis uses a flow view of the market for foreign exchange. Since the mid-1970's, almost all research on the effects of intervention has used a stock approach based on some form of portfolio balance. This research extends the work of Pippenger and Phillips (1973) in three ways. First, we use daily data from 1975 to 1986 to see if their results hold during the current float. Second, we modify their model to include both stock and flow versions of the foreign exchange market. Third, we compare estimates based on changes in official Canadian holdings of U.S. dollars to estimates using actual intervention. The next section reproduces and extends the model used in Pippenger and Phillips (1973). The following section contains our empirical results.

Phillips, Peter C. B.

TI Vector Autoregression and Causality: A Theoretical Overview and Simulation Study. **AU** Toda, Hiro Y.; Phillips, Peter C. B.

TI A Bayesian Analysis of Trend Determination in Economic Time Series. **AU** Zivot, Eric; Phillips, Peter C. B.

PD October 1991. **TI** Unidentified Components in Reduced Rank Regression Estimation of ECM's. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1003; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 11. **PR** no charge. **JE** C32, C51. **KW** Cointegration. Error Correction Models. Identification Problem.

AB Reduced rank regression procedures in error correction models (ECM's) permit consistent estimation of the cointegration space but do not provide consistent estimates of individual structural relations when the dimension of the cointegration space is greater than one. Indeed, individual structural cointegrating equations are unidentified without additional a priori restrictions, just as in the conventional simultaneous equations framework. The effect of this lack of identification is explored by considering the distributions and limit distributions of reduced rank regression estimates of unidentified components of the cointegrating matrix in a typical VAR formulation of the ECM. Some recommendations are made for empirical practice.

Picard, P.

TI Competing Vertical Structures: Precommitment and Renegotiation. **AU** Caillaud, B.; Jullien, B.; Picard, P.

Piccione, Michele

PD March 1992. **TI** Finite Automata Play a Repeated Game. **AU** Piccione, Michele; Rubinstein, Ariel. **AA** Piccione: University of British Columbia. Rubinstein: Tel Aviv University and Princeton University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 5-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 17. **PR** no charge. **JE** C71, C72. **KW** Repeated Game. Cooperative Game. Nash Equilibrium.

AB The paper analyzes a two-player game in which each player has to choose an automation (machine) which plays an infinitely repeated extensive game. We assume that the preferences of the players depend both on repeated game payoffs and the number of states of their machine. In contrast to repeated normal form games, it is shown that if the stage game is an extensive game with perfect information, any Nash equilibrium of the machine game will induce a path consisting of a constant play of a Nash equilibrium of the stage game.

Pietra, Tito

TI Mini-Symposium on "The Structure of Sunspot Equilibria in the Presence of Incomplete Financial Markets". **AU** Cass, David; Pietra, Tito; Suda, Shinichi; Tallon, Jean-Marc; Villanacci, Antonio.

Pingry, David E.

TI An Experimental Investigation of the Hahn-Noll Revenue Neutral Auction for Emissions Licenses. **AU** Franciosi, Robert; Isaac, R. Mark; Pingry, David E.; Reynolds, Stanley S.

Pippenger, John

TI Stabilization of the Canadian Dollar: 1975-1986. **AU** Phillips, Llad; Pippenger, John.

Pochet, Yves

PD 1991. **TI** Lot-Sizing with Constant Batches: Formulation and Valid Inequalities. **AU** Pochet, Yves; Wolsey, Laurence A. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9137; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 25. **PR** not available. **JE** C61, D57, D24. **KW** Dynamic Programming. Production. Linear Programming.

AB We consider the classical lot-sizing problem with constant production capacities (LCC) and a variant in which the capacity in each period is an integer multiple of some basic batch size (LCB). We first show that the classical dynamic program for (LCC) simplifies for (LCB) leading to an O(n^2min(n,C)) algorithm (where n is the number of periods and C the batch size). Using this new algorithm, we show how to formulate both problems as linear programs with O(n^3) variables and constraints. A class of so-called (k,l,S,I) inequalities are described for (LCB) which capture both the

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dynamic nature of the problem as well as the capacity aspects. For (LCB), we prove that these inequalities are the only facet-defining inequalities in which the production variables have (0,1) coefficients. For (LCC), we show that these inequalities include all the known classes of valid inequalities. Finally, we discuss several open questions and possible extensions.

Polemarchakis, H. M.

PD August 1991. **TI** Asset Markets and the Information Revealed by Prices. **AU** Polemarchakis, H. M.; Siconolfi, P. **AA** Polemarchakis: Universite Catholique de Louvain. Siconolfi: Columbia University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9134; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 20. **PR** not available. **JE** G12, D84, G14. **KW** Rational Expectations. Information Set. Asset Market. Asset Pricing.

AB When nominal assets serve to transfer revenues across states of the world, noninformative rational expectations equilibria exist. At noninformative prices, the restricted information under which individuals optimize can be modeled as restricted participation in the asset market. When assets are nominal, the essential indeterminacy of equilibrium asset price that characterizes economies with restricted participation guarantees that noninformative equilibrium prices exist.

Polich, J. Michael

TI The 2+2+4 Recruiting Experiment: Design and Initial Results. **AU** Buddin, Richard; Polich, J. Michael.

Popper, Steven W.

PD January 1990. **TI** The Prospects for Modernizing Soviet Industry. **AA** RAND Corporation. **SR** Rand Report: R-3785-AF; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 75. **PR** not available. **JE** O33, P21, P31, O53, O14. **KW** Privatization. Technological Change. Industrialization. Soviet Union. Socialist Enterprises.

AB This report assesses the Soviet effort to improve economic performance by improving the quality of machine-building products. The author contends that the modernization program addresses only the symptoms of economic inefficiency, not the root cause. The senior Soviet leadership does not yet have an understanding that the goals set for the modernization program depend on fundamental reform of Soviet economic institutions. The Soviet enterprise is not the equivalent of the Western firm -- the Soviet enterprise manager is subject to more uncertainty, retains less control, and faces less well-specified performance criteria. Emphasis on the adoption of new machinery may impose a net cost on the economy rather than a benefit -- and with disappointing results. The success of an effort to modernize Soviet industry depends upon efficient use of information, requiring more substantial reform of the economic system. True modernization is possible only with an adequate system for setting prices, sufficient competition, removal of ministerial authority, and reform of the way the average Soviet enterprise is organized.

Post, Mitchell A.

TI The Effect of a Rating Change on Commercial Paper Outstandings. **AU** Crabbe, Leland; Post, Mitchell A.

Powell, Alan A.

TI Using the Murphy Model to Provide Short-Run Macroeconomic Closure for ORANI. **AU** Breece, James H.; McLaren, Keith R.; Murphy, Chris W.; Powell, Alan A.

Preston, Ian

TI Life-Cycle Expenditure Allocations and the Consumption Costs of Children. **AU** Banks, James; Blundell, Richard; Preston, Ian.

Promel, Hans Jurgen

PD November 1991. **TI** The Asymptotic Structure of H-Free Graphs. **AU** Promel, Hans Jurgen; Steger, Angelika. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 91734-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 15. **PR** no charge. **JE** C60. **KW** Graph Theory. Perfect Graphs. Graph Coloring.

AB *In this paper we focus on two questions. (1) How many* edges can an H-free graph have? (2) What does a "typical" H-free graph look like? For excluded weak subgraphs both problems have been well-studied for a long time. We survey some of the important results. The main stress of the paper however lies in explaining the recent results on excluding induced subgraphs which complement the results in the weak case in an unexpected way. We also indicate how the methods involved in proving these asymptotic results can be used in other branches of graph theory. In particular we comment on applications to graph coloring and to perfect graphs.

Pudney, Stephen

PD September 1991. **TI** Rationing and Consumer Demand in China: Simulating the Effects of a Reform of the Urban Food Pricing System. **AU** Pudney, Stephen; Limin, Wang. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: CP/15; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 61. **PR** no charge. **JE** Q11, P22, P27. **KW** China. Prices. Price Reform. Food Demand. Rationing.

AB This paper presents illustrative estimates of a system of consumer demand functions for basic food in urban China, taking account of the two-track nature of urban food pricing. We simulate the effects of various changes to the rationing system, taking urban supply levels as fixed. We show that substantial inflationary effects of urban price reform are possible but not certain. If the current state pricing system were replaced by short-term equilibrium pricing, we estimate that the food price level might remain almost unchanged, or might rise by as much as 17%. The difference depends on which of two extreme assumptions we make about the marginal price for grain faced by most households.

PD November 1991. **TI** Income, Wealth and the Life-Cycle: A Non-Parametric Analysis for China. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: CP/16; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 51. **PR** no charge. **JE** D31, O15. **KW** Income Distribution. Wealth. China.

AB This paper uses the techniques of nonparametric density and regression estimation to estimate the Chinese age/income and age/wealth distributions, using survey data relating to 1987. Although there is evidence of a clear life cycle profile of income earning and wealth accumulation, the results suggest that only a small part of observed inequality can be explained by life cycle factors. This finding contradicts the results of some other researchers.

Qin, Cheng-Zhong

PD January 1992. **TI** On a Potential Game for Endogenous Formation of Cooperation Structures. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 5-92; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 10. **PR** no charge. **JE** C71. **KW** Cooperative Games. Nash Equilibrium. Game Theory.

AB The strategic form game, proposed by Myerson (1991) for endogenous formation of cooperation structures in any given transferable utility (TU) game, is proved to be a potential game of the type of Monderer and Shapley (1991). If a given TU game is superadditive, then the strategy profiles that are global maxima of the potential function constitute a subset of the Nash equilibria. Furthermore, the payoff vectors of those Nash equilibria are all precisely the Shapley value of the given TU game. Therefore, the corresponding endogenously determined cooperation structures are efficient.

Rabin, Matthew

PD December 1991. **TI** Incorporating Fairness into Game Theory. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 91-185; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 33. **PR** $3.50 plus applicable sales tax. **JE** A12, C72, D63, A13, H41. **KW** Noncooperative Games. Altruism. Public Goods. Monopoly Pricing.

AB Psychological evidence shows that, rather than pursuing solely their own' material interests in group situations, people have additional "social" goals: They wish to help those who are helping them, and hurt those who are hurting them. In this paper, I model such behavior in noncooperative game theory, and define the solution concept "Fairness Equilibrium" as those outcomes that constitute equilibrium behavior when such motives are added to material games. I apply the model to some well-known games and a model of monopoly pricing. Applying the model shows the special role of "Mutual-Max" outcomes (in which each player maximizes the other's material payoffs) and "Mutual-Min" outcomes (in which each player minimizes the other's material payoffs). The following results hold: Any Nash equilibrium that is either a Mutual-Max outcome or Mutual-Min outcome is also a fairness equilibrium. If the material payoffs are small relative to the "psychological payoffs," then, roughly, an outcome is a fairness equilibrium if and only if it is a Mutual-Max or a Mutual-Min outcome. If the material payoffs are large, then an outcome is a fairness equilibrium if it is a strict Nash equilibrium, and only if it is a Nash equilibrium.

Rahman, Shahidur

PD January 1992. **TI** Testing for ARMA(1,1) Disturbances in the Linear Regression Model. **AU** Rahman, Shahidur; King, Maxwell L. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 1/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 21. **PR** no charge. **JE** C12, C22. **KW** Durbin-Watson Test. Hypothesis Testing. Linear Model.

AB Serious alternatives to the AR(1) disturbance model in econometric applications of linear regression include MA(1) disturbances and the sum of independent white noise and AR(1) disturbance components. All three are special cases of ARMA(1,1) processes. This paper reports an empirical power comparison of tests for AR(1), MA(1) and ARMA(1,1) disturbances assuming ARMA(1,1) disturbances. Tests compared include the Durbin-Watson test, the locally best invariant test, and various point optimal invariant (POI) tests. The results suggest that the power of the POI test is largely invariant to the choice of AR(1) parameter value at which power is maximized. This conclusion is strengthened by a theoretical result.

TI An Alternative Approach for the Estimation of Distributed Lag Models in Panel Data. **AU** Matyas, Laszlo; Rahman, Shahidur.

Rajasingham, Indi

PD November 1991. **TI** Currency Diversification of Reserves and Sovereign Debt for Small Open Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/109; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** F41, F34, E42, E58. **KW** Central Bank. Foreign Exchange. Public Debt. Open Economy.

AB An approach for minimizing risk through diversification of foreign exchange reserves and sovereign borrowings is proposed for central banks of small open economies. This approach--developed in simple 2-period, 3-country framework--differs from past work in that the elements of exchange and price risk associated with trade and payments are considered in the portfolio allocation problem. The analysis shows that the net level of reserves and the primary transactions balance affect the optimal portfolio leading to deviations from the optimal allocation prescribed by the classical portfolio model. In addition, this result has implications for the currency composition of exchange market intervention transactions.

Ravikumar, B.

TI A Neoclassical Model of Seasonal Fluctuations. **AU** Chatterjee, Satyajit; Ravikumar, B.

Reed, David P.

TI Residential Broadband Services by Telephone Companies? Technology, Economics, and Public Policy. **AU** Johnson, Leland L.; Reed, David P.

Renault, E.

TI Tests Sur le Noyau, L'image et le Rang de la Matrice des Coefficients D'un Modele Lineaire Multivarie. **AU** Gourieroux, C.; Monfort, A.; Renault, E.

Reynolds, Stanley S.

TI Optimal Monopoly Investment and Capacity Utilization under Random Demand. **AU** Nickerson, David B.; Reynolds, Stanley S.

TI An Experimental Investigation of the Hahn-Noll

Revenue Neutral Auction for Emissions Licenses. **AU** Franciosi, Robert; Isaac, R. Mark; Pingry, David E.; Reynolds, Stanley S.

Rhoades, Stephen A.

PD February 1992. **TI** Evidence on the Size of Banking Markets from Mortgage Loan Rates in Twenty Cities. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Staff Studies Paper: 162; Publication Services, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 11. **PR** no charge. **JE** G21, L44. **KW** Banks. Mortgages. Mergers. Interest Rate.

AB Financial innovation and a surge in bank mergers over the past decade have intensified the debate over whether banking markets are still local. That is, have the decade's developments caused banking markets to grow beyond cities and rural localities to become regional or national in scope? This question is particularly important with respect to bank mergers and acquisitions because of the implications for the antitrust analysis of competition: If banking markets are nonlocal, then local supply and demand conditions would not be relevant in the evaluation of the competitive effects of any given merger. This study conducts an empirical test of the issue concerning banking markets by examining whether local market concentration and other local market conditions have a systematic influence on mortgage interest rates, that is, on the price of mortgages.

Ricketts, Nicholas

PD December 1991. **TI** An International Economy with Country-Specific Money and Productivity Growth Processes. **AU** Ricketts, Nicholas; McCurdy, Thomas H. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 846; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 43. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** F43, F41, F21. **KW** Growth Model. Money Supply. Capital Mobility. Productivity.

AB This paper analyzes a stochastic international growth model with money and country-specific forcing processes for productivity and money growth rates. Money is required due to cash-in-advance constraints for consumption goods but the liquidity constraints need not be binding for all periods. An individual can trade claims on future currency units for both countries through government bond markets. Each country specializes in the production of one of the goods but individual agents can invest, subject to installation costs, in any available technology. Two versions of the model are simulated in order to compare different degrees of international mobility of physical capital. The moments of the forcing processes are calibrated to a sample of U.S. and Canadian data. A perfectly pooled equilibrium solution is computed numerically, using the Marcet method of parameterized expectations, and the moments of the endogenous variables are compared to those for the actual data.

Riddell, W. Craig

TI A Comparative Analysis of Unemployment in Canada and the United States. **AU** Card, David; Riddell, W. Craig.

Rob, Rafael

TI Switching Costs, Sectoral Adjustments and the Welfare-Relevance of Pecuniary Externalities. **AU** Dixit, Avinash; Rob, Rafael.

TI The Durability of Information, Market Efficiency and the Size of Firms: Search with Repeated Transactions. **AU** Fishman, Arthur; Rob, Rafael.

TI Evolution, Rationality and Equilibrium Selection in Societal Games. **AU** Matsui, Akihiko; Rob, Rafael.

TI Risk-Sharing, Adjustment and Trade. **AU** Dixit, Avinash; Rob, Rafael.

TI Learning, Mutation, and Long Run Equilibria in Games. **AU** Kandori, Michihiro; Mailath, George J.; Rob, Rafael.

TI The Durability of Information, Market Efficiency and the Size of Firms: Search with Repeated Transactions. **AU** Fishman, Arthur; Rob, Rafael.

Robin, J. M.

PD March 1991. **TI** Econometric Analysis of the Short-Run Fluctuations of Households' Purchases. **AA** CREST and INRA. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9114; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 22. **PR** no charge. **JE** D12, C12, C25. **KW** Corner Solutions. Utility Theory. Purchase Models. Count Data.

AB Infrequency of purchase models are alternative models to those derived from the classical "utility maximization with binding nonnegativity constraints" scheme for modeling purchases that occur at random dates. An extension of those models is proposed that takes into account possibly existing information about the exact number of times households purchased during the survey period. Various ways of estimation are described and an empirical illustration is presented with data drawn from the French Food Expenditure Survey (INSEE).

TI A Dynamic Model of Choice between Wage-Work and Self-Employment with Liquidity Constraints. **AU** Magnac, T.; Robin, J. M.

Robinson, Sherman

PD December 1991. **TI** Agricultural Policies and Migration in a U.S.-Mexico Free Trade Area: A Computable General Equilibrium Analysis. **AU** Robinson, Sherman; Burfisher, Mary E.; Hinojosa-Ojeda, Raul; Thierfelder, Karen E. **AA** Robinson: University of California, Berkeley. Burfisher and Thierfelder: U.S. Department of Agriculture. Hinojosa-Ojeda: University of California, Los Angeles. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 617; Department of Agricultural and Resource Economics, 313 Giannini Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 33. **PR** $6.60. **JE** F13, F14, Q17, F22. **KW** Free Trade. Trade Policy. Agriculture. Immigration.

AB A U.S.-Mexico agreement to form a free trade area (FTA) is analyzed using an 11-sector, three-country, computable general equilibrium model that explicitly models farm programs and labor migration. The model also uses a flexible functional form for specifying sectoral import demand functions, which is an empirical improvement over earlier specifications using a constant elasticity of substitution function. The model identifies the trade-offs among bilateral trade growth, labor migration, and agricultural program expenditures under alternative FTA scenarios. Trade liberalization in agriculture greatly increases rural-urban migration within Mexico and migration from Mexico to the U.S. In addition, migration is reduced if Mexico grows relative to the U.S. and also if Mexico retains farm support programs. However, the more support that is provided to the Mexican agricultural sector, the smaller is bilateral trade growth.

Rodrigues, Anthony

TI Tests of Mean-Variance Efficiency of International Equity Markets. **AU** Engel, Charles; Rodrigues, Anthony.

Rodrik, Dani

TI Debt Reduction, Adjustment Lending, and Burden Sharing. **AU** Diwan, Ishac; Rodrik, Dani.

Roemer, John E.

PD December 1991. **TI** Can there be Socialism after Communism? **AA** University of California, Davis. **SR** University of California at Davis Economics Department Working Paper: 394; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 25. **PR** no charge. **JE** P31, P51, P26. **KW** Political Economy. Socialist Enterprise. Socialist Institutions.

AB It is argued that Communism eventually failed because of its inability to deal with three principal-agent problems: between the factory manager and the worker, between the planner and the manager, and between the public and the planner. The analogous problems in a capitalist system, and the mechanisms that capitalism has developed to address them, are discussed. A system of market socialism is proposed which borrows some of capitalism's mechanisms. Yet would arguably substantially improve the income distribution. The key is to break the government's political control of firms, thus hardening the firms' budget constraints while not introducing the kind of private property in financial assets that leads to concentration of wealth and power in the hands of a small class.

PD March 1992. **TI** The Emergence of Party Ideology when Voters are Uncertain about How the Economy Works. **AA** University of California, Davis. **SR** University of California at Davis Economics Department Working Paper: 396; Department of Economics, University of California at Davis, Davis, CA 95616-8578. **PG** 19. **PR** no charge. **JE** D71, D72. **KW** Voting. Social Choice. Political Process. Political Parties.

AB There is a continuum of voters, indexed by income, who have preferences over economic outcomes. There are two political parties each representing the interests of given constituencies of voters -- the Rich and the Poor. Parties/candidates put forth policies -- for instance, tax policy, where taxes finance a public good. Voters are uncertain about the "theory of the economy," the function that maps policies into economic outcomes. Parties argue, as well, for theories of the economy. Each voter has a prior probability distribution over possible theories of the economy: after parties announce their theories of the economy, each voter constructs a posterior distribution over such theories. Suppose that voters are unsure how efficiently the government converts tax revenues into the public good. It is shown that, under reasonable assumptions, the party representing the Rich will argue that the government is very inefficient and the party representing the Poor will argue the opposite. What might appear as liberal and conservative ideological views emerge here as simply good strategies in the electoral game.

Rojas-Suarez, Liliana

PD March 1992. **TI** From the Debt Crisis toward Economic Stability: An Analysis of the Consistency of Macroeconomic Policies in Mexico. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/17; International Monetary Fund, Washington, DC 20431. **PG** 34. **PR** not available. **JE** E61, E62, O54, E65. **KW** Government Spending. Stabilization Policy. Inflation.

AB This paper uses a simple framework based on the government budget constraint to analyze the consistency of macroeconomic policies undertaken in Mexico during the period 1978 to mid-1991. It was found that the interaction between the actual implementation of economic policies and economic agents' perceptions about the sustainability of those policies can account, to a large extent, for the behavior of key macroeconomic variables during the period under study. The paper also highlights the costs of adjustment involved in the most recent Mexican stabilization program arising from concerns about the sustainability of the announced policies.

Rolin, J.-M

TI Bayesian Analysis of Mixtures: Some Results on Exact Estimability and Identification. **AU** Florens, J.-P.; Mouchart, M.; Rolin, J.-M.

Rose, Andrew, K.

TI How Pervasive is the Product Cycle? The Empirical Dynamics of American and Japanese Trade Flows. **AU** Gagnon, Joseph E.; Rose, Andrew, K.

Rosen, Harvey S.

TI Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

TI Entrepreneurial Decisions and Liquidity Constraints. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

TI The Carnegie Conjecture: Some Empirical Evidence. **AU** Holtz-Eakin, Douglas; Joulfaian, David; Rosen, Harvey S.

Rotemberg, Julio

PD August 1991. **TI** Leadership Style and Incentives. **AU** Rotemberg, Julio; Saloner, Garth. **AA** Rotemberg: Massachusetts Institute of Technology. Saloner: Stanford University. **SR** Stanford Graduate School of Business Research Paper: 1153; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 35. **PR** not available. **JE** L21, M12, J44. **KW** Innovation. Personnel. Firm Manager. Management. Incentive Contracts.

AB We study the relationship between a firm's environment and its optimal leadership style. We show that leadership style is a function of the CEO's personality and affects the firm's profitability. We use a model in which contracts between the firm (or CEO) and managers are incomplete so that providing incentives to subordinates is not straightforward. The personality of the CEO, and in particular the degree of empathy with other employees, then affects the incentive contracts that can be offered to subordinates. We show that shareholders gain from appointing empathic CEOs, who adopt a participatory style, when the firm has the potential for exploiting numerous innovative ideas. By contrast, when the environment is poor in new ideas, shareholders benefit from hiring a less empathic (profit maximizing) CEO whose style is more autocratic.

Rovesti, C.

PD October 1991. **TI** Mechanism Design: Durability and Efficiency of a Decision Rule. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9147; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 40. **PR** not available. **JE** D81, D82, D71. **KW** Collective Choice. Decision Theory. Voting. Incomplete Information.

AB We consider a Bayesian collective choice problem and we study a renegotiation process described as a voting game between the mechanism status quo and the alternative one. Different concepts of durability of a decision rule are analyzed in the literature depending on the stage of the game in which the renegotiation process is implemented, namely, at the stage interim or ex post. We illustrate them and we focus on the relationships between durability and efficiency. We are able to show that, differently from the case of complete information, in general there are no relationships between (classical) ex post efficiency and durability at the stage interim. For the renegotiation process implemented at the stage ex post the concept of durability in outcomes is proposed. In the case of dominant voting strategies the criterion allows a good coordination among the players towards preferred decisions; in the general case the relationship between efficiency and durability in outcomes is still unclear.

Rubinstein, Ariel

PD February 1992. **TI** A Remark on Infinitely Repeated Extensive Games. **AU** Rubinstein, Ariel; Wolinsky, Asher. **AA** Rubinstein: Tel Aviv University. Wolinsky: Northwestern University. **SR** Tel Aviv Sackler Institute of Economic Studies Working Paper: 4-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 7. **PR** no charge. **JE** C71. **KW** Perfect Equilibrium. Repeated Game. Cooperative Game.

AB The comment demonstrates several examples of extensive games for which the set of subgame perfect equilibrium payoff vectors of its repeated game with discounting is very different than that of the corresponding repeated reduced normal form game even when the discount factor is close to 1. Nevertheless, it is true that with a "dimensionality" condition (ala Fudenberg and Maskin (1986), or Abreu and Dutta (1991)) all feasible and strictly individually rational payoff vectors are subgame perfect equilibrium payoff vectors where the discount rate approaches unity.

TI Finite Automata Play a Repeated Game. **AU** Piccione, Michele; Rubinstein, Ariel.

Rush, Mark

TI Cointegration: How Short is the Long Run? **AU** Hakkio, Craig S.; Rush, Mark.

Russell, R. Robert

TI The Conjunction of Direct and Indirect Separability. **AU** Blackorby, Charles; Russell, R. Robert.

TI Samuelson's "Shibboleth" Revisited: Proportional Budgeting among Agents and Rank-Two Demand Systems. **AU** Blackorby, Charles; Russell, R. Robert.

TI A Choice-Theoretic Rationalisation of the Permanent Income Hypothesis. **AU** Blackorby, Charles; Russell, R. Robert.

Russell, Steven

PD July 1990. **TI** The Inflationary Effects of the Use of Reserve Ratio Reductions, or Open Market Purchases, to Reduce Market Interest Rates: A Theoretical Comparison. **AU** Russell, Steven; Espinosa, Marco. **AA** Russell: Federal Reserve Bank of St. Louis. Espinosa: Federal Reserve Bank of Atlanta. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-006; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 32. **PR** not available. **JE** E52, E43, E58, E51. **KW** Monetary Policy. Money Supply. Interest Rate.

AB The level of market interest rates has served as the principal intermediate target of Federal Reserve monetary policy throughout most of the System's history. Concern about the behavior of monetary aggregates began in the early 1950's, and explicit aggregate targeting in the early 1970's; for several years beginning in the late 1970's, the growth rates of various monetary aggregates largely supplanted interest rates as policy targets. Recently, however, the System has drawn back from rigid adherence to aggregate targeting, broadening its target ranges and allowing a wider variety of considerations to influence the conduct of policy. While interest rates have not been explicitly targeted, the System has adopted operating procedures which give it tighter control over rates, and has intervened on more than one occasion to change their average levels.

Rustichini, Aldo

TI Indeterminancy of Equilibrium in Dynamic Models with Externalities. **AU** Boldrin, Michele; Rustichini, Aldo.

Rutherford, Thomas

TI An Implementation of the Generalized Basis Reduction Algorithm for Integer Programming. **AU** Cook, William; Rutherford, Thomas; Scarf, Herbert E.; Shallcross, David.

Ruud, Judith S.

PD August 1991. **TI** Underwriter Price Support and the IPO Underpricing Puzzle. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9117; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 20. **PR** no charge. **JE** G12, G14, G11. **KW** Stock Market. Asset Pricing. Market Efficiency.

AB This paper reassesses the stylized fact that IPOs are systematically underpriced. Investigation of the distribution of initial IPO returns shows that positive mean initial returns may result from a partially censored left (negative) tail. Underwriter price support can readily account for this censoring of the distribution of initial returns: stock prices are allowed to rise but are prevented from falling significantly until the issue is fully sold. This interpretation, which incorporates neglected information on return distributions and on market practice, stands in contrast to the view that positive average initial IPO returns result from deliberate underpricing of most offerings.

Saavalainen, Tapio

TI The Credibility of Nordic Exchange Rate Bands: 1987-91. **AU** Geadah, Sami; Saavalainen, Tapio; Svensson, Lars E. O.

Sadanand, Venkatraman

TI Precommitment and Random Rates in Symmetric Duopoly: A New Theory of Multinational Production. **AU** Nickerson, David B.; Courchane, Marsha; Sadanand, Venkatraman.

Sadka, Efraim

PD February 1992. **TI** A Tax on Gross Assets of Enterprises as a Form of Presumptive Taxation. **AU** Sadka, Efraim; Tanzi, Vito. **AA** Sadka: Tel Aviv University. Tanzi: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/16; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** H21, H25. **KW** Developing Countries. Business Tax. Taxes.

AB A tax on gross assets has been introduced in some developing countries where several factors (most notably, high inflation) enabled apparently viable enterprises to report losses for income tax purposes. The idea of a tax on the value of assets, rather than on the income that the assets generate, seems to have originated in the 17th century in Milan. It was more recently advocated by Luigi Einaudi and Maurice Allais, but their contributions have remained unknown in the Anglo-Saxon world. The economic implications of such a tax are analyzed in this paper. Special attention is devoted to efficiency and administrative aspects. Practical considerations suggest that the tax on gross assets serves as a minimum income tax rather than as a final tax.

Sadoulet, Elisabeth

PD October 1991. **TI** Agricultural Trade Liberalization for the Low Income Countries: A General Equilibrium-Multimarket Approach. **AU** 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: 614Rev; Department of Agricultural and Resource Economics, 313 Giannini Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 17. **PR** $5.00. **JE** Q17, Q18, F13, D58. **KW** Trade Policy. Developing Countries. Agriculture.

AB While progress in the Uruguay Round of the general agreement on tariffs and trade (GATT) toward agricultural trade liberalization in the OECD countries is currently marred with difficulties, liberalization remains a goal for the United States and many other GATT members. Recent studies edited by Maunder and Valdes and by Goldin and Knudsen are generally consistent in predicting that liberalization would lead to higher world market prices for cereals and animal products. Concerned with the impact that liberalization may have on the poorer countries, most of which are highly dependent on cereals imports, and on the poor within these countries, who spend a high share of their incomes on food grains, we focus on simulating the affects of liberalization on these vulnerable groups. The objective is to assist the more developed countries' negotiators in designing complementary developmental assistance and food aid programs for the less developed countries and for the poor in these countries. The approach we follow consists in constructing archetype multisector and multiclass computable general equilibrium models for groups of countries with similar structural features.

Sahay, Ratna

TI Does Sequencing of Privatization Matter in Reforming Planned Economies? **AU** Husain, Aasim M.; Sahay, Ratna.

Saligari, Grant R.

TI Kalman Filtering: The Initialization Problem. **AU** Snyder, Ralph D.; Saligari, Grant R.

Saloner, Garth

PD April 1991. **TI** Adoption of Technologies with Network Effects. **AU** Saloner, Garth; Shepard, Andrea. **AA** Saloner: Stanford University. Shepard: Massachusetts Institute of Technology. **SR** Stanford Graduate School of Business Research Paper: 1146; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 34. **PR** not available. **JE** O33, O32, R11. **KW** Production. Banking. Technology. Spatial Economics. Adoption.

AB The literature on networks suggests that the value of a network is positively affected by the number of geographically dispersed locations it serves (the "network effect") and the number of its users (the "production scale effect"). We show that as a result a firm's expected time until adoption of technologies with network effects declines in both users and locations. We provide empirical evidence on the adoption of automated teller machines by banks that is consistent with this prediction. Using standard duration models, we find that a bank's date of adoption is decreasing in the number of its branches (a proxy for the number of locations and hence for the network effect) and the value of its deposits (a proxy for number of users and hence for production scale economies). The network effect is the larger of the two effects.

TI Leadership Style and Incentives. **AU** Rotemberg, Julio; Saloner, Garth.

Samuelson, Larry

TI Normal Form Structures in Extensive Form Games. **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M.

Sands, Barbara N.

TI Rethinking the Model Selection Agenda: A Unification of Some Fundamental Issues. **AU** Trosset, Michael W.; Sands, Barbara N.

Santamaria, Marco

PD November 1991. **TI** Privatizing Social Security: The Chilean Case. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9127; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 23. **PR** no charge. **JE** J32, D91, E44, E21. **KW** Pensions. Financial Markets. Savings. Chile.

AB This paper provides a description of the mandatory private pension system instituted in Chile in 1981. The study also provides an evaluation of the impact of the reform on wages, labor costs, national savings rate, and the development of domestic financial markets. The findings suggest that the reform has increased net wages, lowered net labor costs and stimulated the development of local capital markets. The evidence on national savings is less clear cut due to the conflicting impact of the program on the various components of aggregate savings.

Satterthwaite, Mark A.

PD November 1991. **TI** The Double Auction Market: Institutions, Theories, and Experimental Evaluations. **AU** Satterthwaite, Mark A.; Williams, Steven R. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 971; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 26. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** D44, D11, D82. **KW** Demand Analysis. Auctions. Markets.

AB Supply, demand, and trade at a market clearing price are the most fundamental concepts of microeconomics. Marshall (1949) developed this analysis to describe properties of the outcome of trading that he believed to be essentially correct regardless of the actual institution through which trade is conducted. The supply-demand analysis is regarded in a different way in this paper. The "Marshallian cross" is used here as the institution for determining the market price-quantity pair, and the behavior of self-interested, imperfectly informed traders when confronted with this institution is analyzed. We study a call market, i.e., a market in which bids determine a demand curve, asks determine a supply curve, and all trades clear simultaneously at a market clearing price. This paper describes the institution, summarizes our theoretical knowledge of it, and discusses how those theoretical predictions may be confronted with experimental evidence.

Saunders, Anthony

TI Bank Risk and Real Estate: An Asset Pricing Perspective. **AU** Mei, Jianping; Saunders, Anthony.

Scarf, Herbert E.

TI An Implementation of the Generalized Basis Reduction Algorithm for Integer Programming. **AU** Cook, William; Rutherford, Thomas; Scarf, Herbert E.; Shallcross, David.

Schankerman, Mark

PD November 1991. **TI** Revisions of Investment Plans and the Stock Market Rate of Return. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: EI/5; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 46. **PR** no charge. **JE** E22, D21, G12, G31. **KW** Capital Investment. Loans. Stock Market.

AB This paper explores the sources of uncertainty that cause firms to revise their capital investment plans and the stock market to revise its valuation of those firms. A simple method is developed to decompose the uncertainty governing revisions in investment plans and the stock market rate of return into micro, sectoral, and aggregate components, and to measure the degree of heterogeneity in micro responses to common disturbances. The method is applied to a panel data set of firms in the U.S. economy for the period 1950-1973. The empirical results show that the capital investment decision is governed primarily by idiosyncratic uncertainty, but common disturbances are more important for movements in the stock market rate of return.

Schlag, Karl

PD December 1991. **TI** Bounded Perception and Learning How to Decide. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Discussion Paper: 972; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, 3-014 Leverone Hall, Evanston, IL 60208. **PG** 50. **PR** $3.00 U.S. or Canada; $5.00 via International Mail. **JE** D83, D81. **KW** Learning. Decision Theory.

AB Consider a decision-maker who must coordinate his decision with the occurrence of some phenomenon. In order to behave "optimally," the circumstances surrounding the occurrence of the phenomenon must be learned. However, there are natural bounds on the capabilities of perception. More specifically, only a fixed number of attributes may be focused on and observed in each instance. This paper models this problem in the framework of learning concepts from positive examples involving bounded perception. For clarity and simplicity, it is assumed that for each positive example the decision-maker may only observe one of its attributes. The analysis concentrates on finding optimal ways of specifying what attributes should be observed. With certain assumptions of independence we show that a class of local "hill climbing" algorithms are essentially the only optimal ones. Additionally, it is shown that patterns in the observation behavior emerge asymptotically. The results underscore the importance of diversifying attention when acquiring knowledge.

Schmeidler, David

TI On the Uniqueness of Subjective Probabilities. **AU** Karni, Edi; Schmeidler, David.

TI On the Uniqueness of Subjective Probabilities. **AU** Karni, Edi; Schmeidler, David.

Scott, Louis O.

PD December 1991. **TI** The Information Content of Prices in Derivative Security Markets. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/132; International Monetary Fund, Washington, DC 20431. **PG** 30. **PR** not available. **JE** G13, G12, G14. **KW** Futures Pricing. Expectations. Spot Market. Asset Pricing.

AB Prices in futures markets and option markets reflect expectations about future price movements in spot markets, but these prices can also be influenced by risk premia. Futures and forward prices are sometimes interpreted as market expectations for future spot prices, and option prices are used to calculate the market's expectations for future volatility of spot prices. Do these prices accurately reflect market expectations? The purpose of this paper is to examine the information that is reflected in futures prices and option prices. The issue is examined by reviewing both the relevant analytical models and the empirical evidence.

Segal, Uzi

PD October 1991. **TI** The Measure Representation: A Correction. **AA** California Institute of Technology and University of Toronto. **SR** Caltech Social Science Working Paper: 781; Division of Humanities and Social Sciences, 228-

77, California Institute of Technology, Pasadena, CA 91125. **PG** 9. **PR** no charge. **JE** D81, D11. **KW** Expected Utility. Preferences. Lotteries.

AB Wakker and Puppe point out a mistake in Theorem 1 in Segal. This theorem deals with representing preference relations over lotteries by the measure of their epigraphs. An error in the theorem is that it gives wrong conditions concerning the continuity of the measure. This paper corrects the error. Another problem is that the axioms do not imply that the measure is bounded, therefore the measure representation applies only to subsets of the space of lotteries, although these subsets can become arbitrarily close to the whole space of lotteries. Some additional axioms implying that the measure is a product measure (and hence anticipated utility), also guarantee that the measure is bounded.

Selten, Reinhard

PD July 1991. **TI** A Demand Commitment Model of Coalition Bargaining. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-191; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 38. **PR** no charge. **JE** C72, C78. **KW** Perfect Equilibrium. Noncooperative Game. Unanimity Game.

AB A noncooperative model of coalition bargaining in the context of characteristic functions with side-payments is introduced. Temporary commitments to payoff demands are a salient feature of the model. For every coalition game, the model generates a finite extensive game with perfect information. For two basic cases - unanimity games and 3-person quota games without the grand coalition - the noncooperative analysis yields results akin to cooperative game theory. The analysis is based on subgame perfectness alone without the use of further selection criteria. The equal payoff division is the only subgame perfect equilibrium outcome in the case of the zero-normalized unanimity game. In the case of the 3-person quota game with the grand coalition, the players receive their quotas in 2-person coalitions, if a subgame perfect equilibrium is played; each of the three 2-person coalitions occurs with probability 1/3.

Sen, Amartya

PD September 1991. **TI** Markets and Freedoms. **AA** Lamont University and Harvard University. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: DEP/31; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 40. **PR** no charge. **JE** D63, I31. **KW** Markets. Efficiency. Equity. Freedom. Welfare Theory.

AB Not only are markets constitutively linked with negative freedoms, they are also causally connected with overall freedoms, if freedoms are seen - as I have argued they must be - in the light of preferences and counterfactual choices. The efficiency achievements survive in the space of freedoms, both in terms of freedom to choose commodity baskets and in terms of capabilities to function. On the other hand, the equity problems of the market outcomes - serious as they are even in the welfarist framework - tend to become even more problematic and pronounced. While the efficiency advantages of the markets, given the standard assumptions, tend to translate readily to the field of freedoms (even in the space of capabilities, not just that of commodities), the problems of inequality remain and if anything tend to get magnified in the process of the translation. Ultimately, the challenge that the market systems have to face must relate to the equity of the distribution of freedoms.

PD October 1991. **TI** Wars and Famines: On Divisions and Incentives. **AA** Lamont University and Harvard University. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: DEP/33; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 22. **PR** no charge. **JE** I31, O11, I38, H56. **KW** War. Famine. Developing Countries.

AB The connection between wars and famines involves the operation of political as well as economic incentives, and the process can work through consolidating and aggravating divisions in the society with disastrous effects on the most vulnerable. It would be a mistake to concentrate only on the destruction of outputs and capital in causally relating famines to wars. The economic incentives governing production and distribution and the political incentives affecting public protection of the vulnerable can be the crucial features to look at in understanding how wars cause famines. An ideal breeding ground for famines is provided by the "coupling" of (1) economic processes that make some sections of the population more vulnerable to starvation, and (2) political processes that make many governments more insensitive to the predicament of the victims. I have tried to discuss how that "coupling" is fostered in many circumstances by the prevalence of war and militarism in the developing countries.

Sen, Arijit

PD November 1991. **TI** Intertemporal Contractual Relationships with Agent Switching. **AA** Princeton University. **SR** Princeton Woodrow Wilson School Discussion Paper in Economics: 159; Woodrow Wilson School, Princeton University, Princeton, NJ 08544. **PG** 56. **PR** no charge. **JE** D82, L14. **KW** Private Information. Principal-Agent Model. Contract. Renegotiation.

AB This paper analyzes a model of intertemporal contractual exchange under asymmetric information, where a principal interacts over time with members of a set of potential agents who possess private information regarding the value of the interaction. In every period of interaction, the principal has the option to choose the particular agent she wishes to engage. This option enables the principal to utilize an important contractual instrument -- the termination clause. By specifying conditions under which an agency relationship will be terminated, the optimal contracts determine not only the terms governing an ongoing relationship, but also the length of such a relationship. The paper delineates two informational reasons -- the first arising from the imperfect correlation of private information among potential agents in any period, and the second being a consequence of asymmetric information and limited liability -- which lead to intertemporal agent-switching.

Senbet, Lemma W.

TI Cross-Border Liability of Multinational Enterprises, Border Taxes, and Capital Structure. **AU** John, Kose; Senbet, Lemma W.; Sundaram, Anant K.

Shachat, Keith M.

TI Preferences, Property Rights and Anonymity in

Bargaining Games. **AU** Hoffman, Elizabeth; McCabe, Kevin; Shachat, Keith M.; Smith, Vernon L.

TI An Experimetric Study of the Cournot Model. **AU** Binger, Brian R.; Hoffman, Elizabeth; Libecap, Gary D.; Shachat, Keith M.

Shah, C.

PD February 1992. **TI** Choice of Time Series Forecasting Method Using Discriminant Scores. **AU** Shah, C.; King M. L. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 3/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 18. **PR** no charge. **JE** C32. **KW** Exponential Smoothing. Time Series Analysis. Forecasting.

AB A lot of research has been done on comparing the forecasting accuracy of different univariate time series forecasting methods. The biggest such study, using empirical data, was undertaken by Makridakis et al. (1982). The evidence from such comparative studies indicate that there is not one "best" method for all kinds of data. Furthermore, there also seems to be evidence to suggest that the simpler methods, such as exponential smoothing, often perform as well as or even better than the more complex methods. This is particularly true for short-term forecasting. Unfortunately, there has been limited success in identifying the factors that contribute to the relative advantage of one method over another. In this paper we address this problem by considering certain characteristics of a time series in order to calculate its discriminant score. This score is then used to calculate the probability of a particular method being "best" in forecasting that series.

Shallcross, David

TI An Implementation of the Generalized Basis Reduction Algorithm for Integer Programming. **AU** Cook, William; Rutherford, Thomas; Scarf, Herbert E.; Shallcross, David.

Shanley, Michael G.

TI Estimating the Costs of Changes in the Active/Reserve Balance. **AU** Gotz, Glenn A.; Shanley, Michael G.; Butler, Robert A.; Fishman, Barry

Shapiro, Perry

PD December 1991. **TI** Citizen Preference and Public Education in Australia: An Analysis of Interstate Differences. **AU** Shapiro, Perry; Papadakis, Elim. **AA** Shapiro: University of California, Santa Barbara. Papadakis: University of New England. **SR** University of California at Santa Barbara Department of Economics Working Paper: 8-91; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 34. **PR** no charge. **JE** I21, I22. **KW** Public Education. Australia. Median Voter Model.

AB In the centrally financed public education system of Australia, interstate differences in per student educational spending have been interpreted as measures of efficiency: the higher spending states are presumed less efficient than those that spend less. An alternative explanation is that the variation reflects differences in citizen preference. An analysis of a survey of citizen opinion demonstrates that, while the relative efficiency explanation cannot be ruled out, it is likely that the variance in per student expenditures is a reflection of the preferences of the citizens of each state. It appears that states come close to satisfying the demands of their median voter.

Sharkey, William W.

PD November 1991. **TI** Network Models in Economics. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 69; Room 2Q-338, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 6. **PR** not available. **JE** C71, C78, L96. **KW** Spanning Tree. Network. Queuing Systems. Matching Models.

AB This paper surveys the literature in economics in which networks and related graph theoretic concepts play a prominent role. The survey consists of three sections. Section 1 is concerned with cost allocation on minimal cost spanning tree networks and communications networks. Section 2 considers optimal and incentive compatible pricing, and optimal allocation of waiting time in stochastic queuing systems. Section 3 surveys the literature on matching models as they have been applied in economic theory.

Sharpe, Steven A.

PD January 1992. **TI** Switching Costs, Market Concentration, and Prices: The Theory and Its Empirical Implications in the Bank Deposit Market. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 183; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 27. **PR** no charge. **JE** D12, L11, D41, D43. **KW** Product Differentiation. Switching Costs. Market Structure.

AB As demonstrated by Klemperer (1987), if households face a cost of switching among brands of a differentiated good, the price markup over marginal cost is likely to vary in direct proportion to the extent of exogenous customer turnover and migration along the spectrum of differentiation. I generalize this theory to a world with arbitrary market structure and test it empirically using panel data on bank retail deposit interest rates. The extent of customer migration is found to have a significant negative influence on market prices (positive influence on deposit interest rates). In some cases, the magnitude of this influence is shown to depend substantially upon the level of market concentration.

Shaw, Daigee

TI The Impact of Climate on Agriculture: A Ricardian Approach. **AU** Mendelsohn, Robert; Nordhaus, William D.; Shaw, Daigee.

Shepard, Andrea

TI Adoption of Technologies with Network Effects. **AU** Saloner, Garth; Shepard, Andrea.

Sheshinski, Eytan

TI Heterogeneity and Distribution in the Commons. **AU** Brito, Dagobert L.; Intriligator, Michael D.; Sheshinski, Eytan.

TI Economic Aspects of Optimal Disability Benefits. **AU** Diamond, Peter; Sheshinski, Eytan.

Shiller, Robert J.

TI Index-Based Futures and Options Markets in Real Estate.

AU Case, Karl E., Jr.; Shiller, Robert J.; Weiss, Allan N.

Shively, Thomas S.

TI Locally Optimal Testing when a Nuisance Parameter is Present Only under the Alternative. **AU** King, Maxwell L.; Shively, Thomas S.

Shy, Oz

TI Planned Obsolescence as an Engine of Technological Progress. **AU** Fishman, Arthur; Gandal, Neil; Shy, Oz.

Sibert, Anne

PD December 1990. **TI** Government Finance in a Common Currency Area. **AA** University of Kansas and Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 90-09; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, MO 64198. **PG** 38. **PR** no charge. **JE** F31, F42, F36, F33. **KW** Fiscal Policy. Economic Integration. International Coordination. Exchange Rate. European Community.

AB European integration in 1992 may require greater exchange rate coordination that currently exists. The Delors report goes as far as to recommend eventual adoption of a single currency. However, the formation of a common currency area raises fears that independent fiscal policies may produce inferior outcomes. This paper shows that lack of cooperation in fiscal policy leads to too little inflation. If cooperation is possible and seigniorage revenue is shared equally, the outcome may be improved upon by decreasing money growth and allocating a greater share of seigniorage revenue to countries with more costly direct taxation.

Sickles, Robin C.

PD October 1991. **TI** Technical Inefficiency and Productive Decline in the U.S. Interstate Natural Gas Pipeline Industry under the Natural Gas Policy Act. **AU** Sickles, Robin C.; Streitwieser, Mary L. **AA** Sickles: Rice University. Streitwieser: U.S. Bureau of the Census. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 91-6; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 15. **PR** no charge. **JE** L51, L71, Q41. **KW** Deregulation. Energy. Prices. Productivity. Technical Efficiency.

AB The U.S. natural gas industry has undergone substantial change since the enactment of the Natural Gas Policy Act of 1978. Although the major focus of the NGPA was to initiate partial and gradual price deregulation of natural gas at the well-head, the interstate transmission industry was profoundly affected by changes in the relative prices of competing fuels and contractual relationships among producers, transporters, distributors, and end-users. This paper assesses the impact of the NGPA on the technical efficiency and productivity of fourteen interstate natural gas transmissions firms for the period 1978-1985. We focus on the distortionary effects that resulted in the industry during a period in which changes in regulatory policy could neither anticipate changing market conditions nor rapidly adjust to those changes. Two alternative estimating methodologies, stochastic frontier production analysis and data envelopment analysis, are used to measure the firm-specific and temporal distortionary effects. Concordant findings from these alternative methodologies suggest a pervasive pattern of declining technical efficiency in the industry during the period in which this major regulatory intervention was introduced and implemented.

Siconolfi, P.

TI Asset Markets and the Information Revealed by Prices. **AU** Polemarchakis, H. M.; Siconolfi, P.

Siebert, Jerome B. (editor)

TI Economic Perspectives on Pesticide Use in California. **AU** Zilberman, David (editor); Siebert, Jerome B. (editor).

Silvapulle, Param

TI Does the Fisher Effect Apply in Australia? **AU** Inder, Brett; Silvapulle, Param.

Sims, C. A.

TI Empirical Implications of Arbitrage-Free Asset Markets. **AU** Maheswaran, S.; Sims, C. A.

Skiles, Marilyn E.

PD August 1991. **TI** Stabilization and Financial Sector Reform in Mexico. **AA** Federal Reserve Bank of New York. **SR** Federal Reserve Bank of New York Research Paper: 9125; Research Department - Room 901, Federal Reserve Bank of New York, 33 Liberty Street, New York, NY 10045. **PG** 23. **PR** no charge. **JE** O16, O54, O11, E44. **KW** Developing Countries. Financial Market. Economic Reform.

AB Over the past several decades a number of developing countries have implemented financial sector reform programs as a means of increasing the level of domestic savings and improving the efficiency of the credit allocation process. In almost all cases these programs have reversed longstanding policies of government intervention in the financial sector, characterized by interest rate controls, credit ceilings, forced lending schemes, and high reserve requirements. Although many of the programs have been highly successful, in a number of countries the programs have ended in spectacular failure. Consequently, although there is widespread agreement that financial sector reform can only be successful in the context of a stable macroeconomic environment, the literature on financial sector reform in LDCs now reflects a great deal of skepticism about the effectiveness of such reforms, as well as disagreement about how such programs should be designed.

Slade, Margaret E.

PD September 1991. **TI** Environmental Costs of Natural-Resource Commodities: Magnitude and Incidence. **AA** University of British Columbia and GREQE. **SR** University of British Columbia Department of Economics Discussion Paper: 91-34; Department of Economics, University of British Columbia, 997-1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 23. **PR** $.20 per page Canadian to other than educational institutions. **JE** L71, Q31, Q32, O13. **KW** Conservation. Environmental Policy. Environment. Pollution. Economic Development.

AB Changes in energy and nonfuel-mineral production, consumption, and net export revenues that result from environmental protection are estimated for several income classes and geographic regions. Unlike previous assessments, which look at unilateral adoption of standards and assess implications for the adopting country, I assume that all producers incur cleanup costs. This means that most of the adjustment is accomplished through changes in prices and quantities rather than through altered trade patterns. The estimated magnitude of worldwide changes is not large. And, contrary to popular belief, many poor countries are forecasted to benefit from worldwide environmental regulation. This is true because the terms of trade of mineral exporters improve when an environmental policy is implemented. However, even when investment in anti-pollution equipment pays for itself by generating higher resource revenues, the short-run problem of obtaining foreign exchange to purchase the capital equipment remains.

Slemrod, Joel

PD February 1992. **TI** Taxation and Inequality: A Time-Exposure Perspective. **AA** University of Michigan and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3999; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 22. **PR** $5.00. **JE** H24, E62, D31. **KW** Income Inequality. Income Tax. Income Distribution.

AB Conclusions about inequality based on cross-sectional snapshots of annual income can give a misleading picture of the inequality of a more permanent notion of income, due to the mobility of individuals across annual income classes. This paper reassesses some of the issues about taxation and inequality using two longitudinal tax return data bases. Replacing annual income with "time exposure" income, defined as average real income over the period, does not significantly reduce the measured degree of inequality in the 1979-1985 period, although the fraction of income received by the lowest increase substantially. The procedure does, though, reduce the contribution to inequality of certain sources of income such as capital gains and increase the contribution of other sources such as interest and dividends. There is no systematic evidence that the comparison of snapshots between the 1967-1973 and 1979-1985 periods overstates the growth in inequality of a more permanent notion of income.

PD March 1992. **TI** Do Taxes Matter? Lessons from the 1980's. **AA** University of Michigan and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4008; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 10. **PR** $5.00. **JE** E62, E65, H31, H32. **KW** Tax Reforms. Taxes. Fiscal Policy.

AB The response of the economy to two major -- although in important respects offsetting -- tax reforms has been much smaller than ardent supply-side revolutionaries expected, thus suggesting that a reassessment of the grounds for revolt is in order. This paper offers such a reassessment by first discussing how the evidence from the tax reforms of 1981 and 1986 reflects on our understanding of the response to taxation with particular reference to savings and capital gains realizations. I then reconstruct a 1992 view about how taxes affect behavior. A unifying theme is that the tax system does much more than alter the relative prices of real variables -- it also provides incentives to misreport income, restructure financial claims, time transactions, change the legal form of organization, and so on. For this reason, observed low tax elasticities of real variables may be due to either low elasticities of substitution or the fact that tax policy changes opportunity sets in complex ways.

Smith, Lones

PD January 1992. **TI** Folk Theorems: Two-Dimensionality is (Almost) Enough. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 597; Department of Economics, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, MA 02139. **PG** 8. **PR** $6.00 Domestic, $8.00 Overseas, $2.00 Student. **JE** C71. **KW** Repeated Game. Folk Theorem.

AB We exhibit a parallel constructive proof technique for three foundational folk theorems without requiring a full-dimensional payoff space. Instead, we show that a less stringent and more natural projection condition suffices. Along the way, we substitute a strengthened folk theorem for finitely repeated games.

Smith, Peter

PD October 1991. **TI** On the Use and Limitations of Economic and Social Indicators in Analysing the Quality of Life in Singapore. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9117; Department of Economics, University of Southampton, Southampton S09 5NH ENGLAND. **PG** 38. **PR** no charge. **JE** I31, O53, C43. **KW** Economic Development. Industrialization. Development Index.

AB Singapore is a society which has undergone rapid change and development in recent decades, being one of the Newly-Industrializing Countries of East Asia. This paper attempts to evaluate economic and human development in Singapore using published statistics. In so doing, the limitations of data in assessing human development are explored and the dangers of imposing inappropriate criteria are highlighted. Particular reference is made to the UNDP's "Human Development Index," and to the assessment of social and political factors which influence the quality of life of citizens of a society.

Smith, Vernon L.

PD November 1991. **TI** Can Electric Power -- A "Natural Monopoly" -- Be Deregulated? **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-7; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 33. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** L43, L51, L94. **KW** Deregulation. Energy. Public Utilities. Privatization.

AB A proposal for a privatized deregulated electric power industry is articulated. This is made possible, it is argued, by the development of computerized spot auction dispatch based upon optimization algorithms using the decentralized bids to buy of competing retail power merchants and offers to sell from decentralized generating companies. Transmission is priced at incremental losses. The high voltage network is owned jointly by all its users; the low voltage (local distribution) network is owned jointly by competing retail power merchants. Co-owners are governed by competitive cotenancy (joint venture) property right rules. New investment in wire capacity increases the capacity share owned by the investor allowing price signals to directly reward investment decisions.

TI Preferences, Property Rights and Anonymity in Bargaining Games. **AU** Hoffman, Elizabeth; McCabe, Kevin; Shachat, Keith M.; Smith, Vernon L.

Snyder, Ralph D.

TI The Evaluation of Forecast Accuracy of a Non Statistical Method of Forecasting. **AU** Choong, Foong Chee; Snyder, Ralph D.

PD February 1992. **TI** Kalman Filtering: The Initialization Problem. **AU** Snyder, Ralph D.; Saligari, Grant R. **AA** Snyder: Monash University. Saligari: Strategic Manufacturing Technology Pty Ltd. **SR** Monash Department of Econometrics Working Paper: 2/92; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 17. **PR** no charge. **JE** C32. **KW** Linear Model. Structural Model. Square Root Filter.
AB The problem of computing estimates of the state vector in a nonstationary dynamic linear model is considered. Such estimates cannot be obtained with the usual Kalman filter because it fails, on finite precision computing machines, when seeded with the infinite variances associated with the required diffuse or partially diffuse prior probability distribution. The response in the literature has been the development of a number of relatively complex hybrid filters specifically designed to avoid the problem. However, it is argued in this paper that this response has been largely unwarranted. Rather, it is established that any square root implementation of the Kalman filter is capable of producting satisfactory results, so long as the required triangular orthogonalization calculations are undertaken with standard fast Givens transformations, rather than the more usual Householder or Gram-Schmidt procedures.

Sola, Martin

TI Speculative Currency Attacks and Balance of Payments Crises: A Survey. **AU** Blackburn, Keith; Sola, Martin.

TI Exponential Smoothing and Spurious Correlation: A Note. **AU** Blackburn, Keith; Orduna, Felipe; Sola, Martin.

Somers, Harold M.

PD January 1992. **TI** Deficits and Interest Rates. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 645; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 20. **PR** $2.50; checks payable to U.C. Regents. **JE** H62, E42, E43, E62. **KW** Interest Rate. Government Spending. Credit. Budget Deficit. Fiscal Policy.
AB The government's impact on the loanable funds market and interest rates is not measured by the deficit. The net absorption of loanable funds by the government may be far greater or far smaller than the deficit. The detailed nature of governmental expenditures and revenues, not the deficit alone, is what determines the budget's impact on interest rates. We could have a condition of moderating interest rates despite a massive deficit and a strong private demand for loanable funds. Or we could have a budget that puts an upward pressure on interest rates even without a deficit. Removing or creating a deficit would probably have some impact on the net demand or supply of loanable funds but only by coincidence would it be proportional to the size of the deficit itself.

Sonstelie, Jon

TI State Income Taxes and Homeownership: A Test of the Tax Arbitrage Theory. **AU** Narwold, Andrew; Sonstelie, Jon.

Spady, Richard H.

TI An Efficient Semiparametric Estimator for Binary Response Models. **AU** Klein, Roger W.; Spady, Richard H.

Spear, Stephen E.

TI Equilibria with Incomplete Markets and Overlapping Generations. **AU** Cass, David; Green, Richard C.; Spear, Stephen E.

Spiegel, Yossef

PD October 1991. **TI** The Role of Public Debt in Procurement Contracts. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 68; Room 2M-356, Bellcore, 435 South Street, Morristown, New Jersey 07960-1961. **PG** 32. **PR** not available. **JE** L14, G32, G33, H57. **KW** Incomplete Contracts. Business Investment. Bankruptcy. Private Debt.
AB This paper considers procurement under incomplete and non-binding contracts. It is shown that by issuing debt to outsiders, a firm (the seller) can improve its ex post bargaining position vis-a-vis the buyer, because as long as equity holders are protected by limited liability, they have no incentive to trade unless the buyer pays a high enough price to ensure that the firm remains solvent. This explains why firms in the defense procurement industry are so highly leveraged. Debt, however, is costly because the buyer may find the required price too high, in which case, an otherwise efficient trade is not consummated. Since debt enables the firm's claim holders to increase their share in the expected gains from trade, it strengthens their incentive to make a relationship-specific investment, and therefore alleviates the well-known underinvestment problem. Consequently, debt may be socially desirable.

Stagoll, Jane M.

PD November 1991. **TI** An Analysis of Fines Default in English Magistrates' Courts. **AU** Stagoll, Jane M.; Fry, Timothy R. L. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 12/91; Department of Econometrics, Faculty of Economics, Commerce and Management, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 27. **PR** no charge. **JE** K42, K41. **KW** Court Fines. Criminal Behavior. Crime.
AB Data collected by the National Association for the Care and Resettlement of Offenders (NACRO) on fines default in English Magistrates' courts is analyzed using a sequential probability model. It is found that an offender's previous history and employment status play a significant role in determining fines default behavior.

Stark, Graham

TI Modeling Benefit Expenditures Using the FES. **AU** Jones, Jackie; Stark, Graham; Webb, Steven.

Stefanou, Spiro

TI Polish Agriculture in Transition: Does it Hurt to be Slapped by an Invisible Hand? **AU** Karp, Larry; Stefanou, Spiro.

Stegemann, Klaus

PD September 1991. **TI** The International Regulation of Dumping: Protection Made Too Easy. **AA** Queen's University. **SR** Queen's Institute for Economic Research

Discussion Paper: 834; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 56. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** F42, F13. **KW** International Policy. Protectionism. International Trade. Commercial Policy.
AB In many ways, the international regulation of dumping looks like a model of successful multilateral rule making. Yet the systemic justification of anti-dumping measures is dubious, and international rule making has perversely served to expand the scope for regulatory protection. The multilaterally agreed rules have made protection too easy, as compared to the standards that are used to regulate predatory behavior under domestic competition laws and as compared to the standards stipulated for safeguard measures under Article XIX of the GATT. This paper also explores the reasons why the deregulation of dumping will be difficult.

Steger, Angelika

TI The Asymptotic Structure of H-Free Graphs. **AU** Promel, Hans Jurgen; Steger, Angelika.

Steigerwald, Douglas G.

PD October 1991. **TI** A Course in Econometrics: A Review. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 7-91; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 8. **PR** no charge. **JE** A23. **KW** Econometrics. Teaching. Graduate Courses.
AB This is a review of Arthur Goldberger's book "A Course in Econometric Theory" prepared for "Econometric Theory.".

TI Volatility. **AU** LeRoy, Stephen F.; Steigerwald, Douglas G.

Stengos, Thansis

TI A Comparison of Risk-Premium Forecasts Implied by Parametric Versus Nonparametric Conditional Mean Estimators. **AU** McCurdy, Thomas H.; Stengos, Thansis.

Stern, Nicholas

TI Income Inequalities in China: Evidence from Household Survey Data. **AU** Hussain, Athar; Lanjouw, Peter; Stern, Nicholas.

Stratton, Leslie S.

PD August 1991. **TI** Reexaming Involuntary Part-Time Employment. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-2; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 31. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** J21, J22, J23. **KW** Part-Time Employment. Labor Demand. Hours Constraint.
AB Official statistics indicate that involuntary part-time employment (part-time employment theoretically accepted only because full-time employment is not available) has more than tripled over the last twenty years, increasing substantially more rapidly than even unemployment and now encompassing about three million workers. The goal of this study is to examine the empirical definition of involuntary part-time employment, and to see how sensitive the level and trend in involuntary part-time employment are to the particular definition employed. Results suggest that official estimates of involuntary part-time employment may be high - perhaps 50% too high. While the level is quite sensitive, the alarming trend in involuntary part-time employment is robust to a variety of alternative empirical definitions.

Streitwieser, Mary L.

TI Technical Inefficiency and Productive Decline in the U.S. Interstate Natural Gas Pipeline Industry under the Natural Gas Policy Act. **AU** Sickles, Robin C.; Streitwieser, Mary L.

Stuhr, David P.

TI Using Cluster Analysis as a Tool for Economic and Financial Analysis. **AU** Korobow, Leon; Stuhr, David P.

Suda, Shinichi

TI Mini-Symposium on "The Structure of Sunspot Equilibria in the Presence of Incomplete Financial Markets". **AU** Cass, David; Pietra, Tito; Suda, Shinichi; Tallon, Jean-Marc; Villanacci, Antonio.

Sundaram, Anant K.

TI Cross-Border Liability of Multinational Enterprises, Border Taxes, and Capital Structure. **AU** John, Kose; Senbet, Lemma W.; Sundaram, Anant K.

Sundararajan, V.

TI Financial Sector Reforms and Monetary Policy. **AU** Khan, Mohsin S.; Sundararajan, V.

Sussman, Nathan

TI Tickling the Tolerance: Incentives for Producing Low Quality Coins in French Medieval Mints. **AU** Gandal, Neil; Sussman, Nathan.

Svensson, Lars E. O.

TI The Credibility of Nordic Exchange Rate Bands: 1987-91. **AU** Geadah, Sami; Saavalainen, Tapio; Svensson, Lars E. O.

Swinkels, Jeroen M.

TI Normal Form Structures in Extensive Form Games. **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M.

Symansky, Steven A.

TI Evaluating Policy Rules under Imperfect Credibility. **AU** Masson, Paul R.; Symansky, Steven A.

Szekely, Laszlo A.

TI On Weighted Multiway Cuts. **AU** Erdos, Peter L.; Szekely, Laszlo A.

TI The Maximum Size of 4- and 6-Cycle Free Bipartite Graphs on (m,n) Vertices. **AU** de Caen, D.; Szekely, Laszlo A.

Tacconi, Luca

TI The Social Opportunity Cost of Consumption for Australia, 1960-61 to 1988-89. **AU** McDonald, Ian M.; Tacconi, Luca; Kaur, Ravjeet.

Tallon, Jean-Marc

TI Mini-Symposium on "The Structure of Sunspot Equilibria in the Presence of Incomplete Financial Markets". **AU** Cass, David; Pietra, Tito; Suda, Shinichi; Tallon, Jean-Marc; Villanacci, Antonio.

TI Mini-Symposium on "The Structure of Sunspot Equilibria in the Presence of Incomplete Financial Markets". **AU** Cass, David; Pietra, Tito; Suda, Shinichi; Tallon, Jean-Marc; Villanacci, Antonio.

Tanzi, Vito

PD February 1992. **TI** Theory and Policy: A Comment on Dixit and on Current Tax Theory. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/15; International Monetary Fund, Washington, DC 20431. **PG** 8. **PR** not available. **JE** H21, E62, H24. **KW** Tax Reform. Taxes. Inflation.
AB In a recent paper Professor Dixit criticized the argument that when collection lags characterize tax systems, recourse to inflationary finance should be minimized. He argued that, in this case, rather than minimizing recourse to inflationary finance, the rates of the commodity taxes should be adjusted to maintain them at an optimal level and thus, to minimize welfare costs. This paper shows that the requirements for following Dixit's policy prescription are almost impossible to meet. The paper argues that more attention should be paid by tax theorists to the constraints under which tax reforms are made.

TI A Tax on Gross Assets of Enterprises as a Form of Presumptive Taxation. **AU** Sadka, Efraim; Tanzi, Vito.

Tata, Fidelio

PD 1992. **TI** On the Interdependence of Bond Yields Using High Frequency Data. **AA** New York University and University of St. Gallen. **SR** New York University Salomon Brothers Center Working Paper: S-92-7; 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** 9. **PR** $5.00. **JE** G14, G12. **KW** Trading. Securities. Bonds.
AB This paper is another attempt to empirically survey the information flow and its delays in transmission between different securities and different trading places. Based on more than 20,000 tick-by-tick data, 20 bonds and 7 trading places, an algorithm for detecting potential interdependence is presented. This exercise is repeated with a two-second delay, four-second delay, and so on, up to a one-minute delay to ferret out potential time lags in transmission. Several graphical representations are made to make results more visual.

Tatom, John A.

PD 1990. **TI** The Link between Monetary Aggregates and Prices. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-002; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 42. **PR** not available. **JE** E31, E51. **KW** Money. Prices. Inflation.
AB This paper examines the P-star model of the link between M2 and prices recently developed by Hallman, Porter and Small (1989, 1990). It also develops an M1-based variant of the P-star model. The analysis points out and corrects, for the most part, several major shortcomings in the P-star approach. When these corrections are made, the P-star model shows no statistically significant linkage between M2 and prices; there is, however, a significant link between M1 and prices in the M1-based version of the P-star model.

PD 1990. **TI** The P-Star Approach to the Link between Money and Prices. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 90-008; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 31. **PR** not available. **JE** E31, E51. **KW** Money Supply. Inflation. Price Level.
AB This paper examines several specification errors in the M2-based P* model and develops an M1-based estimate of this model. The apparent statistical significance of M2 is shown to arise from a spurious regression that uses a nonstationary regressor and because the significance test for M2 is biased by including the influence of a lagged dependent variable whose coefficient is not normally distributed. When these problems are addressed, M2 is not statistically significantly related to the price level. The M1-based P* model exhibits a significant relationship between M1 and the price level, however.

Taylor, Mark P.

TI Testing for Credibility Effects. **AU** Agenor, Pierre-Richard; Taylor, Mark P.

PD December 1991. **TI** Modelling the Yield Curve. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/134; International Monetary Fund, Washington, DC 20431. **PG** 24. **PR** not available. **JE** E43. **KW** Term Premium. Interest Rate. Term Structure.
AB We test and estimate a variety of alternative models of the yield curve, using weekly, high quality U.K. data. We extend the Campbell-Shiller technique to the overlapping data case and apply it to reject the pure expectations hypothesis under rational expectations. We also find that risk measures, in the form of conditional interest rate volatility, are unable to explain the term premium. A simple, market segmentation approach is, however, moderately successful in explaining the term premium.

Thomas, N.

TI Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative. **AU** Hosek, Susan D.; Anderson, M.; Dixon, L.; Thomas, N.; Zwanziger, J., et. al.

Thomas, S. H.

TI Cointegration and the Gains from International Portfolio Diversification in Bonds and Equities. **AU** Andrade, I. C.; Clare, A. D.; Thomas, S. H.

Toda, Hiro Y.

PD October 1991. **TI** Vector Autoregression and Causality: A Theoretical Overview and Simulation Study. **AU** Toda, Hiro Y.; Phillips, Peter C. B. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1001; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 42. **PR** no charge. **JE** C12, C32. **KW** Error Correction Models. Granger Causality. Wald Test. Cointegration. Vector Autoregression.
AB This paper provides a theoretical overview of Wald tests for Granger causality in levels vector autoregressions (VAR's)

and Johansen-type error correction models (ECM's). For VAR models the results for inference are not encouraging. The limit theory typically involves nonstandard distributions and nuisance parameters, and there is no sound statistical basis for testing causality in such a framework. Granger causality tests in ECM's also suffer from nuisance parameter dependencies asymptotically and nonstandard limit theory. But, in spite of these difficulties Johansen-type ECM's do offer a sound basis for empirical testing of the rank of the cointegration space and the rank of key submatrices that influence the asymptotics. In consequence, we recommend some operational procedures for conducting Granger causality tests in the important practical case of testing the causal effects of one variable on another group of variables and vice versa.

Trosset, Michael W.

PD June 1991. **TI** Rethinking the Model Selection Agenda: A Unification of Some Fundamental Issues. **AU** Trosset, Michael W.; Sands, Barbara N. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-1; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 37. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** C12, C52. **KW** Hypothesis Testing. Model Selection.
AB Consider the problem of several mathematical models competing to explain an empirical phenomenon. It is proposed that the fundamental model selection questions of model discrimination, model correctness, and model adequacy can be answered by measuring the distance of each model from an estimate of the unknown data generating process. Formally, the framework adopted is that of minimum discrepancy discrimination (Linhart and Zucchini, 1986). It is argued that the most appropriate discrepancies for model selection are metrics, and that the most appealing metric is Hellinger distance.

Tryon, Ralph W.

TI Stochastic Behavior of the World Economy under Alternative Policy Regimes. **AU** Gagnon, Joseph E.; Tryon, Ralph W.

Tsybakov, A. B.

TI How Sensitive are Average Derivatives? **AU** Hardle, W.; Tsybakov, A. B.

TI Bandwidth Choice for Average Derivative Estimation. **AU** Hardle, W.; Hart, J.; Marron, J. S.; Tsybakov, A. B.

Tullock, Gordon

PD September 1991. **TI** A Source of Conventions. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-3; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 16. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** A12, Z10. **KW** Evolution. Conventions. Speech.
AB Evolution selected human beings for the ability to communicate. This selection means that most of the communications will be true, thus that people will tend to believe them. Thus, once a particular set of ideas is established, it tends to stay.

PD January 1992. **TI** The Politics of Terrorism. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-10; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 19. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** H56, K42. **KW** Terrorism. War. Invasion.
AB Terrorism may be indirectly supported by a foreign nation or be quite independent. The remedy, if it is supported by a foreign nation, is pressure on that nation and if it's independent it is necessary to detect and punish the terrorists. Large rewards for information about the terrorists is the easiest method of detection.

PD January 1992. **TI** A Note on Redistribution. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-12; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 7. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** I32, D31, E23, E24. **KW** Income Distribution. Economic Growth. Production.
AB The trade-off between redistribution of income and production is discussed with special reference to the effect of the decline of production growth on the poor.

Turnovsky, Stephen J.

TI The Growth and Welfare Consequences of Differential Tariffs with Endogenously-Supplied Capital and Labor. **AU** Brock, Philip L.; Turnovsky, Stephen J.

Turtelboom, Bart

PD December 1991. **TI** Interest Rate Liberalization: Some Lessons from Africa. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/121; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** E52, E44, E43, G28, O16. **KW** Monetary Policy. Interest Rate. Capital Market. Africa. Financial System. Financial Market.
AB This paper undertakes a survey of theoretical considerations and an analysis of the experience of five African countries with interest rate liberalization. Despite substantial progress in monetary policy reforms, liberalization has only partially affected the level and variability of interest rates. Several factors--macroeconomic instability, oligopolistic financial markets, the absence of developed capital markets, as well as the sequencing of the liberalization programs and the asymmetric availability of information--explain the increase in the spread between lending and deposit rates as well as the rather inflexible pattern of interest rates during the transition to a market-based financial system.

Udell, Gregory F.

TI Securitization, Risk, and the Liquidity Problem in Banking. **AU** Berger, Allen N.; Udell, Gregory F.

TI Securitization, Risk, and the Liquidity Problem in Banking. **AU** Berger, Allen N.; Udell, Gregory F.

TI Monitoring Financial Institutions. **AU** Acharya, Sankarshan; Udell, Gregory F.

Uzan, Marc

TI The Marshall Plan: Economic Effects and Implications for Eastern Europe and the Soviet Union. **AU** Eichengreen, Barry; Uzan, Marc.

van der Willigen, Tessa

TI Stabilization and Structural Reform in Czechoslovakia:

An Assessment of the First Stage. **AU** Aghevli, Bijan B.; Borensztein, Eduardo; van der Willigen, Tessa.

van Garderen, Kees Jan

PD December 1991. **TI** Fractional Matrix Calculus: Introduction, Applications, and Future Developments. **AA** Monash University. **SR** Monash Department of Econometrics Working Paper: 19/91; Department of Econometrics, Faculty of Economics and Politics, Monash University, Clayton, Victoria 3168, AUSTRALIA. **PG** 21. **PR** no charge. **JE** B23, C13, C51. **KW** Fractional Differentiation. Fractional Integration.

AB Fractional calculus gives a generalization of the common techniques of integration and differentiation. Although the origin of fractional calculus lies more than 150 years behind us, it is still quite unknown. Recently however, Phillips (1984,1985) used fractional calculus to derive the distributions of the Stein Rule and SUR estimator and Knight (1986b) used it to find the moments of the 2SLS estimator. This paper gives an introduction to fractional calculus by showing the ideas behind the definitions, giving examples and some applications. At the end an attempt is made to show the relevance of this calculus for the different fields of Econometrics and to put it in a more general mathematical perspective.

Vegh, Carlos A.

PD November 1991. **TI** Stopping High Inflation: An Analytical Overview. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/91/107; International Monetary Fund, Washington, DC 20431. **PG** 34. **PR** not available. **JE** F41, F31, E31, E63. **KW** Hyperinflation. Stabilization Policy. Exchange Rate. Current Account.

AB This paper reviews the evidence on stabilization plans in high inflation countries within a unified theoretical framework. The evidence suggests that hyperinflations have been stopped almost instantaneously with no major output costs, while stabilization programs in chronic inflation countries have resulted in an initial expansion followed by a later recession, in addition to a sustained real exchange rate appreciation and current account deficits. These outcomes turn out to be consistent with the predictions of the analytical model.

Villanacci, Antonio

PD September 1991. **TI** Real Indeterminacy, Taxes and Outside Money in Incomplete Financial Market Economies: I. The Case of Lump Sum Taxes. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 91-21; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 38. **PR** no charge. **JE** D51, D52, E44. **KW** Incomplete Markets. Exchange Economy. Financial Markets.

AB The basic model of exchange economies with incomplete financial markets and nominal assets has been thoroughly studied. Some work has been also done to analyze the robustness of the indeterminacy result with respect to changes and enrichments in the structural assumptions of the incomplete market model. The introduction of outside money in the model has also been studied. The goal of this paper is to study the presence of outside money in a model in which the existence of monetary equilibria is made possible by the requirement imposed on the households to pay taxes using outside money.

Vincent, Daniel R.

TI Updating the Reserve Price in Common Value Auctions. **AU** McAfee, R. Preston; Vincent, Daniel R.

Voith, Richard

PD November 1991. **TI** Changing Capitalization of CBD-Oriented Transportation Systems: Evidence from Philadelphia, 1970-1988. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 91-19; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 14. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** R11, R14, R21, R41. **KW** Housing Prices. Business District. Urban Economics. Communities. Urban Transportation.

AB This paper presents estimates of how the value of central business district (CBD) accessibility has changed over the period 1970-88 for the Philadelphia metropolitan area. Using a large data set on suburban Philadelphia house sales, we estimate house value premiums associated with CBD-oriented train service provided by the Southeastern Pennsylvania Transportation Authority (SEPTA) for each year in the sample. Additionally, we provide evidence on changing value of highway access to the CBD. For the Philadelphia metropolitan area, we find strong evidence that accessibility to the CBD is capitalized into suburban house values. The estimated value of CBD accessibility fluctuates with the economic health of the city, indicating that the central city economy is still an important factor in the overall wealth of suburban communities.

Walsh, Patrick

PD November 1991. **TI** A General Framework for Analyzing Endogenous Trade Divergences. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: EI/4; London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 43. **PR** no charge. **JE** F11, F12, F13. **KW** Trade Theory. Exports. International Trade.

AB This paper gives a general framework for analyzing a trade divergence that runs across both the New International trade theory and the traditional analysis of export policy. The source of the trade divergence, the motive for intervention and the analytical framework is shown to be the same in all models. The sign of the trade divergence and hence the policy recommendation is determined by the market structure chosen to endogenize the divergence. The magnitude of the subsidy in all models is determined by the maximum potential profitability of the home industry. It is argued that interpretations based on "profit shifting" or on a "terms of trade improvement" as a motive for trade intervention are misleading.

Wang, Yan

TI Inequality and Poverty in China: Institutional Change and Public Policy 1978-1988. **AU** Ahmad, Ehtisham; Wang, Yan.

Ware, Roger

TI The Role of Limit Pricing in Sequential Entry Models. **AU** Church, Jeffrey; Ware, Roger.

PD October 1991. **TI** Entry Deterrence. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 837; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 39. **PR** $3.00 Canada and U.S.; $3.50 foreign. **JE** L22, L44, L11. **KW** Limit Pricing. Incomplete Information. Antitrust.

AB This paper surveys the recent literature on strategic entry deterrence. Particular attention is paid to limit pricing, entry deterrence models using a two-stage framework, incomplete information treatments of entry deterrence and entry deterrence as a framework for modeling the determination of market structure. In addition there is some discussion of antitrust issues.

TI A Sequential Entry Model with Strategic Use of Excess Capacity. **AU** Barham, Brad; Ware, Roger.

Warner, Andrew M.

PD November 1991. **TI** Did the Debt Crisis or the Oil Price Decline Cause Mexico's Investment Collapse? **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 416; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 34. **PR** no charge. **JE** F34, F21, O54. **KW** Debt Crisis. Foreign Investment. Terms of Trade. Capital Mobility.

AB This paper proposes a simple investment model that permits a test of the relative importance of Mexico's terms of trade decline, the reversal in net capital inflows, and the debt overhang, in explaining Mexico's investment decline in the early 1980's. The paper uses previously unexploited sectoral investment data between 1981 and 1985 to estimate the quantitative importance of these explanations. The data indicate that the main microeconomic mechanism driving the investment decline was the rise in the relative price of investment goods, and further that the deterioration in Mexico's international terms of trade explains most of the increase in this relative price. Our preferred estimate is that about two-thirds of the investment decline was attributable to the terms of trade decline, while the termination of capital inflows explains the remaining third. The paper finds little evidence in favor of other debt crisis effects such as the debt overhang effect or several other more subtle effects that have been proposed in the literature.

PD December 1991. **TI** Did the Debt Crisis Cause the Investment Crisis? **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 418; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** F21, F41, F34, F47. **KW** Debt Crisis. External Debt. Investment. Developing Countries.

AB There is now a large literature which attributes the investment decline in heavily indebted developing countries to the effects of the international debt crisis which began in 1982. However, these theories have not been tested against the alternative that declining terms of trade and high world real interest rates in the early 1980's directly caused the investment declines. This paper is based on the idea that if the debt theories are true, then forecasts of investment in the 1980's which do not use debt variables should not perform very well. This paper points out that such forecasts perform surprisingly well, and in many cases go against the predictions of the debt theories, casting doubt on the validity of the debt theories.

PD February 1992. **TI** Does World Investment Demand Determine U.S. Exports? **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Papers: 423; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 19. **PR** no charge. **JE** F21, F32, F41. **KW** Exports. Firm Investment. Open Economy.

AB An important but apparently neglected fact about U.S. exports is that export variation over time is dominated by variation in exports of capital goods and industrial supplies rather than consumer goods. This fact suggests that world investment demand rather than world consumption demand may be an important yet neglected determinant of U.S. exports. This paper documents a remarkably robust statistical relationship between U.S. exports and world investment demand, and shows that controlling for world investment changes other aspects of traditional export demand equations. To the extent that world investment behaves differently than world consumption this finding may lead to a revision of current thinking about the ultimate determinants of U.S. exports and the mechanisms through which world economic shocks are transmitted to the U.S. economy.

Warshawsky, Mark J.

PD December 1991. **TI** Factors Contributing to Rapid Growth in National Expenditures on Health Care. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 182; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 31. **PR** no charge. **JE** I11, H51. **KW** Health Expenditures. Health Insurance.

AB *National health care expenditures climbed from* a 3-1/2 percent share of Gross Domestic Product in 1929 to over 12 percent in 1990. Over the 1980's alone, the share of national income devoted to health care rose by almost 3 percentage points. More than half of the increase in total expenditures over the period 1960-89 can be attributed to medical price inflation, more than a third to changes in use or kinds of services and supplies, and about a tenth to an increase in the size of the population. More fundamentally, the rapid growth in national expenditures on health care seems to be related to the following factors: the aging of the population, the secular growth of the institution of third-party payment, the technology-augmenting sophistication of medical treatment, and the increase in the number and relative earnings of health care providers.

PD January 1992. **TI** Estimates of the Effect of FAS 106 on Corporate Earnings. **AU** Warshawsky, Mark J.; Mittelstaedt, H. Fred; Cristea, Carrie. **AA** Warshawsky: Board of Governors of the Federal Reserve System. Mittelstaedt and Cristea: Arizona State University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 184; C/O Steven A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 15. **PR** no charge. **JE** M41, J33. **KW** Accounting. Health Benefits. Retirement. Pension

Benefits.
AB In December 1990, the Financial Accounting Standards Board issued Statement No. 106 to apply to financial statements with fiscal years beginning after December 15, 1992. Thus, the FASB expressed its view that retiree health and other post-retirement benefits are a type of deferred compensation, and as such, it is necessary to apply the methodology of accrual accounting instead of cash flow accounting to them. This paper explains the main provisions of Statement 106, presents a method for estimating Statement 106 expense and liability from disclosures of pay-as-you-go cost, and uses this method to evaluate the impact of Statement 106 on financial reports.

Watson, Mark W.
PD March 1992. **TI** Business Cycle Durations and Postwar Stabilization of the U.S. Economy. **AA** Northwestern University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4005; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** $5.00. **JE** E32, N12. **KW** Business Cycle.
AB The average length of business cycle contractions in the United States fell from 20.5 months in the prewar period to 10.7 months in the postwar period. Similarly, the average length of business cycle expansions rose from 25.3 months in the prewar period to 49.9 months in the postwar period. This paper investigates three explanations for this apparent duration stabilization. The first explanation is that shocks to the economy have been smaller in the postwar period. The second explanation is that the composition of output has shifted from sectors that are very cyclical, like manufacturing, to sectors that are less cyclical, like services. The third explanation is that the apparent stabilization is largely spurious, and is caused by differences in the way that prewar and postwar business cycle reference dates were chosen by the NBER. The evidence presented in this paper favors this third explanation.

Webb, Steven
TI Modeling Benefit Expenditures Using the FES. **AU** Jones, Jackie; Stark, Graham; Webb, Steven.

Weiss, Allan N.
TI Index-Based Futures and Options Markets in Real Estate. **AU** Case, Karl E., Jr.; Shiller, Robert J.; Weiss, Allan N.

Weiss, Yoram
PD January 1992. **TI** Inflation and Price Adjustment: A Survey of Findings from Micro-Data. **AA** Tel Aviv University. **SR** Tel Aviv Sackler Institute of Economic Studies Working Paper: 3-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 15. **PR** no charge. **JE** E31. **KW** Inflation. Prices. Price Level.
AB The survey summarizes empirical findings related to (S,s) pricing models. It brings evidence that nominal prices change in discrete jumps. The nominal rigidities lead to a relationship between the inflation level and relative price variability. The survey describes findings on this relationship. Some structured tests of state dependent and time dependent models are also presented. Finally equilibrium implications are tested, in particular the shape of the distribution of the real prices of identical products.

Wells, Kenneth
TI Health Care Utilization in Employer Plans with Preferred Provider Organization Options. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth

TI The Study of Preferred Provider Organizations: Executive Summary. **AU** Hosek, Susan D.; Marquis, M. Susan; Wells, Kenneth; Garnick, Deborah; Luft, Harold.

Werner, Jan
TI Arbitrage and Existence of Equilibrium in Infinite Asset Markets. **AU** Brown, Donald; Werner, Jan.

West, Douglas S.
TI The Relationship between Firm Size and Screening Ability in an Automobile Insurance Market. **AU** Kroner, Kenneth F.; West, Douglas S.

Whaley, Robert E.
TI One Market? Stocks, Futures and Options during October 1987. **AU** Kleidon, Allan W.; Whaley, Robert E.

Wheelock, David C.
PD September 1991. **TI** Which Banks Choose Deposit Insurance? Evidence of Adverse Selection and Moral Hazard in a Voluntary Insurance System. **AU** Wheelock, David C.; Kumbhaker, Subal C. **AA** Wheelock: Federal Reserve Bank of St. Louis and University of Texas, Austin. Kumbhaker: University of Texas, Austin. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-005A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 22. **PR** no charge. **JE** G21, G28, N22. **KW** Banking Regulation. Bank Failures. Deposit Insurance.
AB See other entry.

PD October 1991. **TI** Regulation and Bank Failures: New Evidence from the Agricultural Collapse of the 1920's. **AA** Federal Reserve Bank of St. Louis and University of Texas, Austin. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-006A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 35. **PR** no charge. **JE** G21, G28, N22. **KW** Branch Banking. Deposit Insurance. Banking.
AB This article examines the contribution of government policies to the high number of bank failures in the United States during the 1920's. I consider the state of Kansas, which had a system of voluntary deposit insurance and where branch banking was strictly prohibited, and find that bank failure rates were highest in counties suffering the greatest agricultural distress and where deposit insurance system membership was the highest. The evidence for Kansas illustrates how prohibitions on branch banking caused unit banks to be especially susceptible to local economic shocks, and suggests that, despite regulations to limit risk-taking, deposit insurance caused more bank failures than would have occurred otherwise.

PD November 1991. **TI** Which Banks Choose Deposit Insurance? Evidence of Adverse Selection and Moral Hazard in a Voluntary Insurance System. **AU** Wheelock, David C.; Kumbhaker, Subal C. **AA** Wheelock: Federal Reserve Bank of St. Louis and University of Texas, Austin. Kumbhaker: University of Texas, Austin. **SR** Federal Reserve Bank of St. Louis Working Paper: 91-005B; Research and Public

Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 19. **PR** not available. **JE** G21, N22, G28. **KW** Banking. Commercial Banks. Bank Failures. Bank Regulations.
AB The sharp increase in depository institution failures in recent years has drawn attention to the moral hazard created by underpriced deposit insurance. To identify possible reforms, researchers have begun to consider alternative deposit insurance arrangements. This paper contributes to that literature by examining the deposit insurance arrangements. This paper contributes to that literature by examining the deposit insurance system of Kansas, which operated from 1909 to 1929. The Kansas system had a number of regulations that were intended to limit risk-taking, and membership was made voluntary to assuage objections that insurance forces conservative banks to protect depositors of high risk institutions. Using individual bank data, we test explicitly whether adverse selection and moral hazard characterized the Kansas system.

PD March 1992. **TI** The Slack Banker Dances: Deposit Insurance and Risk-Taking in the Banking Collapse of the 1920's. **AU** Wheelock, David C.; Kumbhaker, Subal C. **AA** Wheelock: Federal Reserve Bank of St. Louis and University of Texas, Austin. Kumbhaker: University of Texas, Austin. **SR** Federal Reserve Bank of St. Louis Working Paper: 92-002A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 26. **PR** no charge. **JE** G21, G28, N22. **KW** Bank Deposits. Bank Failures. Deposit Insurance.
AB This paper studies the effects of deposit insurance on bank behavior using individual bank data from Kansas in the 1920's. Kansas banks were severely stressed by the collapse of agricultural prices in 1920 and resulting increase in farm mortgage defaults. Because membership in the state deposit insurance system was voluntary, it is possible to compare the behavior of insured and non-insured banks facing similar exogenous circumstances. We find that deposit insurance encouraged excessive risk-taking, which helps to explain the comparatively high failure rate of insured banks. The deposit insurance fund ultimately failed to reimburse many depositors of failed banks. We find, however, no evidence of a decline in the credibility of insurance, and hence in the ability of insured banks to take excessive risks, before the system's collapse in 1926.

White, Halbert

TI Strong Convergence of Recursive M-Estimators for Models with Dynamic Latent Variables. **AU** Kuan, Chung-Ming; White, Halbert.

White, Lawrence J.

PD July 1991. **TI** What Should Banks Really Do? **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-91-49; 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** 22. **PR** $5.00. **JE** G21, G28. **KW** Banking Structure. Commercial Banks. Bank Regulations. Efficiency.
AB This paper will review the major issues concerning the proper activities for banks. (This discussion is, of course, a natural complement to a group of papers that focus on what bank regulators should do.) In brief, there are three core issues: First, who is capable of monitoring the activities of bank managers, and under what circumstances? Second, what are the consequences of incomplete or imperfect monitoring? And, third, what are the efficiency consequences of different banking structures or configurations? Judgments about these three issues then lead to conclusions about the proper activities for banks.

PD August 1991. **TI** Banking Deregulation and Consolidation: An Industrial Organization Perspective. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-91-48; 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** 34. **PR** $5.00. **JE** L51, G21, G28. **KW** Commercial Banks. Bank Regulations. Government Policy. Deregulation.
AB This paper will bring an industrial organization perspective to the banking debacle that has already occurred due to economic deregulation and to the consolidation and shrinkage that lie before us. In Section II we briefly review the structure-behavior-performance paradigm of industrial organization and the role of regulation as a structural determinant in that model. In Section III establish the important distinction between economic regulation and health-safety-environment regulation. Section IV reviews the general lessons of the experience of economic deregulation. In Section V we briefly review the experience of banking regulation and deregulation and discuss why the banking deregulation experience has been less successful. Section VI looks ahead to the future regulation-deregulation issues for banking.

PD November 1991. **TI** A Cautionary Tale of Deregulation Gone Awry: The S&L Debacle. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-92-4; 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** 26. **PR** $5.00. **JE** G21, G28. **KW** Regulation. Bank Regulations. Banking.
AB The late 1970's and early 1980's were a period of a substantial loosening of the economic regulation that had surrounded a number of sectors of the U.S. economy: airlines, surface transportation, telecommunications, natural gas and petroleum pricing, securities brokerage, and banking. For the most part, these deregulation actions have been considered to be a success. There is one sector, however, where deregulation has been far less successful: the savings and loan (S&L) industry. Most observers would describe this experience as a "disaster" or a "debacle." The costs to the U.S. Government have been huge, and the experience has tarnished public perception of the benefits of deregulation. This paper will summarize the S&L deregulation experience: its causes and consequences, the errors of commission and omission, and the reforms that are necessary to reduce greatly its likelihood of recurrence in this sector of the U.S. economy or in sectors that have similar characteristics.

Wilkie, Simon

TI Ratio Equilibrium in the Presence of Many Private Goods. **AU** Diamantaras, Dimitrios; Wilkie, Simon.

Williams, Steven R.

TI The Double Auction Market: Institutions, Theories, and Experimental Evaluations. **AU** Satterthwaite, Mark A.;

Williams, Steven R.

Wolf, Holger C.

TI Sticky Exchange Rates and Flexible Prices--A Heretic View from the Interwar Period. **AU** Gulde, Anne-Marie; Wolf, Holger C.

Wolinsky, Asher

TI A Remark on Infinitely Repeated Extensive Games. **AU** Rubinstein, Ariel; Wolinsky, Asher.

Wolkon, Shari

TI Race and School Quality since "Brown vs. Board of Education". **AU** Boozer, Michael A.; Krueger, Alan B.; Wolkon, Shari.

Wolsey, Laurence A.

TI Lot-Sizing with Constant Batches: Formulation and Valid Inequalities. **AU** Pochet, Yves; Wolsey, Laurence A.

Wooders, Myrna Holtz

PD November 1991. **TI** On Large Games and Competitive Markets 1: Theory. **AA** University of Toronto. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-195; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 90. **PR** no charge. **JE** D41, C71, D62. **KW** Exchange Economy. Cooperative Games. Coalitions.

AB This paper discusses a body of research directed towards establishing that large economies where almost all gains to collective activity can be captured by small groups of participants are competitive. Specifically, such economies are game-theoretically equivalent to competitive exchange economies. The economies include ones with clubs, coalition production, local public goods, and also exchange economies with nonconvexities and indivisibilities. A framework of games in characteristic form is introduced. A large game is one with a "large" but finite number of players. The framework has the substitution property, the property that in any large game most players have many close substitutes. The games satisfy the conditions of effectiveness of small groups if almost all gains to cooperative activities can be realized by cooperation within bounded-sized coalitions in partitions of the total player set.

PD November 1991. **TI** On Large Games and Competitive Markets 2: Applications. **AA** University of Toronto. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-196; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 86. **PR** no charge. **JE** D41, D62, C71. **KW** Collective Goods. Perfect Competition. Prices.

AB I discuss the consequences of "On Large Games and Competitive Markets 1: Theory" for economies with collective goods and for properties of markets in large economies, where the goods to be marketed are endogenously determined and prices may be hedonic. For economies with collective goods the main results are: Large economies with excludable collective goods satisfying effectiveness of small groups are competitive. When there are sufficiently strong benefits to increasing group size, so that the group of the whole is an optimal sharing group, but still effectiveness of small groups holds, then the Lindahl equilibrium is competitive; the core converges to the Lindahl payoffs. When more than one group optimally forms for the purpose of joint consumption by the group members, Lindahl pricing within groups and Walrasian pricing for agent types is competitive.

Woroch, Glenn A.

PD May 1990. **TI** Competitive Entry into Local Exchange Markets: Survey of Strategic Models and Econometric Tests. **AA** RAND Corporation. **SR** Rand Paper: P-7644; The Rand Corporation, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 23. **PR** not available. **JE** L12, L51. **KW** Regulation. Industrial Policy. Entry.

AB This paper briefly summarizes research on entry into exchange markets. It focuses on the interaction between entry and the actions of incumbents, entrants, and regulators, addressing the normative role of government in controlling entry. It also reviews research on empirical questions using strategic models.

Wrobel, Andrzej

TI Marginal Analysis and Bewley Equilibria: The Use of Subgradients. **AU** Horsley, Anthony; Wrobel, Andrzej.

TI Price Singularities: Representation vs. Exclusion. **AU** Horsley, Anthony; Wrobel, Andrzej.

Wu, Ho-Mou

TI Individual Risk and Mutual Insurance: A Reformulation. **AU** Cass, David; Chichilinsky, Graciela; Wu, Ho-Mou.

Wulfekuhler, Kurt C.

TI The Uruguay Round of GATT Trade Negotiations. **AU** Hickok, Susan A.; Orr, James; Akhtar, M. A.; Wulfekuhler, Kurt C.

TI An Expanded, Cointegrated Model of U.S. Trade. **AU** Hickok, Susan A.; Hung, Juann H.; Wulfekuhler, Kurt C.

Yashiv, Eran

PD February 1992. **TI** A Note on Reputation Formation in Monetary Policy. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-92-9; 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** 22. **PR** $5.00. **JE** E52, D78. **KW** Monetary Policy. Reputation.

AB This note discusses reputation formation in monetary policy. We reexamine the prevalent model in the literature, which depicts a sequential equilibrium outcome. We discuss several problematic features of the model: it is inconsistent with recent real world experience, it is non-robust with respect to plausible modifications in the underlying payoff structure and it restricts attention to a particular formulation of the interaction between the policy-maker and the private sector. We show how plausible changes in the objectives of the policy-maker or of the private sector may reduce or eliminate reputational behavior. We examine the cases of a nonlinear Phillips curve, differential losses from overprediction and underprediction of inflation and the effects of persistent inflationary surprises. We then discuss the implications of more general formulations of reputational behavior, drawing on recent developments in Game Theory. In this context we explain the implications of the questionable randomization behavior employed by the policy-maker in the standard model. We identify the situations in which reputation formation may take place even without randomization and characterize the general features of such policy.

Zajac, Edward E.

PD February 1992. **TI** In Fairness, Smaller is Cheaper. **AA** University of Arizona. **SR** University of Arizona Economics Working Paper: 92-19; Department of Economics, Building #23, University of Arizona, Tucson, AZ 85721. **PG** 8. **PR** $2.00 Canada and U.S.; $3.00 Overseas by air. **JE** D63, D73, D72. **KW** Fairness. Scale Economies.

AB Fairness requires the like treatment of like cases. At the same time, unfair acts that occur with small probability may elicit a general response from administrators. A simple model illustrates that this can lead to (1) strong diseconomies of scale in administering "fairly," and (2) an unfairness incident that may be a small probability event for a small organization may be an almost certainty for a large one.

Zame, William R.

TI The Existence of Security Market Equilibrium with an Nonatomic State Space. **AU** Mas-Colell, Andreu; Zame, William R.

Zhang, J.

TI Economic Motivations for Limited Dependent and Qualitative Variable Models. **AU** Fry, Timothy R. L.; Brooks, Robert D.; Comley, B. R.; Zhang, J.

Zilberman, David (editor)

PD October 1990. **TI** Economic Perspectives on Pesticide Use in California. **AU** Zilberman, David (editor); Siebert, Jerome B. (editor). **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 564; Department of Agricultural and Resource Economics, 313 Giannini Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 220. **PR** $44.00. **JE** Q11, Q16, Q13. **KW** Environment. Agriculture. Agriculture Policy.

AB The use of synthetic organic pesticides in California agriculture has expanded production possibilities, increased yield, improved product quality, and reduced cost, thus benefiting farmers, processors, and consumers. However, it has also created problems of environmental quality degradation and raised worker safety and public health concerns. The trade-offs associated with pesticide use and regulation, the performance of alternative pest management strategies, and pesticide policies are the subjects of economic research at the University of California.

Zivot, Eric

PD October 1991. **TI** A Bayesian Analysis of Trend Determination in Economic Time Series. **AU** Zivot, Eric; Phillips, Peter C. B. **AA** Phillips: Yale University. Zivot: Wellesley College. **SR** Yale Cowles Foundation Discussion Paper: 1002; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 62. **PR** no charge. **JE** C11, C22. **KW** Autoregression. Unit Root. Structural Change.

AB In this paper we provide a comprehensive Bayesian posterior analysis of trend determination in general autoregressive models. Multiple lag autoregressive models with fitted drifts and time trends as well as models that allow for certain types of structural change in the deterministic components are considered. We utilize a modified information matrix-based prior that accommodates stochastic nonstationarity, takes into account the interactions between long-run and short-run dynamics and controls the degree of stochastic nonstationarity permitted. We derive analytic posterior densities for all of the trend determining parameters via the Laplace approximation to multivariate integrals. We also address the sampling properties of our posteriors under alternative data generating processes by simulation methods. We apply our Bayesian techniques to the Nelson-Plosser macroeconomic data and various stock price and dividend data.

Zwanziger, J., et. al.

TI Preliminary Results from an Evaluation of the CHAMPUS Reform Initiative. **AU** Hosek, Susan D.; Anderson, M.; Dixon, L.; Thomas, N.; Zwanziger, J., et. al.