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)

Abel, Andrew B.

PD May 1989. **TI** Birth, Death and Taxes. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2953; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 022, 023. **KW** Tax Policy. Insurance. Family. Households. Debt.

AB This paper analyzes the effects of lump-sum tax policy in an overlapping generations model in which consumers have uncertain longevity. It extends previous analyses by considering the case in which private insurance arrangements are actuarially unfair. In addition, it considers the polar case of actuarially fair insurance and the polar case of no insurance. A general condition for debt neutrality is derived. This condition depends explicitly on the degree of actuarial unfairness in insurance and on the extent to which parents care about the utility of their children.

Agarwal, Manmohan

PD September 1988. **TI** Recent Developments in South-South Trade. **AA** Jawaharlal Nehru University, New Delhi, India. **SR** University of Western Ontario Center for the Study of International Economic Relations Working Paper: 8809C; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 43. **PR** $4.00 Canadian. **JE** 121, 112, 113, 421. **KW** Developing Countries. Economic Cooperation. Trade Relations.

AB In recent years, there has been a continuing effort by developing countries (LDCs) to foster economic cooperation among themselves. Apart from negotiations that include all LDCs, there have been regional attempts as well. While agreement has been reached on some measures to be adopted to increase economic cooperation among LDCs, little progress has been made in actually increasing such cooperation. The agreement on the Generalized System of Tariff Preferences in early 1988 has raised hopes though the agreement has yet to be ratified. But the 1980s have witnessed a slowdown of this process with hardly any increase in South-South trade. In Section I of this paper, trends in South-South trade are analyzed, while in Section II the role of South-South trade in economic development is discussed.

Aizenman, Joshua

PD April 1989. **TI** Competitive Externalities and the Optimal Seigniorage. **AA** The Hebrew University. **SR** National Bureau of Economic Research Working Paper: 2937; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $2.00. **JE** 134, 311, 133, 023. **KW** Inflation. Central Bank. Monetary Policy.

AB The purpose of this study is to analyze the behavior of the inflation tax in an economy where, due to coordination failure, the inflation rate is not determined by a unique policy maker but by several competing decision makers. Each decision maker can effectively print more paper money via the central bank, which operates only as the printing agency of nominal balances. This market structure generates a competitive externality. A key result is that optimal inflation rate depends positively on the competitive externality. We provide two examples of scenarios where these externalities are relevant. The effect of competitive externalities is to increase the inflation rate, to an extent that puts the economy on the wrong side of the inflation tax Laffer curve.

Akonom, J.

PD October 1987. **TI** A Functional Limit Theorem for Fractional Processes. **AU** Akonom, J.; Gourieroux, Christian. **AA** Akonom: Lille University. Gourieroux: CEPREMAP. **SR** CEPREMAP Discussion Paper: 8801; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 26 P. **PR** 20 FF. **JE** 211. **KW** Fractional Process. Limit Theorem. Nonstationarity. Identification. Brownian Motion.

AB The dynamic aspects of macromodeling: expectations, description of the adjustment processes, causality between variables, separation between short and long term...have been the topic of a number of theoretical and/or practical papers. These dynamic aspects are generally studied by means of ARMA or ARIMA models applied to the endogenous and exogenous processes. This kind of formulation is adapted for describing the stationary parts of the series, since every stationary process may be well approximated by an ARMA process. On the other hand the case of nonstationary fractional processes does not seem to be so well-known. In such a case it is necessary to establish a functional limit theorem. Such a theorem will give the asymptotic behavior of the process after some change of time unit and some reduction.

Alesina, Alberto

PD November 1988. **TI** External Debt, Capital Flight and Political Risk. **AU** Alesina, Alberto; Tabellini, Guido. **AA** Alesina: Harvard University. Tabellini: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 538; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 35. **PR** $2.50; checks payable to University of California at Regents. **JE** 432, 441, 021. **KW** Capital Flight. Political Economy. Income Distribution. External Debt.

AB This paper explains the simultaneous occurrence of large external debts, private capital outflows and low domestic capital formation. We consider a general equilibrium model in which two government types with conflicting distributional goals randomly alternate in office. Uncertainty over the fiscal policies of future governments generates capital flight and small domestic investment, and induces the government to overaccumulate external debt. The model also predicts that left wing governments are more inclined to restrict capital outflows than right wing governments. Finally, we examine how political uncertainty affects the risk premium and how debt repudiation may occur after a regime change.

TI Voting on the Budget Deficit. **AU** Tabellini, Guido; Alesina, Alberto.

Alfter, Marion

PD March 1988. **TI** On Adjoints and Dual Matroids. **AU** Alfter, Marion; Kern, Walter; Wanka, Alfred. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.49; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 6. **PR** No Charge. **JE** 213. **KW** Lattices. Duality. Matroids.

AB Duality among matroids is a well-known and well-understood relation. Besides this "set-theoretical" version of duality, there is another one based on lattice-theoretical concepts, which has been introduced by A. Cheung (1974). These two concepts do not seem to fit into one another very well and their relationship (provided there is any) is more than unclear. In general, matroids may fail to have "duals" in the lattice-theoretical sense. Therefore, a natural question, posed by J.H. Mason (1981), is the following: If M does have a dual in the lattice theoretical sense, does M* (the set-theoretical dual of M) also have one? We present a counterexample, showing that the answer is negative.

Allen, Steven G.

PD April 1989. **TI** The Pension Cost of Changing Jobs. **AU** Allen, Steven G.; Clark, Robert; McDermed, Ann A. **AA** North California State University. **SR** National Bureau of Economic Research Working Paper: 2935; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 821, 921. **KW** Pension Plans. Retirement. Aging. Employment. Fringe Benefits.

AB Workers covered by defined benefit pension plans receive lower benefits at retirement if they leave their current job before reaching retirement age. This study estimates the magnitude of this pension loss for workers in the May 1983 supplement of the Current Population Survey, using pension formula estimates from the 1983 Employee Benefit Survey. The pension loss is generally greatest between the ages of 35 and 54 and represent roughly half of a year's earnings for that age group. The loss tends to be quite high in the declining mining and manufacturing sectors. This probably resulted in lower voluntary attrition at a time of massive layoffs and plant closings.

Alon, N.

PD July 1987. **TI** Cutting Disjoint Discs by Straight Lines. **AU** Alon, N.; Katchalski, M.; Pulleyblank, William R. **AA** Alon: Tel Aviv University. Katchalski: Technion-Israel Institute of Technology, Haifa. Pulleyblank: University of Waterloo. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87477-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 7. **PR** No Charge. **JE** 213. **KW** Disjoint Discs. Convex Sets. Straight Lines. Separation Theorem.

AB For k greater than 0 let f(k) denote the minimum integer f such that for any family of k pairwise disjoint congruent discs in the plane there is a direction alpha such that any line having direction alpha intersects at most f of the discs. We determine the exact asymptotic behavior of f(k). This result has been motivated by problems dealing with separation of convex sets by straight lines.

Altman, Edward I.

PD December 1988. **TI** Risk and Return Experience in the Corporate Convertible Debt Market. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 500; Salomon Brothers Center for Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 28. **PR** No charge. **JE** 522, 521, 313. **KW** Bond Market. Convertible Bonds. Default Risk.

AB The purpose of this article is to document the importance of convertible debt securities in the corporate fixed income market and report upon its anatomy, its default risk and total return attributes. Performance measures for convertibles will be compared with straight debt securities, particularly the high yield segment, over the period 1980-1987 and also with equity market indices. Section II will document and discuss the anatomy of the market in terms of outstanding issues and amounts, bond rating, coupon and yield distributions.

Ambarish, Ramasastry

PD May 1989. **TI** Default Risk and the Valuation of High-Yield Bonds: A Methodological Critique. **AU** Ambarish, Ramasastry; Subrahmanyam, Marti G. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 519; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 13. **PR** $4.00. **JE** 313, 522, 521. **KW** Default Risk. Bonds. Corporate Debt.

AB The purpose of this paper is to examine critically the methodology used in previous research in the area of high-yield bonds. In particular, the use of the mean return and the standard deviation of return as measures of the reward and risk from investing in these financial instruments is questioned. The reason is that a risky corporate bond has an embedded put option due to the limited liability feature of corporate equity. This option feature of corporate debt assumes greater significance as the credit quality of bonds decline. Therefore high-yield bonds share some of the properties of simple call and put options on common stock.

Anderson, Keith B.

PD December 1989. **TI** Do Government-Imposed Ownership Restrictions Inhibit Efficiency?: The Case of the FCC's Doupoly Rule. **AU** Anderson, Keith B.; Woodbury, John R. **AA** Federal Trade Commission. **SR** Federal Trade Commission Bureau of Economics Working Paper: 169; Bureau of Economics, Federal Trade Commission, 6th and

Pennsylvania Ave. NW, Washington, D.C. 20580. **PG** 32. **PR** no charge. **JE** 612, 635. **KW** Common Ownership. Broadcasting. Radio. Communication.
AB The Federal Communications Commission limits the common ownership of multiple broadcast outlets in the same local market. This paper examines whether there are efficiencies from common ownership that might be realized by relaxing these restrictions. We focus primarily on a comparison of prices paid for AM-FM combinations and for stations that are sold and operated as independent stations (i.e., "stand-alones"). We find that stations that were sold as combinations have higher predicted prices as combinations than as stand-alones, thus providing evidence of efficiencies. Increases in the number of combinations over time provides additional evidence of economies from joint operation.

Andersson, Krister
TI Tax Incentives and International Capital Flows: The Case of the United States and Japan. **AU** Bovenberg, A. Lans; Andersson, Krister; Aramaki, Kenji. Chand-Sheetal-K.

Angrist, Joshua D.
PD January 1989. **TI** Minimum Chi-Square and Three-Stage Least Squares in Fixed Effects Models. **AU** Angrist, Joshua D.; Newey, Whitney K. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 246; Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 32. **PR** $2.00. **JE** 211, 212, 821. **KW** Estimators. Fixed Effects. Three Stage Least Squares. Labor Supply.
AB Two approaches to estimation and testing of fixed effects models are commonly found in the econometrics literature. The first involves variations on instrumental variables. The second, a Minimum Chi-Square (MCS) procedure introduced by Chamberlain, minimizes a quadratic form in the difference between unrestricted regression coefficients and the restrictions implied by the fixed effects model. This paper is concerned with the relationship between Three Stage Least Squares (3SLS) and MCS. A 3SLS equivalent of the MCS estimator is presented and, in the usual case wherein the time varying error component has a scalar covariance matrix, 3SLS is shown to simplify to the conventional deviations from means estimator. Furthermore, the corresponding overidentification test statistic is the degrees of freedom times the R-squared from a regression of residuals on all leads and lags of right hand side variables. An empirical example from the literature on life-cycle labor supply is used to illustrate properties of 3SLS procedures for panel data under alternative assumptions regarding residual covariance.

Antonelli, Cristiano
PD June 1988. **TI** Technological Diffusion and Investment Behavior: The Case of the Textile Industry. **AU** Antonelli, Cristiano; Petit, Pascal; Tahar, Gabriel. **AA** Antonelli: Politecnico di Milano. Petit: CEPREMAP. Tahar: Toulouse University. **SR** CEPREMAP Discussion Paper: 8813; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 29. **PR** 20 FF. **JE** 621, 611, 123, 112. **KW** Diffusion. Technology. Learning. Bounded Rationality.
AB The diffusion of new technology in production depends on both its own characteristics in terms of profit and technical capabilities and the general conditions for investment. This paper aims to explain how diffusion processes are the combined result of investment behaviors and of learning processes concerning the new equipment. Simple assumptions about the key factors relevant in the choice of modern equipment, when investing, in a world of bounded rationality, lead to estimations in the case of the Textile industry in a set of 16 countries. Simulations display endogeneously defined diffusion curves and differences in modernization patterns among countries.

Aramaki, Kenji
TI Tax Incentives and International Capital Flows: The Case of the United States and Japan. **AU** Bovenberg, A. Lans; Andersson, Krister; Aramaki, Kenji. Chand-Sheetal-K.

Aron, Debra J.
PD June 1988. **TI** Corporate Spinoffs in an Agency Framework. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 792; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 39. **PR** No Charge. **JE** 512, 611, 511, 514. **KW** Incentive Contracts. Moral Hazard. Diversification. Product Market. Innovations.
AB A model is developed in which corporate spinoffs are a feature of incentive contracts for product managers in diversified firms. Spinoff contracts exploit the fact that, after a spinoff, the stock value of the product line is a much cleaner signal of managerial productivity than when the division belongs to the parent firm. Under such a contract, a divisional manager has the incentive to keep abreast of developments in his product market because, if he becomes aware of a profitable opportunity, he may recommend spinoff of his division and reap the gains from its increased stock value. I show that such an incentive contract dominates standard agency contracts in multiproduct firms when the firm is sufficiently diversified.

Ausubel, Lawrence M.
PD June 1988. **TI** Stationary Sequential Equilibria in Bargaining with Two-Sided Incomplete Information. **AU** Ausubel, Lawrence M.; Deneckere, Raymond J. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 784; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 68. **PR** No Charge. **JE** 026. **KW** Bargaining. Common Knowledge. Incomplete Information. Dynamic Model.
AB In this paper, we analyze the seller-offer bargaining game with two-sided incomplete information. A seller repeatedly proposes prices to a buyer, who accepts or rejects each offer. Each trader's valuation for the single good is unknown to the other player, but the distribution functions for seller and buyer valuations are common knowledge and have common support. Bargaining continues until such time that an offer is accepted. One of the basic issues we explore is the relationship between static and dynamic bargaining. Research by other authors warns that, in a dynamic context, players will necessarily suffer a substantial loss in ex-ante expected gains from trade (relative to the ex-ante efficient mechanism), due to their "inability to commit to the static mechanism".

Avery, Robert B.
PD March 1989. **TI** Loan Commitments and Bank Risk

Exposure. **AU** Avery, Robert B.; Berger, Allen N. **AA** Avery: Cornell University. Berger: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 65; C/O Jeffrey Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** No Charge. **JE** 312, 315, 026. **KW** Bank. Risk. Loan Commitments. Moral Hazard. Adverse Selection. Credit Risk.

AB Theoretical and empirical evidence is presented on the relationship between loan commitments and bank credit risk. All else equal, a loan commitment increases a bank's credit risk exposure by obligating it to issue a future loan under terms it might otherwise refuse. However, all else need not be equal because of moral hazard and adverse selection problems created by commitment contracts. These problems may result in projects of higher risk being financed under commitment than would be financed under spot loan contracts. These problems may also generate a rationing or sorting process under which some borrowers do not receive commitment contracts.

Bachem, Achim

PD February 1988. **TI** Mathematische Modelle fur Bausparkollektive. **AU** Bachem, Achim; Korte, Bernhard; Schrader, Rainer. **AA** Bachem: University of Cologne. Korte and Schrader: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.51; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 18. **PR** No Charge. **JE** 213. **KW** Mathematical Model. Building Society. Econometric Model. Prediction Model.

AB Paper in German.

Bagnoli, Mark

PD October 1988. **TI** Carrot and Yardstick Regulation: Enhancing Market Performance with Output Prizes. **AU** Bagnoli, Mark; Borenstein, Severin. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-01; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 31. **PR** No Charge. **JE** 613, 022. **KW** Regulation. Consumer Surplus. Incentives.

AB Many of the regulatory schemes proposed recently reward a firm for increases in output beyond the level that would be chosen in the absence of government intervention. In this paper, we propose an apparently unrecognized approach to induce firms to expand output. Output increases are induced when firms compete with one another for a reward (output prize). In a wide variety of circumstances, this scheme induces increases in consumer surplus that exceed the output prize. Thus, consumers/taxpayers can be net beneficiaries and, as a result, might voluntarily agree to such a scheme.

Bagwell, Kyle

PD August 1988. **TI** Advertising, Coordination and Signaling. **AU** Bagwell, Kyle; Ramey, Garey. **AA** Bagwell: Northwestern University. Ramey: University of California, San Diego. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 787; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 38. **PR** No Charge. **JE** 531, 514, 511, 616. **KW** Advertising. Consumer Behavior. Price Information. Market Share.

AB A great deal of advertising contains little or no direct information.

Yet advertisements are quite costly to produce and must therefore have some effect on consumer behavior. A challenge for economists is to reconcile the observation of dissipative or wasteful advertising with rational consumer behavior. We offer here a theory of advertising for markets in which price information is difficult to transmit and returns to scale exist.

PD October 1988. **TI** High and Declining Prices Signal Product Quality. **AU** Bagwell, Kyle; Riordan, Michael H. **AA** Bagwell: Northwestern University. Riordan: Boston University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 808; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 37. **PR** No Charge. **JE** 531, 514, 022. **KW** Marketing. Product Quality. Price Differentials. Signalling.

AB The marketing literature has produced various evidence on price-quality relationships. First, firms signal high quality, new products with prices that are above full information, profit-maximizing prices. Second, over time, as information about the product diffuses, this price distortion lessens or vanishes entirely. We demonstrate the logic and robustness of this argument in several equilibrium models of behavior by consumers and firms. The models have different assumptions about consumer information. However, all of the models possess intuitively plausible equilibria in which higher quality products are introduced at higher prices that decline over time.

Baker, Joanna

TI Experimental Assessment of the Effect of Vocational Training on Youthful Property Offenders. **AU** Lattimore, Pamela; Witte, Ann; Baker, Joanna.

Baldwin, Richard E.

PD March 1989. **TI** Sunk-Cost Hysteresis. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 2911; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** \$2.00. **JE** 022, 611. **KW** Sunk Costs. Investment. Uncertainty. Rational Expectations.

AB Despite its important theoretical, empirical and policy implications, sunk-cost hysteresis has not been characterized for the case of model consistent, or rational expectations (previous studies assume that firms believe the forcing variable is generated by some ad hoc, time invariant process such as an iid or Brownian motion process). This omission is significant since if firms do have forward-looking expectations, the existing characterizations cannot be used for empirical testing, or as a guide in developing appropriate econometric techniques. Furthermore, policy conclusions based on such characterizations may be misleading. This paper demonstrates the possibility and characterizes the nature of sunk-cost hysteresis for a broad class of assumptions on the forcing variable process. Most notably this class includes rational or model consistent expectations.

Baldwin, Robert E.

PD May 1989. **TI** Measuring Nontariff Trade Policies. **AA** University of Wisconsin, Madison. **SR** National

Bureau of Economic Research Working Paper: 2978; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 421, 323, 411. **KW** Subsidies. Protectionism. Tariffs. Negotiations. Trade Policy.

AB This paper surveys and critiques various methods of measuring nontariff trade measures (NTMs) for the purpose of determining which seem most promising for facilitating the process of reducing the trade distorting effects of such policies through multilateral negotiations. The general conclusion is that, despite a host of difficulties, theoretical and empirical analysis has progressed sufficiently far to enable reasonable measures of nontariff policies to be made that are useful for assessing relative sectoral protection across countries and monitoring changes in protection and subsidization levels over time.

Ball, Laurence

PD April 1989. **TI** Wage Indexation and Time-Consistent Monetary Policy. **AU** Ball, Laurence; Cecchetti, Stephen G. **AA** Ball: Princeton University. Cecchetti: Ohio State University. **SR** National Bureau of Economic Research Working Paper: 2948; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 832, 134, 131. **KW** Wage Indexes. Inflation. Labor Contracts.

AB This paper investigates the effects of wage indexation on the time-consistent level of inflation. Departing from previous work on time-consistent policy, we study a structural model of the economy. Indexation reduces the cost of inflation, which is inflationary, and steepens the Phillips curve, which is anti-inflationary. In most cases, the net effect is to raise inflation but also to raise welfare: the loss from higher inflation is outweighed by the gain from greater protection against inflation.

Bar, Ilan Avner

PD March 1989. **TI** Costs of Price Adjustment and the Welfare Economics of Inflation and Disinflation: A Comment. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 11-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 12. **PR** No Charge. **JE** 134, 024, 023, 133. **KW** Inflation. Deflation. Menu Costs. Welfare Function. Social Welfare.

AB This comment is an extension of Danziger's (AER 1988) analysis of the welfare economics of inflation with menu costs of price changes. Unlike the somewhat ambiguous results of Danziger, the extension of his model to allow deflation as well as inflation yields a very robust result which states that moderate deflation is significantly inferior to moderate inflation. An attempt to reduce mild inflation is potentially very risky. It can improve social welfare slightly by reducing the inflation rate, but it can decrease social welfare significantly in the case of "overshooting" to deflation.

Barahona, Francisco

PD 1988. **TI** Note on Weintraub's Minimum Cost Flow Algorithm. **AU** Barahona, Francisco; Tardos, Eva. **AA** Barahona: University of Waterloo. Tardos: Eotvos University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88509-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213, 214. **KW** Minimum Cost Flow Algorithm. Polynomial Algorithm. Network Problems.

AB In 1974 Weintraub published a minimum cost flow algorithm for network flow problems with convex cost functions. In this note we consider Weintraub's algorithm when applied to the special case with linear objective function. We show that a minor variation of the algorithm runs in polynomial time. The resulting algorithm, though it is not strongly polynomial, does not rely on scaling. It is a generalization of the maximum flow algorithm, that augments along the fattest augmenting path in the residual graph due to Edmonds and Karp.

PD December 1988. **TI** Reducing Matching to Polynomial Size Linear Programming. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88549-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 14. **PR** No Charge. **JE** 213, 214. **KW** Matching Problem. Combinatorial Algorithm. Linear Programming. Polynomial Algorithm.

AB We study the question of whether the maximum weight perfect matching problem can be reduced to a linear program of polynomial size. We give a partial answer to it, i.e., we show that the Chinese Postman Problem (and Optimum Matching) reduces to a sequence of O((m squared)(log n)) minimum mean cycle problems. We show that this last problem can be formulated as a linear program of polynomial size. This gives a polynomial algorithm for matching based on any polynomial method for Linear Programming. A combinatorial algorithm for finding minimum mean cycles in undirected graphs is also given.

PD February 1989. **TI** Compositions of Graphs and Polyhedra III: Graphs with no W4 Minor. **AU** Barahona, Francisco; Mahjoub, Ali Ridha. **AA** Barahona: University of Waterloo. Mahjoub: University of King Saud. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89565-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 30. **PR** No Charge. **JE** 213. **KW** Stable Set Polytope. Linear Programming. Stable Set.

AB We characterize the Stable Set Polytope for graphs that do not have a 4-wheel as a minor. We prove that the nontrivial facets are obtained by composing "odd cycles" and "subdivisions of K(4)". By adding some extra variables, we show that the stable set problem for these graphs, can be formulated as a linear program of polynomial size.

Barrera, Albino

PD February 1989. **TI** The Interactive Effects of Mother's Schooling and Unsupplemented Breastfeeding on Child Health. **AA** Yale University. **SR** Yale Economic Growth Center Discussion Paper: 572; Economic Growth Center, Yale Universty, Box 1987 Yale Station, New Haven, Connecticut 06520. **PG** 34 pgs. **PR** $2.00 plus postage. **JE** 913, 921. **KW** Children. Family. Health.

AB This paper estimates a nonlinear relationship between duration of breastfeeding and child height-for-age. For this sample of children, health benefits from unsupplemented breastfeeding differ by mother's education, with children of less educated mothers deriving the most gains. These results suggest that more educated mothers are able to provide

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wholesome substitutes to breastmilk without producing ill effects. Results are sensitive to the estimation technique used, with 2SLS estimates showing statistical signficance and substantial health gains compared to OLS estimates.

Barro, Robert J.

PD April 1989. **TI** The Stock Market and Investment. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2925; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 313, 522, 226, 132. **KW** Stock Market. Investment. Stock Prices.

AB Changes in real stock market prices have a lot of explanatory value of the growth rate of U.S. aggregate business investment, especially for long samples that begin in 1891 or 1921. Moreover, for the period since 1921 where data on a q-type variable are available, the stock market dramatically outperforms q. The change in real stock prices also retains its predictive value in the presence of a cash flow variable, such as after tax corporate profits. Basically similar results apply to Canadian investment, except that the U.S. stock market turns out to have more predictive power than the Canadian market. I discuss some possible explanations for this puzzling finding, but none of the explanations seem all that convincing.

PD May 1989. **TI** New Classicals and Keynesians, or the Good Guys and the Bad Guys. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2982; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 036, 031. **KW** Keynesians. Classical Theory. Macroeconomic Policy. Macroeconomics.

AB Old-style Keynesian models relied on sticky prices or wages to explain unemployment and to argue for demand side macroeconomic policies. The new classical macroeconomics focused initially on the apparent real effects of monetary disturbances. This approach achieved important methodological advances, such as rational expectations and new methods of policy evaluation. Another development is the so-called new Keynesian economics, which includes long term contracts, menu cost, efficiency wages and insider-outsider theories, and macroeconomic models with imperfect competition. Although some of these ideas may prove helpful as elements in real business cycle models, my main conclusion is that the new Keynesian economics has not been successful in rehabilitating the Keynesian approach.

Barsky, Robert B.

PD March 1989. **TI** Real Wages over the Business Cycle. **AU** Barsky, Robert B.; Solon, Gary. **AA** Barsky: University of Chicago. Solon: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2888; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 46. **PR** $2.00. **JE** 824, 131, 229, 821. **KW** Business Cycle. Wages. Labor Demand. Employment. Economic Fluctuations.

AB This paper is an examination of cyclical real wage behavior in the United States since World War II. Like most previous aggregate studies, ours finds little cyclicality in aggregate industry real wage data. On the other hand, our analysis of longitudinal microdata from the Panel Study of Income Dynamics reveals substantial procyclicality. We find that this procyclicality is obscured in industry average wage statistics because those statistics are constructed in a way that gives greater weight to low wage workers during expansions. The procyclicality of real wages indicates that cyclical employment fluctuations have been generated mainly by shifts in labor demand. The sources of these shifts and of the positive slope of the effective labor supply curve, however, remain open to alternative interpretations.

Barth, Richard

PD March 1989. **TI** A Simulation Model for Financial Programming. **AU** Barth, Richard; Chadha, Bankim. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/24; International Monetary Fund, Washington, DC 20431. **PG** 45. **PR** No Charge. **JE** 132, 212, 226, 113, 023. **KW** Developing Countries. Economic Growth.

AB This paper describes a simulation model that can serve as a basis for a developing country growth-oriented adjustment program. The model has been designed to provide explicit links between fiscal, monetary and exchange rate policies and major macroeconomic variables. While the model is applied to and solved for the case of Turkey, its simplicity and flexibility make it sufficiently general to be applicable to a wide range of countries. The model integrates demand-determined output with a supply side that responds to policies which affect investment and it allows the relative shares of domestic and foreign factors of production to be determined by their relative prices. The model is solved using Lotus 1-2-3, software that is familiar to Fund economists and which allows the user to quickly evaluate alternative assumptions and policies.

Bartholdi, III John J.

PD April 1989. **TI** How Hard is it to Control an Election. **AU** Bartholdi, III John J.; Tovey, Craig A.; Trick, Michael A. **AA** Bartholdy, Tovey: Georgia Institute of Technology. Trick: Carnegie Mellon University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89569-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 23. **PR** No Charge. **JE** 025, 213. **KW** Voting Schemes. Elections. Procedural Control. Voters.

AB Some voting schemes that are in principle susceptible to control are nevertheless resistant in practice due to excessive computational costs; others are vulnerable. We illustrate this in detail for plurality voting and for Condorcet voting.

Bean, Charles R.

PD January 1989. **TI** Outsiders, Capacity Shortages and Unemployment in the United Kingdom. **AU** Bean, Charles R.; Gavosto, Andrea. **AA** Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 332; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 74 pages. **PR** No Charge. **JE** 132, 824, 133, 023. **KW** Capacity Shortages. Outsiders. Unemployment.

AB We estimate a small annual macroeconometric model of the United Kingdom, based on the model of Sneessens and Dreze (1986), but incorporating a richer labor market structure. In particular increases in the share of long-term unemployment play a central role in explaining unemployment persistence. Union power and mismatch have also played a role in generating today's high unemployment. Simulations of the model suggest a large payoff to temporary schemes which get the long-term unemployed back to work. We also assess the significance of the capital gap.

Benabou, Roland

PD May 1988. **TI** Search Market Equilibrium, Bilateral Heterogeneity and Repeat Purchases. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8806; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 57 P. **PR** 25 FF. **JE** 022, 026. **KW** Price Dispersion. Monopolistic Competition. Search Theory. Heterogeneity. Dynamic Game. Incomplete Information.

AB This paper develops a general model of a search market with heterogeneity among both buyers (through search costs) and sellers (through production costs). It provides a unifying framework for previous models with unilateral heterogeneity, and is thereby able to simultaneously account for: a) price dispersion which does not rest on the indeterminacy of individual prices; b) active search in equilibrium; c) entry of firms; d) the matching of sellers with high costs, hence high prices, with buyers whose search costs are also high. These results are then extended from single to repeated purchase markets -- possibly with buyer renewal -- by embedding the previous model into a dynamic game with incomplete information between sellers and buyers.

PD June 1988. **TI** Wage Bargaining and Staggered Contracts: Theory and Estimation. **AU** Benabou, Roland; Bismut, Claude. **AA** Benabou: CEPREMAP. Bismut: CEPII. **SR** CEPREMAP Discussion Paper: 8810; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 38. **PR** 20 FF. **JE** 824, 833, 821, 023. **KW** Wage Contracts. Wage Equation. Wage Rigidity. Bargaining Game. Contract Length.

AB We develop, then estimate on United States data an aggregate wage equation derived from a model of overlapping wage contracts of different lengths. We start by modelling individual contracts as the outcome of a simple bargaining game, and explicitly how they reflect market conditions (prices, productivity, unemployment) and the relative bargaining power of firms and workers. By endowing these contracts with a staggered dynamic structure, we derive an aggregate wage equation with the same autoregressive moving average form as traditional ones, but a much richer informational content, due to the constraints imposed by the model.

Benner, Avner

PD October 1988. **TI** Unions and Productivity: Unionized Firms Versus Union Managed Firms. **AU** Benner, Avner; Estrin, Saul. **AA** Centre for Labour Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 326; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 44. **PR** No Charge. **JE** 831, 833, 825, 023. **KW** Trade Unions. Union Management. Productivity. Labor Relations.

AB In this paper we provide a theoretical structure and empirical evidence on the relationship between enterprise organization and performance by focussing on a little studied organizational form - the union managed firm - and comparing it with unionized firms. The theoretical analysis focusses on the degree of conflict between workers and managers in the two types of firm. At the empirical level, an elaborate procedure is applied to establish the appropriate representation of technology, controlling for industry and true heterogeneity. In general, we find union management increases productivity - though the scale of the effect is highly sensitive to technical assumptions.

Berger, Allen N.

PD March 1989. **TI** Price Rigidity and Market Structure: Theory and Evidence from the Banking Industry. **AU** Berger, Allen N.; Hannan, Timothy H. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 59; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** No Charge. **JE** 312, 611, 131, 134. **KW** Price Rigidity. Market Concentration. Banking. Interest Rates.

AB This paper expands upon an explanation of price rigidity introduced by Rotemberg and Saloner (1987) and employs it to model and test deposit rate setting behavior by commercial banks. This focus on banking allows us to exploit the fact that the decision by banks to change deposit rates in response to an exogenous change in aggregate interest rates is similar to decisions by firms in general to change prices in response to changes in costs. Since aggregate interest rates are observable, while costs usually are not, this empirical application allows for a relatively detailed and structured examination of the phenomenon of price rigidity not achievable in the general interindustry setting. The empirical estimates are fully consistent with the predictions of the theoretical model.

TI Loan Commitments and Bank Risk Exposure. **AU** Avery, Robert B.; Berger, Allen N.

Bergstrom, Ted

PD October 1988. **TI** Some Simple Analytics of Peak-Load Pricing. **AU** Bergstrom, Ted; MacKie, Mason Jeffrey. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-02; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 16. **PR** No Charge. **JE** 613, 641, 614. **KW** Public Utility. Pricing. Regulation. Capacity.

AB We consider a public utility that provides its service at two different times. Capacity in place can be used in both periods. We study the effects of a change from uniform pricing throughout the day to peak-load pricing, when the utility is constrained to operate with a fixed rate of return on capital. The conventional wisdom seems to be that with peak-load pricing, the peak price will be higher and the off-peak price lower than under uniform pricing, and that peak-load pricing leads to a lower installed capacity. These effects are not generally true. There are plausible cases in which introducing peak-load pricing reduces the price of the service both in peak and off-peak times. Furthermore, peak-load pricing can lead either to greater or to smaller capacity than uniform pricing. We are able to find simple expressions that determine the size and direction of each of these effects. We also provide a criterion for determining whether a particular individual gains or loses from peak-load pricing.

Berndt, Ernst R.

PD April 1989. **TI** Economic Capacity Utilization and Productivity Measurement for Multiproduct Firms with Multiple Quasi-Fixed Inputs. **AU** Berndt, Ernst R.; Fuss, Melvyn A. **AA** Berndt: Massachusetts Institute of Technology. Fuss: University of Toronto. **SR** National

Bureau of Economic Research Working Paper: 2932; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $2.00. **JE** 641, 022, 226. **KW** Economic Capacity. Investment. Productivity. Fixed Inputs.

AB In this paper we develop measures of economic capacity output and economic capacity utilization for firms producing multiple outputs and having one or more quasi-fixed inputs. Although we produce an impossibility theorem showing that based only on the assumption of cost minimization, the concept of capacity output is undefined whenever the number of outputs I exceeds the number of fixed inputs M, we are able to provide alternative constructive procedures for defining capacity output whenever I < M. We also propose a number of additional primal and dual measures of utilization of the variable and fixed inputs, including a multi-fixed input analog to Tobin's q.

Bernheim, B. Douglas

PD April 1989. **TI** How Strong are Bequest Motives? Evidence based on Estimates of the Demand for Life Insurance and Annuities. **AA** Northwestern University. **SR** National Bureau of Economic Research Working Paper: 2942; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $2.00. **JE** 915, 921, 022. **KW** Bequests. Social Security. Life Insurance. Insurance Markets. Savings.

AB This paper presents new empirical evidence in support of the view that a significant fraction of total saving is motivated solely by the desire to leave bequests. Specifically, I find that Social Security annuity benefits significantly raise life insurance holdings and depress private annuity holdings among elderly individuals. These patterns indicate that the typical household would choose to maintain a positive fraction of its resources in bequeathable forms, even if insurance markets were perfect. Evidence on the relationship between insurance purchases and total resources reinforces this conclusion.

Bester, Helmut

PD September 1987. **TI** Qualitative Uncertainty in a Market with Bilateral Trading. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-96; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 24. **PR** No Charge. **JE** 026, 611. **KW** Bargaining. Imperfect Information. Uncertainty. Signalling Games.

AB The paper studies bargaining between a single seller and a succession of potential buyers of an indivisible object. The seller bargains with one buyer at a time and switching buyers is costly. There is two-sided uncertainty: The seller does not know the buyers' reservation prices and buyers cannot observe the quality of the object. We show that, if the costs of switching buyers are high, there exists a signalling equilibrium in which the seller's price offer reveals the quality of the object. In this equilibrium, the high-quality seller proposes a higher price than the low-quality seller and faces a higher risk of being rejected by the buyer. If the costs of switching are low, adverse selection occurs and the high-quality seller drops out of the market. In addition to these two categories of separating equilibria, pooling may occur so that in equilibrium the buyer remains uninformed about the quality of the object.

Bewley, Truman F.

PD April 1989. **TI** Market Innovation and Entrepreneurship: A Knightian View. **AA** Universitat Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-233; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 49. **PR** No Charge. **JE** 026, 511, 621. **KW** Decision Theory. Innovation. Uncertainty.

AB Stimulated by Frank Knight's work, Risk, Uncertainty and Profit, a theory of innovation is presented using what is termed Knightian decision theory. This theory includes a concept of uncertainty aversion. Uncertainty aversion makes people reluctant to undertake new unevaluatable risks. This aversion is compounded when individuals are obliged to cooperate in undertaking a risk. The theory leads naturally to the conclusion that innovation in business would be the natural domain of individual investors with unusually low levels of uncertainty aversion. Uncertainty aversion would also make it difficult to innovate new markets for insurance of unevaluatable risks, for the success of a new market requires that many people overcome their aversion to uncertainty and enter the market.

Bhandari, Jagdeep S.

PD March 1989. **TI** Dual Exchange Markets Under Incomplete Separation: An Optimizing Model. **AU** Bhandari, Jagdeep S.; Vegh, Carlos. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/19; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** No Charge. **JE** 431, 411. **KW** Exchange Rates. Devaluation. Adjustment Mechanisms.

AB This paper constructs and analyzes an optimizing model of dual exchange markets which are incompletely separated owing to the presence of fraudulent cross transactions. The model is used to examine the implications of certain shocks, including devaluation. Devaluation first leads to the emergence of a spread with the financial exchange rate being relatively appreciated vis-a-vis the commercial rate. Over time, the financial rate depreciates beyond the level of the commercial rate. In the final phase of adjustment, the spread declines continuously until a zero spread is restored.

Biddle, Jeff E.

PD May 1989. **TI** Sleep and the Allocation of Time. **AU** Biddle, Jeff E.; Hamermesh, Daniel. **AA** Michigan State University. **SR** National Bureau of Economic Research Working Paper: 2988; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 921, 824, 825, 821. **KW** Labor Market. Labor Supply. Sleep.

AB Sleep must be considered subject to choice and affected by the same economic variables that affect other uses of time. Using aggregated data for 12 countries, a cross section of microeconomic data, and a panel of households, we demonstrate that increases in time spent in the labor market reduce sleep time. We develop a theory of the demand for sleep that differs from standard models by its assumption that sleep affects wages through its impact on labor market productivity. Estimates of a system of demand equations demonstrate that higher wage rates reduce sleep time among men, an effect that is entirely offset by their positive effect on waking nonmarket time. Among women the wage effect on waking nonmarket time is negative and small, but the effect on sleep is negative and quite large.

Binmore, Ken

PD June 1988. **TI** Social Contract I: Harsanyi and Rawls. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-03; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 39. **PR** No Charge. **JE** 022, 026, 025. **KW** Social Contract. Bargaining. Rationality.

AB This is the first of several papers whose beginnings lie in Rawls' '1958, 1968, 1972(theory of the social contract. The aim of the sequence of papers is to defend a version of Rawls' "egalitarian" conclusion for a world in which agents are assumed to be constrained only by rational self-interest. No foundational issues are taken for granted. This is partly because I hope to make the work accessible to a wider audience; but mostly because I believe that much confusion in the literature derives from straightforward misunderstandings on matters which ought not to be controversial.

PD July 1988. **TI** Social Contract II: Gauthier and Nash. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-04; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 51. **PR** No Charge. **JE** 022, 026, 025. **KW** Bargaining. Social Contract. Rationality.

AB This is the second of several free-standing papers whose beginnings lie in Rawls' '1958, 1968, 1972(theory of the social contract. The aim of the sequence of papers is to defend a version of Rawls' "egalitarian" conclusion for a world in which agents are assumed to be constrained only by rational self-interest.

PD July 1988. **TI** Common Knowledge and Game Theory. **AU** Binmore, Ken; Brandenburger, Adam. **AA** Binmore: University of Michigan. Brandenburger: Harvard Business School. **SR** University of Michigan Center for Research on Economic and Social Theory Working Papér: 89-06; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 46. **PR** No Charge. **JE** 026. **KW** Common Knowledge. Game Theory. Rational Expectations. Securities.

AB The story of the dirty-faced ladies already embodies the essential point. Mutual observation of agents' behavior can lead to information becoming common knowledge that was not common knowledge before. Perhaps the most important area in which such problems arise is in the study of rational expectations equilibria in the trading of risky securities. How can there be trade if everybody's willingness to trade means that everybody knows that everybody expects to be a winner. Since risky securities are traded on the basis of private information, there must presumably be some "agreeing to disagree" in the real world. But to assess its extent and its implications, one needs to have a precise theory of the norm from which "agreeing to disagree" is seen as a deviation. The beginnings of such a theory are presented here.

PD August 1988. **TI** Social Contract III: Evolution and Utilitarianism. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-05; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 37. **PR** No Charge. **JE** 026, 022, 213. **KW** Coordination Problem. Bargaining.

AB The paper takes the simplest possible bargaining game as a paradigm for the coordination problem -- i.e. the problem of selecting an equilibrium when many are available. The aim is to explore the circumstances under which evolution will lead to a utilitarian conclusion.

Bismut, Claude

TI Wage Bargaining and Staggered Contracts: Theory and Estimation. **AU** Benabou, Roland; Bismut, Claude.

Bizer, David

PD October 1988. **TI** Are Tax Rates Martingales. **AU** Bizer, David; Durlauf, Steven N. **AA** Bizer: Johns Hopkins University. Durlauf: Stanford University and National Bureau of Economic Research. **SR** Stanford Center for Economic Policy Research Discussion Paper: 142; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 37. **PR** No Charge. **JE** 323. **KW** Tax Rates. Random Walk. Martingale. Tax System.

AB Researchers testing an optimal tax Euler equation have found that the evolution of United States tax rates over time is roughly consistent with the theory that tax rates should follow a random walk. We critique this finding by arguing that the boundedness of tax rates implies that any martingale in tax rates must be degenerate. Conventional regression analyses which assume nondegeneracy will not possess standard asymptotics for the degenerate martingale case. We confirm our theoretical conclusions with an empirical examination of the properties of a tax rate series and conclude that one overall rejects the hypothesis that the first difference in the series is white noise. Finally, we show that there is a cyclical component to tax changes corresponding to changes in political party administration.

Black, Fischer

PD April 1989. **TI** Mean Reversion and Consumption Smoothing. **AA** Goldman, Sachs & Co. **SR** National Bureau of Economic Research Working Paper: 2946; National Bureau of Research, 1050 Massachusetts Avenue, Cambidge, MA 02138. **PG** 13. **PR** $2.00. **JE** 022, 026, 023. **KW** Consumption. Mean Reversion. Risk. Wealth. Interest Rate.

AB Using a simple conventional model with additive separable utility and constant elasticity, we can explain mean reversion and consumption smoothing. The model uses the price of risk and wealth as state variables, but has only one stochastic variable. The price of risk rises temporarily as wealth falls. We also distinguish between risk aversion and the consumption elasticity of marginal utility. We can use the model to match estimates of the average values of consumption volatility, wealth volatility, mean reversion, the growth rate of consumption, the real interest rate, and the market risk premium.

PD April 1989. **TI** Equilibrium Exchange Rate Hedging. **AA** Goldman, Sachs & Co. **SR** National Bureau of Economic Research Working Paper: 2947; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $2.00. **JE** 441, 411, 433, 431. **KW** Investment. Portfolio. Hedging. International Markets. Exchange Rates.

AB In a one-period model where each investor consumes a single good, and where borrowing and lending are private and real, there is a universal constant that tells how much each investor hedges his foreign investments. Foreign investors are those with different consumption goods, not necessarily those who live in different countries. In equilibrium, the price of the world market portfolio will adjust so that the constant will be related to an average of world market risk premia, an average of world market volatilities, and an average of exchange rate volatilities, where we take the averages over all investors.

Blanchflower, David G.

PD September 1988. **TI** The Economic Effects of Britain's Trade Unions. **AU** Blanchflower, David G.; Oswald, Andrew J. **AA** Blanchflower: University of Surrey and Centre for Labour Economics, London School of Economics. Oswald: Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 324; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 22. **PR** No Charge. **JE** 831, 023. **KW** Trade Unions. Britain.

AB This paper presents a nontechnical summary of what economists know, or believe they know, about the economic consequences of unionism in Great Britain.

PD March 1989. **TI** Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J. **AA** Blanchflower: University of Surrey and London School of Economics. Millward and Oswald: Department of Employment, Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 339; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 33. **PR** No Charge. **JE** 831, 824, 821. **KW** Trade Unions. Employment.

AB Although there exists a large literature on the effects of trade unions upon wages, there is no published work which uses microeconomic data to examine the employment consequences of unionization. The paper addresses this issue with a new British data set and shows that, even after the addition of a substantial set of control variables, there is a strong association between poor employment performance and the presence of trade unions. The union employment growth differential is estimated at approximately -3% per annum.

PD March 1989. **TI** The Wage Curve. **AU** Blanchflower, David G.; Oswald, Andrew J. **AA** Blanchflower: University of Surrey. Oswald: Centre for Labour Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 340; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 49. **PR** No Charge. **JE** 824, 821, 023, 229. **KW** Wages. Unemployment.

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

Blank, Rebecca M.

PD March 1989. **TI** Recent Trends in Housing Conditions among the Urban Poor. **AU** Blank, Rebecca M.; Rosen, Harvey S. **AA** Blank: Massachusetts Institute of Technology. Rosen: Princeton University. **SR** National Bureau of Economic Research Working Paper: 2886; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 20. **PR** $2.00. **JE** 932, 931, 914, 921. **KW** Urban Economics. Housing. Poverty. Homeowners. Households.

AB In this paper we examine the trends in housing conditions among the urban poor over the last decade, relate these trends to the economic environments of the cities, and compare the poor to other income groups. We find that there has been a substantial decrease in "housing independence" -- among the poor. This paper provides little evidence for the popular hypothesis that changes in housing attributes over the last decade are predominantly related to changes in housing markets. Including a variety of economic variables does little to explain the trends in housing circumstances of different income groups.

Blau, Francine

PD March 1989. **TI** Black/White Differences in Wealth and Asset Consumption. **AU** Blau, Francine; Graham, John D. **AA** Blau: University of Illinois. Graham: Rutgers University. **SR** National Bureau of Economic Research Working Paper: 2898; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 917, 921. **KW** Wealth. Race. Minorities. Families. Transfers.

AB Using data from the 1976 and 1978 National Longitudinal Surveys of young men and young women, this study examines racial differences in the magnitude and composition of wealth and the reasons for them. On average, young black families hold 18 percent of the wealth of young white families, and hold their wealth in proportionately different forms. Even after controlling for racial differences in income and other demographic factors, as much as three-quarters of the wealth gap remains unexplained. We speculate on the causes for this, concluding that racial differences in intergenerational transfers most likely play an important role.

Blejer, Mario I.

PD March 1989. **TI** The Evolving Role of Fiscal Policy in Centrally Planned Economies Under Reform: The Case of China. **AU** Blejer, Mario I.; Szapary, Gyorgy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/26; International Monetary Fund, Washington, DC 20431. **PG** 37. **PR** No Charge. **JE** 124, 052, 321, 023. **KW** Socialism. Economic Reform. China. Fiscal Policy. Macroeconomics.

AB Market-oriented economic reforms in centrally planned economies have altered the functions and objectives of key policy instruments, particularly in the case of fiscal policy. As a result of reform, economic management requires the use of "indirect" levers to regulate the behavior of increasingly autonomous economic agents. In this respect, fiscal policy becomes central and its macroeconomic role is enhanced. This paper studies the recent Chinese experience, reviewing fiscal developments and analyzing the effectiveness and appropriateness of available fiscal instruments in performing their newly enhanced macroeconomic role.

Blomstrom, Magnus

TI Foreign Investment and Technology Transfer: A Simple Model. **AU** Wang, Jian Ye; Blomstrom, Magnus.

PD May 1989. **TI** Why Do Multinational Firms Seek Out Joint Ventures?. **AU** Blomstrom, Magnus; Zejan, Mario. **AA** Blomstrom: Stockholm School of Economics and National Bureau of Economic Research. Zejan: University of Gothenburg. **SR** National Bureau of Economic Research Working Paper: 2987; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 442, 621, 123. **KW** Technology. Joint Ventures. Multinationals. Developing Countries.
AB This paper uses a model of dichotomous choice to distinguish the characteristics of Swedish multinational firms that seek out joint ventures from those that do not. The findings suggest that firms with little experience of foreign production and highly diversified product lines are the most likely to share equity. In general, it is found that multinational firms that have the most to offer the developing countries are reluctant to enter into joint venture agreements. Therefore, imposing joint venture status on multinationals may prevent the inflow of advanced technologies.

Bloom, David E.

PD November 1988. **TI** The Evolution of AIDS Economic Research. **AU** Bloom, David E.; Glied, Sherry. **AA** Bloom: Columbia University. Glied: Harvard University. **SR** Columbia Department of Economics Working Paper: 413; Department of Economics, Columbia University, New York, NY 10027. **PG** 14. **PR** $5.00. **JE** 941, 913. **KW** Acquired Immune Deficiency Syndrome. Medical Research. Epidemic.
AB This paper reviews the progress made by economists in their research on the Acquired Immune Deficiency Syndrome epidemic. Three main conclusions are drawn. First, the direct economic impact of AIDS in the United States (i.e., personal medical care costs and foregone earnings due to morbidity and premature mortality) is not likely to be large on a national level through the early 1990s, although its impact will be large in certain regions of the country. Second, the large direct impact in certain regions implies that the epidemic may have serious economic repercussions that extend beyond the health sector of the economy. This raises a number of important research issues, many of which economists have not yet begun to address. Third, all of the key ingredients for conducting effective research on several of these important new issues -- theory, data, and empirical methods -- are currently available. This last conclusion is illustrated by an analysis of the labor market impact of the AIDS epidemic.

Bmaskar, V.

PD September 1988. **TI** Rational Play in a Quick Response Duopoly. **AA** University College London. **SR** University College London Discussion Paper: 88-24; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 11. **PR** No Charge. **JE** 026, 611, 022. **KW** Duopoly. Rationality. Pricing Strategies. Prices.
AB If firms in a homogeneous duopoly game can respond with negligible delay to their rival's price changes, equilibrium is unique at the monopoly price. Marschak and Selten's analysis via restabilizing responses, which gives rise to a continuum of equilibria, is shown to impose insufficient rationality requirements on players' strategies.

Bodie, Zvi

PD April 1989. **TI** Pensions as Retirement Income Insurance. **AA** Boston University. **SR** National Bureau of Economic Research Working Paper: 2917; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 824, 915. **KW** Pensions. Retirement.
AB This paper develops the view that employer-sponsored pension plans are best understood as retirement income insurance for employees and from that perspective addresses a number of questions regarding the reasons for their existence, their design, and their funding and investment policies. Two questions are: Why do employers provide pension plans for their employees and why is participation usually mandatory? Why is the defined benefit form of pension plan the dominant one rather than defined contribution?.

Boersch, Supan Axel

PD January 1989. **TI** A Dynamic Analysis of Household Dissolution and Living Arrangement Transitions by Elderly Americans. **AA** Fachbereich Wirtschafts and Sozialwissenschaften. **SR** National Bureau of Economic Research Working Paper: 2808; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 918, 921. **KW** Elderly. Aging. Households. Family.
AB This paper exploits the new nonresponse files of the Panel Study of Income Dynamics in order to study living arrangement transitions of elderly Americans. The focus of the paper is an estimate of the probability of household dissolution, i.e., the probabilities of transitions from living independently to living with adult children or other related or unrelated persons and the probability of becoming institutionalized, and an investigation of the factors causing such transitions.

Boldrin, Michele

PD February 1989. **TI** Simple Macroeconomic Models With Very Complicated Dynamics. **AU** Boldrin, Michele; Deneckere, Raymond J. **AA** Boldrin: University of California, Los Angeles. Deneckere: Northwestern University. **SR** University of California at Los Angeles Department of Economics Working Paper: 527; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 53. **PR** $2.50; checks payable to University of California at Regents. **JE** 021, 023, 111. **KW** Two-Sector Model. Chaos. Dynamic Programming.
AB We consider a simple aggregated economy with identical infinitely lived agents and two goods: a capital and a consumption good. They are produced by different industries, under constant return to scale technology, by means of labor and capital itself. The competitive equilibrium over time is reduced to the solution of an infinite horizon Dynamic Programming problem. Functional forms (Cobb-Douglas and Leontief) are chosen for the production functions. Utility is linear in consumption and labor is exogenously supplied. At different parameter values the dynamic properties of the equilibrium paths are dramatically different: they go from global convergence to a unique steady state, to cycles of many different amplitudes to chaos. The statistic properties of aggregate time series generated by this economy in the chaotic regime are compared to the analogous ones for the United

States economy.

Bollobas, Bela

PD August 1988. **TI** Martingales, Isoperimetric Inequalities and Random Graphs. **AA** University of Cambridge. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88515-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 41. **PR** No Charge. **JE** 213. **KW** Martingale Process. Banach Spaces. Isoperimetric. Random Graphs.

AB For many years now, martingale inequalities have been used with great success in the geometry of Banach spaces. As another aspect of the same concentration of measure phenomenon, isoperimetric inequalities have also been used to great effect. Recently martingale inequalities have been applied with success to problems concerning random graphs, resulting in a fairly satisfactory solution of the chromatic number problem. However, this is only the tip of the iceberg: there are a host of other problems where martingale inequalities and isoperimetric inequalities can be applied. In this note, we shall present some appropriate inequalities and give some applications to random graphs.

PD August 1988. **TI** The Travelling Salesman Problem in the k-Dimensional Unit Cube. **AU** Bollobas, Bela; Meir, Amram. **AA** Bollobas: University of Cambridge. Meir: University of Alberta. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88516-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** No Charge. **JE** 213. **KW** Travelling Salesman. Unit Cube.

AB This variant of the travelling salesman problem has been solved for k = 2: Newman proved that s(2)(n) = 2 for n greater than or equal to 2. Results related to s(2)(n) have been proved by Bentley and Saxe and Meir. In the same note, Meir asked whether s(k)(n) is bounded from above by a constant c(k), and the same question was raised by Yatchew. Our aim is to answer this question in the affirmative.

Borenstein, Severin

TI Carrot and Yardstick Regulation: Enhancing Market Performance with Output Prizes. **AU** Bagnoli, Mark; Borenstein, Severin.

Borensztein, Eduardo R.

PD February 1989. **TI** Foreign Borrowing and Export Promotion Policies. **AU** Borensztein, Eduardo R.; Ghosh, Atish Rex. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/16; International Monetary Fund, Washington, DC 20431. **PG** 33. **PR** No Charge. **JE** 431, 313, 112, 411. **KW** Debtor Nation. Debt. Investment. Exports.

AB This paper considers the problem of allocation of investment for a debtor country that faces a ceiling on the amount of foreign debt it can accumulate. It shows that it is optimal for the debtor country to create a more open economy by favoring investment in the export sector over investment in the import-competing sector. The reason is that a more open economy is more sensitive to trade sanctions and therefore more creditworthy in international markets. Because international creditworthiness is basically an externality, there is a role for policy to provide higher returns to export producing activities.

Bos, Dieter

PD August 1988. **TI** Economic Consequences of an Aging Population. **AU** Bos, Dieter; Von Weizsacker, Robert. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-191; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** No Charge. **JE** 918, 841, 915, 824. **KW** Aging. Social Security. Elderly. Retirement.

AB This paper gives an introduction into economic problems of aging populations. First, we review recent studies on the economic status of the elderly. Second, we treat the labor supply of the elderly, in particular the question of whether social security benefits encourage early retirement. Third, we deal with macroeconomic responses to age-structural change: how does population aging affect the overall productivity, the macrostructure of consumption, and the macro amount of savings and investments?

PD March 1989. **TI** Privatisation and People's Capitalism. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-179; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 31. **PR** No Charge. **JE** 614, 053, 025, 024. **KW** Public Enterprises. Capitalism. Shareholders.

AB "People's capitalism" is a conservative catchphrase which accentuates widespread ownership of shares, in particular by lower-income earners. Maximizing the number of shareholders is an objective which often has been followed by conservative governments when privatising public enterprises. The underlying political concept is simple. Public enterprises are owned by governments. From the point of view of political philosophy (not of law, of course), this implies the public enterprises are owned by the people. People's capitalism would imply a shift from the philosophical, indirect ownership to a juridical, direct ownership of the people.

Bound, John

PD January 1989. **TI** The Health and Earnings of Rejected Disability Insurance Applicants. **AA** The University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2816; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 822, 915, 921. **KW** Social Security. Disability Insurance. Health. Employment.

AB Applicants for Social Security Disability Benefits who fail to pass the medical screening form a natural 'control' group for beneficiaries. Data drawn from the 1972 and 1978 surveys of the disabled done for the Social Security Administration show that fewer than 50 per cent of rejected male applicants work. Typical earnings of those that do are less than 50 per cent of median earnings for other men their age. These data cast doubt on recent econometric work which suggests that the disincentive effects of Disability Insurance have been substantial.

PD March 1989. **TI** Measurement Error in Cross-Sectional and Longitudinal Labor Market Surveys: Results from Two Validation Studies. **AU** Bound, John; Brown, Charles; Duncan, Greg; Rodgers, Willard. **AA** University of Michigan. **SR** National Bureau of Economic Research

Working Paper: 2884; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $2.00. **JE** 824, 229, 211. **KW** Measurement Error, Wages. Employment. Micro Data.

AB This paper reports evidence on the error properties of survey reports of labor market variables such as earnings and work hours. Our primary data source is the PSID Validation Study, a two-wave panel survey of a sample of workers employed by a large firm which also allowed us access to its very detailed records of its workers earnings, etc.. The second data source uses individuals' 1977 and 1978 (March Current Population Survey) reports of earnings, matched to Social Security earnings records. In both data sets, individuals: reports of earnings are fairly accurately reported, and the errors are negatively related to true earnings. Various measures of hourly earnings were much less reliable than annual earnings. Retrospective reports of unemployment showed considerable under-reporting, even of long spells.

PD March 1989. **TI** The Extent of Measurement Error in Longitudinal Earnings Data: Do Two Wrongs Make a Right?. **AU** Bound, John; Krueger, Alan. **AA** Bound: University of Michigan. Krueger: Princeton University. **SR** National Bureau of Economic Research Working Paper: 2885; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 824, 229, 211. **KW** Wages. Longitudinal Data. Measurement Error. Serial Correlation.

AB This paper examines the properties and prevalence of measurement error in longitudinal earnings data. The analysis compares Current Population Survey data to administrative Social Security payroll tax records for a sample of heads of households over two years. In contrast to the typically assumed properties of measurement error, the results indicate that errors are serially correlated over two years and negatively correlated with true earnings (i.e., mean reverting). Moreover, reported earnings are more reliable for females than males. Overall, the ratio of the variance of signal to the total variance is .82 for men and .92 for women.

PD May 1989. **TI** Changes in the Structure of Wages During the 1980's: An Evaluation of Alternative Explanations. **AU** Bound, John; Johnson, George. **AA** University of Michigan, Ann Arbor. **SR** National Bureau of Economic Research Working Paper: 2983; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 621, 851, 821. **KW** Wages. Wage Structure. Education. Technology. Human Capital.

AB Between 1979 and 1987 there were three significant changes in the wage structure in the United States. The pecuniary returns to schooling increased by about a third; the wages of older relative to younger workers with relatively low education increased to some extent; and the wages of women relative to men rose by almost ten percent. The paper investigates several alternative explanations of these wage structure phenomena, including the most popular ones that their principal causes were shifts in the structure of product demand, skilled labor saving technological change, and changes in the incidence and level of rents received by lower skilled workers.

Bourguignon, Francois

PD April 1989. **TI** Adjustment and Income Distribution: A Counterfactual Analysis. **AU** Bourguignon, Francois; Branson, William H.; de Melo, Jaime. **AA** Bourguignon: Ecole des Hautes Etudes en Sciences Sociales, Paris. Branson: Princeton University. de Melo: The World Bank. **SR** National Bureau of Economic Research Working Paper: 2943; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 133, 921, 023. **KW** Simulation. Macroeconomic Model. Income Distribution. Portfolio. Wealth.

AB This paper presents a structural macro simulation model to quantify the effects of alternative stabilization packages on the distribution of income and wealth. The model combines the explicit microeconomic optimizing behavior characteristic of computable general equilibrium models with asset portfolio behavior of macroeconomic models in Tobin's tradition.

Simulations with the model are carried out for a representative economy subject to the interest rate and terms-of-trade shocks of the early 1980s. The simulations suggest a large adverse impact on the distribution of income of a sharp contractionary package.

Bovenberg, A. Lans

PD January 1989. **TI** Tax Incentives and International Capital Flows: The Case of the United States and Japan. **AU** Bovenberg, A. Lans; Andersson, Krister; Aramaki, Kenji. Chand-Sheetal-K. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/5; International Monetary Fund, Washington, DC 20431. **PG** 45. **PR** No Charge. **JE** 441, 323, 411, 023. **KW** Capital Flows. Investment. Tax Policy. Portfolios. Taxes.

AB This paper explores how the tax treatment of investment and savings affects international capital flows as well as national and global welfare.

Focusing on portfolio investment, it evaluates the international effects of capital income taxes in the United States and Japan. During the 1980s, these taxes encouraged capital flows to the United States both by favoring investment in that country and by harming the country's relative savings performance. The paper concludes that the internationalization of financial markets calls for a careful study of the international implications of domestic tax policies.

Boyd, Sylvia C.

PD October 1988. **TI** Small Travelling Salesman Polytopes. **AU** Boyd, Sylvia C.; Cunningham, William H. **AA** Boyd: University of Ottawa. Cunningham: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88540-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 23. **PR** No Charge. **JE** 213. **KW** Travelling Salesman Problem. Polyhedra. Facets. Cutting Planes.

AB We introduce a new class of valid inequalities for the polytope of the symmetric travelling salesman problem. We also give complete characterizations of the polytope for 6 and 7 cities. For the latter case, the new inequalities are needed. These results are related to work of R.Z.

Norman in the 1950s.

Bradford, David F.

PD March 1989. **TI** Market Value vs. Financial Accounting Measures of National Saving. **AA** NBER Center for Advanced Study. **SR** National Bureau of Economic Research Working Paper: 2906; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138.

PG 56. **PR** $2.00. **JE** 221, 224. **KW** Savings. National Income. National Wealth.
AB Although National Income and Product Account (NIPA) saving measures, and especially NIPA saving rates, are widely used in both scholarly and journalistic treatments, they are seriously defective as representations of the variables derived from economic analysis, either for measuring economic performance or as elements of the explanation for consumption behavior. National Balance Sheet data on wealth at asset market value presented in this paper show that NIPA saving measures are not good proxies for market value measures. The picture of recent national saving experience that emerges from market value data is quite different. Various conceptual and data quality issues are discussed.

Brandenburger, Adam

TI Common Knowledge and Game Theory. **AU** Binmore, Ken; Brandenburger, Adam.

Branson, William H.

TI Adjustment and Income Distribution: A Counterfactual Analysis. **AU** Bourguignon, Francois; Branson, William H.; de Melo, Jaime.

Braun, Phillip

TI Major Macroeconomic Variables and Leading Indexes: Some Estimates of Their Interrelations, 1886-1982. **AU** Zarnowitz, Victor; Braun, Phillip.

Bregman, Arie

PD May 1989. **TI** High Tech Firms in Israeli Industry. **AU** Bregman, Arie; Fuss, Melvyn A.; Regev, Haim. **AA** Bregman: Bank of Israel. Fuss: University of Toronto. Regev: Central Bureau of Statistics. **SR** National Bureau of Economic Research Working Paper: 2969; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 611, 621, 821. **KW** Technology. Israel. Wages. Employment. Industry.
AB The main purpose of this study is to characterize and analyze high technology industrial firms in Israel. We are able to advance beyond previous empirical studies of high technology because we have access to a unique individual firm data set, a sample of 670 establishments in Israel for the year 1982. Not only do we have basic production data at the individual firm level, but also each firm's capital stock revalued to 1982 dollars. The largest concentration of High Tech firms are found in electronics and transport equipment industries, and the lowest in textiles and clothing. High Tech firms appear to be more productive, pay higher wages, and higher rates of return.

Brenner, Menachem

PD March 1989. **TI** New Financial Instruments to Hedge Changes in Volatility. **AU** Brenner, Menachem; Galai, Dan. **AA** Hebrew University. **SR** New York University Salomon Brothers Center Working Paper: 512; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 16. **PR** $4.00. **JE** 313, 311. **KW** Financial Instruments. Market Volatility. Interest Rates. Hedging. Bonds. Stock Markets..
AB With the introduction of stock index futures and options, and bond futures and options, investors can hedge against market volatility and interest rate volatility. One risk which investors are still exposed to is the change in these volatilities. There are two major sources for changes in market volatility: the first source stems from changes in macroeconomic factors, (e.g., inflation, interest rates, unemployment) or changes in economic policy. A second source is changes in volatility of equity of specific firms due to shifts in their capital structure, or, to news about their performance.

Brenton, P. A.

TI Voluntary Export Restraints: UK Restrictions on Imports of Leather Footwear from Eastern Europe. **AU** Winters, Alan L.; Brenton, P. A.

Brickley, James A.

PD September 1987. **TI** Ownership Structure and Voting on Antitakeover Amendments. **AU** Brickley, James A.; Lease, Ronald C.; Smith, Clifford W. Jr. **AA** Brickley and Smith: University of Rochester. Lease: Tulane University. **SR** University of Rochester Managerial Economics Research Center Working Paper: MERC 87-05; William E. Simon Graduate School of Business Administration, University of Rochester, Rochester, NY 14627. **PR** No Charge. **JE** 511, 512, 514. **KW** Institutions. Management. Shareholders. Voting. Incentives.
AB Theory suggests that shareholders who own blocks of stock have a stronger incentive to invest in voting on corporate issues than nonblockholders. Our evidence indicates that institutional investors and other blockholders vote more actively on anti-takeover amendments than nonblockholders, and opposition by institutions is greater when the proposal appears to harm shareholders. Our evidence suggests that institutions that are less subject to management influence, such as mutual funds, foundations, and public-employee pension funds are more likely to oppose management than banks, insurance companies, and trusts, which frequently derive benefits from lines of business under management control.

PD October 1988. **TI** Internal Corporate Restructuring: An Empirical Analysis. **AU** Brickley, James A.; Van Drunen, Leonard D. **AA** Brickley: University of Rochester. Van Drunen: University of Utah. **SR** University of Rochester Managerial Economics Research Center Working Paper: MERC 88-08; William E. Simon Graduate School of Business Administration, University of Rochester, Rochester, NY 14627. **PR** No Charge. **JE** 511, 512, 514. **KW** Restructuring. Organizational Form. Organizational Change. Internal Structure. Shareholders.
AB This paper examines firms that alter their internal structures (divisional configuration or management assignments). On average this restructuring increases shareholder wealth. Wealth gains appear to come from new information revealed about investment opportunities and increases in organizational efficiency. Performance before the restructurings suggests that poorly organized firms are motivated by market pressures to change their organizational structures. Change also occurs in healthy firms as part of the growth process. Restructuring often occurs where there is no evidence of a takeover threat. The evidence suggests possible declines in earnings immediately following the restructurings due to increased expenses.

Brightwell, Graham

PD September 1988. **TI** Reorientations of Covering Graphs. **AU** Brightwell, Graham; Nesetril, Jaroslav. **AA** Brightwell: Cambridge University. Nesetril: University of Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88527-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** No Charge. **JE** 213. **KW** Covering Graph. Orientation.

AB The aim of this note is to construct a graph G on n vertices which is a connected covering graph but has 2(o(n)) diagram orientations. This provides a negative answer to a question of I. Rival.

Broecker, Thorsten

PD November 1988. **TI** On the Strategic Relevance of the Financial Structure of Firms in a Two-Period Cournot Duopoly. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-211; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** No Charge. **JE** 611, 315, 026. **KW** Game Theory. Cournot Equilibrium. Financial Structure. Capital Market. Duopoly. Bankruptcy. Debt.

AB In this paper, we analyze the strategic relevance of the financial structure of a firm when it is engaged in oligopolistic competition over time. Specifically, we consider a two-period Cournot duopoly. Before a firm can enter the market, it has to pay some set-up cost. A firm can raise the funds needed by demanding debt of equity financing on a capital market. At the end of period one, first shareholders and then creditors of a firm are allowed to decide whether or not to liquidate the firm. The creditors' right to liquidate a firm is linked to the disability of the firm to meet its repayment obligations in this period. Being able to move first gives the shareholders of a firm a strategic advantage over the creditors of the other firm.

Brown, Charles

TI Measurement Error in Cross-Sectional and Longitudinal Labor Market Surveys: Results from Two Validation Studies. **AU** Bound, John; Brown, Charles; Duncan, Greg; Rodgers, Willard.

Brown, Stephen J.

PD February 1989. **TI** Macroeconomic Factors and the Japanese Equity Markets: The CAPMD Project. **AU** Brown, Stephen J.; Otsuki, Toshiyuki. **AA** Brown: New York University. Otsuki: International University of Japan. **SR** New York University Salomon Brothers Center Working Paper: 503; 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** No charge. **JE** 313, 122. **KW** Japan. Equity Market. Risk Premium. Asset Pricing.

AB Recent studies of the Japanese equity markets provide only limited evidence that macroeconomic variables are associated with positive risk premia in the Japanese equity markets. In particular, it does not appear that oil price changes of exchange rate sensitivity explains the pricing of Japanese equities. This paper explores alternative definitions of the macrofactors and the effect of controlling for industrial composition in the context of a new paradigm for estimating asset pricing models introduced by McElroy and Burmeister. We find evidence that from six to seven macrofactors are priced sources of risk in the Japanese equity markets. This paper briefly describes the McElroy and Burmeister model in Section 2, the data used in Section 3 and basic results in Section 4. Section 5 contains some suggestions for future work.

Bruce, Neil

PD November 1988. **TI** Transfers in Kind: Why They Can be Efficient and Non-Paternalistic. **AU** Bruce, Neil; Waldman, Michael. **AA** Bruce: Queen's University. Waldman: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 532; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 23. **PR** $2.50; checks payable to University of California at Regents. **JE** 022, 921. **KW** Transfers. Altruism. Bequests.

AB The traditional argument predicts that transfers motivated by altruism should always be given in cash rather than in kind, and given unconditionally rather than as matching grants. Observations of the real world indicate that, on the contrary, tied transfers are quite common. In this paper we show that it is not necessarily one of the assumptions of the traditional argument that is incorrect, but rather it may be the logic of the argument itself. In particular, we show that the traditional argument neglects the role that the Samaritan's dilemma may play in determining the form that transfers typically take.

Brunello, Giorgio

PD January 1989. **TI** Hysteresis and "The Japanese Unemployment Problem": A Preliminary Investigation. **AA** Centre for Labour Economics, LSE and Osaka University. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 330; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 49. **PR** No Charge. **JE** 824, 831, 122, 821. **KW** Trade Unions. Labor Market. Wages. Employment. Japan. Europe.

AB The Blanchard-Summers model of hysteresis is a very popular explanation of recent European unemployment. This paper asks if the same model can be used to encompass the Japanese experience. The answer is that hysteresis cannot be easily dismissed from recent Japanese data. They contain as much evidence of hysteresis as the European data. The paper explains some of the differences between Japan and Europe in terms of indexation to unexpected real shocks.

PD March 1989. **TI** Wage Determination in a Simple Hierarchical Model with a Nonzero Probability of Promotion. **AA** Osaka University and London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 338; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 37. **PR** No Charge. **JE** 831, 832, 824, 821. **KW** Trade Unions. Collective Bargaining. Wage Determination. Promotion.

AB This paper introduces a dynamic element into recent models of wage determination in unionized firms. This element is the probability of promotion to a higher rank. A nonzero probability of promotion generates interesting results. In particular one can show that for a range of employment growth the distinction between labor demand and contract curve is meaningful even if the median union voter has a survival probability equal to one.

Butz, David A.

PD November 1988. **TI** Nondiscrimination Guarantees and Holdup in Long-Term Contracts. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 533; Department of Economics, University of California at Los Angeles, 405 Hilgard Ave., Los Angeles, CA 90024. **PG** 31. **PR** $2.50; checks payable to University of California at Regents. **JE** 611, 514, 022. **KW** Long Term Contracts. Product Discrimination. Resale Market. Market Power.

AB A firm controls access to the market for some good. Rather than produce the good itself, the firm purchases it from homogeneous and risk neutral suppliers, and resells it to final consumers. Because suppliers invest in specific capital, the firm has ex post market power even though ex ante the market for suppliers is competitive. By promising each supplier "most" favorable treatment, the firm binds itself to a policy of nondiscrimination, and commits not to pit suppliers against one another in an effort (ex post) to secure more favorable terms. Under appropriate circumstances, these promises can be used in lieu of complex contingent-claims contracts.

Caballero, Ricardo J.

PD October 1988. **TI** Intertemporal Substitution and Consumption Fluctuations. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 409; Department of Economics, Columbia University, New York, NY 10027. **PG** 33. **PR** $5.00. **JE** 921, 212. **KW** Substitution. Consumption. Wealth Effects. Nondurables.

AB This paper proposes a new methodology to assess the relative importance of wealth and substitution effects, as well as to construct upper bounds for the degree of intertemporal substitution. This technique was put into practice using the quarterly postwar United States consumption of non-durables series. The results not only confirm Hall's (1988) findings of an extremely small coefficient of intertemporal substitution, but also show that this does not preclude substitution effects from having a significant role in explaining consumption fluctuations. In fact, my estimates suggest that almost half of the latter can be explained by extremely small -- perhaps imperceptible from the econometric point of view -- but long lasting changes in the slope of the consumption path.

PD December 1988. **TI** Real Exchange Rate Uncertainty and Exports: Multi-Country Empirical Evidence. **AU** Caballero, Ricardo J.; Corbo, Vittorio. **AA** Caballero: Columbia University. Corbo: The World Bank. **SR** Columbia Department of Economics Working Paper: 414; Department of Economics, Columbia University, New York, NY 10027. **PG** 18. **PR** $5.00. **JE** 431, 411, 026, 121. **KW** Exchange Rates. Exports. Uncertainty. Developing Countries.

AB The theoretical section of the paper studies the conditions under which increases in the degree of uncertainty about the real exchange rate depress exports. Existence of a fixed and predetermined factor is not enough. On the contrary, in this case the convexity of marginal profitability of capital with respect to the real exchange rate, implies that an increase in uncertainty raises exports. The cost of being caught with too little capital outweighs the cost of being caught with too much capital, hence it is optimal for firms to increase investment in order to reduce the probability of being surprised short of capital. The qualitative implications of the previous model are tested on several least developed countries (LDCs), showing a clear and strong negative effect of real exchange rate uncertainty on exports performance.

Cagan, Phillip

PD September 1988. **TI** The 1987 Stock Market Crash and the Wealth Effect. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 406; Department of Economics, Columbia University, New York, NY 10027. **PG** 16. **PR** $5.00. **JE** 131, 133, 224. **KW** Stock Market. Wealth. Economic Activity. Consumption.

AB In October 1987 the stock market crashed, reducing the value of the public's equity holdings by about a half trillion dollars. This sudden decline reduced the market value of the public's wealth significantly. According to a long literature developing the economics of consumption, such a large decline in wealth would reduce consumer expenditures. This literature views wealth as one of the important variables in addition to income determining consumption. Indeed, past studies typically estimated the effect of wealth on consumption to be around 5 percent, which implied that consumer expenditures would drop by ($500 billion times 5 per cent) $25 billion. With multiplier repercussions of (say) two, this implied a sizable $50 billion decline in Gross National Product. In fact consumption and GNP continued a moderate upward trend in the fourth quarter of 1987 and (at the time of writing) through at least 1988. No wealth effect could be detected, though initially it led many forecasters to predict a slowing or even a decline in economic activity.

PD September 1988. **TI** The Leading Indicators and Monetary Aggregates. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 407; Department of Economics, Columbia University, New York, NY 10027. **PG** 16. **PR** $5.00. **JE** 223, 225. **KW** Leading Indicators. Monetary Aggregates. Composite Index.

AB The composite leading index includes the monetary aggregate real M2. In recent years the behavior of all the monetary aggregates has changed, raising questions about their continued usefulness as reliable indicators. This paper evaluates the contribution of M2 and other monetary and financial aggregates to the composite index.

Calvo, Guillermo A.

PD January 1989. **TI** Is Inflation Effective for Liquidating Short-Term Nominal Debt? **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/2; International Monetary Fund, Washington, DC 20431. **PG** 10. **PR** No Charge. **JE** 431, 443, 134, 133, 311. **KW** Debt. Inflation. Public Debt. Devaluations. Government Bonds. Exchange Rates.

AB The possibility of reducing the real value of domestic non-indexed government debt through inflation is studied. A central result is that this kind of debt liquidation is possible even though prices are sticky and government bonds are short term. A policy implication is that short bond maturities are no safeguard against surprise devaluations intended to lower the burden of the debt. If devaluation incentives are present, it is further argued that nominal non-indexed bonds could give rise to situations where devaluations are a consequence of self-fulfilling expectations cycles.

Campbell, John Y.

PD April 1989. **TI** Consumption, Income, and Interest Rates: Reinterpreting the Time Series Evidence. **AU** Campbell, John Y.; Mankiw, N. Gregory. **AA** Campbell: Princeton University. Mankiw: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2924; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 45. **PR** $2.00. **JE** 921, 023. **KW** Life-cycle Hypothesis. Consumption. Income. Permanent Income. Economic Policy.

AB This paper proposes that the time series data on consumption, income, and interest rates are best viewed as generated not by a single representative consumer but by two groups of consumers. Half the consumers are forward-looking and consume their permanent income, but are extremely reluctant to substitute consumption intertemporally. Half the consumers follow the "rule of thumb" of consuming their current income. The paper documents three empirical regularities that, it argues, are best explained by this model. First, expected changes in income are associated with expected changes in consumption. Second, expected real interest rates are not associated with expected changes in consumption. Third, periods in which consumption is high relative to income are typically followed by high growth in income.

Canzoneri, Matthew B.

PD January 1989. **TI** A New Interpretation of the Coordination Problem and its Empirical Significance. **AU** Canzoneri, Matthew B.; Edison, Hali J. **AA** Canzoneri: Georgetown University. Edison: Division of International Finance, Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 340; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 49. **PR** No Charge. **JE** 422, 411, 113, 026. **KW** Policy Coordination. Macroeconomic Models. Nash Equilibrium. International Policy.

AB In this paper, we discuss a new interpretation of what might be meant by the "coordination" of policies; in this interpretation, the policymakers are selecting a noncooperative solution rather than a cooperative solution. The new interpretation is suggested by the fact that games typically have a large number of Nash solutions, and players are not indifferent as to which occurs. The multiplicity of solutions may be due to information sharing and surveillance, the choice of policy instruments, or the adoption of reputational strategies in repeated versions of the game. The "coordination" problem: results from policymakers' desire to coordinate on a good Nash equilibrium.

Card, David

PD January 1989. **TI** Deregulation and Labor Earnings in the Airline Industry. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 247; Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 48. **PR** $2.00. **JE** 615, 612. **KW** Deregulation. Airline Industry. Airplanes. Air Transportation.

AB This paper uses a variety of data sources to track the earnings of airline industry employees over the past two decades and assess the changes that have occurred since deregulation in 1978. Individual microdata from Census files as well as collective bargaining contract information are used to follow wages for pilots, flight attendants, mechanics, and workers as a whole. Perhaps surprisingly, I find that the real earnings of airline workers have declined only modestly in the past 10 years. Comparisons with other groups of workers suggest that these declines have been about the same or only slightly larger than those observed for most other workers in the economy. Furthermore, within the airline industry, the declines in earnings have been similar for all three groups of skilled workers. If the deregulated industry can be taken as a competitive benchmark, these findings suggest that the regulatory rents earned by airline workers prior to deregulation were relatively small: on the order of 10 percent of earnings.

Carlin, Wendy J.

TI Medium-Run Keynesianism: Hysteresis and Capital Scrapping. **AU** Soskice, David W.; Carlin, Wendy J.

PD December 1988. **TI** Austerity Policy in West Germany: Origins and Consequences. **AU** Carlin, Wendy J.; Jacob, Ralf. **AA** University College London. **SR** University College London Discussion Paper: 88-22; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 46. **PR** E150. **JE** 122, 133, 311, 321, 023. **KW** Macroeconomic Policy. West Germany. Economic Policy. Economic Stabilization.

AB West German macroeconomic performance since 1973 and especially since 1979 has been unimpressive relative to its past and to its major competitors. This article argues that policy decisions since the early 1980s have contributed to weak performance. In particular, it is argued that the adoption of restrictive monetary and fiscal policies along similar lines to the austerity package in the late 1940s was misconceived. Although successful in reducing inflation and improving profitability, the policy package has failed to generate a recovery of private sector investment. A central difference between the early 1950s and 1980s has been the absence in the latter period of a German export boom. The comparison between Germany and Japan in this regard is noted.

Cecchetti, Stephen G.

TI Wage Indexation and Time-Consistent Monetary Policy. **AU** Ball, Laurence; Cecchetti, Stephen G.

Chadha, Bankim

PD March 1989. **TI** Macroeconomics and Famine. **AU** Chadha, Bankim; Teja, Ranjit S. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/25; International Monetary Fund, Washington, DC 20431. **PG** 21. **PR** No Charge. **JE** 914, 311, 321, 121. **KW** Poverty. Famine. Food Supply. Fiscal Policy.

AB The aim of the paper is to shift the focus of famine analysis away from food supply towards the macroeconomic determinants of food entitlement -- i.e., to the ability of individuals to purchase food. Towards this end, we develop a model to demonstrate how loose monetary and fiscal policies may give rise to famine even when there is no change in per capita food output. We illustrate our findings with a description of the 1974 Bangladesh famine.

TI A Simulation Model for Financial Programming. **AU** Barth, Richard; Chadha, Bankim.

PD April 1989. **TI** Real Exchange Rate and Output Variability: The Role of Sticky Prices. **AA** International

Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/35; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** No Charge. **JE** 431, 411, 023. **KW** Prices. Exchange Rates. Open Economy. Output. Capital Mobility.

AB This paper investigates the relationships between the degree of price stickiness (inflexibility), the variability of output, and that of the real exchange rate in an open economy under flexible exchange rates and capital mobility. We show that there exists, in general, a critical degree of price inflexibility below which increased inflexibility of prices reduces the variability of output. We also show that, in general, as prices become more inflexible, the relationship between the variability of the real exchange rate and that of output will be nonmonotonic. That is, as the variability of the real exchange rate increases the variability of output will decline up to a point, and only then increase.

Checchi, Daniele

PD May 1988. **TI** Economic Interdependence and Structural Change: Results from Principal Component Analysis. **AA** Brescia University. **SR** CEPREMAP Discussion Paper: 8808; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 33. **PR** 20 FF. **JE** 131, 431, 122. **KW** International Interdependence. Macroeconomic Models. Business Cycle. Structural Change.

AB The objective of this paper is to analyze several recent changes in international interdependence among countries. After a short review of the existing literature, some empirical evidence of increased synchronization in movements is presented for a number of variables from the main seven countries in the OECD area. Using principal component techniques, investigations are conducted in order to test the possibility of structural change occurring in the sample period (1960-87). Using the 1973 as the split point, the behavior of financial variables and investment decisions is shown to be different when comparing the first with the second subperiod.

Choi, In

TI Testing for a Unit Root by Generalized Least Squares Methods in the Time and Frequency Domains. **AU** Phillips, Peter C. B.; Choi, In.

Ciocca, Pierluigi

PD November 1988. **TI** Real and Financial Instability: An Overview with Reference to Italy. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 496; 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** 27. **PR** No Charge. **JE** 311. **KW** Financial Crisis. Central Banks. Financial System. Monetary Policy.

AB In the first place, this particular central banker could perhaps restrict the subject matter. Indeed, I think it would be both wise and prudent for me to do so and I shall limit my remarks to the defenses that central banks build up against the risk of serious economic instability. I shall thus not address the issues of "normal" business cycles or the various problems of a badly performing economy; nor shall I deal with financial crises in the narrow sense, of the kind that do not involve the world of production. I shall therefore concentrate on crises, i.e. acute recessions affecting the spheres of production and investment, combined with swings in relative prices involving both real and financial assets.

Citrin, Daniel

PD April 1989. **TI** The Recent Behavior of U.S. Trade Prices. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/29; International Monetary Fund, Washington, DC 20431. **PG** 11. **PR** No Charge. **JE** 431, 227, 122. **KW** Trade Prices. Depreciation. Computers. Exports.

AB There is a widespread view that the adjustment of United States trade prices -- and hence merchandise trade flows -- in the face of the substantial dollar depreciation since early 1985 has been slower than might have been expected. This paper examines the recent behavior of United States trade prices, and concludes that the modest movements are largely attributable to a decline in computer prices, swings in commodity prices, and the growing importance of computers in United States trade. Empirical results suggest that once the influence of computer and commodity prices are taken into account, the recent behavior of United States trade prices is not out of line with historical experience.

Clark, Robert

TI The Pension Cost of Changing Jobs. **AU** Allen, Steven G.; Clark, Robert; McDermed, Ann A.

Clotfelter, Charles

PD April 1989. **TI** The Demand for Lottery Products. **AU** Clotfelter, Charles; Cook, Philip. **AA** Duke University. **SR** National Bureau of Economic Research Working Paper: 2928; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** $2.00. **JE** 921, 132, 026. **KW** Lottery. Gambling. Consumer Demand.

AB Lotteries constitute one of the fastest-growing categories of consumer expenditure in the United States. Not only have an increasing number of states legalized state lotteries, but the per capita expenditures on lotteries in lottery states have increased at an annual rate of 13 percent after inflation between 1975 and 1988. This article examines the demand for lottery products. The organizational form of the lottery is evolving in response to the quest for higher revenues: in particular, smaller states are forming a multistate game. This article is a chapter from Selling Hope: State Lotteries in America, an NBER monograph to be published by Harvard University Press in November, 1989.

Coe, David

PD April 1989. **TI** Structural Determinants of the Natural Rate of Unemployment in Canada. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/31; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** No Charge. **JE** 822, 824. **KW** Unemployment. Canada. Real Wages.

AB This paper presents empirical estimates of the policy and structural determinants of the natural rate of unemployment in Canada. The paper begins with a discussion of structural features of the economy which impinge on the adjustment of real wages to their equilibrium level. Estimates are presented showing how the generosity of the unemployment insurance system is related to past levels of unemployment. The empirical results indicate that government policies have been largely responsible for changes in the natural rate, and hence can contribute to a reduction in the natural rate in the medium term.

Coggins, Jay S.

PD December 1988. **TI** Existence of Equilibria in Lobbying Economies. **AU** Coggins, Jay S.; Graham, Tomasi Theodore; Roe, Terry L. **AA** University of Minnesota. **SR** University of Minnesota Economic Development Center Bulletin: 88-5; 231 Classroom Office Building, University of Minnesota, Saint Paul, MN 55108. **PG** 29. **PR** No Charge. **JE** 021, 026, 113, 321. **KW** Political Economy. Lobbying. Government Policy. Noncooperative Game.

AB Governments often establish economic policy in response to political pressure by interest groups. Since these groups' political activities may alter prices, economies so affected cannot be characterized by perfect competition. We develop a model of a "lobbying economy" in which consumers' choice of political activity simultaneously determines relative prices and income levels. They balance the loss in income due to lobbying payments against the potential gain in wealth from a favorable government price policy. This paper proves the existence of an equilibrium in economies of this sort. We reformulate the economy as a generalized lobbying game and prove the existence of a noncooperative equilibrium in the game. This equilibrium is then shown to be an equilibrium in the economy.

Cohen, Daniel

PD October 1988. **TI** Is the Discount on the Secondary Market a Case for LDC Debt Relief? **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8823; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 28. **PR** 20 FF. **JE** 443, 432, 441. **KW** Debt Rescheduling. Developing Countries. Debt Crisis.

AB This paper analyzes the optimal rescheduling strategy of lenders whose claims on a country shows a discount on the secondary markets. The paper shows that lenders should proceed as follows. They should split the debt into two components: a performing and nonperforming part. They should act "as if" the debt amounted to the performing part and scale down how much money the borrower should service on that part only. The optimal value of the "nonperforming" part is shown to be strictly positive, while the equilibrium value of the "performing part" is shown to coincide with the market value of the debt. The paper relates this result to the "debt-overhang" argument (according to which too large a nominal claim may reduce the market value of the debt) and proposes an econometric estimate of the importance of this problem.

Cook, Philip

TI The Demand for Lottery Products. **AU** Clotfelter, Charles; Cook, Philip.

Cooper, Russell

PD April 1989. **TI** Macroeconomic Implications of Production Bunching: Factor Demand Linkages. **AU** Cooper, Russell; Haltiwanger, John C. **AA** Cooper: University of Iowa. Haltiwanger: University of Maryland. **SR** National Bureau of Economic Research Working Paper: 2976; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 022, 023. **KW** Inventories. Production. Technology. Competition. Fluctuations.

AB The literature on inventory holdings stresses their role in smoothing production when costs are convex. Existing empirical evidence suggests that output is more variable than consumption so that production smoothing is not apparently present. One way of explaining this finding is to allow for nonconvex technologies. In this paper, we investigate some macroeconomic implications of the proposition that at least some firms in the economy produce with nonconvex technologies. We begin our analysis by studying a simple Robinson Crusoe economy with a single, storable good which is produced from a nonconvex technology. The single agent can produce a finite amount of output simply by incurring a fixed production cost. We demonstrate that the efficient solution to this problem will entail periods of production followed by periods of inactivity.

Corbo, Vittorio

TI Real Exchange Rate Uncertainty and Exports: Multi-Country Empirical Evidence. **AU** Caballero, Ricardo J.; Corbo, Vittorio.

Corcoran, Mary

PD March 1989. **TI** Effects of Family and Community Background on Men's Economic Status. **AU** Corcoran, Mary; Gordon, Roger H.; Laren, Deborah; Solon, Gary. **AA** University of Michigan, Ann Arbor. **SR** National Bureau of Economic Research Working Paper: 2896; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $2.00. **JE** 931, 921, 914, 917. **KW** Consumer Economics. Community. Urban Economics. Poverty. Standard of Living. Economic Status.

AB This study uses intergenerational data from the Panel Study of Income Dynamics to investigate the effects of family and community background on men's economic status. It is distinguished from most previous studies by its emphasis on community influences and on influences from poverty and welfare use. Also, our parental characteristics data are more comprehensive and accurate than those of many earlier studies. We find substantial disadvantages in economic status for black men, men from lower-income families, and men from more welfare-dependent families or communities. Otherwise, we do not find much evidence of community influences. This, however, might be due to the grossness of the geographic detail at which our community variables are measured.

Crafts, Nick

PD November 1988. **TI** British Economic Growth Before and After 1979: A Review of the Evidence. **AA** University of Warwick. **SR** Centre for Economic Policy Research Discussion Paper: 292; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 39. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 122, 825, 226, 113. **KW** Economic Growth. Productivity. Supply Side Policy. England. Fiscal Policy.

AB The paper surveys the evidence on British economic growth performance since the war. It is shown that the hypotheses proposed by Bacon and Eltis, Kaldor and Thirlwall to account for slow growth are inadequate and that supply side problems leading to poor productivity performance are the most plausible explanation of Britain's relative decline. It is argued both that these failings have their basis in the political and institutional legacy of postwar Britain and that the Thatcher years have seen only a partial solution to supply side weaknesses.

Cukierman, Alex

PD May 1989. **TI** Optimal Accommodation by Strong Policymakers under Incomplete Information. **AU** Cukierman, Alex; Liviatan, Nissan. **AA** Liviatan: Hebrew University of Jerusalem. Cukierman: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 13-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 55. **PR** No Charge. **JE** 311, 134, 133, 023. **KW** Inflation. Expectations. Monetary Policy. Policymakers. Imperfect Information.

AB It is well known that the ability to precommit resolves the dynamic inconsistency of monetary policy. This paper examines the optimal behavior of a policymaker who is able to precommit (referred to as strong) when the public entertains the possibility that he is either strong or weak (not able to precommit). The main result is that in the presence of doubts about their type it may be optimal, even for strong policymakers to partially accommodate inflationary expectations. The "shadow" of weakness prevents them from delivering their best performance. Thus, in the presence of incomplete information the ability to precommit does not fully resolve the dynamic inconsistency of monetary policy.

Cummins, Clint

TI The R&D Master File Documentation. **AU** Hall, Bronwyn H.; Cummins, Clint; Laderman, Elizabeth; Mundy, Joy.

Cunningham, William H.

TI Small Travelling Salesman Polytopes. **AU** Boyd, Sylvia C.; Cunningham, William H.

PD December 1988. **TI** B-Matching Degree Sequence Polyhedra. **AU** Cunningham, William H.; Green, Krotki Jan. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88535-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 17. **PR** No Charge. **JE** 213. **KW** B-Matching. Degree Sequence. Convex Hull. Simple Graphs. Separation Theorem.

AB A capacitated b-matching in a graph is an assignment of nonnegative integers to edges, each at most a given capacity and the sum at each vertex at most a given bound. Its degree sequence is the vector whose components are the sums at each vertex. We give a linearinequality description of the convex hull of degree sequences of capacitated b-matchings of a graph. This result includes as special cases theorems of Balas-Pulleyblank on matchable sets and Koren on degree sequences of simple graphs. We also give a minmax separation theorem, and describe a connection with submodular functions.

PD December 1988. **TI** A Separation Algorithm for the Matchable Set Polytope. **AU** Cunningham, William H.; Green, Krotki Jan. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89554-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 16. **PR** No Charge. **JE** 213, 214. **KW** Matchable Sets. Separation Problem. Convex Hull. Algorithm.

AB A matchable set of a graph is a set of vertices joined in pairs by disjoint edges. Balas and Pulleyblank gave a linear inequality description of the convex hull of matchable sets. We give a polynomial time combinatorial algorithm for the separation problem for this polytope, and a minmax theorem characterizing the maximum violation by a given point of an inequality of the system.

Dana, Rose Anne

PD July 1988. **TI** A Note on the Bellman Equation of the "Overtaking Criterion". **AU** Dana, Rose Anne; Le Van, Cuong. **AA** Dana: Paris VI University. Le Van: CEPREMAP. **SR** CEPREMAP Discussion Paper: 8820; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 12. **PR** 20 FF. **JE** 022, 111, 213. **KW** Bellman Equation. Value Function. Overtaking Criterion. Dynamic System.

AB In this paper we discuss properties of solutions to the Bellman equation of the "overtaking criterion" and also prove that the optimal trajectory can be represented by a continuous dynamical system.

PD July 1988. **TI** Asymptotic Properties of a Leontief Economy. **AU** Dana, Rose Anne; Florenzano, Monique; Levan, Cuong; Levy, Dominique. **AA** Dana: Paris VI University. Florenzano, Levan, Levy: CEPREMAP-CNRS. **SR** CEPREMAP Discussion Paper: 8814; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 22. **PR** 20 FF. **JE** 021, 111, 213. **KW** General Equilibrium Model. Intertemporal Models. Preferences. Economic Growth.

AB In this paper we discuss the asymptotic properties of equilibrium quantities of a Leontief economy when agents have additively separable utilities. We estimate the rate of growth of equilibrium quantities and prices that either tend to zero or infinity or remain bounded below and above by strictly positive vectors. In the case of homogeneous preferences we prove that the quantities of any equilibrium converge to those of an equilibrium that grows at a constant rate.

Daniel, Kermit

PD March 1989. **TI** A Note on Mark Testa, et al., "Employment and Marriage Among Inner-City Fathers". **AA** University of Chicago and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 89-3; Economics Research Center/NORC, 1155 East 60th Street, Chicago, IL 60637. **PG** 16. **PR** $2.00; Send requests to Librarian, Economics Research Center. **JE** 931, 932, 921. **KW** Poverty. Children. Pregnancy. Inner City.

AB This note comments on a paper by Testa, Astone, Krogh, and Neckerman that has received some attention in the media recently. In "Employment and Marriage Among Inner-City Fathers" these authors present some results concerning out-of-wedlock conceptions of people living in poverty tracts in Chicago. Unfortunately, the authors seriously misinterpret their results. They attempt to test two explanations for the rise in single parenthood, that proposed by Charles Murray in Losing Ground and that proposed by William J. Wilson and Kathryn Neckerman in The Truly Disadvantaged. Testa, et al. claim to find empirical support for Wilson and Neckerman's explanation while rejecting Murray's, but actually their results run contrary to Wilson and Neckerman's hypothesis and are irrelevant to Murray's.

Davies, James

PD March 1989. **TI** Taxes and Capital Formation: How Important is Human Capital?. **AU** Davies, James; Whalley, John. **AA** University of Western Ontario. **SR** National Bureau of Economic Research Working Paper: 2899; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 51. **PR** $2.00. **JE** 323, 522, 851, 022, 023. **KW** Human Capital. Capital. Taxes. Growth Model. Life-cycle Hypothesis. Investment.

AB This paper explores how explicit incorporation of human capital affects dynamic general equilibrium analysis of the effects of taxes on capital formation and welfare in a life-cycle growth model. In contrast to the results of partial equilibrium analysis, we find that estimates of the full dynamic welfare costs of capital income taxes are little affected by incorporating human capital. While the short run impact effects of replacing income taxes with wage or consumption taxes are significantly affected by endogenizing human capital, these effects are short lived. In the long run the rate of return on non-human capital falls to approximately its initial net of tax level, and steady state human capital investment plant are therefore little affected by the tax changes.

De Long, JB

PD March 1989. **TI** Positive Feedback Investment Strategies and Destabilizing Rational Speculation. **AU** De Long, JB; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert. **AA** De Long, Summers and Waldmann: Harvard University. Shleifer: University of Chicago. **SR** National Bureau of Economic Research Working Paper: 2880; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 313, 311. **KW** Financial Markets. Investment Strategy. Prices. Volatility. Stock Market.

AB Analyses of the role of rational speculators in financial markets usually presume that such investors dampen price fluctuations by trading against liquidity or noise traders. This conclusion does not necessarily hold when noise traders follow positive-feedback investment strategies -- buy when prices rise and sell when prices fall. In such cases, it may pay rational speculators to try to jump on the bandwagon early and to purchase ahead of noise trader demand. If rational speculators' attempts to jump on the bandwagon early trigger positive-feedback investment strategies, then an increase in the number of forward-looking rational speculators can lead to increased volatility of prices about fundamentals.

de Melo, Jaime

TI Adjustment and Income Distribution: A Counterfactual Analysis. **AU** Bourguignon, Francois; Branson, William H.; de Melo, Jaime.

de Palma, Andre

PD January 1989. **TI** Equilibrium in Competing Networks with Differentiated Products. **AU** de Palma, Andre; Leruth, Luc. **AA** de Palma: Northwestern University. Leruth: Universite Libre de Bruxelles and EIASM. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 814; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 29. **PR** No Charge. **JE** 611, 921, 022. **KW** Networks. Bertrand Equilibrium. Competition. Entry Barriers.

AB A number of goods are characterized by the fact that the utility a consumer derives from buying them increases with the number of consumers who are also buying them. Such goods are commonly referred to as "networks" to which consumers decide whether or not to get linked. The paper is organized as follows. In section 2, we reconsider Bertrand competition in the presence of network externalities. We give a simple argument to show why demand is not defined and we also show how externalities can play the role of a barrier to entry even when the potential entrant offers a product of better quality. In section 3, we propose a general model of duopolistic competition with horizontally differentiated products. We show that externalities may entail nonexistence of a Bertrand equilibrium when the degree of differentiation is low.

del Sol, Patricio

PD August 1988. **TI** Time Inconsistency and the Advantage of Not Committing: The Importer of an Exhaustible Resource. **AU** del Sol, Patricio; Sweeney, James. **AA** del Sol: Universidad Catolica de Chile. Sweeney: Stanford University. **SR** Stanford Center for Economic Policy Research Discussion Paper: 143; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 19. **PR** No Charge. **JE** 721, 022. **KW** Natural Resource. Prices. Commitment.

AB We show that a dominant consumer or importer of an exhaustible resource, with power to set prices may be better off by not committing any prices than by committing only near term prices. This result suggests that Kydland's and Prescott's (1977) argument for "rules rather than discretion" may be incorrect under certain conditions.

Del Valle, Marguerite

TI Patent and Copyright Protection for Innovations in Finance. **AU** Judlowe, Stephen; Petruzzi, Christopher; Del Valle, Marguerite.

Dellas, Harris

PD April 1989. **TI** Currency Switch and the Choice of an International Reserve Currency. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/27; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** No Charge. **JE** 431, 432, 441, 411. **KW** Inflation. Capital Flight. Currency. Foreign Liabilities.

AB This paper explains why sovereign issuers of reserve currencies do not use unexpected inflation to repudiate their foreign liabilities. Monetary restraint is exercised because of the fear that reserve users will switch to other currencies if an attempt is made to raise "excessive" revenue. By the same reasoning, capital flight can serve as a deterrent to excessive money creation. It is shown that even without policy precommitment or aversion to inflation, the availability of alternative currencies can support an equilibrium with a finite, time consistent inflation rate.

DeMarzo, Peter M.

PD January 1989. **TI** Corporate Financial Hedging with Proprietary Information. **AU** DeMarzo, Peter M.; Duffie, J. Darrell. **AA** Stanford University. **SR** Universitat Bonn

Sonderforschungsbereich 303 - Discussion Paper: A-222; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 22. **PR** No Charge. **JE** 313, 514, 521. **KW** Hedging. Modigliani-Miller Theorem. Asymmetric Information.

AB If a firm has information pertinent to its own dividend stream that is not made available to its shareholders, it may be in the interests of the firm and its shareholders to adopt a financial hedging policy. This is in contrast with the Modigliani-Miller Theorem, which implies that, with informational symmetry, such financial hedging is irrelevant.

Demougin, Dominique

PD May 1989. **TI** A Signalling Model of Nominal Price Inertia. **AU** Demougin, Dominique; Fishman, Arthur. **AA** Demougin: University of Toronto. Fishman: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 16-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 31. **PR** No Charge. **JE** 026, 134. **KW** Signalling Game. Separating Equilibrium. Signalling. Price Inertia. Imperfect Information. Market Structure.

AB We present a signalling model which ascribes real effects to nominal disturbances. The market structure is characterized by imperfect information about prices which in the absence of aggregate informational asymmetries grants individual sellers monopoly status as in Diamond (1971).

In addition, agents must incur an arbitrarily small cost to become perfectly informed about an aggregate nominal shock. If a seller has incurred this cost, its buyers may costlessly infer its private aggregate information from its nominal price. The solution of this signalling game specifies a set of sellers which separate and another which pools and thus exhibits price inertia. The aggregate price level lies below the separating and above the pooling price.

Deneckere, Raymond J.

TI Stationary Sequential Equilibria in Bargaining with Two-Sided Incomplete Information. **AU** Ausubel, Lawrence M.; Deneckere, Raymond J.

TI Simple Macroeconomic Models With Very Complicated Dynamics. **AU** Boldrin, Michele; Deneckere, Raymond J.

Dhrymes, Phoebus J.

PD January 1989. **TI** Autoregressive Errors in Singular Systems of Equations. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 416; Department of Economics, Columbia University, New York, NY 10027. **PG** 37. **PR** $5.00. **JE** 211. **KW** Linear Models. Covariance Matrix. Autoregression.

AB We consider a system of general linear models, where the system error vector has a singular covariance matrix owing to various "adding up" requirements, and where, in addition, the error vector obeys an autoregressive scheme. The paper reformulates the problem considered earlier by Berndt and Savin (1975), as well as others before them, so that its solution is far simpler, being the natural extension of a Cochrane-Orcutt like procedure to a system of equations. This reformulation enables us to treat all parameters symmetrically and discloses a set of conditions, which is different from that exhibited in the framework provided by Berndt and Savin.

Diba, Behzad T.

PD November 1988. **TI** Have Money-Stock Fluctuations had a Liquidity Effect on Expected Real Interest Rates? **AU** Diba, Behzad T.; Oh, Seonghwan. **AA** Diba: Georgetown University. Oh: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 534; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 30. **PR** $2.50; checks payable to University of California at Regents. **JE** 131, 132, 133, 023. **KW** Interest Rates. Business Cycle. Granger Causality. Liquidity Effect. Monetary Aggregates.

AB This paper reports some empirical evidence on the relation between the expected real interest rate and monetary aggregates in postwar United States data. We find some evidence against the hypothesis, implied by the Real Business Cycle model of Litterman and Weiss (1985), that the expected real interest rate follows a univariate autoregressive process, not Granger-caused by monetary aggregates. But we find less evidence against a more general bivariate model -- suggested by what Barro (1987) refers to as "the basic market clearing model". The evidence against both models becomes much weaker when we take the monetary base, rather than M2, as our measure of the money stock. Using the bivariate model as our null hypothesis, we find no evidence that money stock fluctuations have had a short run liquidity effect on the real interest rate.

PD February 1989. **TI** Money, Inflation, and the Expected Real Interest Rate. **AU** Diba, Behzad T.; Oh, Seonghwan. **AA** Diba: Georgetown University. Oh: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 548; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 28. **PR** $2.50; checks payable to University of California at Regents. **JE** 132, 133, 131, 023. **KW** Money. Inflation. Real Interest Rates. Fisher Hypothesis. Business Cycles. Expectations. Serial Correlation.

AB This paper tests the exclusion of lagged rates of inflation and money growth from regression equations, with serially correlated disturbances, for the expected real interest rate. Our tests exploit an extension of Mishkin's (1981) observation that under the maintained hypothesis of rational expectations, a regression of the ex post real interest rate on predetermined variables yields valid test statistics for drawing inferences about the correlations of these variables with the expected real interest rate. We discuss some implications of our tests for the empirical literature on the Fisher hypothesis, and for a real business cycle model developed by Litterman and Weiss.

Diebold, Francis X.

PD March 1989. **TI** Is Consumption Too Smooth? Long Memory and the Deaton Paradox. **AU** Diebold, Francis X.; Rudebusch, Glenn D. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 57; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 023, 921. **KW** Life-Cycle Model. Permanent-Income Hypothesis. Consumption. Unit Root. Long Memory Process.

AB Under common stochastic representations of income, the permanent-income hypothesis predicts that changes in consumption should be larger than innovations to income. This prediction is not supported by the data, and a variety of theoretical explanations have been advanced in the literature. We provide a complementary empirical investigation using a generalized class of long memory fractionally-integrated stochastic representations; thus, we can examine the possibility that the alleged excess smoothness of consumption is the result of ad hoc restrictions on low-frequency dynamics implicit in commonly used ARIMA representations of income. Furthermore, we can construct confidence intervals associated with the long run impulse response of income that are not conditional upon the presence of a unit root in income. These interval estimates are quite wide, and include regions in which the "excess smoothness" paradox vanishes.

Diwan, Ishac

PD May 1989. **TI** Patents, Appropriate Technology, and North-South Trade. **AU** Diwan, Ishac; Rodrik, Dani. **AA** Diwan: The World Bank. Rodrik: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2974; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 621, 612, 022. **KW** Patents. Innovations. Technology. Market Size.

AB We consider the differential incentives of the North and the South to provide patent protection to innovating firms in the North. The two regions are assumed to have a different distribution of preferences over the range of exploitable technologies. Due to the scarcity of R&D resources, the two regions are in potential competition with each other to encourage the development of technologies most suited to their needs. This provides a motive for the South to provide patent protection even when it constitutes a small share of the world market and hence has strong free riding incentives otherwise. A benevolent global planner will set equal rates of patent protection only when it weights the welfare of the two regions equally. We find that the comparative statics of the Nash equilibrium exhibit considerable ambiguity.

Donnenfeld, Shabtai

PD March 1989. **TI** Pricing of Exports and Exchange Rate Uncertainty. **AU** Donnenfeld, Shabtai; Zilcha, Itzhak. **AA** Donnenfeld: State University of New York, Stony Brook. Zilcha: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 12-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 22. **PR** No Charge. **JE** 431, 411, 022. **KW** International Trade. Exports. Invoicing. Exchange Rates. Decision Process.

AB This paper examines the pricing-cum-invoicing strategies available to an exporting firm under fluctuating exchange rates. The analysis focuses on the sequential decision making process regarding production, pricing and sales allocation across markets and the way these decisions are affected by the currency in which exports are invoiced. We show that invoicing exports in the importer's currency rather than in the exporter's currency entails higher expected profits, larger total production and larger expected exports. Furthermore we compare the exporter's decisions when it precommits to a price before the exchange rate is known to the case of no price precommitment. We find that in the latter case the firm produces more, exports more and enjoys higher profits than in the former case.

Dornbusch, Rudiger

PD March 1989. **TI** Financial Factors in Economic Development. **AU** Dornbusch, Rudiger; Reynoso, Alejandro. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2889; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $2.00. **JE** 112, 121, 441. **KW** Financial Markets. Economic Development. Developing Countries. Savings. Capital Mobility. Foreign Investment.

AB Financial factors have been assigned strategic importance in economic development. But very different factors have been isolated in the respective experiences: in Asia unrepressed financial markets in mobilizing saving and allocating investment have been given prominence. In Latin America the central question is the role of inflationary finance, the scope for deficits to enhance growth and, increasingly, the feedback from high and unstable inflation to poor economic performance. This paper reviews and contrasts the two approaches and concludes that the strong claims for the benefits of financial liberalization are not supported by evidence.

PD May 1989. **TI** The Macroeconomics of Populism in Latin America. **AU** Dornbusch, Rudiger; Edwards, Sebastian. **AA** Dornbusch: Massachusetts Institute of Technology. Edwards: University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 2986; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 121, 113, 133, 023. **KW** Growth Theory. Income Distribution. Economic Policy. Inflation. Deficits.

AB Macroeconomic populism is an approach to economics that emphasizes growth and income distribution and deemphasizes the risks of inflation and deficit finance, external constraints and the reaction of economic agents to agressive non-market policies. The purpose of our paper is to show that policy experiences in different countries and periods share common features, from the initial conditions, the motivation for policies, the argument that the country's conditions are different, to the ultimate collapse. Our central thesis is that the macroeconomics of various experiences is very much the same, even if the politics differed greatly.

Driffill, John

PD October 1988. **TI** Costs of Inflation. **AU** Driffill, John; Mizon, Grayham E.; Ulph, Alistair. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8815; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 87. **PR** No Charge. **JE** 134, 133, 227, 311. **KW** Inflation. Monetary Policy. Prices. Economic Policy. Welfare Costs.

AB Economic policy in most Western countries over the past ten years has given prominence to reducing the rate of inflation, with consequences in some countries like the United Kingdom of high rates of unemployment. In this chapter we shall review the attempts that have been made by economists to evaluate the costs imposed on an economy by inflation. We begin, in the next section, with the simplest case of perfectly anticipated inflation where there are no other distortions to the economy. In this case inflation is viewed as a tax on real money balances, and the evaluation of the costs of inflation is a standard application of the welfare effects of a single distortion. The analysis is then extended to allow for the possibility of other distortions in the economy, of which we consider two related to the tax system: the nonexistence of lump-sum taxes, and the failure of tax systems in practice to be fully indexed.

Dubey, Pradeep

PD January 1989. **TI** Repeated Trade and the Velocity of Money. **AU** Dubey, Pradeep; Sahi, Siddhartha; Shubik, Martin. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 895; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 16. **PR** $2.00. **JE** 021, 311. **KW** Walrasian Equilibrium. Oligopoly. Trading.

AB There are two sources of inefficiency of strategic equilibria (SE) in market mechanisms. The first is the oligopolistic effect, which occurs when an agent can single-handedly influence prices. With a continuum of agents we get "perfect competition" and this effect is, of course, wiped out. But the inefficiency of SE's may nevertheless persist because agents are not "perfectly liquid", i.e., the constraints of the mechanism are such that they cannot carry out arbitrary trades at the market prices. Our main result is that, if enough repeated rounds of trade are permitted within a single utility period, then the liquidity problem is overcome: SE outcomes turn out to be not only efficient but, in fact, Walrasian.

Duffie, J. Darrell

TI Corporate Financial Hedging with Proprietary Information. **AU** DeMarzo, Peter M.; Duffie, J. Darrell.

PD January 1989. **TI** Mean-Variance Hedging in Continuous Time. **AU** Duffie, J. Darrell; Richardson, Henry R. **AA** Duffie: Stanford University. Richardson: Metron Incorporated. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-223; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** No Charge. **JE** 313. **KW** Hedging. Optimal Strategies. Futures Contracts. Trading Strategies.

AB A hedger is faced with a commitment in one asset and the opportunity to continuously trade futures contracts on another asset whose returns are correlated with those of the committed asset. Optimal futures trading strategies are presented in closed form for several mean-variance and quadratic objectives.

Dumas, Bernard

PD April 1989. **TI** Perishable Investment and Hysteresis in Capital Formation. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2930; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 611, 522, 514, 531. **KW** Advertising. Investment. Marketing. Entry Barriers. Capital Formation.

AB Entry into a market seems to necessitate some investment into "marketing capital" (or distribution capital: advertising, dealerships etc...). This form of investment has the property that, if it is unused for some time, it quickly becomes worthless. The purpose of the present paper is to produce a general equilibrium model of capital formation in an economy subject to random shocks, when marketing capital (with the above properties) is used in distribution, in addition to the "normal" capital used in production. We exhibit an analytical solution to the dynamic program representing the welfare optimum problem, along with the shadow prices corresponding to this program. These are also the prices which would support the general equilibrium of a decentralized market economy.

Duncan, Greg

TI Measurement Error in Cross-Sectional and Longitudinal Labor Market Surveys: Results from Two Validation Studies. **AU** Bound, John; Brown, Charles; Duncan, Greg; Rodgers, Willard.

Durlauf, Steven N.

PD August 1988. **TI** Sample Path Properties of Rational Bubbles. **AA** Stanford University. **SR** Stanford Center for Economic Policy Research Discussion Paper: 139; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 26. **PR** No Charge. **JE** 313, 311. **KW** Asset Pricing. Bubbles. Rationality. Transversality.

AB This paper explores some of the properties of rational bubbles in linear asset pricing equations. The paper demonstrates that such bubbles (1) are nonnegative over almost all sample paths, and (2) subdivide into two classes. The first class is degenerate, whereas the second class is erratic. Specifically, all bubbles either converge to zero with probability 1 or diverge to infinity with positive probability. These two classes may be separately discussed in terms of empirical and theoretical implications. With respect to hypothesis testing, convergent bubbles are difficult to identify, whereas divergent bubbles are easy to uncover. If bubbles possess uniformly bounded innovations, it is possible to develop consistent tests for their presence which do not require knowledge of the information sets of agents. However, standard tests for bubbles are not robust to many forms of misspecification. Reconciling bubbles with intertemporal optimizing models, on the other hand, appears to be quite difficult. The beginning of a rational bubble may be ruled out in a "near rational" model, based upon sample path arguments, even if the bubble fulfills a suitably defined transversality condition.

TI Are Tax Rates Martingales. **AU** Bizer, David; Durlauf, Steven N.

PD April 1989. **TI** Bounds on the Variances of Specification Errors in Models with Expectations. **AU** Durlauf, Steven N.; Hall, Robert E. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2936; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 211. **KW** Specification. Expectations. Information Sets. Lagged Dependent Variables.

AB Under rather general conditions, observed covariances place a useful lower bound on the variance of the misspecification or noise in models based on expectations. We construct an optimal bound on model noise that captures the complete set of testable restrictions on an expectations based model. The power of different tests may be ranked according to the information restrictions employed in constructing noise estimates. Our results show that specification tests which use the history of lagged dependent variables are usually better able to uncover model noise than based on information sets that exclude those variables.

Dutta, Jayasri

PD April 1989. **TI** What Do Heteroskedasticity Tests Detect?. **AU** Dutta, Jayasri; Zaman, Asad. **AA** Columbia University. **SR** Columbia First Bostcn Series in Money, Economics and Finance Working Paper: FB-89-10; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 26. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 211. **KW** Heteroskedasticity. Unbiased Tests. Consistent Tests. Information Matrix Tests.

AB A test can be said to 'detect' a heteroskedastic variance sequence only if (at the very least) its power exceeds its size. Using this principle to define the 'implicit null' and 'alternative' for a test, we analyze the performance of several popular tests for heteroskedasticity. The tests examined belong to one of two broad classes; the Szroeter class of exact tests, and the Bickel class of asymptotic chi-squared tests, which includes Lagrange Multiplier tests. We show that for all such tests, there exist many kinds of heteroskedasticity which the tests fail to detect. Using a technique due to Pitman, we construct a test which detects all kinds of heteroskedasticity in the normal model.

Ebrill, Liam P.

PD February 1989. **TI** Some Microeconomics of Fiscal Deficit Reductions: The Case of Tax Expenditures. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/14; International Monetary Fund, Washington, DC 20431. **PR** No Charge. **JE** 321, 323, 024, 921. **KW** Fiscal Spending. Budget Deficit. Welfare Analysis. Taxation.

AB This paper considers the merits of reducing or eliminating some specific tax expenditure measures currently in force in the United States with a view to reducing the federal fiscal deficit. The paper starts from the observation that savings decisions in the United States are distorted and that therefore government borrowing to finance current expenditures results in significant welfare losses. It is possible by reducing or eliminating individual tax expenditures to reduce the fiscal deficit while at the same time enhancing economic efficiency. However, tax expenditures are heterogeneous so changes to the range of tax expenditures should be selective.

Edison, Hali J.

TI A New Interpretation of the Coordination Problem and its Empirical Significance. **AU** Canzoneri, Matthew B.; Edison, Hali J.

PD January 1989. **TI** A Long-Run View of the European Monetary System. **AU** Edison, Hali J.; Fisher, Eric O. N. **AA** Edison: Division of International Finance, Board of Governors of the Federal Reserve System. Fisher: Cornell University. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 339; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 43. **PR** No Charge. **JE** 431, 432, 227, 131. **KW** Exchange Rates. EMS. Unit Roots. Co-integration. Price Index. Inflation.

AB This paper analyzes the exchange rates and consumer price indices of the six largest countries of the European Monetary System (EMS). The analysis covers the entire period of floating exchange rates. This paper shows that many of the implied real exchange rates have unit roots, even when one allows for the possibility of a structural break occurring at the time of the formation of the EMS. Further, prices and exchange rates are not co-integrated during the EMS period. There is strong evidence that there is a quadratic time trend in these price indices and weak evidence that exchange rates and prices were more highly co-integrated before the advent of the EMS. The data suggest that the eleven realignments of the EMS between 1979 and 1988 have not served fully to offset the member countries' inflation differentials.

Edwards, Sebastian

PD September 1988. **TI** Exchange Controls and Trade Restrictions in Devaluation Episodes. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 513; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 68. **PR** $2.50; checks payable to University of California at Regents. **JE** 431, 411, 121. **KW** Exchange Controls. Trade. Exchange Rates. Developing Countries.

AB This paper corresponds to the Appendix to Chapter 6 of the forthcoming book Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries. This work investigates several aspects related to exchange rates in developing nations. Theoretical models of equilibrium and disequilibrium exchange rates are developed; the behavior of real exchange rates is investigated for a large cross section of countries; and the effectiveness of devaluation is assessed for a group of 39 developing nations.

PD September 1988. **TI** Devaluations, Real Exchange Rates and the External Sector. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 514; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 56. **PR** $2.50; checks payable to University of California at Regents. **JE** 431, 121. **KW** Devaluations. Exchange Rates. Developing Countries.

AB This paper corresponds to Chapter 7 of the forthcoming book Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries. This work investigates several aspects related to exchange rates in developing nations. Theoretical models of equilibrium and disequilibrium exchange rates are developed; the behavior of real exchange rates is investigated for a large cross section of countries; and the effectiveness of devaluation is assessed for a group of 39 developing nations.

PD September 1988. **TI** Devaluations, Aggregate Output and Income Distribution. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 515; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 52. **PR** $2.50; checks payable to University of California at Regents. **JE** 431, 411, 121. **KW** Devaluations. Output. Income. Exchange Rates. Developing Countries.

AB This paper corresponds to Chapter 8 of the forthcoming book Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries. This work investigates several aspects related to exchange rates in developing nations. Theoretical models of equilibrium and disequilibrium exchange rates are developed; the behavior of real exchange rates is investigated for a large cross section of countries; and the effectiveness of devaluation is assessed for a group of 39 developing nations.

PD September 1988. **TI** Conclusion and Bibliography of

Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 516; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 25. **PR** $2.50; checks payable to University of California at Regents. **JE** 431, 411, 121. **KW** Exchange Rates. Devaluation. Developing Countries.

AB This paper corresponds to Chapter 9 of the forthcoming book Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries. This work investigates several aspects related to exchange rates in developing nations. Theoretical models of equilibrium and disequilibrium exchange rates are developed; the behavior of real exchange rates is investigated for a large cross section of countries; and the effectiveness of devaluation is assessed for a group of 39 developing nations.

PD November 1988. **TI** The Debt Crisis and Economic Adjustment in Latin American. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 531; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 23. **PR** $2.50; checks payable to University of California at Regents. **JE** 121, 432, 443, 133. **KW** Latin America. Debt Crisis. Developing Countries. Inflation. Economic Adjustment.

AB This paper discusses several aspects of Latin America's adjustment process following the debt crisis. Some of the issues addressed include the role of the international financial system, the role of the International Monetary Fund and the World Bank, and the costs of the adjustment. The discussion also deals with individual countries' experiences, with special emphasis on the heterodox anti-inflationary programs.

PD March 1989. **TI** Terms of Trade Disturbances, Real Exchange Rates, and Welfare: The Role of Capital Controls and Labor Market Distortions. **AU** Edwards, Sebastian; Ostry, Jonathan. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/21; International Monetary Fund, Washington, DC 20431. **PG** 24. **PR** No Charge. **JE** 431, 313, 411, 122. **KW** Capital Controls. Welfare Analysis. Adjustment Mechanisms.

AB Many arguments that have been advanced in favor of maintaining capital controls within the EC have not paid sufficient attention to the welfare consequences of this type of market intervention. Our paper provides a simple, optimizing framework in which the welfare consequences of capital controls can be assessed. Two main issues are considered. First, how do capital controls affect the adjustment of macroeconomic variables to real disturbances? Second, what is the nature of second best arguments for maintaining capital controls given that certain distortions will remain after the European single market is in place in 1992?

PD March 1989. **TI** Terms of Trade Disturbance, Real Exchange Rates and Welfare: The Role of Capital Controls and Labor Market Distortions. **AU** Edwards, Sebastian; Ostry, Jonathan. **AA** Edwards: University of California, Los Angeles. Ostry: International Monetary Fund. **SR** National Bureau of Economic Research Working Paper: 2907; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $2.00. **JE** 411, 441, 431, 122. **KW** Capital Controls. Exchange Rates. Europe.

AB Many arguments that have been advanced in favor of maintaining capital control within the EEC have not paid sufficient attention to the welfare consequences of this type of market intervention. Our paper provides a simple, optimizing framework in which the welfare consequences of capital controls can be assessed. Two main issues are considered. First, how do capital controls affect the adjustment of macroeconomic variables to real disturbances? Second, what is the nature of second best arguments for maintaining capital controls given that certain distortions will remain after the European single market is in place in 1992?.

PD March 1989. **TI** Openness, Outward Orientation, Trade Liberalization and Economic Performance in Developing Countries. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 2908; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 60. **PR** $2.00. **KW** Developing Countries. Economic Growth. Technology.

AB This paper deals with the role of trade regimes in determining economic performance and growth in the developing countries. The policy and empirical literatures on trade orientation and economic growth are critically reviewed; it is argued that a key limitation of these works has been the inability to create measures of trade orientation that are: (i) objective; (ii) continuous and (iii) comparable across countries. A growth model that relates trade orientation to the ability to absorb technological progress from the rest of the world is developed for the case of a small country. The model is tested using a new index of trade orientation that is free from the limitations described above.

PD March 1989. **TI** The International Monetary Fund and the Developing Countries: A Critical Evaluation. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 2909; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 55. **PR** $2.00. **JE** 432, 121. **KW** Developing Countries. International Monetary Fund. Debt Crisis.

AB The purpose of this paper is to critically evaluate the IMF's role in the developing countries' adjustment process. In particular, the paper tries to answer the following questions: What model or framework does the IMF use to generate its advice, and is that advice eclectic? Is there evidence that countries that followed the IMF's advice do better than countries that proceed in other ways? Are the policy decisions of the Fund based on technical knowledge or do they reflect the political views of the larger members? The paper also includes an evaluation of recent IMF programs, as well as an econometric analysis of the contractionary devaluation issue.

PD April 1989. **TI** Real Exchange Rates in the Developing Countries: Concepts and Measurement. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 2950; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 52. **PR** $2.00. **JE** 431, 411, 121. **KW** Exchange Rates. Developing Countries.

AB This paper deals with three important issues related to real exchange rates. First, it discusses the analytical concept of real exchange rate (RER) placing particular emphasis on providing an operational definition for the equilibrium real exchage rate. Second, this paper deals with problems associated with measuring real exchange rates. And third, I analyze the actual behavior of RER's in a number of developing countries. Here, issues related to the behavior of alternative indexes and to the statistical properties of real exchange rates are emphasized. Additionally, I study the real consequences of increased real exchange rate volatility.

TI The Macroeconomics of Populism in Latin America.
AU Dornbusch, Rudiger; Edwards, Sebastian.

Eichengreen, Berry

TI Trade Liberalization in General Equilibrium: Intertemporal and Inter-Industry Effects. **AU** Goulder, Lawrence H.; Eichengreen, Berry.

Elliehausen, Gregory E.

PD March 1989. **TI** Discrimination in Consumer Lending. **AU** Elliehausen, Gregory E.; Lawrence, Edward. **AA** Elliehausen: Board of Governors of the Federal Reserve System. Lawrence: University of Missouri. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 60; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** No Charge. **JE** 315, 917. **KW** Discrimination. Lending. Consumer Credit. Credit Market. Banking.

AB This paper tests for the existence of discrimination in consumer lending by finance companies in Texas before the passage of the Equal Credit Opportunity Act (ECOA). Unlike previous studies, the data used here permit conclusions about discrimination in the market, not just in the behavior of a small number of creditors. The tests suggest that finance companies in Texas did not discriminate on the basis of race, age, ethnic status, or receipt of income from sources now protected by the ECOA. Tests also show that these companies may have discriminated against single borrowers of both sexes and against widows but not married women or divorced borrowers.

Ellwood, David T.

PD March 1989. **TI** The American Way of Aging: An Event History Analysis. **AU** Ellwood, David T.; Kane, Thomas J. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2892; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 918, 921, 229, 132. **KW** Aging. Elderly. Marital Status. Disability. Income. Retirement. Data Simulation.

AB The paper presents a methodology for studying the sequence and timing of life events past age 65. After estimating models of marital status, disability, living arrangements and income from the scattered segments of old age captured within the 17 year window of the Panel Study of Income Dynamics (PSID), we simulated up to 35 years of old age, using a sample of those turning 65 between 1980 and 1984. Even in this initial effort, we report some interesting findings including: First, the prospects for rich and poor at age 65 were very different, those with high incomes living 4 years longer than those with low incomes. Second, women are much more vulnerable to changes in marital status, suffering a permanent 20% decline in their standard of living upon widowhood compared to 10% decline for men.

Emons, Winand

PD July 1988. **TI** On the Effectiveness of Liability Rules when Agents are not Identical. **AU** Emons, Winand; Sobel, Joel. **AA** Emons: University of Bonn. Sobel: University of California, San Diego. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-212; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 16. **PR** No Charge. **JE** 024, 026. **KW** Liability Law. Mechanism Design. Accidents. First-best Solution.

AB This paper is about accidents involving two risk-neutral parties. Both parties engage in actions that are profitable but affect the magnitude of possible bilateral accidents. We analyze how the action choices can be decentralized by liability rules that assign the accident costs to the two parties. If we allow for punitive damages, we can implement the first-best actions by a liability rule even if agents are not identical. Under this liability rule some individuals may be in expectation better off in the event of an accident than in the event of no accident. We provide conditions under which this problem does not arise.

PD November 1988. **TI** Efficient Liability Rules for an Economy with Non-identical Individuals. **AA** University of Basel. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-213; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 21. **PR** No Charge. **JE** 024, 026. **KW** Liability Law. Mechanism Design. Accidents. Negligence.

AB This paper is about accident situations involving two risk-neutral parties. Both parties engage in activity levels that are profitable but affect the magnitude of possible bilateral accidents. We analyze how the activity choices can be decentralized by liability rules that assign the costs to the two parties to an accident. We whow that rules which share damages are superior to negligence rules where one party bears the entire accident costs.

Engel, Charles M.

PD March 1989. **TI** Conditional Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles M.; Frankel, Jeffrey A.; Froot, Kenneth A. Rodrigues-Anthony. **AA** Engel: Universty of Virginia. Frankel: Harvard University. Froot: Massachusetts Institute of Technology. Rodrigues: Federal Reserve Bank of New York. **SR** National Bureau of Economic Research Working Paper: 2890; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** $2.00. **JE** 313, 311, 132. **KW** Stock Market. Asset Returns. Variance Efficiency. Asset Prices.

AB We apply the method of constrained asset share estimation (CASE) to test the mean-variance efficiency (MVE) of the stock market. This method allows conditional expected returns to vary in unrestricted ways, given investor preferences. We also allow conditional variances to follow an ARCH process. The data estimate reasonably the coefficient of relative risk aversion, though are unable to reject investor risk neutrality. We reject the restrictions implied by MVE, although changing conditional variances improve statistically upon measured market efficiency. We find that unrestricted asset-share and ARCH models help forecast excess returns. Once MVE is imposed, however, this forecasting ability disappears.

Ericson, Richard

TI Empirical Implications of Alternative Models of Firm Dynamics. **AU** Pakes, Ariel; Ericson, Richard.

Ermisch, John F.

TI Gender Discrimination in the British Labour Market: A Reassessment. **AU** Wright, Robert E.; Ermisch, John F.

Estrin, Saul

TI Unions and Productivity: Unionized Firms Versus Union Managed Firms. **AU** Benner, Avner; Estrin, Saul.

Faigle, Ulrich

PD October 1988. **TI** The Communication Complexity of Interval Orders. **AU** Faigle, Ulrich; Schrader, Rainer; Turan, Gyorgy. **AA** Faigle: University of Twente. Schrader: University of Bonn. Turan: University of Illinois. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88536-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 14. **PR** No Charge. **JE** 213. **KW** Communication. Interval Order. Information.

AB The communication complexity of interval orders is studied within the following model. Two players choose two elements x and y and want to determine whether x less than y holds by exchanging as few bits of information as possible. It is shown that an optimal one-way protocol exists by first establishing a rank-optimality result for a subclass of generalized interval orders. It turns out that the deterministic and nondeterministic communication complexities concide for generalized interval orders. The analogous statement for the complementary relation is true for interval orders in the strict sense while it need not hold for generalized interval orders.

Fair, Ray C.

PD February 1989. **TI** The Production Smoothing Model is Alive and Well. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 896; Cowles Foundation for Research in Economics, 30 Hillhouse Avenue, Box 2125 Yale Station, New Haven, CT 06520. **PG** 19. **PR** No Charge. **JE** 131, 522, 514, 631. **KW** Production Smoothing. Investment. Inventories.

AB Monthly data in physical units for seven industries are used to examine the production smoothing hypothesis. The results strongly support this hypothesis. Significant effects of expected future sales on current production are found for four industries, and the estimated decision equations for all seven industries imply production smoothing behavior. The previous negative results regarding the hypothesis appear to be due to the use of poor data, particularly the shipments and inventory data of the Department of Commerce.

Fairfield, Patricia M.

PD March 1989. **TI** An Empirical Test of Accounting Values as Measures of Intrinsic Values. **AU** Fairfield, Patricia M.; Harris, Trevor S. **AA** Fairfield: Baruch College. Harris: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-08; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 32. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 521, 522, 541. **KW** Hedging. Portfolios. Investments.

AB Price deviations from simple valuation models based on accounting earnings and book value of owners' equity, are used to test the intrinsic value explanation of the price-earnings and price-book value anomalies. Relative price deviations from the implied benchmark prices are used to assign years into high and low deviation groups. Traditional zero investment hedge portfolios are formed in each year and the returns are compared across high and low deviation years. The high deviation years show significantly larger size and risk-adjusted returns over four holding periods, providing strong evidence in favor of an intrinsic value explanation of the anomalies.

Fallick, Bruce

PD March 1989. **TI** Unemployment Insurance and the Rate of Re-Employment of Displaced Workers. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 550; Department of Economics, University of California at Los Angeles, Los Angeles, CA 90024. **PG** 34. **PR** $2.50. **JE** 824, 822, 823, 821. **KW** Unemployment. Displaced Workers. Unemployment Duration. Unemployment Insurance. Search Theory. Labor Mobility.

AB The rate of transition from unemployment to re-employment for a sample of displaced workers is estimated using a semiparametric specification which allows the effects of unemployment insurance benefits to vary over time. The effects of UI benefits are seen to decline and eventually disappear as the date of expiration approaches, a result which is consistent with the predictions of search theory. However, the expiration of UI benefits are seen to be an inadequate explanation of the spikes commonly observed in Kaplan-Meier and other nonparametric sample hazard rates for re-employment. UI benefits affect only the rate at which a displaced worker becomes re-employed in an industry other than the one from which he or she was displaced. They do not significantly affect the rate of re-employment for the worker's previous industry. Thus UI benefits appear to retard the industrial mobility of displaced workers.

Fare, Rolf

PD May 1987. **TI** On Price Efficiency. **AU** Fare, Rolf; Grosskopf, Shawna. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-119; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 19. **PR** No Charge. **JE** 614, 227. **KW** Price Efficiency. Shadow Prices. Nonparametric Methods.

AB 1. In a sequence of papers, Atkinson and Halvorsen (1980, 1984, 1986) have applied the model by Lau and Yotopolous (1971) to study various aspects of price efficiency. In this model, "firms are assumed to choose inputs so as to minimize the total shadow costs of the chosen level of output". Atkinson and Halvorsen (1984, p. 650). The shadow prices, may differ from actual prices. In terms of the possible difference they define two efficiency notions: "Relative price efficiency with respect to input i and j exists if and only if k(i) = k(j), and absolute price efficiency exists if and only if k(i) = 1 for all i". Atkinson and Halvorsen (1984, p. 653). In this paper, we will shed light on the above efficiency notions by relating them to the dual Farrell-like measures of price efficiency, as introduced by Fare (1984).

Farmer, Roger E. A.

PD January 1989. **TI** RINCE Preferences. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 547; Los Angeles, CA 90024. **PG** 33. **PR** $2.50. **JE** 026, 022. **KW** Uncertainty. Risk. Intertemporal Models. Dynamic Models.
AB This paper presents a class of preferences that yield closed form solutions to dynamic stochastic choice problems. These preferences are based on a set of axioms that were proposed by Kreps and Porteus. The Kreps Porteus axioms allow one to separate an agent's attitudes to risk from his or her intertemporal elasticity of substitution. RINCE preferences have the properties of RIsk Neutrality and Constant Elasticity of substitution.

PD March 1989. **TI** AIL Theory and the Ailing Phillips Curve a Contract Based Approach to Aggregate Supply. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 549; Department of Economics, University of California at Los Angeles, Los Angeles, CA 90024. **PG** 27. **PR** $2.50. **JE** 023, 131, 132, 133. **KW** Phillips Curve. Contracts. Aggregate Supply. Asymmetric Information.
AB This paper presents empirical evidence from United States data of a structurally stable aggregate supply relationship between real and nominal rates of interest and the rate of unemployment. The paper reviews theories of contracts that are based on the twin assumptions of asymmetric information and limited collateral and it argues that these theories (referred to as A.I.L. theories) provide a strong theoretical foundation for a contract-based theory of aggregate supply. It is suggested that the original Phillips curve estimates should be reinterpreted in the light of A.I.L. theories which represent alternatives to the Phelps-Friedman interpretation of the Phillips relationship.

Fassäbender, Bert

PD August 1987. **TI** A Generalization of a Theorem of Nash-Williams. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.43; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 3. **PR** No Charge. **JE** 213. **KW** Connected Graph. Hamiltonian.
AB Let G be a simple k-connected graph of order e greater than or equal to 3 with minimum degree d and independence number a. We generalize a theorem of Nash-Williams by proving that G is Hamiltonian if d greater than or equal to max a+k-2, (e+k(k-1)/(k+1).

PD October 1987. **TI** Kriterien vom ORE-Typ fur Langste Kreise in 2-Zusammenhangenden Graphen. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.46; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213. **KW** Connected Graph. Complete Graph.
AB Let G be a simple 2-connected graph of order v such that the degree-sum of any two nonadjacent vertices is at least 2/3v, and let C be a non dominating longest cycle in G. We show that G-C is a complete graph and V(G) contains a nonempty proper subset S such that G-S has exactly 1S1+1 components. From this result a sufficient condition for the existence of hamilton cycles in 1-tough graphs can be obtained.

PD July 1988. **TI** On Longest Cycles and Strongly Linking Vertex Sets. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.57; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 6. **PR** No Charge. **JE** 213. **KW** Longest Cycle. Vertex Set. Connectivity.
AB Let G be a simple non-hamiltonian graph, let C be a longest cycle in G, and let p be a positive integer. By considering a special form of connectivity, we obtain a sufficient condition on degrees for the non-existence of (p-1)-path-connected components in G-C.

Fernandez, Raquel

PD May 1989. **TI** Why haven't Debtor Countries Formed a Cartel?. **AA** Boston University. **SR** National Bureau of Economic Research Working Paper: 2980; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 443, 432, 411, 026. **KW** Cartel. Collusion. Debt. Banks. Bargaining.
AB We study the question of whether there exist strategies whereby countries are able to sustain a cartel or collusive behavior when bargaining with a bank over the amount of debt to be repaid. A unique subgame perfect equilibrium exists in which the bank is effectively able to isolate each country and extract from each the same payoff that it would obtain in the absence of economies to scale. Consequently, a country would be better off if another country declared default. We also show that if two countries of unequal size are bargaining with a bank, in equilibrium a decrease in the size of the smaller country implies a greater payoff to the large country although the payoff to the small country is invariant.

PD May 1989. **TI** Sovereign-Debt Renegotiations Revisited. **AA** Boston University. **SR** National Bureau of Economic Research Working Paper: 2981; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 443, 026. **KW** Debt. Public Debt. Bargaining.
AB The sovereign debt literature has often implicitly assumed that all the power in the bargaining game between debtor and creditor lies with the latter. An earlier paper provided a game theoretic basis for this contention, in that all the subgame perfect equilibria of the game modeled have an extreme form in which the game's surplus is captured by the creditor. Two related games are analyzed here. Equilibria in which the debtor captures some of the surplus are shown to exist in one of them but not the other, and the roles of various assumptions in all three games is examined.

Fershtman, Chaim

TI The Perverse Effects of Sales Taxes and Price Controls in an Equilibrium Search Model. **AU** Fishman, Arthur; Fershtman, Chaim.

PD February 1989. **TI** Observable Contracts: Strategic Delegation and Cooperation. **AU** Fershtman, Chaim; Judd, Kenneth L.; Kalai, Ehud. **AA** Fershtman: Tel Aviv University. Judd: Stanford University. Kalai: Northwestern University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 8-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL.

PG 26. **PR** No Charge. **JE** 026. **KW** Commitment. Noncooperative Game. Delegation Game. Cooperation. Common Knowledge.

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

Fischer, Stanley

PD January 1989. **TI** Should Nations Learn to Live with Inflation. **AU** Fischer, Stanley; Summers, Lawrence H. **AA** Fischer: The World Bank. Summers: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2815; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 134, 133, 024. **KW** Inflation. Government Policy. Stabilization Policy.

AB It is often argued that the most important costs of inflation can be substantially mitigated by indexing reforms. Yet governments in moderate inflation countries have generally been very reluctant to promote institutional changes that would reduce the costs of inflation. Capital income continues to be taxed on a nominal basis, indexed bonds are a rarity, typical mortgage contracts keep nominal rather than real payments constant, and interest is not paid on required reserves. This paper examines the welfare consequences of inflation mitigation measures in the context of dynamic consistency theories of the determination of the inflation rate. Our general conclusion is that recognizing the effects of inflation mitigation measures on the choice of the inflation rate substantially undercuts the welfare case in their favor.

Fisher, Eric O. N.

TI A Long-Run View of the European Monetary System. **AU** Edison, Hali J.; Fisher, Eric O. N.

Fishman, Arthur

PD February 1989. **TI** Asymmetric Dynamic Price Competition with Price Inertia. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 6-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 16. **PR** No Charge. **JE** 611, 022, 616. **KW** Dynamic Model. Duopoly. Consumer Surplus. Price Inertia.

AB This paper presents a model of dynamic price duopoly with short-term price inertia. A perturbation of consumer behavior, specifying that a consumer may purchase from the higher priced seller with positive probability, endows each duopolist with an arbitrarily small degree of monopoly power. It is shown that the slightest degree of asymmetry between the firms with respect to this monopoly power unambiguously identifies a firm which appropriates almost all the surplus from those consumers over whom the firms compete. This outcome is the unique Pareto dominant equilibrium if firms are restricted to state dependent strategies.

PD February 1989. **TI** The Perverse Effects of Sales Taxes and Price Controls in an Equilibrium Search Model. **AU** Fishman, Arthur; Fershtman, Chaim. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 7-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 24. **PR** No Charge. **JE** 612, 616, 022. **KW** Search Theory. Market Equilibrium. Sales Tax. Price Controls.

AB If industrial policy is to be effective, it is essential that its effects on market performance be well understood. This paper examines the effects of sales taxes, price ceilings and minimum wages on the performance of markets in which agents must invest in costly search to become informed about prices or wages. In this context it is found that the market equilibrium may respond to changes in policy instruments in strikingly counterintuitive ways. In particular, the imposition of price ceilings and minimum wages may respectively result in substantial consumer price increases and wage decreases. Similarly, an increase in the sales tax may substantially reduce the consumer price.

TI A Signalling Model of Nominal Price Inertia. **AU** Demougin, Dominique; Fishman, Arthur.

Flavin, Marjorie A.

PD December 1988. **TI** The Excess Smoothness of Consumption: Indentification and Interpretation. **AA** University of Virginia. **SR** National Bureau of Economic Research Working Paper: 2807; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 921, 023. **KW** Consumption. Information. Income. Forecasts. Smoothness.

AB The paper investigates the implications of the omitted information problem -- that is, the econometric problem which arises because an econometrician cannot explicitly include the complete set of variables potentially used by agents -- in the context of the "excess smoothness" phenomenon posed by Deaton '1987(. The paper shows that an econometrician who fails to take into account the effects of omitted information will incorrectly conclude that an empirical finding of excess smoothness of consumption implies that the income process is nonstationary. By contrast, with a more thorough understanding of the omitted information problem, the finding of excess smoothness of consumption is easily explained with two assumptions: a) the consumption data is generated by the excess sensitivity alternative hypothesis, in which consumption is a weighted average of current income and permanent income, and b) agents are forecasting on the basis of a larger information set than the econometrician.

Flood, Robert P.

PD March 1989. **TI** Testable Implications of Indeterminacies in Models with Rational Expectations. **AU** Flood, Robert P.; Hodrick, Robert. **AA** Flood: International Monetary Fund. Hodrick: Northwestern University. **SR** National Bureau of Economic Research Working Paper: 2903; National Bareau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 133, 131, 023. **KW** Bubbles. Sunspots. Prices. Exchange Rates. Asset Prices.

AB The possibility that movements in market prices of assets of goods may be caused by self-fulfilling prophecies, called bubbles or sunspots, has long intrigued market observers. If bubbles or sunspots exist, market prices differ from their fundamental values, and markets do not necessarily allocate resources to their best possible uses. This paper surveys the current state of the empirically-oriented literature concerning rational dynamic indeterminacies by which we mean a situation of self-fulfilling prophecy within a rational expectations model. The empirical work in this area concentrates primarily on indeterminacies in price levels, exchanges rates and equity prices.

PD April 1989. **TI** The Linkage Between Speculative Attack and Target Zone Models of Exchange Rates. **AU** Flood, Robert P.; Garber, Peter M. **AA** Flood: International Monetary Fund. Garber: Brown University. **SR** International Monetary Fund Working Paper: WP/89/30; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** No Charge. **JE** 431, 441, 411. **KW** Exchange Rates. Speculation. Asset Prices.

AB In this paper we generalize the target zone exchange rate as model formalized by Krugman (1988b). The main contributions of these pages consist of linking the recent developments in the theory of target zones to the mirror image theory of speculative attacks on asset price fixing regimes and in using aspects of that linkage to give an intuitive interpretation to the "smooth pasting" condition often invoked as a terminal condition. We aim to unify these two literatures by showing that the solution concepts in both are identical.

PD April 1989. **TI** Simple Rules, Discretion and Monetary Policy. **AU** Flood, Robert P.; Isard, Peter. **AA** International Monetary Fund. **SR** National Bureau of Economic Research Working Paper: 2934; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 311, 023. **KW** Monetary Authority. Monetary Policy. Money Supply.

AB In this paper we explore the possibilities arising under a policy in which a partially state contingent money supply rule is mixed with discretion. In addition to demonstrating that such mixed strategies can dominate both complete discretion and rigid adherence to the partially state contingent rule, we investigate the appropriate setting of parameters in a partially state contingent policy when it is acknowledged that the rule will not be followed on all occasions--i.e., that sometimes the monetary authority will resort to discretion.

PD April 1989. **TI** The Linkage between Speculative Attack and Target Zone Models of Exchange Rates. **AU** Flood, Robert P.; Garber, Peter M. **AA** Flood: International Monetary Fund. Garber: Brown University. **SR** National Bureau of Economic Research Working Paper: 2918; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $2.00. **JE** 411, 431, 311. **KW** Exchange Rates. Target Zones. Asset Prices.

AB In this paper we generalize the target zone exchange rate as a model formalized by Krugman (1988) to include finite-sized interventions in defense of the zone. The main contributions of these pages consist of linking the recent developments in the theory of target zones to the mirror-image theory of speculative attacks on asset price fixing regimes and in using aspects of that linkage to give an intuitive interpretation to the "smooth pasting" condition usually invoked as a terminal condition.

Florenzano, Monique

PD 1988. **TI** Edgeworth Equilibria, Fuzzy Core and Equilibria of a Production Economy Without Ordered Preferences. **AA** CNRS-CEPREMAP. **SR** CEPREMAP Discussion Paper: 8822; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 29. **PR** 20 FF. **JE** 021, 213. **KW** Debreu-Scarf Theorem. Nonordered Preference. Fixed Point Theorems. Riesz Space. Equilibrium Allocations. Production Economy. General Equilibrium Model.

AB The aim of this paper is to extend the Debreu-Scarf theorem on the coincidence, under suitable conditions, between the set of Walrasian allocations and the set of Edgeworth equilibria to production economies without ordered preferences, defined in a Hausdorff linear topological space. We obtain three results: 1) Edgeworth equilibria exist under very mild conditions. Under a weak additional continuity property of preferences, the fuzzy core is also nonempty. 2) In the finite dimensional case, the set of Edgeworth equilibria, the set of Walrasian allocations and the fuzzy core of a convex economy coincide under standard assumptions. The same is true in the infinite dimensional case for an hypothetical economy whose Edgeworth equilibria can be embedded in the Edgeworth equilibria of the original economy. 3) As a by-result, an existence result for Walrasian equilibria extends most of the recent existence results.

TI Asymptotic Properties of a Leontief Economy. **AU** Dana, Rose Anne; Florenzano, Monique; Levan, Cuong; Levy, Dominique.

Fourgeaud, Claude

PD January 1988. **TI** Heterogeneite dans les Modeles a Representation Lineaire. **AU** Fourgeaud, Claude; Gourieroux, Christian; Pradel, Jacqueline. **AA** Fourgeaud and Gourieroux: CEPREMAP. Pradel: Paris IX University. **SR** CEPREMAP Discussion Paper: 8805; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 43. **PR** 20 FF. **JE** 211. **KW** Heterogeneity Bias. Heterogeneity Test. Duration Model. Linear System. Asymptotic Theory. Exponential Function.

AB We consider models with a linear representation $Y = Xb + U$ and we show that the information on b decreases when heterogeneity is present. We then examine the bias of the maximum likelihood estimator of b when heterogeneity is not taken into account. We propose a one sided test of the heterogeneity hypothesis. Finally, we determine the asymptotic properties of the maximum likelihood estimators of b and of the heterogeneity parameter. These results can be applied to duration data models when exogeneous variables are introduced through an exponential function. Paper in French.

Frank, Andras

PD January 1989. **TI** Packing Paths in Planar Graphs. **AA** University of Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88551-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Planar Graph. Demand Edges. Commodity Flows.

AB A generalization of P. Seymour's theorem on planar integral 2-commodity flows is given when the underlying graph G together with the demand graph H (a graph having edges that connect the corresponding terminal pairs) form a planar graph and the demand edges are on two faces of G.

Frankel, Jeffrey A.

TI Conditional Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles M.; Frankel, Jeffrey A.; Froot, Kenneth A. Rodrigues-Anthony.

Frech, H. E. III

PD January 1989. **TI** Consumer Information, Price and Nonprice Competition Among Hospitals. **AU** Frech, H. E. III; Woolley, J. Michael. **AA** Frech: University of California, Santa Barbara. Woolley: Board of Governors of the Federal Reserve. **SR** University of California at Santa Barbara Department of Economics Working Paper: 6-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 60. **PR** No Charge. **JE** 913, 612. **KW** Health Care. Medical Costs. Hospitals. Competition.

AB Health care expenditures have been soaring for many years. Partly as a result, competition among hospitals has received increasing attention as a cost-cutting measure. Traditional antitrust and industrial organization approaches would suggest that more hospital competition would improve market performance. On the other hand, some observers have argued that competition among hospitals increases costs and prices. Excessive nonprice competition, so the story goes, leads to overuse of technology and other resources. Normal price-reducing market pressures are held to be absent, or at least greatly reduced, because of the diminished price sensitivity of the poorly informed and highly insured patient.

Freeman, Richard B.

PD December 1988. **TI** Employer Behavior in the Face of Union Organizing Drives. **AU** Freeman, Richard B.; Kleiner, Morris M. **AA** Freeman: National Bureau of Economic Research. Kleiner: University of Minnesota. **SR** National Bureau of Economic Research Working Paper: 2805; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 831, 833, 511, 514. **KW** Unions. Union Organization. Management. Firm Policy.

AB The direct role of employers in union organizing has long been a neglected part of the union organizing literature. In this study we examine the determinants and consequences of employer behavior when faced with an organizing drive. In general we interpret our results as consistent with the notion that firms behave in a profit maximizing manner in opposing an organizing drive and with the basic proposition that management opposition, reflected in diverse forms of behavior, is a key component in the on-going decline in private sector unionism in the United States.

PD January 1989. **TI** On the Divergence in Unionism Among Developed Countries. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2817; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 831, 122. **KW** Labor Force. Unions.

AB In this paper I explore the evolution of unionism in the 1970s and 1980s, when the post-oil shock world economy created a "crisis of unionism" throughout the western world. I try to explain why union representation of work forces fell in some countries but not in others and contrast union responses to the challenge of the period. Most strikingly, my analysis indicates that if 1980s trends continue the west will be divided between countries with strong trade union movements operating in a neo-corporatist system, as in Scandinavia, and countries with 'ghetto unionism' limited to special segments of the work force, as in the United States.

PD May 1989. **TI** Crumbling Pillar? Declining Union Desity in Japan. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2963; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 831, 832. **KW** Japan. Unions. Labor Force. Collective Bargaining.

AB This paper seeks to understand the recent decline of union density in Japan from 35% in 1975 to 28% in 1987. The decline in density is analyzed in terms of the changing proportion of workers in high and low unionization groups and the changes in density within those groups. Then using a stock-flow relationship we look at how the organizing rate of new unions affects the overall density. A regression model assesses our interpretation of changes in Japanese density. Our principal findings are: (1) Structural shifts in the composition of employment and of the demographics of the work force account for only a modest proportion of the drop in Japanese density. (2) Much of the decline in density is associated with the inability of Japanese unions to organize new establishments.

Freeman, Scott

PD January 1989. **TI** Inside Money, Output and Causality. **AU** Freeman, Scott; Huffman, Gregory W. **AA** Freeman: University of California, Santa Barbara. Huffman: University of Western Ontario. **SR** University of California at Santa Barbara Department of Economics Working Paper: 3-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 37. **PR** No Charge. **JE** 311, 133, 023. **KW** Random Walk. Business Cycle. Money Stock. Monetary Policy.

AB Although most of the money stock is inside money and most of the money/output correlation seems related to inside money fluctuations, most attempts to explain the money/output correlations have featured fiat money as the only form of money. The model of this paper examines money/output correlations where the stock of money consists of both inside and outside money (deposits plus currency, or the Federal Reserve's M1). The model's money multiplier is endogenous, determined by the relative returns and transactions costs of inside money and fiat money. Inside money represents deposits at banks, which use the deposits to create capital (or equivalently, to make loans to agents who create capital). It will be useful, therefore, to think of inside money as intermediated capital.

PD January 1989. **TI** Knowledge-based Growth. **AU** Freeman, Scott; Polasky, Stephen. **AA** Freeman: University of California, Santa Barbara. Polasky: Boston College. **SR** University of California at Santa Barbara Department of Economics Working Paper: 4-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 30. **PR** No Charge. **JE** 111, 023. **KW** Economic Growth. Knowledge. Learning. Output.

AB A major challenge in the study of the growth of economies over time has been to account for the continual growth in output exceeding what can be explained by the growth of observed inputs to production. The additional growth in output must be accounted for by growth in some unobserved input, usually thought of as human capital, or knowledge. In this paper we present a model displaying sustained growth in output resulting from the accumulation of knowledge. The accumulation of knowledge is endogenous, determined by study chosen by optimizing agents.

Frenkel, Jacob A.

PD February 1989. **TI** Simulating the Effects of Some Simple Coordinated vs. Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/17; International Monetary Fund, Washington, DC 20431. **PG** 37. **PR** No Charge. **JE** 431, 411, 133, 113. **KW** Monetary Policy. Exchange Rates. Coordination. Fluctuations.

AB Effects of different policy rules are simulated: uncoordinated targeting of the money supply or nominal income, use of monetary policy to achieve coordinated targets for nominal or real exchange rates, and the use of monetary and fiscal policies to hit targets for internal and external balance. The following conclusions emerge: rules which performed best for some shocks performed poorly for others; monetary policy was ineffective in limiting movements in real exchange rates; unconstrained use of fiscal policy was quite powerful in influencing real variables; and dynamic instability was a potentially serious problem. Robustness to different specifications and to constraints on instruments remains to be examined.

PD March 1989. **TI** Exchange Rate Volatility and Misalignment: Evaluating Some Proposals for Reform. **AU** Frenkel, Jacob A.; Goldstein, Morris. **AA** International Monetary Fund. **SR** National Bureau of Economic Research Working Paper: 2894; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 46. **PR** $2.00. **JE** 431, 441, 411, 133. **KW** Exchage Rates. Economic Policy. Capital Flow. International Coordination.

AB In this paper, we analyze several proposals for reducing the volatility and/or misalignment of key-currency exchange rates. The proposals examined are a system of target zones, the imposition of controls or taxes on international capital flows, and a strengthening of international coordination over economic policies. We also review key characteristics of the behavior of major-currency exchange rates over the period of floating rates and examine the various criteria or standards for drawing inferences about excess volatility and misalignment.

PD April 1989. **TI** International Spillovers of Taxation. **AU** Frenkel, Jacob A.; Razin, Assaf; Symansky, Steven. **AA** Frenkel and Symansky: International Monetary Fund. Razin: Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 2927; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $2.00. **JE** 411, 323, 122, 443. **KW** Taxes. Tax Policy. Current Account. Saving. Consumption. Borrowing.

AB This paper deals with the international effects of taxation. Tax policies have profound effects on the temporal composition and on the intertemporal evolution of the macro economy. The analysis highlights key issues pertinent for the understanding of international effects of domestic tax policies and of international tax harmonization. The analytical framework adopts the saving-investment balance approach to the analysis of international economic interdependence and includes a detailed specification of public and private sector behavior focusing on the roles played by taxes on income, consumption, and international borrowing.

PD April 1989. **TI** Simulating the Effects of Some Simple Coordinated versus Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul. **AA** International Monetary Fund. **SR** National Bureau of Economic Research Working Paper: 2929; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 56. **PR** $2.00. **JE** 311, 321, 131, 133. **KW** Fiscal Policy. Monetary Policy. Exchange Rates. Money Supply. Targets. Economic Coordination.

AB Effects of different policy rules are simulated: uncoordinated targeting of the money supply or nominal income, use of monetary policy to achieve coordinated targets for nominal or real exchange rates, and the use of monetary and fiscal policies to hit targets for internal and external balance. The following conclusions emerge: rules which performed best for some shocks performed poorly for others; monetary policy was ineffective in limiting movements in real exchange rates; unconstrained use of fiscal policy was quite powerful in influencing real variables; and dynamic instability was a potentially serious problem.

Froot, Kenneth A.

TI Conditional Mean-Variance Efficiency of the U.S. Stock Market. **AU** Engel, Charles M.; Frankel, Jeffrey A.; Froot, Kenneth A. Rodrigues-Anthony.

PD March 1989. **TI** Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. **AU** Froot, Kenneth A.; Stein, Jeremy. **AA** Froot: Massachusetts Institute of Technology. Stein: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2914; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 431, 441, 411. **KW** Exchange Rates. Foreign Investment. Capital Markets. Public Information. Capital Flow.

AB We examine the connection between exchange rates and foreign direct investment that arises when globally integrated capital markets are subject to informational imperfections. These imperfections cause external financing to be more expensive than internal financing, so that changes in wealth translate into changes in the demand for direct investment. By systematically lowering the relative wealth of domestic agents, a depreciation of the domestic currency can lead to foreign acquisitions of certain domestic assets. We develop a simple model of this phenomenon and test for its relevance in determining international capital flows.

Fullerton, Don

PD January 1989. **TI** If Labor is Inelastic, Are Taxes Still Distorting. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2810; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 022, 024. **KW** Taxes. Labor Supply. Public Good.

AB Three recent papers measure the marginal excess burden of labor taxes in the United States. They obtain very different results even where they all use a zero uncompensated labor supply elasticity and assume that the additional revenue is spent on a public good that is separable in utility. The impression is that other parameters must explain the differences in results. Yet each paper uses a different concept of excess burden. Here, I calculate all three measures in one model and show how conceptual differences explain the results. Only one of these measures isolates the distortionary effects of taxes in a way that depends on the compensated labor supply elasticity. The other two measures incorporate income effects and thus depend on the actual change in labor.

Fuss, Melvyn A.

TI Economic Capacity Utilization and Productivity Measurement for Multiproduct Firms with Multiple Quasi-Fixed Inputs. **AU** Berndt, Ernst R.; Fuss, Melvyn A.

TI High Tech Firms in Israeli Industry. **AU** Bregman, Arie; Fuss, Melvyn A.; Regev, Haim.

Galai, Dan

TI New Financial Instruments to Hedge Changes in Volatility. **AU** Brenner, Menachem; Galai, Dan.

Gale, William G.

PD January 1989. **TI** The Hybrid Plan: A Proposal for Federal Credit Reform. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 543; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 29. **PR** $2.50; checks payable to University of California at Regents. **JE** 322, 323, 321. **KW** Budget Deficits. Subsidies. Credit Policy. Loan Guarantees. Direct Loans.

AB The current budgetary and administrative treatment of federal credit is misleading and controversial. This paper reviews underlying issues and current proposals for reform, and suggests an alternative. The Hybrid Plan essentially combines the advantages of each of the two main alternatives. Unlike other proposals, the Hybrid Plan would allow the management of credit policy to be responsive both to the pervasive diversity embodied in federal credit policies and to improvements in the government's ability to administer credit programs.

Garber, Peter M.

TI The Linkage Between Speculative Attack and Target Zone Models of Exchange Rates. **AU** Flood, Robert P.; Garber, Peter M.

TI The Linkage between Speculative Attack and Target Zone Models of Exchange Rates. **AU** Flood, Robert P.; Garber, Peter M.

Gaudet, Gerard

PD July 1988. **TI** The Profitability of Exogenous Output Contractions: A Comparative-Static Analysis with Application to Strikes, Mergers and Export Subsidies. **AU** Gaudet, Gerard; Salant, Stephen W. **AA** Gaudet: Universite Laval, Quebec. Salant: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-09; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 40. **PR** No Charge. **JE** 022. **KW** Cournot Equilibrium. Homogeneous Good. Cost Functions. Output.

AB We consider a Cournot equilibrium where firms with identical cost functions produce a homogeneous good. A subset of these firms faces an exogenously-induced marginal contraction of individual output. We show that for any given finite number of firms greater than one, each firm in the subset will gain (lose) if the number of firms in the subset is sufficiently large (small). With constant marginal costs of production and a linear inverse demand curve, the firms in the subset will gain if and only if they outnumber the firms outside it by more than one. In general, the firms in the subset will gain if and only if their number exceeds by more than one an "adjusted" number of outside firms, where the multiplicative adjustment factor depends on the curvatures of the cost and inverse demand curves. In a price-taking equilibrium, on the other hand, the firms in the subset will never lose from a marginal contraction of their output.

PD August 1988. **TI** Uniqueness of Cournot Equilibrium: New Results from Old Methods. **AU** Gaudet, Gerard; Salant, Stephen W. **AA** Gaudet: Universite Laval, Quebec. Salant: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-10; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 8. **PR** No Charge. **JE** 022, 213. **KW** Cournot Equilibrium. Uniqueness. Output. Prices.

AB This paper provides a proof of a condition for uniqueness of Cournot equilibrium. Existing proofs of the same condition have shown it to imply a unique element within a limited class of Cournot equilibria, but leave open the possibility of other pure-strategy equilibria outside this class. A simpler approach permits us to derive the condition and to rule out the possibility of these other equilibria. The approach used also provides new insight into the conditions for existence of Cournot equilibrium.

Gavosto, Andrea

TI Outsiders, Capacity Shortages and Unemployment in the United Kingdom. **AU** Bean, Charles R.; Gavosto, Andrea.

Gelfand, Matthew D.

PD March 1989. **TI** The Simple Microanalytics of Payments System Risk. **AU** Gelfand, Matthew D.; Lindsey, David E. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 61; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 30. **PR** No Charge. **JE** 315, 312, 311. **KW** Systemic Risk. Credit Risk. Lending. Federal Reserve. Market Shares.

AB A significant fraction of Fedwire and CHIPS payments is based on credit extended implicitly during the day and extinguished by the close of business, with peak levels of such "daylight" credit amounting to $130 billion in aggregate. As with any credit, daylight lenders, including the Federal Reserve, are subject to risks of loss. This paper explores optimal, free market, and second-best allocations of daylight credit in view of internal and external financial risks and in view of the Federal Reserve's ability to extend such credit without directly adding to systemic risk. In the optimum, both total credit and private sector market shares will be smaller than in suboptimal allocations.

Gertler, Mark

PD March 1989. **TI** Developing Country Borrowing and Domestic Wealth. **AU** Gertler, Mark; Rogoff, Kenneth. **AA** University of Wisconsin. **SR** National Bureau of Economic Research Working Paper: 2887; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 121, 441, 433, 411.

KW Developing Countries. Debt. Creditors. Capital Markets. Foreign Investment.
AB We show that across developing countries, external debt to private creditors rises more than proportionately with income. We then develop a simple theoretical model consistent with this phenomenon and also consistent with the well-documented relationship between capital market development and growth. Our framework stresses information asymmetries at the level of individual borrowers as the source of frictions in world capital markets.

Ghosh, Atish Rex

TI Foreign Borrowing and Export Promotion Policies.
AU Borensztein, Eduardo R.; Ghosh, Atish Rex.

Giavazzi, Francesco

PD April 1989. **TI** Confidence Crises and Public Debt Management. **AU** Giavazzi, Francesco; Pagano, Marco. **AA** Giavazzi: Universita do Bologna. Pagano: Universita di Napoli. **SR** National Bureau of Economic Research Working Paper: 2926; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambrige, MA 02138. **PG** 21. **PR** $2.00. **JE** 443, 441, 431, 322, 321. **KW** Capital Mobility. Exchange Rates. Devaluations. Public Debt.
AB Under free capital mobility, confidence crises can result in devaluations even when fixed exchange rates are viable, if fiscal authorities can obtain temporary money financing. During a crisis, domestic interest rates increase reflecting the expected devaluation. Rather than selling debt at punitive rates, fiscal authorities will turn to temporary money financing, leading to equilibria with positive probability of devaluation. These equilibria can be ruled out if the amount of debt maturing during the crisis is sufficiently small a condition that can be met by reducing the stock of public debt, lengthening its average maturity and/or smoothing the time distribution of maturing issues.

Gibbons, Robert S.

PD April 1989. **TI** Relative Performance Evaluation for Chief Executive Officers. **AU** Gibbons, Robert S.; Murphy, Kevin J. **AA** Gibbons: Massachusetts Institute of Technology. Murphy: University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2944; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 824, 825, 022. **KW** Productivity. Incentives. Wages. Employment.
AB The purpose of this paper is to review the benefits and costs of relative performance evaluation (RPE) and to test for the presence of RPE in one occupation where the benefits plausibly exceed the cost: chief executive officers (CEOs). In contrast to previous research, our empirical evidence strongly supports the RPE hypothesis-CEO pay revisions and retention probabilities are positively and significantly related to firm performance, but are negatively and significantly related to industry and market performance, ceteris paribus. Our results also suggest that CEO performance is more likely to be evaluated relative to aggregate market movements than relative to industry movements.

PD May 1989. **TI** Layoffs and Lemons. **AU** Gibbons, Robert S.; Katz, Lawrence F. **AA** Gibbons: Massachusetts Institute of Technology. Katz: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2968; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 821, 833. **KW** Layoffs. Employment. Wages.
AB In thia paper we provide theoretical and empirical analyses of an asymmetric information model of layoffs in which the current employer is better informed about its workers' abilities than prospective employers are. The key feature of the model is that when firms have discretion with respect to whom to layoff, the market infers that laid off workers are of low ability. Since no such negative inference should be attached to workers displaced in a plant closing, our model predicts that the port-displacement wages of otherwise observationally equivalent workers will be higher for those displaced by plant closings than for those displaced by layoffs. In our empirical work, we use data from the Displaced Workers Supplements in the January 1984 and 1986 Current Population Surveys.

Gilboa, Itzhek

PD January 1989. **TI** A Necessary but Insufficient Condition for the Stochastic Binary Choice Problem. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 818; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 37. **PR** No Charge. **JE** 022, 213, 025. **KW** Stochastic Binary Choice. Triangle Inequality. Diagonal Inequality. Graph Decomposition.
AB In this paper some necessary conditions on Q -- the "diagonal inequality" -- are formulated and they are proved to generalize the Cohen-Falmagne conditions. A counterexample shows that the diagonal inequality (hence, perforce, the Cohen-Falmagne conditions) is insufficient. The same example is used to show that Fishburn's conditions are also insufficient.

Gin, Alan

PD January 1989. **TI** The Streetcar and Residential Location in Nineteenth Century Philadelphia. **AU** Gin, Alan; Sonstelie, Jon. **AA** Gin: University of San Diego. Sonstelie: University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 8-89; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 25. **PR** No Charge. **JE** 941, 933, 931. **KW** Mass Transit. Commuting. Urban Planning. Commuters.
AB The first mode of mass transit in American cities was the horse-drawn streetcar. The streetcar was introduced in the 1850s. Before that time, most commuters walked to work. Commuting by streetcar was faster than walking, enabling workers to live farther from the city's center. The new access to suburban locations was not open to low-income commuters, however, because the streetcar fare was too expensive for them. The streetcar should have therefore initiated an exodus of centrally located, high-income residents towards the suburbs. This paper examines residential patterns in Philadelphia using data from the censuses 1850, 1860, 1870 and 1880. Our analysis uncovers clear evidence that the streetcar caused the predicted exodus and suggests a more general theory linking the life cycle of commuting modes to major changes in residential patterns.

Glied, Sherry

TI The Evolution of AIDS Economic Research.
AU Bloom, David E.; Glied, Sherry.

Goldstein, Morris

TI Simulating the Effects of Some Simple Coordinated vs. Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul.

TI Exchange Rate Volatility and Misalignment: Evaluating Some Proposals for Reform. **AU** Frenkel, Jacob A.; Goldstein, Morris.

TI Simulating the Effects of Some Simple Coordinated versus Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul.

Gonul, Fusun F.

PD November 1988. **TI** Comparison of Hazard Functions with Duration Dependence and Stayer-Mover Structure with an Application to Divorce. **AA** Carnegie-Mellon University, University of California, Davis and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 89-1; Economics Research Center/NORC, 1155 East 60th Street, Chicago, IL 60637. **PG** 11. **PR** $2.00; Send requests to Librarian, Economics Research Center. **JE** 212, 921. **KW** Monte Carlo. Hazard Functions. Duration.

AB Performances of hazard functions with an implicit stayer-mover structure are examined in Monte Carlo samples. The results are then applied to data on duration of first marriages.

Gordon, David B.

PD January 1989. **TI** A Note on "Transfers". **AU** Gordon, David B.; Levine, Ross. **AA** Division of International Finance, Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 341; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 28. **PR** No Charge. **JE** 443, 432, 431, 224. **KW** Balance of Payments. Capital Account. Trade Account. Capital Formation. Portfolio.

AB This paper attempts to provide some structure to the analysis and measurement of "net resource transfers". We go about achieving this objective in two steps. First, we use standard measures of portfolio changes and balance of payments statistics to evaluate the real resource transfers associated with financial transactions. Second, we sketch ways in which this analytical framework can be used to address the economic concerns associated with the term "net resource transfers", e.g., questions regarding the "burdens" of international debt obligations and the effects of these obligations on domestic capital formation and debt servicing.

Gordon, Roger H.

TI Effects of Family and Community Background on Men's Economic Status. **AU** Corcoran, Mary; Gordon, Roger H.; Laren, Deborah; Solon, Gary.

Goulder, Lawrence H.

PD January 1989. **TI** Tax Policy, Housing Prices, and Housing Investment. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2814; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323, 932. **KW** Tax Reform. Taxes. Housing. Capital Investment.

AB This paper employs a general equilibrium model to assess the effects of major components of the Tax Reform Act of 1986 on the performance of housing and other industries. The model considers both short-term and long-term effects on housing demands, house values, and investment in housing. Model results indicate that in the short run, the recent cuts in corporate tax rates, elimination of investment tax credits, and scaling back of depreciation deductions together have negative implications for investment in nonresidential capital but positive effects on housing investment. This mainly reflects the fact that prior to the '86 tax reforms, investment tax credits and favorable depreciation rules disproportionately benefitted nonhousing industries; thus their removal especially affects industries other than housing and helps "crowd in" housing investment. Over the long term, however, the tax changes imply lower investment in housing as well as in other types of capital. The reduced housing investment stems from adverse effects of the reforms on aggregate output and real income.

PD May 1989. **TI** Trade Liberalization in General Equilibrium: Intertemporal and Inter-Industry Effects. **AU** Goulder, Lawrence H.; Eichengreen, Berry. **AA** Goulder: Harvard University. Eichengreen: University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 2965; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 431, 411, 441, 023. **KW** Tariffs. Exports. Capital Flows.

AB This paper uses a dynamic computable general equilibrium model to simulate the effects of unilateral reductions by the U.S. in tariffs and "voluntary" export restraints (VER's). We consider 50 percent cuts in tariffs and in ad valorem VER equivalents, separately and in combination. The model features intertemporal optimization by households and firms, explicit adjustment dynamics, an integrated treatment of the current and capital accounts of the balance of payments, and industry disaggregation. Central findings include: (1) VER's are considerably more significant than tariffs in terms of the magnitude of the macroeconomic effects induced by their reductions; and (2) while VER reductions enhance domestic welfare, unilateral tariff cuts reduce domestic welfare.

Gourieroux, Christian

TI A Functional Limit Theorem for Fractional Processes. **AU** Akonom, J.; Gourieroux, Christian.

TI Heterogeneite dans les Modeles a Representation Lineaire. **AU** Fourgeaud, Claude; Gourieroux, Christian; Pradel, Jacqueline.

PD March 1988. **TI** Heterogeneite I: Le cas lineaire. **AU** Gourieroux, Christian; Peaucelle, Irina. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8809; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 28. **PR** 20 FF. **JE** 211. **KW** Panel Data. Heterogeneity. Heterogeneity Bias. Linear Models.

AB In the case of panel data, the introduced explanatory variables are often not sufficient for describing all the individual characteristics and it may be useful to consider relation with individual varying coefficients.
When this heterogeneity is even partially omitted, the estimated parameters may or may not have some interpretations in term of the associated disaggregated parameters. In this

paper we analyze the existence and the importance of heterogeneity biases for linear models. Paper in French.

PD June 1988. **TI** Heterogeneite: II: Etude des Biais (Sous l'Hypothese d'Exogeneite Faible). **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8817; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 29 P. **PR** 20 FF. **JE** 022, 023, 212. **KW** Heterogeneity. Random Coefficient Model. Substitution Effect. Technical Progress. Representative Model. Heterogeneity Bias.
AB In microeconometrics models, the individual differences are taken into account by the introduction of explanatory variables but also by means of the parameters of interest. This parameter of heterogeneity is in general described by the p.d.f. of the parameter among the individuals (heterogeneity distribution) and it is often assumed that it is independent of the values of the explanatory variables (assumption of weak exogeneity).
Then we replace the initial disaggregate model by the model integrated with respect to the heterogeneity distribution (the so-called representative model). The aim of this paper is to discuss the biases, which are consequences of a direct use of the representative model, as if heterogeneity were absent. Paper in French.

Graham, John D.
TI Black/White Differences in Wealth and Asset Consumption. **AU** Blau, Francine; Graham, John D.

Graham, Tomasi Theodore
TI Existence of Equilibria in Lobbying Economies. **AU** Coggins, Jay S.; Graham, Tomasi Theodore; Roe, Terry L.

Grandmont, Jean Michel
PD June 1988. **TI** Report on M. Allais' Scientific Work. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8819; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 22. **PR** 20 FF. **JE** 011, 021. **KW** Allais. Equilibrium. Welfare. Uncertainty. Economic Theory.
AB The report reviews briefly the main scientific contributions in economics of Maurice Allais, with specific emphasis on theory.

PD June 1988. **TI** Nonlinear Difference Equations Bifurcations and Chaos: An Introduction. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8811; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 119. **PR** 35 FF. **JE** 131, 213. **KW** Economic Fluctuations. Difference Equations. Bifurcations. Chaos.
AB The aim of these lecture notes is to present a few mathematical facts about the bifurcations of nonlinear difference equations, in a compact form that might be useable by economic theorists. These notes should be part of the mathematical appendices of a forthcoming book "Market Psychology and Business Cycles" that will be eventually published by Oxford University Press. The material of these lectures was presented as a short course at the Summer Workshop in Economic Theory at Stanford University (IMSSS) in the summer of 1987. The comments and suggestions of the participants are gratefully acknowledged.

PD October 1988. **TI** Temporary Equilibrium: Money, Expectations and Dynamics. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8821; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 38. **PR** 20 FF. **JE** 021, 031, 131, 023, 311. **KW** Money. Expectations. Business Cycle. Learning. Dynamic Model. General Equilibrium.
AB It is attempted in this review to present in accessible terms modern developments in the theory of temporary equilibrium and of economic dynamics initiated by the publication of Value and Capital. Attention is focused on 1) the integration of money and financial assets in general equilibrium theory, and the clarification of the choice-theoretic structure of Keynesian macroeconomic models and of their links with the theory of imperfect competition; 2) the occurrence and multiplicity of long run steady states, with self-fulfilling expectations, of the economic or social system (stationary states, deterministic cycles, stationary stochastic processes), and 3) the stability, or instability, of these long run steady states when traders employ pre-specified learning processes.

Gravelle, Jane G.
PD May 1989. **TI** Non-Neutral Taxation and the Efficiency Gains of the 1986 Tax Reform Act-A New Look. **AA** Library of Congress. **SR** National Bureau of Economic Research Working Paper: 2964; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323, 514, 511, 611, 022. **KW** Tax Reform. Taxes. Corporations. Capital.
AB The Tax Reform Act of 1986 considerably altered the differentials between taxes on corporate and noncorporate capital. Conventional wisdom, relying on various incarnations of the Harberger model, suggests rather small efficiency effects from these changes in corporate tax wedges. But the Harberger models appear to understate greatly the efficiency effects of changes in the corporate tax wedge because they do not admit production of the same good by both corporate and noncorporate firms. A new model which allows corporate and noncorporate firms to coexist within the same industry suggests a significant efficiency gain from the Tax Reform Act. The model predicts that the new law reduced excess burden by at least $31 billion and eliminated about half of the total distortion from non-neutral taxation.

Gray, Wayne B.
PD January 1989. **TI** A Behavioral Approach to Compliance: OSHA Enforcement's Impact on Workplace Accidents. **AU** Gray, Wayne B.; Scholz, John T. **AA** Gray: Clark University. Scholz: State University of New York, Stony Brook. **SR** National Bureau of Economic Research Working Paper: 2813; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 822, 631. **KW** Working Conditions. Manufacturing. Employee Safety.
AB This study tests for effects of OSHA enforcement, using data on injuries and OSHA inspections for 6,842 manufacturing plants between 1979 and 1985. We use measures of general deterrence (expected inspections at plants like this one) and specific deterrence (actual inspections at this plant). Both measures of deterrence are found to affect accidents, with a 10 per cent increase in inspections with penalties predicted to reduce accidents by 2 per cent. The existence of specific deterrence effects, the importance of lagged effects, the asymmetrical effects of probability and amount of penalty on accidents, and the tendency of injury rates to self-correct over a

few years support a behavioral model of the firm's response to enforcement rather than the traditional 'expected penalty' model of deterrence theory.

Green, Jerry R.

PD May 1988. **TI** Ordinal Independence in Non-Linear Utility Theory. **AU** Green, Jerry R.; Jullien, Bruno. **AA** Green: Harvard University. Jullien: CEPREMAP. **SR** CEPREMAP Discussion Paper: 8818; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 47. **PR** 20 FF. **JE** 022, 026. **KW** Independence Axiom. Nonlinear Utility. Uncertainty. Utility Theory. Preferences.

AB Individual behavior under uncertainty is characterized using a new axiom, ordinal independence, which is a weakened form of the von Neumann-Morgenstern independence axiom. It states that if two distributions share a "tail" in common, then this tail can be modified without altering the individual's preference between these distributions. Preference is determined by the tail on which the distributions differ. This axiom implies an appealing and simple functional form for a numerical representation of preferences. It generalizes the form of "anticipated utility", and it explains some well-known forms of behavior, such as the Friedman-Savage paradox, that anticipated utility cannot.

Green, Krotki Jan

TI B-Matching Degree Sequence Polyhedra. **AU** Cunningham, William H.; Green, Krotki Jan.

TI A Separation Algorithm for the Matchable Set Polytope. **AU** Cunningham, William H.; Green, Krotki Jan.

Greene, Joshua

PD March 1989. **TI** The External Debt Problem of Sub-Saharan Africa. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/23; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** No Charge. **JE** 443, 121, 112. **KW** Africa. Debt. Debt Relief.

AB The massive external debt burden of Sub-Saharan Africa has gained widespread attention as a serious policy issue during the past few years. This paper reviews recent trends in the debt levels and economic performance of Sub-Saharan countries and assesses a number of proposals for reducing their external debt service obligations. There is also a discussion of the modalities of various debt relief proposals that have been advanced.

Greenwald, Bruce C.

PD April 1989. **TI** Toward a Theory of Rigidities. **AU** Greenwald, Bruce C.; Stiglitz, Joseph E. **AA** Greenwald: Bellcore. Stiglitz: Stanford University. **SR** National Bureau of Economic Research Working Paper: 2938; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 14. **PR** $2.00. **JE** 131, 511, 514, 022. **KW** Decision Theory. Prices. Inflation. Market Theory.

AB This paper presents a theory of rigidity, or more properly inertia, in the responses of economic variables to changing environments. The theory rests on three fundamental assumptions: (1) that firms are risk averse, (2) that firms are uncertain of the impacts of changing decision variables and (3) that this uncertainty increases with the size of deviations in decision variables from appropriately defined past level. Under these circumstances an optimal portfolio of incremental decision variable adjustments exists which (a) takes variance minimizing adoptions to environmental change as a point of departure and then (b) is weighted in favor of changes in variables whose effects are less uncertain.

PD April 1989. **TI** Financial Market Imperfections and Productivity Growth. **AU** Greenwald, Bruce C.; Stiglitz, Joseph E. **AA** Greenwald: Bellcore. Stiglitz: Stanford. **SR** National Bureau of Economic Research Working Paper: 2945; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 39. **PR** $2.00. **JE** 825, 226, 621, 022, 522. **KW** Financial Markets. Productivity Growth. Technology. Investment.

AB This paper examines the impact of financial market imperfections on long-term productivity growth. It focuses on failures in markets for the sale of equity securities and hence on the failure of markets which help firm diversify the risks of real investment. The paper examines separately situations in which productivity growth is driven by learning-by-doing and where it results from the cumulative impact of explicit investment in technology by firms. In general, a multiplicity of steady-state growth paths exists with different growth rates along each path. The particular path followed by any single economy (and hence the growth rate of that economy) will depend significantly on policy interventions which mitigate effects of financial markets.

Griliches, Zvi

PD April 1989. **TI** Patents: Recent Trends and Puzzles. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2922; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $2.00. **JE** 621, 825. **KW** Patents. Technology. R&D. Productivity.

AB This paper reviews the historical data on patenting in the United States with special reference to the last 20 years and their potential relation, if any, to the recent productivity slowdown. Two points are made: Patents are not a "constant-yardstick" indicator of either inventive input or output. Moreover, they are "produced" by a governmental agency which goes through its own budgetary and inefficiency cycles. The paper shows that the appearance of an absolute decline in patenting in the 1970s is an artifact of such a cycle. This leaves us still with the longer run puzzle of a slower growth in patenting, especially by U.S. residents, relative to R&D expenditures.

Grosskopf, Shawna

TI On Price Efficiency. **AU** Fare, Rolf; Grosskopf, Shawna.

Grossman, Gene M.

PD January 1989. **TI** Comparative Advantage and Long-Run Growth. **AU** Grossman, Gene M.; Helpman, Elhanan. **AA** Grossman: Princeton University. Helpman: Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 2809; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 621, 111, 422, 411. **KW** Technology. Trade. Economic Growth. Commercial Policy. Dynamic Model.

AB We construct a dynamic, two-country model of trade and growth in which endogenous technological progress results from the profit-maximizing behavior of entrepreneurs. We study the role that the external trading environment and that trade and industrial policies play in the determination of long-run growth rates. We find that cross-country differences in efficiency at R&D versus manufacturing (i.e., comparative advantage) bear importantly on the growth effects of economic structure and commercial policies. Our analysis allows for both natural and acquired comparative advantage, and we discuss the primitive determinants of the latter.

TI Endogenous Product Cycles. **AU** Helpman, Elhanan; Grossman, Gene M.

PD May 1989. **TI** Growth and Welfare in a Small Open Economy. **AU** Grossman, Gene M.; Helpman, Elhanan. **AA** Grossman: Princeton University. Helpman: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 15-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 30. **PR** No Charge. **JE** 422, 111, 621, 411. **KW** Technology. Open Economy. Trade Policy. Long Run Growth. Innovation. Commercial Policy.

AB We construct a model of growth based on endogenous technological change in a small, open economy. Entrepreneurs develop new intermediate products whenever the present value of potential profits exceeds the cost of R&D. Diversity of intermediates contributes to total factor productivity in the production of final goods. The economy produces two such final goods, and trades these at exogenously given world prices. We study the welfare implications of R&D subsidies and commercial policy.

Grossman, Sanford J.

PD October 1988. **TI** Optimal Dynamic Hedging. **AU** Grossman, Sanford J.; Vila, Jean Luc. **AA** Grossman: Princeton University. Vila: New York University. **SR** New York University Salomon Brothers Center Working Paper: 495; 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** 38. **PR** No Charge. **JE** 313, 311. **KW** Portfolio. Hedging. Incomplete Markets. Dynamic Model. Trading.

AB A standard dynamic hedging problem involves an institution choosing its portfolio subject to the constraint that it meet a prespecified liability flow. If markets are complete then this can be accomplished by the purchase of put options (or their equivalent). If markets can be completed by the use of a dynamic trading strategy, then the solution will involve synthesizing put options. However, when the above constraint is combined with the constraint that borrowing is not permitted, then the dynamic trading strategy which synthesizes the relevant options can become infeasible. Herein, we find the optimal hedging strategy for an institution with the above constraints. We show that it is possible to substantially improve upon the Constant Proportion Portfolio Insurance strategies suggested by Black and Jonnes (1987) and Perold (1986).

Gustafsson, Siv

PD October 1988. **TI** Daycare Subsidies and Labor Supply in Sweden. **AU** Gustafsson, Siv; Stafford, Frank. **AA** Gustafsson: Arbetslivcentrum. Stafford: University of Michigan. **SR** Centre for Economic Policy Research Discussion Paper: 279; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 33. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 813, 822, 824, 921, 841. **KW** Labor Supply. Child care. Median Voter. Women. Households. Children.

AB The provision of subsidized child care may encourage women to participate in the paid labor force. This paper analyzes the effects of the price and availability of subsidized child care on labor force participation, using data from a Swedish household survey for 1984 in combination with data on public day care fees and spaces per child by community. We argue that the subsidy rate and availability of spaces determined by the political leaders of the community is to a large extent exogenous to the household. The joint out-of-home child care and labor supply decision is analyzed by logit-choice models. We find that the provision of high quality public day care in Sweden encourages the labor market activity of women with preschoolers, even when a spouse's income is high, and that when spaces are not rationed a lower price encourages use. This is consistent with the predictions of our theoretical model.

Guth, Werner

PD January 1989. **TI** Equilibrium Selection in the Spence Signaling Game. **AU** Guth, Werner; van Damme, Eric. **AA** Guth: University of Frankfurt. van Damme: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-218; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 36. **PR** No Charge. **JE** 021, 026. **KW** Signalling. Perturbed Game. Spence Model.

AB The paper studies the most simple version of the Spence job market signaling model in which there are just 2 types of workers while education is not productivity increasing. To eliminate the multiplicity of equilibria, the general equilibrium selection theory of John Harsanyi and Reinhard Selten is applied. It is shown that this theory selects Wilson's E(2)-equilibrium as the solution.

Gyourko, Joseph

PD March 1989. **TI** Public Sector Bargaining and the Local Budgetary Process. **AU** Gyourko, Joseph; Tracy, Joseph S. **AA** Gyourko: University of Pennsylvania. Tracy: Yale University. **SR** National Bureau of Economic Research Working Paper: 2915; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $2.00. **JE** 822, 324, 824, 832. **KW** Public Sector. Teachers. Wages. Local Government. Property Taxes.

AB This paper investigates how the fiscal environment and the budgetary process affects wage and employment determination in the local public sector. The structure of the local tax system is found to be influential with significantly higher wages occurring in cities with access to local sales and/or income taxes. State-imposed property tax limits are found to be associated with lower wages (but not overall payrolls per capital). We find evidence that skill enhancement may be an important policy tool. Local governments appear to successfully use it to mitigate the wage premia associated with strong state collective bargaining legislation.

Hall, Bronwyn H.

PD December 1988. **TI** The R&D Master File Documentation. **AU** Hall, Bronwyn H.; Cummins, Clint; Laderman, Elizabeth; Mundy, Joy. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic

Research Technical Paper: 72; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 229, 631. **KW** Data Sets. Micro Data. Manufacturing.
AB This document describes the panel of publicly traded United States manufacturing firms which was created and updated at the National Bureau of Economic Research from 1978 through 1988 within the Productivity Program. The panel consists of about 2600 large manufacturing firms with three to twenty-seven years of data each; the period covered by the sampling frame was 1976 through 1985, with data back to 1959 where possible. There are approximately 70 variables for each firm-year of data, consisting of income statement and balance sheet variables and the corresponding common stock data. The technological data available for these firms consist of R&D expenditures and patents granted, both by date of application and by granting date. The patents data are available only through about 1981, due to the limitations of our sources and budget. The firms on the file are identified both by their CUSIP number and by name, making it feasible to match this data to other sources.

PD May 1989. **TI** Research and Development as an Investment. **AU** Hall, Bronwyn H.; Hayashi, Fumio. **AA** Hall: National Bureau of Economic Research. Hayashi: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2973; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 522, 621, 631. **KW** Investment. Technology. Manufacturing. Capital. Financial Markets.
AB About 20 percent of the gross investment expenditures of U.S. manufacturing firms is expenditures on research and development. Like investment in physical capital, R&D also responds to news about future prospects of the firm, such as profitability, technological opportunities, or chages in factor prices. Using data from a panel of large U.S. manufacturing firms that was developed within the Productivity Program of the NBER, we investigate the differential responses of these two types of investment to changes in the value of the firm's assets as perceived by financial markets and the interaction of these responses.

Hall, Robert E.

TI Bounds on the Variances of Specification Errors in Models with Expectations. **AU** Durlauf, Steven N.; Hall, Robert E.

Hallman, Jeffrey J.

PD April 1989. **TI** M2 Per Unit of Potential GNP as an Anchor for the Price Level. **AU** Hallman, Jeffrey J.; Porter, Richard D.; Small, David H. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Staff Studies Paper: 157; Staff Studies Section, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 28. **PR** Free. **JE** 311, 132, 134, 133. **KW** Inflation. Monetary Policy. Velocity. Money. Forecasting. Monetary Aggregates.
AB The study's analysis of M2 and prices starts with the question, What long-run price level will current holdings of M2 support? The long-run equilibrium price level, P*, is defined as being consistent with the current value of M2 when V2 is at its long-run level, V*, and when real GNP is at its long-run potential level, Q*. Thus, P* is proportional to M2 per unit of potential output. Operationally, the mean of V2 since 1955:1 is used as the estimate of V*. Discrepancies between the long-run equilibrium price level, P*, and the actual price level, P, drive the inflation process. If P* is greater than P, then the current level of M2, if maintained, will eventually yield an acceleration of prices. If P* is below P, then maintaining the current level of M2 will eventually yield a deceleration.

Haltiwanger, John C.

TI Macroeconomic Implications of Production Bunching: Factor Demand Linkages. **AU** Cooper, Russell; Haltiwanger, John C.

Haltmaier, Jane T.

PD March 1989. **TI** The Use of Survey Data in Forecasting Business Fixed Investment. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 56; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 16. **PR** No Charge. **JE** 131, 132, 522. **KW** Surveys. Forecasting. Investment.
AB Investment spending surveys such as those published quarterly by the Commerce Department might be expected to be useful in forecasting business fixed investment. This paper examines the incremental value of the surveys in forecasting investment in conjunction with two large econometric models, namely the Federal Reserve Board's quarterly MPS and monthly forecasting models. Both in-sample and out-of-sample performance is assessed. The results indicate that the surveys do contain information that is not incorporated in the quarterly model's modified neoclassical investment equations, but are not very useful in combination with the monthly model, which incorporates forward-looking monthly data such as orders for capital goods and construction contracts into econometric investment equations.

Hamermesh, Daniel

TI Sleep and the Allocation of Time. **AU** Biddle, Jeff E.; Hamermesh, Daniel.

Hannan, Timothy H.

TI Price Rigidity and Market Structure: Theory and Evidence from the Banking Industry. **AU** Berger, Allen N.; Hannan, Timothy H.

PD March 1989. **TI** The Impact of Bank Regulatory Requirements on Large Corporate Lending. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 63; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 34. **PR** No Charge. **JE** 312, 314, 315, 613. **KW** Corporate Lending. Commercial Banks. Reserve Requirements. Regulations.
AB This paper defines the burden imposed on banks by reserve requirements, deposit insurance premiums, and capital adequacy requirements and estimates the extent to which it has inhibited large corporate lending by banks. Evidence consistent with the hypothesis that all three of these elements of the regulatory burden inhibit large corporate lending by banks is found. Coefficient point estimates suggest that capital

requirements have a particularly strong effect on the lending behavior of banks for which capital requirements are binding.

PD March 1989. **TI** Returns to Bidders and Targets in the Acquisition Process: Evidence from the Banking Industry. **AU** Hannan, Timothy H.; Wolken, John D. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 64; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 20. **PR** No Charge. **JE** 312, 314, 315. **KW** Acquisition. Bidders. Targets. Banking. Stockholders. Commercial Banks.

AB This study examines the wealth effects of acquisition announcements in the banking industry using a standard event-study methodology and a significantly updated and enlarged sample of publicly traded banking organizations. Acquisition announcements in the banking industry result in substantial, statistically significant gains to the stockholders of target firms. Stockholders of bidding firms incur statistically significant, nontrivial losses at the time of the acquisition announcement. The hypothesis that acquisitions in the banking industry result in no net gain to the shareholders of the bidding and target firms combined cannot be rejected. Our results thus suggest that acquisitions in the banking industry have resulted in a wealth transfer from bidders to targets, with no overall gain to the shareholders of the two firms combined.

Hardle, Wolfgang

PD March 1989. **TI** Bandwidth Choice for Average Derivative Estimation. **AU** Hardle, Wolfgang; Hart, Jeffrey D.; Marron, J. S.; Tsybakov, A. B. **AA** Hardle: University of Bonn. Hart: Texas A&M University. Marron: University of North Carolina. Tsybacov: Academy of Sciences of the Union of Soviet Socialist Republic. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-200; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 23. **PR** No Charge. **JE** 211. **KW** Bandwidth. Kernel Estimators. 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 the optimal bandwidth. The extent to which the theoretical conclusions apply in practice is investigated in an important economic example related to the Law of Demand.

PD March 1989. **TI** Resampling for Inference from Curves. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-225; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** No Charge. **JE** 211, 214. **KW** Nonparametric Methods. Cross-Validation. Bootstrap.

AB Nonparametric curve estimation resampling methods have a long tradition. Cross-Validation is used for instance to optimize the smoothing parameter. In this paper a resampling method is studied that is helpful in drawing inferences from curves. More specifically a variant of the Bootstrap is proposed to construct errorbars and to compare with parametric curves. This so-called Wild Bootstrap is easy to implement and does not require complicated plug-in estimation.

Hardouvelis, Gikas A.

PD February 1989. **TI** Stock Market Bubbles Before the Crash of 1987. **AA** Barnard College, Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-07; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 26. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canad and Puerto Rico). **JE** 313, 441, 311. **KW** Stock Market. Japan, Great Britain. United States. Bubbles. Risk Premium.

AB The October 1987 worldwide stock market crash cannot be explained as a rational reevaluation of future fundamentals. Was it the result of a bubble crash, i.e, were markets overvalued before their collapse? The paper proposes and implements a new test for rational bubbles. During the lifetime of a rational bubble, investors' risk premium follows an upward trend because the premium for a year and half before the crash in the New York and Tokyo markets, and for a year before the crash in the London market.

Harris, Trevor S.

TI An Empirical Test of Accounting Values as Measures of Intrinsic Values. **AU** Fairfield, Patricia M.; Harris, Trevor S.

Harrison, Glenn W.

PD December 1988. **TI** The Welfare Effects of Customs Union Accession. **AU** Harrison, Glenn W.; Rutherford, Thomas F.; Wooton, Ian. **AA** University of Western Ontario. **SR** University of Western Ontario Center for the Study of International Economic Relations Working Paper: 8810C; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 31. **PR** $4.00 Canadian. **JE** 422, 411, 021. **KW** General Equilibrium Model. Customs Union. Tariffs. Trade Barriers.

AB Almost all of the literature examines the formation of a customs union by considering the effects of marginal changes in trade barriers whereas large, discrete tax changes are central to the creation of the union. The use of marginal techniques is dictated in large part by the analytical intractability of doing anything else. However, this is not without cost. The experience gained from study of optimal tariffs has taught us that marginal and discrete tariff changes do not always have the same implications: while a large country will benefit from reducing, say, a prohibitive tariff it is not in its best interests to eliminate the tariff entirely. Similarly, especially with models of three or more countries, we must expect qualitative (as well as quantitative) differences in the effects of marginal and discrete tax adjustments.

Hart, Jeffrey D.

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

Haubrich, Joseph

PD April 1989. **TI** The Sources and Nature of Long-Term Memory in the Business Cycle. **AU** Haubrich, Joseph; Lo, Andrew W. **AA** Haubrich: University of Pennsylvania. Lo: Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2951; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 133, 131, 132, 023. **KW** Fiscal Policy. Aggregation. Time Series. Macroeconomic Model.

AB This paper examines the stochastic properties of aggregate macroeconomic time series from the standpoint of fractionally integrated models, and focuses on the persistence of economic shocks. We develop a simple macroeconomic model that exhibits long-term dependence, a consequence of aggregation in the presence of real business cycles. We derive the relation between properties of fractionally integrated macroeconomic time series and those of microeconomic data, and discuss how fiscal policy may alter their stochastic behavior. To implement these results empirically, we employ a test for fractionally integrated time series based on the Hurst-Mandelbrot rescaled range. This test is robost to short-term dependence, and is applied to quarterly and annual real GNP to determine the sources and nature of long-term dependence in the business cycle.

Hayashi, Fumio

TI Research and Development as an Investment. **AU** Hall, Bronwyn H.; Hayashi, Fumio.

Heckman, James J.

PD January 1989. **TI** The Third Birth in Sweden. **AU** Heckman, James J.; Walker, James R. **AA** Heckman: Yale University. Walker: University of Wisconsin. **SR** Yale Economic Growth Center Discussion Paper: 573; Economic Growth Center, Yale University, Box 1987 Yale Station, New Haven, Connecticut 06520. **PG** 69 pages. **PR** $2.00 plus postage. **JE** 921, 841. **KW** Children. Family. Fertility.

AB This paper addresses three issues in the context of analyzing transitions to third births in Sweden. First, the effects of socioeconomic variables on age specific third birth rates include the effects of such variables on the timing and spacing of the first two births. Second, the age of a woman at the time she becomes at risk of the third birth and the length of time spent waiting for the first two births may affect the transition rates to the third birth. Third, the existence of person specific unobserved variables that account for life cycle fertility and are correlated across spells may lead to biased estimates of the parameters of socioeconomic variables affecting transition times to the third birth.

Heller, Peter S.

PD January 1989. **TI** Aging, Savings and Pensions in the Group of Seven Countries: 1980-2025. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/13; International Monetary Fund, Washington, DC 20431. **PG** 35. **PR** No Charge. **JE** 841, 918, 921, 122, 132. **KW** Fertility. Mortality. Demographics. Elderly. Savings. Government Spending.

AB In the next 30-40 years, past changes in fertility and mortality will lead to a significant increase in the share of the elderly. This study suggests that these demographic trends may lead to a decline in the G-7 private savings rate after 2000, compounding the impact of social expenditure pressures on the government's deficit. Moreover, public pensions may decline as a share of the consumption needs of the elderly, leading to financial pressures to reduce their consumption. The reduced burden of child support on the working population will not offset the increased burden of societal support for the elderly.

Hellwig, Martin

PD July 1988. **TI** Markov-Perfect Equilibrium in Games of Perfect Information. **AU** Hellwig, Martin; Leininger, Wolfgang. **AA** Hellwig: University of Basel. Leininger: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-183; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 35. **PR** No Charge. **JE** 026. **KW** Game Theory. Markov Strategies. Subgame Perfect Equilibrium. Perfect Information.

AB We study infinite-action games of perfect information with finitely many players. Specifically, we are interested in establishing existence of subgame-perfect equilibrium (Selten (1965)) in certain "simple" strategies.

The games considered in this paper allow a representation via "state variables", such that for any date t, the subgame that is played from date t onwards depends on the history (resp. state trajectory) up to t only as this history affects the present state at t.

Helpman, Elhanan

TI Comparative Advantage and Long-Run Growth. **AU** Grossman, Gene M.; Helpman, Elhanan.

PD March 1989. **TI** Endogenous Product Cycles. **AU** Helpman, Elhanan; Grossman, Gene M. **AA** Helpman: Tel Aviv University. Grossman: Princeton University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 10-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 35. **PR** No Charge. **JE** 411, 111, 621, 023. **KW** Product Cycles. Long Run Growth. Innovation. Imitation. Technology.

AB We construct a model of the product cycle featuring endogenous innovation and endogenous technology transfer. Competitive entrepreneurs in the North expend resources to bring out new products whenever expected present discounted value of future oligopoly profits exceeds current product development costs. Each Northern oligopolist continuously faces the risk that its product will be copied by a Southern imitator, at which time its profit stream will come to an end. In the South, competitive entrepreneurs may devote resources to learning the production processes that have been developed in the North. There too, costs (of reverse engineering) must be covered by a stream of operating profits. We study the determinants of the long run rate of growth of the world economy, and the long run rate of technological diffusion. We also provide an analysis of the effects of exogenous events and of public policy on relative wage rates in the two regions.

TI Growth and Welfare in a Small Open Economy. **AU** Grossman, Gene M.; Helpman, Elhanan.

Helwege, Jean

PD April 1989. **TI** Capital Structure, Bankruptcy Costs, and Firm-Specific Human Capital. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 66; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 24. **PR** No Charge. **JE** 521, 611, 851. **KW** Capital Structure. Liquidation Costs. Tenure-Earnings Profiles. Bankruptcy.

AB This paper examines the implications of Titman's (1984) theory of capital structure for investments in firm-specific human capital and tests for the effects of an increase in the probability of bankruptcy on the shapes of tenure-earnings profiles. The costs of liquidation to workers with specific human capital may be important enough for some firms to choose low debt-to-equity ratios. If so, increases in the probability of bankruptcy will be associated with lower levels of investment in specific human capital. Several proxies for the probability of bankruptcy are used to estimate the effects of an increase in the probability of bankruptcy on the tenure-earnings profile.

Hendershott, Patric H.

PD May 1989. **TI** The Long-Run Impact on Federal Tax Revenues and Capital Allocation of a Cut in the Capital Gains Tax Rate. **AU** Hendershott, Patric H.; Won, Yun Hi. **AA** Ohio State University. **SR** National Bureau of Economic Research Working Paper: 2962; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323, 522, 521. **KW** Simulations. Capital Gains. Taxes. Portfolio.

AB Model simulation are run to obtain a range of realistic estimates of the long run revenue impact of a capital gains tax rate cut to a maximum of 15 percent. The basic vehicle for the simulations is a slightly modified version of the Galper-Lucke-Toder (GLT) general equilibrium model. The essential message of this paper is that the strong emphasis in the literature on the realization response to a capital gains tax rate cut has been appropriate. The payout/recharacterization and portfolio redistribution/reallocation effects do not appear to be large. Moreover, the portfolio responses, within the context of the GLT model, act to raise tax revenues (substitution of taxable business capital for tax free household and state and local capital), not lower them as has been conjectured.

Hendricks, Kenneth

PD September 1988. **TI** Random Reservation Prices and Bidding Behavior in OCS Drainage Auctions. **AU** Hendricks, Kenneth; Porter, Robert H.; Spady, Richard H. **AA** Hendricks: University of British Columbia. Porter: Northwestern University. Spady: Bell Communications Research. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 807; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 34. **PR** No Charge. **JE** 632, 611, 616, 026. **KW** Auctions. Bidding. Auction Model. Information.

AB This paper examines bid distributions for federal drainage and development leases on the Outer Continental Shelf from 1959 to 1980. These are leases which are adjacent to tracts on which an oil or gas deposit has been discovered. We find that an auction model in which the reservation price is random, and neighbor firms are assumed to be better informed about the value of a lease than nonneighbor firms, can explain the properties of the distributions of the high neighbor and nonneighbor bids.

PD January 1989. **TI** Collusion in Auctions. **AU** Hendricks, Kenneth; Porter, Robert H. **AA** Hendricks: University of British Columbia. Porter: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 817; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 22. **PR** No Charge. **JE** 026, 612, 611, 022. **KW** Collusion. Auctions. Heterogeneity. Uncertainty.

AB Despite substantial legal evidence of collusion in auctions, there has been very little theoretical or empirical work on this subject by economists. This survey paper discusses mechanisms that are likely to facilitate collusion in auctions, as well as methods of detecting the presence of these schemes. The principal message of this paper is that the presence and the characteristics of collusive mechanisms depend critically on the nature of the object being auctioned, and on the particular auction rules. Accordingly, empirical work should be tailored to specific cases. We highlight these issues in the context of two canonical data sets; namely, procurement contract data in which seller heterogeneities are important, and data on mineral rights auctions, in which uncertainty about the value of the object is considerable.

Henke, Wolfgang

PD December 1986. **TI** The Hyperbolic n-Space as a Graph in Euclidean (6n-6)-Space. **AU** Henke, Wolfgang; Nettekoven, Wolfgang. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 86.37; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Imbedding. Hyperbolic Space. Euclidean Space.

AB We construct for each n greater than or equal to 2 an isometric C(infinity)-imbedding the n-dim. hyperbolic space into the Euclidean space whose image is the graph of a C(infinity)-map. This generalizes a well known result of D. Blanusa 1955 (the case n = 2).

Henninger, Christoph

PD February 1989. **TI** Size Distributions of Incomes and Expenditures Testing the Parametric Approach. **AU** Henninger, Christoph; Schmitz, Heinz Peter. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-219; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 18. **PR** No Charge. **JE** 225, 212, 227. **KW** Income Distribution. Functional Forms.

AB It is common in economics to describe the size distribution of income by a parametric function. We will fit some of the most frequently used functional forms (Gamma, Generalized Gamma, Singh-Maddala, Lognormal and Fisk) to the income data made available by the ESRC Data Archive at the University of Essex. Using the Kolmogorov-Smirnov test, the data reject all functional forms applied to the whole population. Stratifying the data into subgroups using the criteria of household composition or the main source of income reveals differences in the flexibilities of the parametric forms to represent the data.

Hines, James R. Jr

PD April 1989. **TI** Coming Home to America: Dividend Repatriations by U.S. Multinationals. **AU** Hines, James R. Jr; Hubbard, R. Glenn. **AA** Hines: Princeton University. Hubbard: Columbia University. **SR** National Bureau of Economic Research Working Paper: 2931; National Bureau of Economic Research, 1050 Massachusetts Avenue, Combridge, MA 02138. **PR** $2.00. **JE** 442, 521, 323, 611.

KW Multinationals. Tax System. Repatriation. Dividends.
AB This paper analyzes the financial flows from foreign subsidiaries of American multinational corporations to their parent corporations in the U.S.. These repatriations are important not only to U.S. investors, who thereby have access to those funds, but also to the U.S. government, which generally does not tax foreign earnings of controlled foreign corporations until they are repatriated. The paper reviews the current tax system as applied to multinational firms, and considers the incentives it creates for various intra-firm financial transactions (in particular, the form of repatriations).

Hochstattler, W.

PD October 1987. **TI** Matroid Matching in Pseudomodular Lattices. **AU** Hochstattler, W.; Kern, Walter. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.45; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 9. **PR** No Charge. **JE** 213. **KW** Matroid Matching. Pseudomodular Matroids. Matroids. Matching Problem.
AB The matroid matching problem (also known as matroid parity problem) has been intensively studied by several authors. Starting from very special problems, in particular the matching problem and the matroid intersection problem, good characterizations have been obtained for more and more general classes of matroids. The two most recent ones are the class of representable matroids and, later on, the class of algebraic matroids. We present a further step of generalization, showing that a good characterization can also be obtained for the class of pseudomodular matroids, introduced by Bjorner and Lovasz. A small counterexample is included to show that pseudomodularity still does not cover all matroids that behave well with respect to matroid matching.

Hodrick, Robert

PD March 1989. **TI** The Variability of Velocity in Cash-in-Advance Models. **AU** Hodrick, Robert; Kocherlakota, Narayana; Lucas, Deborah. **AA** Northwestern University. **SR** National Bureau of Economic Research Working Paper: 2891; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $2.00. **JE** 226, 212, 023. **KW** Consumption. Money. Velocity. Macroeconomics. Credit.
AB Early cash-in-advance models have the feature that the cash-in-advance constraint always binds, implying that the velocity of money is constant. Lucas (1984) and Svensson (1985) propose a change in information structure that potentially allows velocity to vary. By calibrating a version of these models using a new solution algorithm and using U.S. time series data on consumption growth and money growth, we find that in practice the cash-in-advance constraint almost always binds. This result is robust to changes in the forcing process, the inclusion of credit goods along with cash goods, various preference specifications, and changes in the precision of the agents' information.

TI Testable Implications of Indeterminacies in Models with Rational Expectations. **AU** Flood, Robert P.; Hodrick, Robert.

Hoffman, Dennis

PD April 1989. **TI** Long-Run and Interest Elasticities of Money Demand in the United States. **AU** Hoffman, Dennis; Rasche, Robert. **AA** Hoffman: Arizona State University. Rasche: Michigan State University. **SR** National Bureau of Economic Research Working Paper: 2949; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 221, 132, 131. **KW** Demand Functions. Money. Income Elasticity.
AB This study investigates the stability of long run log-linear demand functions for narrowly defined monetary aggregates in the U.S. during the post World War II period. The hypotheses that the individual time series which appear in such equations (real M1, real Monetary Base, real Personal Income and short-term and long-term nominal interest rates) all have unit roots cannot be rejected. The primary conclusion of this study is that with proper attention to the time series properties of the available data, there exists strong evidence in support of a stable equilibrium demand function for real balances.

Hofmeister, M.

PD May 1987. **TI** Counting Double Covers of Graphs. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.42; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 11. **PR** No Charge. **JE** 213. **KW** Automorphisms. Double Covers. Isomorphism.
AB Any group of automorphisms of a graph G induces a notion of isomorphism between double covers of G. The corresponding isomorphism classes will be counted.

PD June 1988. **TI** Isomorphisms and Automorphism of Graph Coverings. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.56; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** No Charge. **JE** 213. **KW** Automorphism. Covering Projection. Isomorphisms.
AB Any group of automorphisms of a graph G induces a notion of isomorphism between covering projections of G. We consider liftings of automorphisms of G and classify the isomorphism classes of covering projections of G by means of permutation voltage assignments.

PD January 1989. **TI** Concrete Graph Covering Projections. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89.62; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Homeomorphism. Covering Projection. Isomorphism.
AB A graph covering projection is a local graph homeomorphism. Certain partitions of the vertex set of the preimage graph induce a notion of "concreteness". The concrete graph covering projections will be counted up to isomorphism.

Hohmann, Christoph

PD December 1986. **TI** Optimization and Optimality Test for the Max-Cut Problem. **AU** Hohmann, Christoph; Kern, Walter. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 86.35; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213, 214. **KW** Optimality

Test. Max-Cut Problem. Polynomial Algorithm.
AB We show that the following two problems are polynomially equivalent: 1) Given a (weighted) graph G, and a cut C of G, decide whether C is maximal or not. 2) Given a (weighted) graph G, and a cut of G, decide whether C is maximal or not, and in case it is not, find a better solution C'. As a consequence, an optimality testing oracle may be used to design a polynomial algorithm for approximately solving the (weighted) Max-Cut Problem. This in turn implies that the recognizing optimal cuts in an unweighted graph is NP-hard.

Holland, Olaf Alexander

PD 1987. **TI** Schnittebenenverfahren fur Travelling-Salesman- und verwandte Probleme. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87479-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 188. **PR** No Charge. **JE** 213. **KW** Combinatorial Optimization. Travelling Salesman Problem. Matching.
AB Paper in German.

Holtz-Eakin, Douglas

PD November 1988. **TI** Intertemporal Analysis of State and Local Government Spending: Theory and Tests. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S. **AA** Holtz-Eakin: Columbia University. Rosen: Princeton University. **SR** Columbia Department of Economics Working Paper: 411; Department of Economics, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00. **JE** 324, 321. **KW** Government Spending. State Governments. Intertemporal Substitution. Dynamic Models. Fiscal Policy.
AB Both theoretical and empirical analyses of state and local government behavior generally assume that all spending during a given period depends only on resources available in that period. This absence of attention to the dynamics of aggregate state and local spending is particularly striking given its role in determining aggregate demand -- state and local purchases of goods and services were $543.2 billion in 1987, about 12 per cent of Gross National Product, and $100 billion more than that year's non-residential investment expenditures.

PD November 1988. **TI** Vote Maximization and the Provision of Local Government Services. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 410; Department of Economics, Columbia University, New York, NY 10027. **PG** 32. **PR** $5.00. **JE** 324, 025, 321. **KW** Fiscal Policy. Local Governments. Government Policy. Median Voter.
AB Econometric analysis of the fiscal policies of local governments depends upon the assumed relationship between the individual demands of residents in each community and the observed activities of their governments. Unfortunately, no consensus exists on the correct specification of the link between individual demands and government policies. Due primarily to its tractability, the most common assumption in the empirical literature is that policies are determined in accordance with the median voter model. In these studies, variations in government expenditure, taxation, etc. are attributed to changes in the resources and prices faced by a single individual: the median voter.

PD January 1989. **TI** The "Rationality" of Municipal Capital Spending: Evidence from New Jersey. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S. **AA** Holtz-Eakin: Columbia University. Rosen: Princeton University. **SR** Columbia Department of Economics Working Paper: 419; Department of Economics, Columbia University, New York, NY 10027. **PG** 29. **PR** $5.00. **JE** 324, 321. **KW** Capital Spending. Investment. State Governments. Government Spending.
AB In 1985, capital spending by subfederal governments in the United States amounted to about $80 billion. This capital served as an input to the production of education, roads, bridges, and other items that are of vital national concern. Compared to capital spending by the private sector, there has been relatively little analysis of the process that determines the flow of state and local investment. The existing literature embodies two conflicting views regarding the determinants of state and local capital spending. Some analysts interpret movements in capital spending as rational reactions to changing economic and demographic conditions. Others attribute changes to myopic decision making by politically motivated local officials. In this paper we utilize panel data on capital spending by a sample of New Jersey municipalities during the early 1980s in order to investigate which hypothesis is more consistent with actual spending behavior.

PD May 1989. **TI** Municipal Construction Spending: An Empirical Examination. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S. **AA** Holtz-Eakin: Columbia University. Rosen: Princeton University. **SR** National Bureau of Economic Research Working Paper: 2989; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 324, 634. **KW** Government Spending. Construction. Public Capital.
AB Despite widespread concern and discussion, no consensus exists concerning the causes of the "infrastructure crisis." We investigate several models of the determination of local public capital expenditures. Using Euler equation methods, we find that the hypothesis that construction spending is determined by unconstrained, forward looking municipal planning cannot be rejected. Consistent with this result, we find that the stochastic feature of the determination of construction spending. Only unanticipated changes in a community's resources alter its demand for structures.

Horne, Jocelyn

PD March 1989. **TI** Net Foreign Assets and International Adjustment in the United States, Japan and the Federal Republic of Germany. **AU** Horne, Jocelyn; Kremers, Jeroen; Masson, Paul. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/22; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** No Charge. **JE** 441, 431, 122. **KW** Asset Markets. Public Debt. Adjustment Mechanisms.
AB This paper examines external adjustment in the United States, Japan and Germany from the perspective of net foreign asset positions. It asks two questions: What are, in the long run, the determinants of net foreign asset equilibrium? and: What are, in the short run, the adjustment mechanisms sustaining that equilibrium? An analysis of postwar data produces two insights. First, using a cointegration approach, the existence of long-run net foreign asset equilibrium can be identified; in each of the G-3 countries, it is a function of demographic variables and public debt. Second, deviations from the long-run equilibrium give rise to disequilibrium feedback through domestic absorption and through other channels.

Hotz, V. Joseph

PD February 1989. **TI** Conditional Choice Probabilities and the Estimation of Dynamic Discrete Choice Models. **AU** Hotz, V. Joseph; Miller, Robert A. **AA** Hotz: University of Chicago and Economics Research Center/NORC. Miller: Carnegie-Mellon University and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 89-2; Economics Research Center/NORC, 1155 East 60th Street, Chicago, IL 60637. **PG** 64. **PR** $2.00; Send requests to Librarian, Economics Research Center. **JE** 211, 212, 921. **KW** Discrete Choice. Decision Rules. Dynamic Programming. Asymptotic Theory.

AB This paper develops a new method for estimating the structural parameters of dynamic programming problems in which choices are discrete. The method reduces the computational burden of estimating such models. We show that the valuation functions characterizing the discounted expected future utility associated with such choices often can be represented as an easily computed function of the state variables, structural parameters, and the probabilities of choosing alternative actions for states which are feasible in the future.

Hoyt, William H.

PD March 1989. **TI** Capital Gains Taxation and the Demand for Owner-Occupied Housing. **AU** Hoyt, William H.; Rosenthal, Stuart S. **AA** University of Kentucky and Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Economic Activity Section Working Paper Series: 92; Economic Activity Section, Stop #80, Federal Reserve Board, Washington, D.C. 20551. **PG** 26. **PR** No Charge. **JE** 932, 323, 921, 931. **KW** Housing. Capital Gains. Budget Constraint. Housing Sales.

AB Previous studies of the demand for owner-occupied housing have argued that we can ignore the taxation of capital gains because homeowners do not pay a capital gains tax if they buy up when they move (see King (1980) for example). Although few homeowners may actually pay tax on their capital gain, the capital gains tax code introduces a nonlinearity into the budget constraint of previous homeowners, causing previous homeowners to face a different price of housing depending on whether they buy up or down. As a result, some previous homeowners might buy up to avoid paying tax on their capital gain, when they would otherwise buy down. Using econometric techniques developed by Burtless and Hausman (1978), Hausman (1985) and Moffit (1986), we model the kinked budget constraint associated with capital gains taxation within a maximum likelihood model of owner-occupied housing demand.

Hubbard, R. Glenn

TI Coming Home to America: Dividend Repatriations by U.S. Multinationals. **AU** Hines, James R. Jr; Hubbard, R. Glenn.

Huffman, Gregory W.

TI Inside Money, Output and Causality. **AU** Freeman, Scott; Huffman, Gregory W.

Hylleberg, Svend

PD February 1989. **TI** A Note on the Distribution of the Least Squares Estimator of a Random Walk with Drift. **AU** Hylleberg, Svend; Mizon, Grayham E. **AA** Hylleberg: University of Aarhus, Denmark. Mizon: University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8903; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 11. **PR** No Charge. **JE** 211. **KW** Random Walk. Asymptotic Theory. Ordinary Least Squares. Dickey Fuller Test.

AB It is shown that the application of the result that the Dickey Fuller "t" obtained from a regression with an intercept is asymptotically normal if the DGP is a random walk with drift may be of little use in small samples unless the drift is enormous. In fact the Dickey-Fuller distribution may give a better approximation in many cases.

Inman, Robert P.

PD April 1989. **TI** The Local Decision to Tax: Evidence from Large U.S. Cities. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2921; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 39. **PR** $2.00. **JE** 324, 321. **KW** Taxes. Tax Policy. Governments. Fiscal Policy.

AB The structure of local taxation is an important determinant of the fiscal performance of decentralized public economies. In contrast to our understanding of local government spending, however, we know surprisingly little about how cities and states set taxes. This study specifies and estimates a model of the institutional, political, and economic determinants of the local decision to tax. Redistributive politics is an important determinant of local tax policy, at least for this sample of 41 large U.S. cities during the period 1961-1986. The results cast serious doubt on the validity of the "representative" or average taxpayer approach to behavioral modeling of fiscal policy for large, income diverse government.

Isard, Peter

PD January 1989. **TI** The Relevance of Fiscal Conditions for the Success of European Monetary Integration. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/6; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** No Charge. **JE** 423, 432, 441, 411. **KW** Fiscal Policy. International Investment. Monetary System. Economic Integration.

AB The paper argues that international differences in fiscal conditions influence the relative attractiveness of locating production facilities in different countries and could prove to be a troublesome source of instability for the European economies. Even though physical capital movements tend to occur slowly, divergent fiscal conditions can exert pressures on exchange rates in the short run, and the monetary policy reactions induced in a fixed exchange rate regime may affect real wage rates and/or employment levels. The implications for tax harmonization and budget discipline are discussed. It is argued that monetary integration itself will not induce fiscal discipline.

TI Simple Rules, Discretion and Monetary Policy. **AU** Flood, Robert P.; Isard, Peter.

Ize, Alain

PD February 1989. **TI** Savings, Investment and Growth in Mexico: Five Years After the Crisis. **AA** International Monetary Fund. **SR** International Monetary Fund Working

Paper: WP/89/18; International Monetary Fund, Washington, DC 20431. **PG** 68. **PR** No Charge. **JE** 122, 111, 443, 431, 113. **KW** Mexico. Depreciation. Economic Growth. Public Debt.

AB Despite Mexico's recent remarkable progress in adjusting its fiscal and external accounts and in restructuring its economy, the recovery of growth has remained elusive. This paper reviews some aspects of Mexico's recent performance and suggests that systemic adjustment uncertainty, and policy conflicts between stabilization and real depreciation objectives, are among the factors that have contributed most to delaying the private sector's investment response and preventing a sustainable recovery. The paper also assesses future growth prospects and resource mobilization needs, based on a growth model that fully incorporates the internal transfer problem and emphasizes solvency requirements.

Jackman, Richard A.

PD January 1989. **TI** Wage Formation in the Nordic Countries viewed from an International perspective. **AA** Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 335; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 55. **PR** No Charge. **JE** 824, 133, 123, 832. **KW** Unemployment. Wages. Bargaining. Labor Market. Labor Policy.

AB This paper investigates the extent to which centralized wage bargaining has contributed to the success of the Nordic economies in maintaining full employment. It is argued that unemployment will tend to be lower under centralized than under decentralized wage determination because in the centralized case wage-setters take into account the full social costs of unemployment, whereas under decentralization, an individual bargaining unit ignores the costs that unemployment resulting from its actions imposes on other sectors. The paper also considers the role of labor market policies and their interaction with the unemployment benefit system. A tentative conclusion is that such policies have been at least as important as the wage setting process in accounting for the low unemployment rates of the Nordic economies.

Jacob, Ralf

TI Austerity Policy in West Germany: Origins and Consequences. **AU** Carlin, Wendy J.; Jacob, Ralf.

Jensen, Richard

TI Tariffs with Private Information and Reputation. **AU** Thursby, Marie; Jensen, Richard.

Johnson, George

TI Changes in the Structure of Wages During the 1980's: An Evaluation of Alternative Explanations. **AU** Bound, John; Johnson, George.

Johnston, R. Barry

PD January 1989. **TI** Distressed Financial Institutions in Thailand: Structural Weaknesses, Support Operations and Economic Consequences. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/4; International Monetary Fund, Washington, DC 20431. **PG** 36. **PR** No Charge. **JE** 311, 314, 121, 312. **KW** Financial System. Regulation. Banking. Financial Crisis.

AB The Thai financial system faced a crisis in 1983. Weak managerial practices and an inadequate legal and regulatory framework were associated with a gradual deterioration in many financial institutions' balance sheets; these weaknesses were brought to the fore by a sharp economic downturn in the first half of the 1980s. The Thai authorities took a number of measures to maintain stability in the financial system and to restructure insolvent financial institutions, including a substantial strengthening in the legal and regulatory framework. The crisis has impacted on the government budget deficit and caused shifts in the demand for financial aggregates and the supply of reserve money.

Jones, Ronald

TI Vertical Foreclosure and International Trade Policy. **AU** Spencer, Barbara J.; Jones, Ronald.

Judd, Kenneth L.

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

Judlowe, Stephen

PD October 1988. **TI** Patent and Copyright Protection for Innovations in Finance. **AU** Judlowe, Stephen; Petruzzi, Christopher; Del Valle, Marguerite. **AA** Petruzzi: New York University. Judlow, Del Valle: Hopgood, Calimafde, Kalil, Blaustein and Judlowe, Law Firm. **SR** New York University Salomon Brothers Center Working Paper: 494; 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** 24. **PR** No Charge. **JE** 311, 621. **KW** Innovations. Incentives. Risk. Financial Innovations. Copyright.

AB The originator of a new financial product bears substantial risk and expense both in creating the product and in introducing it to the market. If the successful innovations can be quickly copied by competitors who bear none of the risk and expense but who can divert profits from the innovator, then the potential diversion of profits reduces the incentives to create a new product. Recent court decisions, however, have recognized that protection can be accorded to some innovations in finance. These protections are due to a broad interpretation of copyright and patent laws along with the fact that many of the recent innovations in finance require the use of a computer for practical implementation. We will provide a brief description of the different laws that may be used to protect innovations in finance along with examples showing that innovators who avail themselves of legal protection may receive substantial financial rewards, but those rewards are lost forever to innovators who fail to seek the appropriate legal protection in a timely manner.

Jullien, Bruno

TI Ordinal Independence in Non-Linear Utility Theory. **AU** Green, Jerry R.; Jullien, Bruno.

Jungnickel, D.

PD 1986. **TI** A Class of Lattices. **AU** Jungnickel, D.; Leclerc, Matthias. **AA** Jungnickel: University of Giessen. Leclerc: University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.54;

Sonderforschungsbereich 303 an der Universitat Bonn, Adenaueralle 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** No Charge. **JE** 213. **KW** Lattices. Matrix Theory. Combinations. Basis.

AB We determine the lattice in z(n) generated by those vectors having exactly k components 1 and the remaining n-k components 0; we also exhibit a "nice" basis for this lattice. A natural sub-lattice for the case n=m squared, k=m yields a connection to a famous result from Combinatorial Matrix Theory.

Kalai, Ehud

PD June 1988. **TI** Bounded Rationality and Strategic Complexity in Repeated Games. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 783; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 44. **PR** No Charge. **JE** 511, 026. **KW** Repeated Games. Decision Theory. Rationality.

AB Three important areas in modern decision theory are: bounded rationality, artificial decision making, and management information systems. It is easy to illustrate fundamental questions within these areas. For example: 1) What are the possible outcomes of strategic games if players are restricted to (or choose to) use "simple" strategies? 2) What are the limitations or implications of delegating competitive decisions to machines? 3) What information system (size and structure) should a player maintain when playing a strategic game? Recently, within the context of repeated games, meaningful answers to questions of this type were obtained. The purpose of this survey is to report some of these new methodologies and results.

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

Kamien, Morton I.

PD December 1988. **TI** Competitively Cost Advantageous Mergers and Monopolization. **AU** Kamien, Morton I.; Zang, Israel. **AA** Kamien: Northwestern University. Zang: Tel Aviv University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 799; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 30. **PR** No Charge. **JE** 514, 616, 611, 026. **KW** Mergers. Competition. Monopoly. Noncooperative Game.

AB The common incentive for horizontal mergers is to reduce competition.

If in addition a merged firm can realize a production cost advantage over its unmerged rivals, then the incentive for merger is reinforced. We address two major questions here. The first is whether or not the potential for lower production costs does lead to complete or partial monopolization of an industry through acquisition by one firm of all its rivals? The second is whether or not competitively advantageous cost reducing mergers necessarily result in a lower equilibrium market price? These questions are addressed in terms of a two stage noncooperative game.

Kane, Thomas J.

TI The American Way of Aging: An Event History Analysis. **AU** Ellwood, David T.; Kane, Thomas J.

Katchalski, M.

TI Cutting Disjoint Discs by Straight Lines. **AU** Alon, N.; Katchalski, M.; Pulleyblank, William R.

Katz, Lawrence F.

TI Layoffs and Lemons. **AU** Gibbons, Robert S.; Katz, Lawrence F.

Kennedy, Craig

TI AIDS, Heterosexuals and Africa. **AU** Lal, Deepak Kumar; Kennedy, Craig.

Kern, Walter

TI Optimization and Optimality Test for the Max-Cut Problem. **AU** Hohmann, Christoph; Kern, Walter.

TI Matroid Matching in Pseudomodular Lattices. **AU** Hochstattler, W.; Kern, Walter.

TI On Adjoints and Dual Matroids. **AU** Alfter, Marion; Kern, Walter; Wanka, Alfred.

Kimball, Miles

PD May 1989. **TI** Labor Market Dynamics when Unemployment is a Worker Discipline Device. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2967; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 821, 023, 022. **KW** Labor Market. Efficiency Wages. Labor Supply. Dynamic Model.

AB Efficiency wage models of the effort elicitation type have important implications for labor market dynamics. These models have a wide array of discontinuous sunspot equilibria driven by extraneous variables, in addition to well-behaved equilibria characterized by continuous, slowly adjusting patterns of employment. Many aspects of actual labor markets can be replicated by these models. For example, the longer run movements they predict in employment allow macroeconomic evidence for a large labor supply elasticity to be reconciled with panel data evidence for a small labor supply elasticity. Many testable, but as yet untested predictions about labor market dynamics can also be generated.

King, Mervyn

PD March 1989. **TI** Transmission of Volatility Between Stock Markets. **AU** King, Mervyn; Wadhwani, Sushil B. **AA** London School of Economics. **SR** National Bureau of Economic Research Working Paper: 2910; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 441. **KW** Capital Market. Stock Market. Volatility. Public Information.

AB This paper investigates why, in October 1987, almost all stock markets fell together despite widely differing economic circumstances. The idea is that "contagion" between markets occurs as the result of attempts by rational agents to infer information from price changes in other markets. This provides a channel through which a "mistake" in one market can be transmitted to other markets. Hourly stock price data from New York, Tokyo and London during an eight month period around the crash offer support for the contagion model. In addition, the magnitude of the contagion coefficients are found to increase with volatility.

Kiyotaki, Nobuhiro

PD November 1988. **TI** Fiat Money in Search Equilibrium. **AU** Kiyotaki, Nobuhiro; Wright, Randall. **AA** Kiyotaki: University of Wisconsin. Wright: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 88-23; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 49. **PR** No Charge. **JE** 021, 023, 022. **KW** Money. Liquidity. Search. Matching. General Equilibrium. Differentiated Products.

AB We analyze a general equilibrium search/matching model of production and exchange with differentiated commodities. Because of the large number of commodities, pure barter is difficult in that it requires the famous double coincidence. This potentially provides a role for fiat money without a cash-in-advance constraint, as imposed in some similar models. We show that an equilibrium with valued fiat money exists, and is robust to changes in the environment, including transactions or storage costs and taxation on using money. Rate of return dominance, liquidity and the welfare improving role of money are all discussed.

Kleiner, Morris M.

TI Employer Behavior in the Face of Union Organizing Drives. **AU** Freeman, Richard B.; Kleiner, Morris M.

Kocherlakota, Narayana

TI The Variability of Velocity in Cash-in-Advance Models. **AU** Hodrick, Robert; Kocherlakota, Narayana; Lucas, Deborah.

Korte, Bernhard

TI Mathematische Modelle fur Bausparkollektive. **AU** Bachem, Achim; Korte, Bernhard; Schrader, Rainer.

Kottmann, Thomas

PD January 1989. **TI** Simultaneous Equations Linear Models With Forecast Feedback. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-108; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 28. **PR** No Charge. **JE** 211, 022. **KW** Simultaneous Equations. Forecast Feedback. Rational Expectations. Learning Processes. Linear Models.

AB We investigate single equation linear models with forecast feedback where the scalar endogenous quantity y(t) at time t is explained -- up to a disturbance term u(t) -- by linear combination of exogenous variables (collected in x(t)) and of forecasts of present and future values of the endogenous quantity.

PD March 1989. **TI** A New Approach to Rational Expectations: Selections and Learning. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-120; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 34. **PR** No Charge. **JE** 021, 213. **KW** Forecasts. Linear Models. Expectations. Rational Expectations Equilibrium.

AB In macroeconomics since 1961 linear models with forecast feedback (LMFFs) where the endogenous quantity y(t) at time t is (among other things) influenced by expectations of present or future values of this quantity are analyzed under the assumption of rational expectations. Up to now this assumption has been object of severe criticism from a purely theoretical as well as from an application oriented point of view: (1) For k greater than 0, i.e. when expectations of future values enter, the REE for a specific LMFF is in general not unique. (2) For k greater than 0, the REEs are in general not statistically efficient in the sense that the mean square prediction error is minimized. (3) Even if by theoretical arguments a specific REE can be selected, it has to be explained how the economic agents whose expectations are modelled know what these rational expectations are or how they can learn to become rational. This is the stability problem.

Krasa, Stefan

PD February 1989. **TI** Equilibria with Options: Existene and Indeterminacy. **AU** Krasa, Stefan; Werner, Jan. **AA** Krasa: University of Vienna. Werner: University of Minnesota. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-230; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 24. **PR** No Charge. **JE** 313, 021. **KW** Existence. Equilibrium Allocation. Commodity Market. Futures Market. Endowments.

AB This paper studies an economy in which trading takes place in spot commodity markets and incomplete futures markets for assets of various types. There are real assets (stocks or commodity futures), options on real assets, and a riskless nominal bond. We show that for a generic set of economies parametrized by consumers' endowments and structure of real assets, there exists an equilibrium. Moreover, we show that, generically, the set of equilibrium allocations of commodities contains a manifold of a high dimension. Even if the market structure is potentially complete (i.e. the number of assets, including options, equals or exceeds the number of states of nature) and the Arrow-Debreu equilibrium can be achieved through sequential trading in spot and futures markets, there are multiple (inefficient) equilibria without full rank of the asset payoff matrix.

Kravis, Irving B.

PD April 1989. **TI** Technological Characteristics of Industries and the Competitiveness of the U.S. and its Multinationals. **AU** Kravis, Irving B.; Lipsey, Robert E. **AA** Kravis: University of Pennsylvania. Lipsey: City University of New York. **SR** National Bureau of Economic Research Working Paper: 2933; National Bureau of Economic Research, 1050 Massachussets Avenue, Cambridge, MA 02138. **PG** 27. **PR** $2.00. **JE** 442, 431, 621. **KW** Exports. Multinationals. Technology. Competition.

AB The share of U.S. multinational firms in world exports of manufactures has remained almost constant at about 17 per cent for the last 20 years while that of the U.S as a country has declined substantially. The composition of world manufactured exports shifted toward high-technology or R&D-intensive products during these years and away from low-technology products. High R&D intensity was a factor raising the competitiveness of U.S. industries and particularly that of U.S. multinationals in those industries. High advertising intensity raised the competitiveness of U.S. multinationals but not usually that of their industries. Higher growth in R&D-intensity also led to increase in multinationals' shares of world exports between 1977 and 1982.

Krelle, Wilhelm

PD January 1988. **TI** Simulatane Bestimmung der Wechselkurse der wichtigsten Wahrungen. **AU** Krelle, Wilhelm; Welsch, Heinz. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-111; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 431, 212. **KW** Exchange Rate. Balance of Payments.
AB Paper in German.

PD May 1988. **TI** Lange Wellen der Wirtschaftlichen Entwicklung Tatsachen und Erklarungen. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-110; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 32. **PR** No Charge. **JE** 111, 131. 133. **KW** Economic Fluctuation. Technical Progress. Kondratieff Cycle. Business Cycle.
AB Paper in German.

PD September 1988. **TI** Dynamische Markttheorie und Makrotheorie. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-112; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 33. **PR** No Charge. **JE** 023, 111, 212. **KW** Competition. Economic Growth. Occupation. Dynamic Model. Market Theory.
AB Paper in German.

PD September 1988. **TI** Die Raumliche Wirtschaftsentwicklung im WeltmaBastab Ost-West- und Nord-Sud- Vergleiche. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-113; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 34. **PR** No Charge. **JE** 041, 123, 131, 132. **KW** Economic Growth. Economic Development. Structural Change. Social Structure.
AB Paper in German.

PD October 1988. **TI** Latent Variables in Econometric Models. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-104; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 27. **PR** No Charge. **JE** 212, 211, 132, 131, 111. **KW** Economic Growth. Econometric Models. Forecasting. Measurement Error.
AB The basic approach in Econometrics, as far as model building is concerned, has remained unchanged since the Cowles-Commission introduced it in the early 50's. The economic theory is supposed to supply the analytic form of the functional relations between different economic variables. Only the most important relations will be considered explicitly. All other variables - there are many others - are assumed to be of minor importance so that according to the central limit theorem in statistics their influence can be modelled as a normally distributed error variable. The observations are assumed to be error free. The problem is to estimate the unknown parameters of the functions. The maximum likelihood method or, under certain conditions, the least square method are the appropriate tools of estimation.

Kremers, Jeroen

TI Net Foreign Assets and International Adjustment in the United States, Japan and the Federal Republic of Germany. **AU** Horne, Jocelyn; Kremers, Jeroen; Masson, Paul.

PD April 1989. **TI** Gaining Policy Credibility in the EMS: The Case of Ireland. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/36; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** No Charge. **JE** 311, 431, 432, 133, 134. **KW** Ireland. Exchange Rates. Inflation. Expectations. European Monetary System.
AB This paper presents evidence that Ireland's disinflation policy has derived credibility from its participation in the exchange rate mechanism of the EMS. Before 1979, Irish inflation expectations followed mainly the expected movements of prices in the United Kingdom. Given the accommodating stance of exchange rate policy in the latter country, the influence of changes in international price competitiveness on expected inflation in Ireland was minor. In contrast, upon entry into the EMS the Irish expectations soon converged toward the expected price behavior of partners in the exchange rate mechanism, and competitiveness became an important influence on expected inflation in Ireland. A loss of competitiveness at the beginning of the disinflation seems to have been instrumental in establishing its credibility.

Krueger, Alan

TI The Extent of Measurement Error in Longitudinal Earnings Data: Do Two Wrongs Make a Right?. **AU** Bound, John; Krueger, Alan.

Krueger, Anne

PD March 1989. **TI** Asymmetries in Policy Between Exportables and Import-Competing Goods. **AA** Duke University. **SR** National Bureau of Economic Research Working Paper: 2904; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $2.00. **JE** 411, 422. **KW** Protectionism. Exports. Imports. Political economy.
AB This paper reexamines current understanding of the political economy of protection. To date, work has centered on determinants of the height of protection and its form. It is argued that examining the structure of protection misses one important piece of evidence - why import-competing industries tend to be more highly protected than industries producing exportables. When the question is cast in this light, a number of new insights emerge, including the importance of earlier protective measures in influencing current protectionist pressures. "Identity bias", whereby political decisions can be asymmetric between winners and losers, depending on whose identity is known, is introduced.

Krugman, Paul R.

PD May 1989. **TI** History vs. Expectations. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2971; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 023. **KW** External Economies. Long Run Equilibrium. Expectations. Initial Conditions. Adjustment Costs.

AB In models with external economies, there are often two or more long run equilibria. Which equilibrium is chosen? Much of the literature presumes that "history" sets initial conditions which determine the outcome, but an alternative view stresses the role of "expectations", i.e. of self-fulfilling prophecy. This paper uses a simple trade model with both external economies and adjustment costs to show how the parameters of the economy determine the relative importance of history and expectations in determining equilibrium.

PD May 1989. **TI** Is Bilateralism Bad?. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2972; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 423, 411. **KW** Trade Policy. Trade Liberalization.
AB In the 1980s the process of trade liberalization through multilateral negotiations seems to have run aground. In its place there have been a number of bilateral and regional moves toward liberalization. Some have been concerned that these local deals may, by undermining the multilateral process, actually reduce world trade and welfare. This paper develops a simple model of the effects of regional trading blocs, and shows that consolidation of the world into a smaller number of such blocs may indeed reduce welfare, even when each bloc acts to *maximize the welfare of its members. Indeed, for all plausible* parameter values world welfare is minimized when there are three trading blocs.

Kuester, Kathleen A.

PD April 1989. **TI** Bank Equity Values, Bank Risk, and the Implied Market Values of Banks' Assets and Liabilities. **AU** Kuester, Kathleen A.; O'Brien, James. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 67; C/O Jeff Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 40. **PR** No Charge. **JE** 312, 313, 314, 613. **KW** Stock Market. Bank Equity. Option Pricing. Risk.
AB The paper examines the importance of several sources of risk in valuing banks' market equity and deposit insurance. The analysis indicates that both bank-specific loan credit risk and the market's discount for bank default risk are important determinants of banks' market equity values. The results suggest that the market risk discount may be influenced by factors that are important in determining the general level of stock prices. Finally, the value of deposit insurance net of explicit and implicit regulatory costs is found to differ across banks, depending in part on bank-specific risk.

Kupiec, Paul H.

PD March 1989. **TI** A Survey of Exchange-Traded Basket Instruments. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 62; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 30. **PR** No Charge. **JE** 522. **KW** Index Participation Shares. Basket Securities. Financial Instruments. Portfolio.
AB This survey discusses "basket" financial instruments generically known as Index Participation shares (IPs). An IP is a hybrid instrument that has characteristics similar to those of existing index-futures contracts, options contracts, and stock-index mutual funds. An IP is a contract and does not represent direct ownership over any individual security. Similar to other derivatives, an IP has a clearing house guaranteeing its performance and a zero net supply. The equilibrium market price of an IP will differ from its underlying index's cash price by an amount defined as the IP basis. The IP basis will be determined by the dividend stream of the underlying index and expected short term interest rates.

Laderman, Elizabeth

TI The R&D Master File Documentation. **AU** Hall, Bronwyn H.; Cummins, Clint; Laderman, Elizabeth; Mundy, Joy.

Laffargue, Jean Pierre

PD 1988. **TI** Resolution d'un Modele Macroeconomique Non Lineaire avec Anticipations Rationnelles. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8824; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 57. **PR** 25 FF. **JE** 211. **KW** Rational Expectation. Simulation. Difference Equations. Nonlinear Models.
AB The simulation of a model with rational expectations requires the solution of a system of difference equations with initial and terminal conditions over a finite time period. This paper first considers the linear case and investigates the kind of errors which will result from the substitution of a finite horizon to the infinite one. The results which are found are applied to the evaluation of the various methods of choice of this horizon and the terminal conditions which are related to it, when the model is nonlinear. Then the paper gives a short review of the methods of simulation which are currently used in macroeconomics. Finally it presents a method of relaxation which has not been used yet in economics: this method rests upon the algorithm of Newton-Raphson and the triangulation of a large matrix by Gauss' elimination.

Laidler, David

PD August 1988. **TI** Monetarism, Microfoundations and the Theory of Monetary Policy. **AA** University of Western Ontario. **SR** University of Western Ontario Center for the Study of International Economic Relations Working Paper: 8807C; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 34. **PR** $4.00 Canadian. **JE** 311, 023. **KW** Monetarism. Money. Monetary Policy. Money Neutrality.
AB The originators of new economic ideas seldom see them work out as they intended. Once published, they become common property and evolve in the most unexpected ways. This proposition might, upon close inspection, turn out to be something of an overgeneralization, but it is surely true of that bundle of ideas commonly known as "Monetarism". Such commentators as Brunner and Meltzer (1987) and Leijonhufvud (1987) have noted, with alarm in the former case, and amusement in the second, the way in which a doctrine whose slogan was "money matters (and matters a great deal)" has during the 1980s seemingly inexorably evolved into one in which money is to all intents and purposes irrelevant. This evolution ought to cause considerable concern to those interested in practical matters of economic policy.

Lal, Deepak Kumar

PD September 1988. **TI** AIDS, Heterosexuals and Africa.

AU Lal, Deepak Kumar; Kennedy, Craig. **AA** Lal: University College London. Kennedy: National Institute of Health. **SR** University College London Discussion Paper: 88-28; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 37. **PR** 150 sterling. **JE** 913. **KW** AIDS. Heterosexuals. Africa.
AB Hence, we will first ask the question: what, if anything, is known about the means of heterosexual transmission of AIDS outside the high risk groups? Secondly, what can be inferred from the numerous studies, mostly from Africa, being cited to establish the threat of the heterosexual transmission of AIDS to the general population? These are the questions that will be dealt with in the first section of this paper. The second and final section apart from providing our conclusions also discusses the political economy of the AIDS hysteria, which in many ways is reminiscent of the hysteria associated with the ecological "limits to growth" in the late 1960s and early 1970s.

Lancaster, Kelvin

PD September 1988. **TI** Two-Tiered Industries: Large and Small Scale Firms in Simultaneous Competition. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 405; Department of Economics, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00. **JE** 611, 022. **KW** Firm Size. Industry Structure. Differentiated Products.
AB The purpose of this paper is to analyze potential industry structures in which both large scale and small scale firms, of such size disparity as to be using different production techniques, are present and competing. This is an easily observed real world phenomenon, but one that does not fit conventional market structure models. The analysis shows that it is possible to have an industry in long run two-tiered equilibrium, with both large scale low marginal cost and small scale high marginal cost firms present and active, provided the industry is product differentiated in more than two characteristics. Such an equilibrium is characterized by two-way competition in which large scale firms compete simultaneously with each other and with small scale firms, and by the existence of different prices for the outputs of the large and small scale firms, prices of the latter being always higher.

Landskroner, Yoram

PD December 1988. **TI** Debt Relief and Adjustment Policies. **AU** Landskroner, Yoram; Paroush, Jacob. **AA** Landskroner: The Hebrew University and New York University. Paroush: Bar Ilan University and New York University. **SR** New York University Salomon Brothers Center Working Paper: 501; 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** 24. **PR** No charge. **JE** 443, 432, 121. **KW** Developing Countries. Public Debt. Debt Relief.
AB In this paper we specify a model of the simultaneous optimal behavior of a lender with an outstanding claim and a borrower encountering debt servicing difficulties. A third party, say the IMF, imposes a constraint in the form of an economic austerity program on the borrower. The borrower has to decide on the optimal economic policy while the lender has to decide about the optimal debt relief in the form of a new loan. The decisions of the two parties are related through the constraint which affects the probability that the debtor will repay his debt to the creditor. Thus, the actions by the borrower are an incentive to the lender. Section II presents the model and the simultaneous optimal solutions of the borrower and the lender. In Section III comparative statics are presented where the effects of the different parameters of the model are analyzed.

Laren, Deborah

TI Effects of Family and Community Background on Men's Economic Status. **AU** Corcoran, Mary; Gordon, Roger H.; Laren, Deborah; Solon, Gary.

Lattimore, Pamela

PD May 1989. **TI** Experimental Assessment of the Effect of Vocational Training on Youthful Property Offenders. **AU** Lattimore, Pamela; Witte, Ann; Baker, Joanna. **AA** Lattimore: Washington, D.C.. Witte: Wellesley College. Baker: Department of Management Science, Blacksburg, VA. **SR** National Bureau of Economic Research Working Paper: 2952; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 811, 916. **KW** Vocational Training. Criminal Reform. Law Enforcement.
AB It this paper we report results that suggest that carefully integrated and implemented vocational training and re-entry programs for youthful property offenders can reduce the rate at which such individuals are arrested after release. The question has been : "Why have programs rarely been shown to have significant effects on the behavior of offenders?" Our results suggest that the major reasons may be that programs evaluated to date have been weak and implementation poor. Even with substantial backing from correctional management only 16 percent of the experimental group participated in all aspects of the Vocational Delivery System (VDS).

Lawrence, Edward

TI Discrimination in Consumer Lending. **AU** Elliehausen, Gregory E.; Lawrence, Edward.

Le Fort, Guillermo

PD April 1989. **TI** Financial Crisis in Developing Countries and Structural Weakness of the Financial System. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/33; International Monetary Fund, Washington, DC 20431. **PG** 41. **PR** No Charge. **JE** 121, 311, 312, 613, 313. **KW** Financial Crisis. Developing Countries. Debt. Regulations. Capital Markets. Banking.
AB This paper examines the generation of financial crises in developing economies and shows that the microeconomic structure of the financial sector is a crucial factor in creating the conditions for a crisis. Structural problems of the financial system in developing countries, including implicit insurance on bank liabilities, limitations of capital markets, and lack of appropriate regulations, are sources of financial fragility. The paper concludes that close supervision of bank loans is needed to eliminate these distortions, and the optimal intervention consists of imposing an adjustable bankruptcy penalty on banking activity or charging a fair insurance premium on bank liabilities.

Le Van, Cuong

TI A Note on the Bellman Equation of the "Overtaking Criterion". **AU** Dana, Rose Anne; Le Van, Cuong.

Leamer, Edward E.

PD January 1989. **TI** The Structure and Effects of Tariff and Nontariff Barriers in 1983. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 545; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 59. **PR** $2.50; checks payable to University of California at Regents. **JE** 123, 422, 421, 411. **KW** Tariffs. Trade Barriers. Imports. General Equilibrium Model.

AB This paper reports some results on the estimation of the effects of tariff and nontariff barriers using cross sectional data collected in 1983.

Estimates are based partly on cross-country variability but also on cross-commodity variability of barriers and imports. A justification of this kind of regression is offered in Section 1 which presents a general equilibrium model with log-linear production and utility. One kind of model controls for differences in commodity and country with dummy variables. The other kind retains the commodity dummies but includes also interactions between measured country characteristics and commodity characteristics. Models are estimated with an overall measure of nontariff barriers and also barriers disaggregated into quantitative restrictions, price maintenance barriers, quality controls and threats.

Lease, Ronald C.

TI Ownership Structure and Voting on Antitakeover Amendments. **AU** Brickley, James A.; Lease, Ronald C.; Smith, Clifford W. Jr.

Leborgne, Daniele

TI L'apres-fordisme et son espace. **AU** Lipietz, Alain; Leborgne, Daniele.

Leclerc, Matthias

PD 1986. **TI** Constrained Spanning Trees and the Travelling Salesman Problem. **AU** Leclerc, Matthias; Rendl, Franz. **AA** Leclerc: University of Cologne. Rendl: University of Graz. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.55; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213. **KW** Travelling Salesman Problem. Lagrangian Approach. Algorithm. Lower Bound.

AB Minimum weight 1-trees provide a well-known lower bound for the symmetric traveling salesman problem. We propose to strengthen this bound by imposing degree-constraints upon the 1-trees. The vertices for the constraints are chosen to form a stable set S. We propose an algorithm for this problem and report on its use in a Lagrangian approach to the traveling salesman problem.

TI A Class of Lattices. **AU** Jungnickel, D.; Leclerc, Matthias.

PD September 1986. **TI** Optimizing over a Slice of the Bipartite Matching Polytope. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 86.34; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 4. **PR** No Charge. **JE** 213, 214. **KW** Matching Problem. Algorithm.

AB We discuss a special case of the Exact Perfect Matching Problem, which is polynomially solvable. A good algorithm will be given.

PD December 1986. **TI** The 2-Matching Lattice of a Graph. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 86.36; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 2. **PR** No Charge. **JE** 213. **KW** Lattice. Matching Problem. Linear Subspace.

AB We determine the lattice generated by the perfect 2-matchings of a graph in terms of the corresponding linear subspace of R(E).

PD February 1987. **TI** A Multiply Constrained Matroid Optimization Problem. **AU** Leclerc, Matthias; Rendl, Franz. **AA** Leclerc: University of Cologne. Rendl: University of Waterloo. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.40; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 6. **PR** No Charge. **JE** 213. **KW** Matroid Intersection. Matroids. Algorithm.

AB We consider the problem of finding a minimum weight basis in a matroid satisfying additional conditions which can be described as follows: each element of the matroid is assigned a color and feasible bases can use at most a prescribed number of elements from each color. This problem is a special case of weighted matroid intersection. We provide an algorithm for this problem which improves general matroid intersection algorithms by exploiting the simple structure of the side constraints.

PD May 1987. **TI** Constrained Matching Problems and Pfaffian Graphs. **AU** Leclerc, Matthias; Little, Charles H. C.; Rendl, Franz. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.41; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213. **KW** Multiple Choice Matching. Pfaffian Graphs. Set Partitioning. Polynomial Algorithm.

AB We consider the problem of finding a perfect matching in a graph satisfying additional constraints which can be described as follows: for a number of subsets of the edges the perfect matching is allowed to contain only some prescribed number of elements of each set. We show that the problem is polynomial for Pfaffian graphs. The recognition problem for general Pfaffian graphs is shown to be in NP. Moreover a polynomial algorithm to recognize bipartite Pfaffian graphs is provided.

PD September 1987. **TI** Eine Min-Max Beziehung fur das Exakte Matroid Problem. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.44; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 3. **PR** No Charge. **JE** 213. **KW** Matroid Problem. Matroids.

AB Paper in German.

PD November 1987. **TI** Algorithmen fur Kombinatorische Optimierungsprobleme mit Partitionsbeschrankungen. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.47; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1,

DEUTSCHLAND. **PG** 91. **PR** No Charge. **JE** 213. **KW** Matroid Matching. Restricted Matching. Matching Problem.
AB Paper in German.

PD February 1988. **TI** A Linear Algorithm for Breaking Periodic Vernam Ciphers. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.52; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 3. **PR** No Charge. **JE** 213. **KW** Cipher. Linear Algorithm. Security.

PD April 1988. **TI** Fast Polynomial Arithmetic and Exact Matchings. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.53; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** No Charge. **JE** 213. **KW** Complexity. Matchings. Pseudo-Polynomial. Knapsack Equation. Polynomial Algorithm.
AB Given a graph G, a function w:E maps to Z(positive), and an integer b. A pseudo-polynomial algorithm is presented, which determines a perfect matching M of G satisfying the equation sum (w(e):e element of M) = b.

PD October 1988. **TI** K-Best Constrained Bases of a Matroid. **AU** Leclerc, Matthias; Rendl, Franz. **AA** Leclerc: University of Cologne. Rendl: University of Graz. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.61; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213. **KW** Ranking. Matroid Intersections. Basis. Matroid.
AB We propose a method for finding a set of k-best bases of an arbitrary matroid where the bases are required to satisfy additional partitionlike constraints. Applications of this problem are discussed.

Lee, Hahn Shik

PD April 1989. **TI** Maximum Likelihood Inferences on Cointegration and Seasonal Cointegration. **AA** University of California, San Diego. **SR** University of California at San Diego Department of Economics Discussion Paper: 89-19; D-008 (Dept. of Economics), UCSD, La Jolla, CA 92093. **PG** 40 pages. **PR** $3.00. **JE** 211. **KW** Co-integration. Seasonality. Time Series. Unit Root. Asymptotic Theory.
AB The test for co-integration and seasonal co-integration are developed for a nonstationary VAR time series with Gaussian error which have unit roots at seasonal frequencies as well as zero frequency. Using the maximum likelihood inferences, we estimate and test the hypothesis on seasonal co-integrating vectors at each frequency in the presence of unit roots at other seasonal frequencies. The basic finding is that several null hypotheses can be tested separately for each case of interest, unless the joint testing for seasonal co-integration at annual frequency is desired. This follows from the fact that any two time series processes with unit roots at different frequencies are asymptotically uncorrelated. Hence the asymptotic distribution theory for testing seasonal co-integration at frequency omega=0 or omega=1/2 can be adapted from the result in Johansen (1988). This testing procedure is extended to examine some interesting cases where some or all of the co-integrating vectors coincide.

Lehmussaari, Olli Pekka

PD April 1989. **TI** Deregulation and Consumption -- Saving Dynamics in the Nordic Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/34; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** No Charge. **JE** 122, 323, 311, 921. **KW** Savings. Deregulation. Tax Law.
AB This paper examines the changes in savings behavior brought about by financial liberalization in the Nordic countries. The paper suggests that there have been changes in the economic relationships in Finland and Norway since the deregulation, while the evidence from Denmark is less clearcut. Data do not reveal any structural change in Sweden. The results also indicate that the wealth effect has played an increasing role in household saving decisions. Since the present tax rules are biased against saving, cuts in marginal tax rates and reductions in the tax value of interest payments would be expected to increase household saving.

Lehrer, Ehud

PD January 1989. **TI** On a Representation of a Relation By a Measure. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 816; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 20. **PR** No Charge. **JE** 026, 024. **KW** Preference Order. Representable Relation. Preferences. Necessary Condition.
AB We give a necessary and sufficient condition for the existence of representation for relation by a positive measure for the general case in which the relation is defined on any set of subsets of Omega.

Leiderman, Leonardo

PD May 1989. **TI** Economic Adjustment and Exchange Rates in LDCs A Review Essay. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 14-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv ISRAEL. **PG** 16. **PR** No Charge. **JE** 121, 112, 131, 311. **KW** Developing Countries. Economic Reform. Economic Adjustment. Exchange Rates.
AB This paper is a review essay of the volume Economic Adjustment and Exchange Rates in Developing Countries, edited by Sebastian Edwards and Liaquat Ahamed The University of Chicago Press for the National Bureau of Economic Research, Chicago, Illinois, 1986. Special attention is given to analysis of the effects of Devaluation, of the Links between budgetary and exchange rate policies, and of the impact of economic reforms.

Leininger, Wolfgang

TI Markov-Perfect Equilibrium in Games of Perfect Information. **AU** Hellwig, Martin; Leininger, Wolfgang.

PD August 1988. **TI** On Strictly Competitive and Zero-Sum Games. **AU** Leininger, Wolfgang; Thorlund, Petersen Lars; Weibull, Jorgen W. **AA** Leininger: University of Bonn. Thorlund-Petersen: Norwegian School of Business Administration, Bergen. Weibull: Stockholm University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-194; Sonderforschungsbereich 303 an der

Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 5. **PR** No Charge. **JE** 026. **KW** Noncooperative Games. Zero-Sum Games. Mixed Strategies.
AB This note is concerned with the relationship between two-person zero-sum games and two-person strictly competitive games. Its purpose is to show that, as far as noncooperative game theory is concerned, the two classes are identical with respect to pure strategies but not with respect to mixed strategies. We also extend the notion of strict competitiveness to mixed strategies and characterize the corresponding class of games.

PD March 1989. **TI** Intergenerative Transfers und das Neo-Ricardianische Theorem. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-224; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** No Charge. **JE** 322, 023. **KW** Capital Accumulation. Life-Cycle Hypothesis. Intergenerational Transfers.
AB Paper in German.

Leruth, Luc
TI Equilibrium in Competing Networks with Differentiated Products. **AU** de Palma, Andre; Leruth, Luc.

Levan, Cuong
TI Asymptotic Properties of a Leontief Economy. **AU** Dana, Rose Anne; Florenzano, Monique; Levan, Cuong; Levy, Dominique.

Levine, Ross
TI A Note on "Transfers". **AU** Gordon, David B.; Levine, Ross.

Levy, David T.
PD March 1989. **TI** Predation, Firm-Specific Assets and Diversification. **AA** University of Baltimore. **SR** Federal Trade Commission Bureau of Economics Working Paper: 171; Bureau of Economics, Federal Trade Commission, 6th and Pennsylvania Ave. NW, Washington, D.C. 20580. **PG** 12. **PR** no charge. **JE** 611, 612, 522. **KW** Antitrust Policy. Predation. Diversification. Sunk Costs.
AB This study examines the relationship between diversification and predation. Unlike previous analyses, the focus is placed on the role of the firm's investment in sunk cost assets. Unlike the single product firm, the diversified firm may use certain firm specific assets that are not sunk to the product. The ability to transfer these assets among uses or locations may lower the cost and thereby encourage predation by the diversified firm. The "long-purse" and "multimarket-reputation" arguments about predation by diversified firms can be viewed as special cases of this phenomenon. Diversification may also affect the likelihood that a firm will be a target of predation.

Levy, Dominique
TI Asymptotic Properties of a Leontief Economy. **AU** Dana, Rose Anne; Florenzano, Monique; Levan, Cuong; Levy, Dominique.

Lewis, Karen K.
PD May 1989. **TI** Was there a "Peso Problem" in the U.S. Term Structure of Interest Rates: 1979-1982?. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 518; 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** $4.00. **JE** 311, 131. **KW** Interest Rates. Monetary Policy. Bonds. Federal Reserve.
AB This paper investigates the potential "peso problem" effects upon ex post returns on longer term relative to short term bonds during the period of 1970 to 1982 when the Federal Reserve was following a policy of allowing interest rates to fluctuate. The "peso problem" effect arose from the market's belief that the Fed could not maintain this policy indefinitely. The belief that the Fed would resume a form of interest rate targeting would have lowered the returns on long term relative to short term bonds as appears to have occured ex post.

Liang, J. Nellie
PD April 1989. **TI** Systematic Risk, Market Structure, and Entry Barriers. **AU** Liang, J. Nellie; Wolken, John D. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 68; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** No Charge. **JE** 611, 521, 312. **KW** Systematic Risk. Tobin's Q. Entry Barriers. Market Power.
AB This paper examines the relationship between systematic risk and market power for a sample of medium to large regional bank holding companies. Systematic risk is measured by the CAPM beta adjusted for infrequent trading. Firm market power is measured using traditional variables such as market concentration, firm market share and entry conditions; alternatively we employ an estimated Tobin's q as a market-determined measure of market power. We find that entry barriers reduce the holding company's systematic risk, but firm market share and market concentration are not usually significant. The results using q as a measure of market power are not consistent with theoretical expectations of a one-period model. le

Lichtenberg, Frank R.
PD December 1988. **TI** Contributions to Federal Election Campaigns by Government Contractors. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-06; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 32. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 114, 322, 511. **KW** Political Action Committees. Government Contracting. Political Economy. Election Campaigns.
AB We develop a theoretical model which determines whether or not a firm sponsors a Political Action Committee (PAC) and, if it does, the quantity of funds that the PAC will disburse. The firm is assumed to face supply and demand schedules for PAC receipts, whose positions depend on attributes of the firm such as firm size, government sale intensity, and market structure. Two related equations derived from the theoretical model a probit equation for PAC sponsorship and a disbursements equation are estimated using pooled data on 226 government (primarily defense) contracting

firms during the 1979-80 and 1981-82 election cycles.

PD February 1989. **TI** The Effect of TaKeovers on the Employment and Wages of Central-Office and Other Personnel. **AU** Lichtenberg, Frank R.; Siegel, Donald. **AA** Lichtenberg: Columbia University. Siegel: National Bureau of Economic Research. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-05; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 36. **PR** $5.00 accademics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 611, 824, 511, 512. **KW** TaKeovers. Mergers. Acquisitions. Employment. Wages.

AB Recent high rates of takeover activity have stimulated considerable interest and concern among policymakers and the public about changes in corporate ownership, but relatively little evidence about the "real" (as opposed to financial) effect of takeovers has been available. This paper presents evidence concerning the effects of ownership change on the employment and wages of central office workers according to some views, those likely to be most affected by takeovers and contrasts them with the effects on manufacturing plant employees. The evidence is based on a large, longitudinal, plant level data set derived from Census Bureau surveys of both administrative and production establishments.

PD March 1989. **TI** The Impact of R&D Investment on Productivity - New Evidence Using Linked R&D-LRD Data. **AU** Lichtenberg, Frank R.; Siegel, Donald. **AA** Lichtenberg: Columbia University. Siegel: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2901; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 621, 522, 514, 825. **KW** R&D. Technology. Productivity. Firm Size. Innovation.

AB This paper uses confidential Census longitudinal microdata to examine the association between R&D and productivity for the period 1972-1985. This data allows for significant improvements in measurement and model specification, yielding more precise estimates of the returns to R&D. Our results confirm the findings of existing studies: 1) positive returns to R&D investment, 2) higher returns to company-financed research, 3) a productivity "premium" on basic research.

PD March 1989. **TI** The Effect of Takeovers on the Employment and Wages of Central-Office and Other Personnel. **AU** Lichtenberg, Frank R.; Siegel, Donald. **AA** Lichtenberg: Columbia University. Siegel: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2895; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 611, 824, 511, 512. **KW** Takeovers. Mergers. Employment. Wages. Acquisitions.

AB This paper presents evidence based on establishment level Census Bureau data concerning the effects of ownership change on the employment and wages of both central office workers and manufacturing plant employees. We find that central offices that change owners between 1977 and 1982 had substantially lower employment growth during that period than central offices not changing owners. In contrast, employment growth in production establishments changing owners was only 5% lower than it was in production establishments not changing owners. These findings are consistent with the view that reduction of administrative overhead is an important motive for changes in ownership. We also provide evidence concerning the relationship between firm size and administrative intensity.

Lindsey, David E.

TI The Simple Microanalytics of Payments System Risk. **AU** Gelfand, Matthew D.; Lindsey, David E.

Lipietz, Alain

PD October 1987. **TI** Socialistes et liberaux face a la crise de "l'economie mixte". **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8741; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 28. **PR** 20 FF. **JE** 122, 053, 112. **KW** France. Economic Policy. Socialism. Economic Development.

AB This paper first outlines the peculiarities of the French Post-War pattern of development ("Fordism"). Then it shows why both right-wing governments (from 1974 to 1981) and left-wing ones (from 1981 to 1986) made a first attempt at managing the crisis of this model through keynesianism, then through neoliberalism. The policy implemented from March 1986 radicalizes this shift to neoliberalism. On the contrary, the liberal period of the socialist government was mitigated with incentives in favor of industry, and experiments in new social policies. The macroeconomic results of the socialist's administration appear, up to now, more convincing than the results of the new administration. Paper in French.

PD 1988. **TI** L'apres-fordisme et son espace. **AU** Lipietz, Alain; Leborgne, Daniele. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8807; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 42 P. **PR** 20 FF. **JE** 611, 621, 833, 941, 112. **KW** Technology. Industrial Organization. Wage Contracts.

AB Now technologies can be implemented by means of intensified polarization of skills or by means of increased responsibility (involvement) for workers. These outcomes may be associated with rigid or flexible forms of wage contracting and with individual or collective forms of negotiation. Three classes of models emerge, labelled here neo-Taylorist, Californian, and Saturnian. In terms of industrial organization, new technologies tend to engender specialized firms and vertical quasi-integration, together with territorial integration. These different tendencies give rise to distinctive patterns of regional development, namely, specialized productive areas, local productive systems, and system areas. Paper in French.

PD May 1988. **TI** Gouverner l'Economie Face aux Defis Internationaux: du Developpementisme Nationaliste a la Crise Nationale. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8815; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 22. **PR** 20 FF. **JE** 036, 051, 113, 112. **KW** France. Economic Policy. Regulation. Hegemony.

AB This paper introduces some new developments of the "french regulation approach" into political sciences (hegemonic block, social paradigm). These developments are implemented in the study of State/Society relationships in France 1962-1987. Ironically, it appears that there existed a broader consent upon the pattern of development in force during the 60's (at the time of obvious "ideological" disconsents) than in the present period of the "end of ideologies". Nonetheless, the development along the "fordist model", fostered by State, was weakened by the lack of a clear corresponding hegemonic block. Such a weakness was eventually reflected in the incapacity of governments, right or left wing, to deal with the national and international crisis of fordism. Paper in French.

PD June 1988. **TI** La Trame, la Chaine, et la Regulation: un Outil Pour les Sciences Sociales. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8816; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 34 P. **PR** 20 FF. **JE** 012, 036. **KW** Regulation. Economic Accumulation. France. National Crisis.
AB The aim of this paper is to draw some subjective lights from research and teaching practices using the notion of "regulation". First this notion is set up in connection to the french intellectual context of the last twenty years. Then it is articulated with the concepts of "contradictory relations" and of "crisis". This is done along an example borrowed from literature (the love affair in Le Misanthrope by Moliere). Then the discussion is carried on about the examples of economic accumulation and spatial structures. Paper in French.

Lipsey, Robert E.

PD April 1989. **TI** The Internationalization of Production. **AA** City University of New York and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2923; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $2.00. **JE** 442, 122, 441. **KW** International Business. Capital Mobility. Business Sector. Production.
AB The degree of internationalization of the enterprise or business sectors of many countries, as measured by the ratio of direct investment abroad to domestic wealth or assets, or of assets or employment abroad to that at home, has been growing over the last twenty years or more. The exception to this trend is the United States, in which the extent of internationalization, after growing until the 1970s, has stagnated or decreased somewhat. The differences among the country levels and trends seem to reflect country size and divergences between the competitiveness of countries and of their companies, including those that result from exchange rate movements.

TI Technological Characteristics of Industries and the Competitiveness of the U.S. and its Multinationals. **AU** Kravis, Irving B.; Lipsey, Robert E.

Little, Charles H. C.

TI Constrained Matching Problems and Pfaffian Graphs. **AU** Leclerc, Matthias; Little, Charles H. C.; Rendl, Franz.

Liviatan, Nissan

TI Optimal Accommodation by Strong Policymakers under Incomplete Information. **AU** Cukierman, Alex; Liviatan, Nissan.

Lizondo, Jose Saul

PD January 1989. **TI** Dynamics of Devaluation and "Equivalent" Fiscal Policies for a Small Open Economy. **AU** Lizondo, Jose Saul; Montiel, Peter. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/1; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** No Charge. **JE** 431, 411, 321, 023. **KW** Open Economy. Fiscal Policy. Devaluation Reserve. Target. Exchange Rates.
AB In pursuing a steady-state reserve target, policymakers in small open economies can resort to devaluation or to temporary increases in public saving. This paper contrasts the dynamic implications of these alternative policies in a model with optimizing agents who possess perfect foresight. In general, the private sector cannot be insulated from the effects of the government's reserve-accumulation policies. The dynamic effects of devaluation depend on the fiscal policy rule in effect. In contrast to devaluation, the "equivalent" fiscal policies imply discontinuities in private consumption and temporary tax increases may cause key macroeconomic variables to overshoot their steady-state values.

Lo, Andrew W.

TI The Sources and Nature of Long-Term Memory in the Business Cycle. **AU** Haubrich, Joseph; Lo, Andrew W.

PD May 1989. **TI** An Econometric Analysis of Nonsynchronous-Trading. **AU** Lo, Andrew W.; MacKinlay, A. Craig. **AA** Lo: Massachusetts Institute of Technology. MacKinlay: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2960; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 313, 311. **KW** Asset Prices. Asset Returns. Random Walk. Portfolios. Stock Market.
AB We develop a stochastic model of nonsynchronous asset prices based on sampling with ramdom censoring. In addition to generalizing existing models of nontrading our framework allows the explicit calculation of the effects of infrequent trading on the time series properties of asset return. These are empirically testable implications for the variances, autocorrelations, and cross-autocorrelations of returns to individual stocks as well as to portfolios. We construct estimators to quantify the magnitude of nontrading effects in commonly used stock returns data bases and show the extent to which this phenomenon is responsible for the recent rejections of the random walk hypothesis.

PD May 1989. **TI** When are Contrarian Profits due to Stock Market Overreaction?. **AU** Lo, Andrew W.; MacKinlay, A. Craig. **AA** Lo: Massachusetts Institute of Technology. MacKinlay: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2977; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 311. **KW** Stock market. Portfolio. Securities.
AB Even if returns on individual securities are temporally independent, portfolio strategies that attempt to exploit return reversals may still earn positive expected profits. This is due to the effects of cross-autocovariances from which contrarian strategies inadvertently benefit. We provide an informal taxonomy of return-generating processes that yield positive [and negative] expected profits under a particular contrarian portfolio strategy, and use this taxonomy to reconcile the empirical findings of weak negative autocorrelation for returns on individual stocks with the strong positive auto correlation of portfolio returns. We present empirical evidence against overreaction as the primary source of contrarian profits, and show the presence of important lead-lag relations across securities.

PD May 1989. **TI** Long-Term Memory in Stock Market Prices. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2984; National Bureau of Economic Research, 1050

Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 212. **KW** Asymptotic Theory. Stock Prices. Stochastic Model. Time Series. Memory Process.
AB A test for long run memory that is robust to short range dependence is developed. It is a simple extension of Mandelbrot's "range over standard deviation" or R/S statistic, for which the relevant asymptotic sampling theory is derived via functional central limit theory. This test is applied to daily, weekly, monthly, and annual stock returns indexes over several different time periods. Contrary to previous findings, there is no evidence of long range dependence in any of the indexes over any sample period or sub-period once short term autocorrelations are taken into account. Illustrative Monte Carlo experiments indicate that the modified R/S test has power against at least two specific models of long run memory, suggesting that stochastic models of short range dependence may adequately capture the time series behavior of stock returns.

Loretan, Mico

TI The Durbin Watson Ratio under Infinite Variance Errors.
AU Phillips, Peter C. B.; Loretan, Mico.

Lovasz, Laslo

PD May 1988. **TI** The Complexity of Communication. **AA** University of Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88518-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 11. **PR** No Charge. **JE** 213. **KW** Complexity Measures. Communication.
AB In the following sections we give a brief survey of some results in the theory of communication complexity. We shall try to avoid the use of extensive mathematics; but it is an important point to make that this lovely theory brings together a surprising number of ideas from classical and modern mathematics, and I hope that I can illustrate this fact even to my non-mathematician readers.

Lucas, Deborah

TI The Variability of Velocity in Cash-in-Advance Models.
AU Hodrick, Robert; Kocherlakota, Narayana; Lucas, Deborah.

Luczak, Tomasz

PD March 1989. **TI** Ramsey Properties of Random Graphs. **AU** Luczak, Tomasz; Rucinski, Andrzeij; Voigt, Bernd. **AA** Luczak, Rucinski: University of Poznan. Voigt: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89556-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 28. **PR** No Charge. **JE** 213. **KW** Vertices. Ramsey Graph. Pigeonhole Principle.
AB No abstract available.

Lyon, Andrew B.

PD March 1989. **TI** Understanding Investment Incentives Under Parallel Tax Systems: An Application to the Alternative Minimum Tax. **AA** University of Maryland. **SR** National Bureau of Economic Research Working Paper: 2912; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $2.00. **JE** 323, 522. **KW** Income Taxes. Investment. Tax Systems. Taxes.
AB Many countries' income tax systems consist of multiple parallel tax systems. Most commonly, statutory tax rates may vary with income. As a special case, taxpayers with net losses in a given year and no past tax liability face a zero tax rate in that year, but may use the loss to offset future taxes. In the U.S., the newly enacted alternative minimum tax (AMT) for corporations is a parallel tax system. In addition to taxing income at statutory tax rates different than those under the regular tax system, it provides separate depreciation schedules, allowable deductions, and tax exclusions. This paper examines the conditions under which the existence of a parallel tax system maintains neutral investment incentives for taxpayers who may switch between tax systems.

PD May 1989. **TI** Did ACRS Really Cause Stock Proces to Fall?. **AA** University of Maryland. **SR** National Bureau of Economic Research Working Paper: 2990; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 522, 521. **KW** Stock Prices. Capital Stock. Depreciation.
AB This paper tests the hypothesis that the introduction of the Accelerated Cost Recovery System in 1981 caused a reduction in stock prices by reducing the value of existing capital. A second hypothesis that these depreciation changes benefited firms by increasing the return from new investment is also examined. Stock returns during the period surrounding enactment of this legislation are evaluated with data on capital stock and investment for over 800 firms. The empirical results suggest that neither hypothesis is an important determinant of cross sectional differences in returns during this period.

Machin, Stephen J.

PD November 1988. **TI** Unions and the Financial Performance of British Private Sector Establishments. **AU** Machin, Stephen J.; Stewart, Mark B. **AA** Machin: University College London. Stewart: University of Warwick. **SR** University College London Discussion Paper: 88-23; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 33. **PR** 150 pounds sterling. **JE** 611, 831. **KW** Financial Performance. Trade Unions. Market Power.
AB This paper considers the relationship between unions and financial performance using data from the 1980 and 1984 Workplace Industrial Relations Surveys. A qualitative indicator of financial performance is utilized and Ordered Probit estimates presented indicate that unionized establishments are characterized by lower performance levels than are nonunion concerns. The interface between union effects and relative market power is also explored and the ability of unions to extract a share of the available rents is found to be greater if the plants in which they are located possess a higher market share.

MacKie, Mason Jeffrey

TI Some Simple Analytics of Peak-Load Pricing.
AU Bergstrom, Ted; MacKie, Mason Jeffrey.

MacKinlay, A. Craig

TI An Econometric Analysis of Nonsynchronous-Trading.
AU Lo, Andrew W.; MacKinlay, A. Craig.

TI When are Contrarian Profits due to Stock Market Overreaction?. **AU** Lo, Andrew W.; MacKinlay, A. Craig.

MacLeod, William Bentley

PD March 1989. **TI** Wage Premiums and Profit Maximisation in Efficiency Wage Models. **AU** MacLeod, William Bentley; Malcomson, James M. **AA** MacLeod: Queen's University and Universidad Autonoma de Barcelona. Malcomson: University of Southampton. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 337; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 35. **PR** No Charge. **JE** 026, 821, 824. **KW** Efficiency Wages. Bonding. Labor Market. Incentives. Wage Premiums.

AB The bonding critique of efficiency wage models in which workers are paid premium wages to prevent shirking does not apply if one takes account of the incentives facing firms as well as those facing workers. The conventional assumption that in equilibrium the short side of the market receives all the gains from trade is inappropriate for models of this type.

Efficiency wages are efficient not just in the private sense of giving firms the lowest wage bill per unit of output but also in the social sense of maximizing the number of potentially mutually beneficial matches that are realized.

Magill, Michael J. P.

PD April 1989. **TI** Real Effects of Money in General Equilibrium. **AU** Magill, Michael J. P.; Quinzii, Martine. **AA** University of Southern California. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-232; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 43. **PR** No Charge. **JE** 021, 313, 311. **KW** Exchange Economy. Market Transaction. Monetary Equilibrium. Monetary Policy. General Equilibrium Model.

AB This paper studies a simple stochastic general equilibrium model with money and nominal assets. We examine the role of money as a medium of exchange and as a store of value and give conditions under which local changes in the money supply lead to local changes in the equilibrium allocation.

Magnus, Jan R.

PD May 1989. **TI** Forecasting, Misspecification, and Unit Roots: The Case of ARMA (1,1) vs. AR(1). **AA** London School of Economics and University of California, San Diego. **SR** University of California at San Diego Department of Economics Discussion Paper: 89-24; D-008 Dept. of Economics, UCSD, La Jolla, CA 92093. **PR** no charge. **JE** 211, 132. **KW** ARMA Model. Misspecification. Forecasting. Unit Root. Time Series.

AB Misspecification in time series regressions can have important effects on least squares estimates, test statistics and forecasts. In this paper we analyze these effects (especially the effects on forecasts) for finite samples in one of the leading cases where the process that generates the data is ARMA (1,1) but the model used for estimation is AR(1). Assumptions about the initial conditions are important too, especially when one of the roots of the characteristic polynomial is near the unit circle. Hence, special attention is given to the near unit root case.

Mahjoub, Ali Ridha

TI Compositions of Graphs and Polyhedra III: Graphs with no W4 Minor. **AU** Barahona, Francisco; Mahjoub, Ali Ridha.

Makowski, Louis

PD March 1989. **TI** Groves Mechanisms in Continuum Economies: Characterization and Existence. **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: 518; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 33. **PR** $2.50; checks payable to University of California at Regents. **JE** 021, 024. **KW** Dominant Strategy. Continuum. Rationality. Infinite Horizon.

AB The equivalence in the finite agent case between the families of efficient dominant strategy and Groves mechanisms is extended to continuum economies. The concept of an individual's marginal product is used to link the two families of mechanisms when agents are non-atomic. Unlike the finite agent case, feasible and efficient dominant strategy mechanisms exist in the continuum, but these mechanisms do not guarantee individual rationality. For the latter condition to hold, the environment must satisfy an adding-up condition: each individual receives a payoff exactly equal to his marginal product, which we also characterize as equivalent to the condition that each individual creates no external effects. Environments and examples are given that exhibit or fail to exhibit adding-up.

Makrydakis, Stelios V.

PD January 1989. **TI** The Role of Wealth, Government Debt and Credit in the Greek Economy. **AU** Makrydakis, Stelios V.; McKenzie, George W. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8901; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 54. **PR** No Charge. **JE** 311, 312, 315, 322. **KW** Net Wealth. Credit. Public Debt. Financial System. Government Expenditures. Greece. Commercial Banking.

AB The empirical assessment of the significance of wealth and credit as channels of interaction between the real and financial sectors of the Greek economy constitutes the main objective of the present study. The necessary analytical framework is provided by modelling the process of financial intermediation conducted by the banking sector and simultaneously, allowing the feedback responses of the real sector to be taken into account. Special emphasis is placed on the definition of wealth by considering the possible wealth effects of public sector debt separately.

Malcomson, James M.

TI Wage Premiums and Profit Maximisation in Efficiency Wage Models. **AU** MacLeod, William Bentley; Malcomson, James M.

Malgrange, Pierre

PD December 1987. **TI** The Structure of Dynamic Macroeconometric Models. **AA** CEPREMAP-CNRS. **SR** CEPREMAP Discussion Paper: 8802; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 29. **PR** 20 FF. **JE** 212, 023. **KW** Macroeconometric Model. Structural Analysis. Dynamic Systems. Growth Model. Theoretical Foundations.

AB The paper presents a method for analyzing a given macroeconometric model aimed at enlightening its theoretical foundations hidden behind the apparently numerous and complex equations. The basic idea is to operate on the model as if it was a theoretical disequilibrium growth model, but with numerical parameters. A thorough application to the French Quarterly Model METRIC is given.

Mankiw, N. Gregory

PD March 1989. **TI** Real Business Cycles: A New Keynesian Perspective. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2882; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $2.00. **JE** 133, 023, 131. **KW** Technology. Business Cycle. Economic Fluctuations.

AB This paper is a critique of the latest new classical theory of economic fluctuations. According to this theory, the business cycle is the natural and efficient response of the economy to exogenous changes in the available production technology. This paper discusses several versions of this theory and argues that this line of research is unlikely to yield an empirically plausible explanation of observed economic fluctuations.

TI Consumption, Income, and Interest Rates: Reinterpreting the Time Series Evidence. **AU** Campbell, John Y.; Mankiw, N. Gregory.

Mao, cheng Cai

PD September 1988. **TI** Covering Two Digraphs with Arborescences. **AA** Academia Sinica, Beijing. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88526-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Finite Digraphs. Arborescences. Vertex Sets.

AB Let G(1) and G(2) be finite digraphs, both with vertex set V. Suppose that each vertex v of V has nonnegative integers f(v) and g(v) with f(v) less than or equal to g(v), and each arc e of G(i) has nonnegative integers a(i)(e) and b(i)(e) with a(i)(e) less than or equal to b(i)(e), i = 1,2. In this paper we give a necessary and sufficient condition for the existence of k arborescences in G(i) covering each arc e of G(i) at least a(i)(e) and at most b(i)(e) times, i = 1,2, and satisfying the condition that for each v in V f(v) less than or equal to r(1)(v) = r(2)(v) less than or equal to g(v) where r(i)(v) denotes the number of the arborescences in G(i) rooted at v.

PD November 1988. **TI** (a,b)-Factorizations of Graphs. **AA** Academia Sinica, Beijing, China. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88542-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 19. **PR** No Charge. **JE** 213. **KW** Integer-Valued Functions. Spanning Subgraph. Factorization.

PD November 1988. **TI** A Note on Some Factor Theorems of Graphs. **AA** Academia Sinica, Beijing. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88538-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 7. **PR** No Charge. **JE** 213. **KW** Finite Graphs. Graph Factors.

AB The aim of this note is to show that some recently published results on graph factors derive fairly easily from Lovasz' (g,f)-Factor Theorems.

Marron, J. S.

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

Marston, Richard

PD March 1989. **TI** Pricing to Market in Japanese Manufacturing. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2905; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $2.00. **JE** 431, 131, 133. **KW** Manufacturing. Exchange Rates. Exports. Prices.

AB This paper investigates pricing by Japanese manufacturing firms in export and domestic markets. The paper reports equations explaining the margin between export prices in yen and domestic prices for a wide range of final goods including many of the electronic and transport products which have figured so prominently in recent trade discussions. Evidence is presented showing that Japanese firms respond to changes in real exchange rates by "pricing to market", varying their export prices in yen relative to their domestic prices. The empirical specification makes it possible to disentangle planned changes in the margin between export and domestic prices from inadvertent changes in this margin due to unanticipated changes in exchange rates.

Masson, Paul

TI Simulating the Effects of Some Simple Coordinated vs. Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul.

TI Net Foreign Assets and International Adjustment in the United States, Japan and the Federal Republic of Germany. **AU** Horne, Jocelyn; Kremers, Jeroen; Masson, Paul.

TI Simulating the Effects of Some Simple Coordinated versus Uncoordinated Policy Rules. **AU** Frenkel, Jacob A.; Goldstein, Morris; Masson, Paul.

Mathur, Purushottam Narayan

PD October 1988. **TI** A Perspective on Productivity, Wages, and Income in Developing Countries after the Commodity Price Crash of the 1980's. **AA** University College London and University College of Wales, Aberystwyth. **SR** University College London Discussion Paper: 88-21; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 24. **PR** 150 pounds sterling. **JE** 112, 121, 226, 411. **KW** Economic Development. Developing Countries. Debt. Productivity.

AB In the past decades not a single developing market economy could enter the category of industrialized market economies (viz. the rank of OECD countries). Causes of this phenomenon are examined. It is found that the current international economic order is responsible for this. Developmental efforts of each country not only engulfs it in Debt-trap, but also keeps the prices of its exportables low because of the fallacy of composition. This long run low price ensures that the real wage rate has hardly any chance of improving with the current rules.

PD October 1988. TI Why do International Price Structures Differ? AA University College London, and University College of Wales, Aberystwyth. SR University College London Discussion Paper: 88-15; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. PG 11. PR 150 pounds sterling. JE 431, 411, 443, 121, 023. KW Foreign Aid. Exports. Developing Countries. Price Structure. Wages.

AB The world price of the export commodity determines the wage rate in a developing country. Together with production technology and imported inputs, it also determines the price structure. The availability of foreign exchange determines the production possibility curve of the economy. This additional information is useful in delineating the implications of debt servicing, as well as foreign aid, on production possibilities and choosing the best alternatives rather than stumbling on one.

Matsui, Akihiko

PD January 1989. TI Social Stability and Equilibrium. AA Northwestern University. SR Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 819; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. PG 31. PR No Charge. JE 026. KW Nash Equilibrium. Social Stability. Stable Set. Accessibility. Solution Concepts. Game Theory.

AB A new solution concept for games in the normal form is proposed in order to cope with the questions of social stability. ns of A cyclically stable set is a set of strategy profiles which is closed under accessibility and for which any two members are accessible from each other. It is proved that cyclically stable sets always exist, and that they are invariant with respect to sequential elimination of strictly dominated strategies and addition/deletion of redundant strategies. In general, however, there need not be a cyclically stable set including a Nash equilibrium.

Matsuyama, Kiminori

PD October 1988. TI A Theory of Sectoral Adjustment. AA Northwestern University. SR Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 812; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. PG 36 (32 + 4 figures). PR No Charge. JE 824, 823, 022, 024. KW Career Choice. Labor Adjustment. Overlapping Generations Model. Labor Supply.

AB This paper constructs two sector overlapping generations economies where sectoral adjustment of labor takes place slowly in response to sectoral shocks. The dynamics of labor supplies are characterized for a variety of relative price shocks (both exogenous and endogenous) under constant-, decreasing-, and increasing-returns-to-scale technologies. Welfare implications are also discussed.

PD December 1988. TI Endogenous Price Fluctuations in an Optimizing Model of a Monetary Economy. AA Northwestern University. SR Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 813; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. PG 32 pages (28 + 4 figures). PR No Charge. JE 131, 111, 023, 133. KW Endogenous Cycles. Chaos. Money Supply. Prices. Fluctuations. Economic Growth. Dynamic Model.

AB This paper demonstrates that an optimizing model of a monetary economy can produce perfect foresight equilibria, in which the price level fluctuates forever in a stationary environment. These equilibrium paths are bounded so that neither the transversality condition nor the fractional backing of paper money proposed by Obstfeld and Rogoff (1983) can rule them out. The chaotic dynamics is also considered. Although an economy with a high rate of money supply growth is more likely to be in the chaotic region (an increase in the growth rate of money supply leads to a period-doubling transition to chaos), the chaos can emerge even with a constant money supply and an arbitrarily small discount rate. The paper also shows that some fluctuating equilibria give higher welfare than the steady state equilibrium.

Matthews, Steven A.

PD November 1988. TI Veto Threats: Rhetoric in a Bargaining Model. AA Northwestern University. SR Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 805; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. PG 29. PR No Charge. JE 026, 025. KW Bargaining. Communication. Cheap Talk. Mathematical Politics. Veto. Legislature.

AB A specific bargaining game is studied, motivated by the speech-making, bill-proposing, and bill-vetoing observed in legislative processes. The game has two players, a chooser and a proposer, with the preferences of the chooser not known to the proposer. The chooser starts the game by talking. Then the proposer proposes an outcome, which the chooser accepts or vetoes. Only two kinds of perfect equilibria exist. In the more interesting kind, the chooser tells the proposer which of two sets contains his type. Two proposals are possibly elicited, a compromise proposal and the proposer's favorite proposal. Ironically, only the compromise proposal is ever vetoed.

Matzkin, Rosa L.

PD December 1988. TI Nonparametric Tests of Maximizing Behavior Subject to Nonlinear Sets. AA Yale University. SR Yale Cowles Foundation Discussion Paper: 894; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. PG 58. PR $2.00. JE 022, 213. KW Revealed Preferences. Nonparametric Tests. Monotonicity. Concavity.

AB This paper extends the axiomatic theory of revealed preference to choices that are generated by the maximization of a strictly concave and strictly monotone function subject to nonlinear constraint sets. I characterize finite sets of observations on choice behavior that are consistent with the maximization of a strictly concave and strictly monotone objective function. Both nonconvex and convex choice sets are considered. The analysis applies, for example, to consumers who face either regressive or progressive taxes and to households that produce commodities according to either a convex or a concave production function. For choice sets that possess convex and monotone complements, my characterization provides a nonparametric test for the maximization hypothesis. For choice sets that can be supported by unique hyperplanes at the chosen elements, the result provides a nonparametric test for the strict concavity and strict monotonicity of the maximized function.

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McCall, John J.

PD August 1988. **TI** Exchangeability and the Structure of the Economy: A Preliminary Process Analysis. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 525; Department of Economics - UCLA Los Angeles, CA 90024. **PG** 29. **PR** $2.50. **JE** 821, 833, 023. **KW** Labor Market. Business Cycles. Contracts. Networks. Exchangeability.

AB This approach to business cycles requires that each agent in the economy be considered. The model begins with these atomic entities -- consumers, firms, and their manifold relations. The basic economic concepts are contracts and the no arbitrage condition. The entire economy is unified by exchangeability and martingale analysis. From the design of information producing experiments through the spatial distribution of firms and industries, the formation and dissolution of contracts, the hiring of inputs, the production and distribution of output, advertising, the measure and control of fluctuating heterogeneity afflicting all of these processes all of these activities are studied with an assortment of exchangeable birth and death processes. The methodology is exemplified by a queuing network model of the labor market.

PD September 1988. **TI** An Introduction to Exchangeability and Its Economic Applications. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 526; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 59. **PR** $2.50; checks payable to University of California at Regents. **JE** 211, 021. **KW** Exchangeability. Bayes Methods. Dynamical Systems. Economic Process.

AB The symmetry possessed by exchangeability is the key to its usefulness. The methods that are used to comprehend reality will be successful insofar as they contain this symmetry. This is true of theoretical models, empirical methods, and algorithms. Indeed, if the design of mechanisms is by rearrangement of natural matter, their survival value will depend on the degree to which they retain the symmetry of the original matter. This comment encompasses complex machinery and sophisticated political, social, and economic institutions. This paper is simply an elaboration of this observation. The process begins with designing experiments to decode nature's mysterious language.

McDermed, Ann A.

TI The Pension Cost of Changing Jobs. **AU** Allen, Steven G.; Clark, Robert; McDermed, Ann A.

McKenzie, George W.

TI The Role of Wealth, Government Debt and Credit in the Greek Economy. **AU** Makrydakis, Stelios V.; McKenzie, George W.

McLean, Richard P.

TI Capital Accumulation in an Intertemporal Duopoly. **AU** Sklivas, Steven D.; McLean, Richard P.

Meir, Amram

TI The Travelling Salesman Problem in the k-Dimensional Unit Cube. **AU** Bollobas, Bela; Meir, Amram.

Middendorf, M.

PD September 1988. **TI** The Max Clique Problem in Classes of String-Graphs. **AU** Middendorf, M.; Pfeiffer, F. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88529-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 9. **PR** No Charge. **JE** 213. **KW** String-Graph. Max Clique Problem. Polynomial Algorithms.

AB A string-graph is an intersection graph of a set of curves in the plane. Investigating the complexity of the max clique problem for some classes of string-graphs we obtain NP-completeness results on one hand and polynomial time algorithms on the other hand for string-graph-classes of at first sight surprising similarity.

Miller, Robert A.

TI Conditional Choice Probabilities and the Estimation of Dynamic Discrete Choice Models. **AU** Hotz, V. Joseph; Miller, Robert A.

Millward, Neil

TI Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J.

Minyi, Yue

PD January 1989. **TI** On the Exact Upper Bound for the Multifit Processor Scheduling Algorithm. **AA** Academia Sinica, Beijing, China. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88547-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 37. **PR** No Charge. **JE** 213, 214. **KW** Scheduling. Algorithm. Binpacking Problem. Multifit.

AB We consider the well-known problem of Scheduling n independent tasks nonpreemptively on m identical processors with aim to minimize the makespan. Coffman, Garey and Johnson [1978] described an algorithm Multifit, based on techniques from binpacking, with better worst performance than the LPT algorithm and prove that it satisfies a bound of 1.22. It has been claimed by Friesen (1984) that this bound can be improved to 1.2. However, we found that this proof, especially his Lemma 4.9, is unlegible. Yue, Kehlerer and Yu (1988) have given the bound 1.2 in a simple way. In this paper, we prove first that the bound cannot exceed 13/11 and then to prove that it is exactly 13/11.

Miron, Jeffrey A.

PD August 1988. **TI** The Founding of the Fed and the Destabilization of the Post-1914 Economy. **AA** University of Michigan and NBER. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-08; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 48. **PR** No Charge. **JE** 311, 131, 133, 023. **KW** Monetary Policy. Federal Reserve. Natural Rate. Economic Pluctuations.

AB A standard assumption in the literature on optimal monetary policy is that the proper goal of policy is the reduction of the variation in output around its natural rate level. The stabilization of output has not always been accepted as the primary goal of policy, however. This paper argues that neither the founders of the Federal Reserve System nor the central bankers in charge during the first twenty-five years of the Fed's existence viewed the elimination of short term movements in output as an important objective for policy. Instead, the framers of the Federal Reserve System and the early practitioners of central banking in the United States apparently thought that "stabilization" of asset markets was the crucial task for the monetary authority. The paper compares the performance of the United States economy during the twenty-five year periods before and after 1914 and shows that after the founding of the Fed the variance of both the rate of growth of output and of the inflation rate increased significantly, while the average rate of growth of output fell, and real stock prices became substantially more volatile. on in.

PD November 1988. **TI** A Cross-Country Comparison of Seasonal Cycles and Business Cycles. **AA** University of Michigan and National Bureau of Economic Research. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-07; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 39. **PR** No Charge. **JE** 133, 131, 123. **KW** Business Cycles. Seasonality. Developed Countries. Fluctuations.
AB This paper conducts a cross country analysis of the seasonal cycles in aggregate economic activity, and it compares the cross country variation in the properties of seasonal cycles to the cross country variation in the properties of business cycles. Seasonal fluctuations account for a large fraction (80-90 per cent) of the non-trend variation in most aggregate quantity variables, but there has been almost no analysis of seasonal fluctuations in the literature on international comparisons of aggregate fluctuations.

Mizon, Grayham E.

TI Costs of Inflation. **AU** Driffill, John; Mizon, Grayham E.; Ulph, Alistair.

PD February 1989. **TI** More on the Distribution of Consumer Price Changes in the U.K. **AU** Mizon, Grayham E.; Safford, J. Claire; Thomas, Stephen H. **AA** Southampton University. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8902; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 18. **PR** No Charge. **JE** 134, 227. **KW** Inflation. Price Variations. Price Responses. Relative Prices.
AB This paper rejects the hypothesis that relative commodity price changes are normally distributed using monthly United Kingdom data from 1962-1983. The presence of skewness in the distribution of price changes across commodities suggests that the Asymmetric Price Response Hypothesis may be a good description of the relation between the moments of the distribution of price changes. We use Granger Causality tests to investigate this hypothesis, but it is not supported by the data. We also examine the major time series features of the individual price series.

TI A Note on the Distribution of the Least Squares Estimator of a Random Walk with Drift. **AU** Hylleberg, Svend; Mizon, Grayham E.

Moghadam, Reza

TI Relative Wage Flexibility in Four Countries. **AU** Pissarides, Christopher A.; Moghadam, Reza.

Mohr, Michael

PD September 1988. **TI** Uniqueness and Stability of Stationary Rational Expectations Equilibria. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-97; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 25. **PR** No Charge. **JE** 211. **KW** Linear Stochastic Model. Expectations Equilibria. Bounded Memory. Rational Expectations. Forecast Feedback.
AB This paper treats a linear stochastic model which is widely used in econometrics and economic theory. Its dynamics is caused by rational expectations of the (K+1) future values of the endogenous process y. These expectations are based on past values of some input process x, which (in the first part) is supposed to be ARMA, but does not necessarily coincide with the exogenous process u. In order to investigate the properties of the solutions to this model (the rational expectations equilibria) it is useful to distinguish between two cases: In the first one the entire history of x is available to the agents in forming their expectations (this is the conventional case of unbounded memory), in the second one only the last part of it is used (bounded memory case). One distressing aspect in the analysis of such models is the multiplicity of solutions. The problem becomes more tractable if we restrict the set of solutions by the requirement of stationarity.

PD February 1989. **TI** Asymptotic Properties of Least Squares Estimators in Regression Models with Forecast Feedback. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-116; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 25. **PR** No Charge. **JE** 211, 132, 212. **KW** Dynamic Linear Models. Rational Expectation. Ordinary Least Squares.
AB In this paper we focus on asymptotic properties of OLS estimators in linear models with forecast feedback.

Montiel, Peter

TI Dynamics of Devaluation and "Equivalent" Fiscal Policies for a Small Open Economy. **AU** Lizondo, Jose Saul; Montiel, Peter.

Morrison, Catherine J.

PD April 1989. **TI** Markup Behavior in Durable and Nondurable Manufacturing: A Production Theory Approach. **AA** Tufts University. **SR** National Bureau of Economic Research Working Paper: 2941; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 022, 023, 611. **KW** Price Markup. Scale Economies. Capacity Utilization. Production Theory.
AB In this paper I provide a production theory based framework for measuring markups of prices over marginal cost, and the effects of cost and demand characteristics on these markups. Price to marginal cost ratios are measured for various Canadian manufacturing industries, and the impacts of capacity utilization, scale economies, changing prices of variable inputs, import competition, unemployment and other cost and demand determinants are evaluated using adjusted markup indexes and elasticities of the markup ratios. The measured price margins are within a reasonable range and tend to be countercyclical. Moreover, these measures suggest that profitability stemming from the potential to increase price over marginal cost appears primarily to arise from cost characteristics determining scale

economies.

Mortensen, Dale T.

PD December 1988. **TI** Equilibrium Wage Distributions: A Synthesis. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 811; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 38. **PR** No Charge. **JE** 026, 824, 022. **KW** Wage Distribution. Search Theory. Noncooperative Game. Wage Determination.

AB The problem of wage determination is formulated as a noncooperative game in which employers post wage offers and workers sequentially search among them. Establishing the existence of an equilibrium distribution of wage offers and associated reservation wage rates for the general case of any finite number of worker and employer types given that workers receive offers both when employed and when not at frequencies that generally depend on employment status is the principal task accomplished in the paper. The constructed representation of the equilibrium wage offer distribution is used to determine the data required to identify the model's structural parameters.

PD December 1988. **TI** The Persistence of Indeterminacy of Unemployment in Search Equilibrium. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 810; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 34. **PR** No Charge. **JE** 821, 824, 022, 023. **KW** Unemployment. Search Theory. Wage Determination. Labor Market.

AB Existing theories that explain persistent and indeterminant unemployment are brought together within the unifying framework of search equilibrium. External economies that exhibit increasing returns to production and exchange are identified as potential causes of both the indeterminacy and the persistence of unemployment for a wide range of assumptions about wage determination. Those considered include a 'market clearing' wage, an 'efficiency' wage, and an 'insider-outsider' wage model.

Although either of the nonmarket clearing specifications can induce greater persistence, multiple equilibria require increasing returns in the technologies of either production or exchange.

Mosser, Patricia C.

PD November 1988. **TI** Materials Inventories and Shortfall Costs. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 412; Department of Economics, Columbia University, New York, NY 10027. **PG** 36. **PR** \$5.00. **JE** 522, 521, 631. **KW** Inventories. Finished Goods. Material Stocks. Manufacturing.

AB Much of the empirical and theoretical work on aggregate inventories has concentrated on the behavior of stocks of manufacturers' finished goods. In recent empirical studies, the attention on finished goods has been to the virtual exclusion of other types of inventory, specifically work-in-progress inventories and materials and supplies stocks. This emphasis appears misplaced both on a size basis: finished goods inventories account for only one-third of all manufacturing inventories while the other two-thirds is split approximately equally between works and materials; and because works and materials serve quite different functions and have different time series properties than finished goods. This paper is a preliminary investigation of this latter group of inventories, manufacturing materials and supplies. It presents and estimates a representative agent model of inventory carrying costs and shortfall costs which a manufacturing purchasing agent might face.

Mullins, Mark

PD November 1988. **TI** The Effect of the Stock Market on Investment: A Comparative Study. **AU** Mullins, Mark; Wadhwani, Sushil B. **AA** London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 329; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 26. **PR** No Charge. **JE** 522, 123, 313, 511, 512. **KW** Stock Market. Corporate Investment. Stock Prices.

AB This paper is concerned with examining whether exogenous events whose only direct effect is to change stock prices can indirectly affect corporate investment through the stock price mechanism. It is argued that the actual effect of share price changes depends on institutional considerations which affect the degree of managerial autonomy. Therefore, it would be reasonable to expect the stock market to be less influential in Japan or Germany, when compared with the United States or United Kingdom. This paper provides some econometric evidence which supports this view in that once one has allowed for other influences on investment, share prices provide no additional explanatory power for investment behavior in Japan or Germany, but they do affect investment in the UK and United States.

Mundy, Joy

TI The R&D Master File Documentation. **AU** Hall, Bronwyn H.; Cummins, Clint; Laderman, Elizabeth; Mundy, Joy.

Murphy, Kevin J.

TI Relative Performance Evaluation for Chief Executive Officers. **AU** Gibbons, Robert S.; Murphy, Kevin J.

Myerson, Roger B.

PD September 1988. **TI** Mechanism Design. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 796; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 28. **PR** No Charge. **JE** 022, 011. **KW** Mechanism. Incentive Compatibility. Coase's Theorem. Revelation Principle.

AB This paper is a survey of mechanism design, written for a book of excerpts from the New Palgrave Dictionary of Economics. Topics discussed include the revelation principle, incentive constraints, ex post efficiency, mechanism-theoretic limits of Coase's theorem, the importance of mediation, interim incentive-efficiency, and mechanism selection by individuals with private information.

Neelin, Janet Currie

PD January 1989. **TI** What Do (Public Sector) Unions Do? Wage and Employment Determination among Ontario Public School Teachers. **AA** University of California, Los

Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 542; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 41. **PR** $2.50; checks payable to University of California at Regents. **JE** 832, 824, 811, 022. **KW** Efficient Contracts. Monopoly. Employment. Collective Bargaining. Public Sector. Unions. Contract Curve.

AB The efficient contracts model is contrasted with a very simple model of supply and demand in the market for public school teachers. The paper departs from the long tradition of identifying labor demand curves by assuming that labor supply is perfectly elastic at the union wage. It is also one of the first papers to test an efficient contracts model using public sector data. The main question addressed is whether or not a simple supply and demand model can explain wage and employment determination in this market as well as a more complicated contracting story.

Nelson, Charles R.

TI A Markov Model of Heteroskedasticity, Risk, and Learning in the Stock Market. **AU** Turner, Christopher M.; Nelson, Charles R.; Startz, Richard.

Nerlove, Marc L.

PD March 1989. **TI** Von Thuenen's Model of the Dual Economy. **AU** Nerlove, Marc L.; Sadka, Efraim. **AA** Nerlove: University of Pennsylvania, Philadelphia and the International Food Policy Research Institute, Washington, D.C. Sadka: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 9-89; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 34. **PR** No Charge. **JE** 933, 941, 112. **KW** Economic Development. Transportation Costs. Dual Economy. Location Theory. Von Thuenen.

AB Von Thuenen's model of locational equilibrium is turned into a model of the dual economic development, having considerable relevance to the developing economies of the world today in which high costs of transport are pervasive and significant determinants of relative commodity prices. The role of transportation costs in determining the spatial distribution of commodity prices and, therefore, real wages and the spatial distribution of labor is analyzed. Comparative statics results, concerning, in particular, the possibilities of technological progress and growth are investigated.

Nesetril, Jaroslav

TI Reorientations of Covering Graphs. **AU** Brightwell, Graham; Nesetril, Jaroslav.

PD October 1988. **TI** Ramsey Theory. **AA** University of Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88505; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 91. **PR** No Charge. **JE** 213. **KW** Combinatorics. Ramsey Theory.

AB There are many aspects of combinatorics which are mirrored by chapters of this book. But few areas from such a compact body of concepts and results (and thus in turn form a theory in the classical sense) as Ramsey theory. When presenting it one could follow the axiom-definition-theorem-corollary scheme. We decided to follow roughly historical account commented from contemporary point of view. This seems to us that the most appropriate method for the subject. It is our aim to give proofs of the main theorems. Recently found techniques enable us to do so.

PD November 1988. **TI** Minimal Graphs Without Bilateral Symmetry: The Case of Induced Length 4. **AU** Nesetril, Jaroslav; Sabidusse, G. **AA** Nesetril: University of Montreal. Sabidussi: University of Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88512-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 53. **PR** No Charge. **JE** 213. **KW** Asymmetric Graphs. Involution Free.

AB In this paper we deal with (inclusion) minimal asymmetric graphs. We prove that there are exactly 7 minimal asymmetric graphs which contain an induced path of length 4. This, together with an earlier result which gives exactly 2 such graphs containing induced path of length 5 (and no such graph for longer induced paths) contributes to the verification of the conjecture that there are only finitely many minimal asymmetric graphs. It remains to verify the case of the path of length 3.

Nettekoven, Wolfgang

TI The Hyperbolic n-Space as a Graph in Euclidean (6n-6)-Space. **AU** Henke, Wolfgang; Nettekoven, Wolfgang.

Neumann, Manfred J. M.

PD January 1989. **TI** Determinants of Contract Wages in Germany. **AU** Neumann, Manfred J. M.; Schmidt, Roland; Schulte, Elisabeth. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-221; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 26. **PR** No Charge. **JE** 824, 832, 831, 825. **KW** Expected Inflation. Employment. Productivity. Labor Contracts. Collective Bargaining.

AB This paper investigates the determinants of German pay-rise contracts which are collectively negotiated at the industry level. Key findings from data of seven industries are: first, the contracts are shaped by the German unions' neutrality doctrine which asserts that contracts are neutral towards employment, if they take full account of expected inflation and labor productivity growth. Second, the contracts are based on economy-wide rather than industry-specific productivity growth. The evidence suggests that the German labor market is dominated by a cooperative solution which is not neutral towards employment.

Newey, Whitney K.

TI Minimum Chi-Square and Three-Stage Least Squares in Fixed Effects Models. **AU** Angrist, Joshua D.; Newey, Whitney K.

Nickell, Stephen John

PD January 1989. **TI** Insider Forces and Wage Determination. **AU** Nickell, Stephen John; Wadhwani, Sushil B. **AA** Nickell: Institute of Economics and Statistics, University of Oxford.
Wadhwani: Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 334; Centre for Labour Economics, London School of Economics, Houghton Street,

London WC2A 2AE, UNITED KINGDOM. **PG** 39. **PR** No Charge. **JE** 824, 831, 229, 825. **KW** Insider-Outsider Models. Wage Determination. Hysteresis. England.

AB This paper attempts to assess the relative importance of firm-specific factors (i.e. insider forces) in wage determination. Using firm-level data on 219 United Kingdom companies over 1974-82, it finds that a 1 per cent rise in a firm's prices or productivity relative to the aggregate economy leads to a rise in relative wages of 0.1 - 0.2 per cent. As a corollary to this, outside factors like the aggregate wage and the unemployment rate, also play an important role. There is evidence for insider based hysteresis effects, but these are inversely related to the extent to which firms take national agreements into account.

Noldeke, Georg

PD October 1988. **TI** Signalling in a Dynamic Labor Market. **AU** Noldeke, Georg; van Damme, Eric. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-148; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 37. **PR** No Charge. **JE** 026, 022. **KW** Game Theory. Incomplete Information. Sequential Equilibria. Signalling Model. Collusion.

AB This paper analyzes a multiperiod version of the Spence Job Market Signalling Model in which workers cannot commit to an education choice and firms make wage offers at any point in time. The dynamic competition combined with the incomplete information yield a multiplicity of sequential equilibria, including ones that sustain implicit collusion, even though the length of the game is finite. Emphasis is placed on equilibria that survive the 'elimination of never weak best response' criterion of Kohlberg and Mertens (1986). It is shown that in the limit, as the time between offers tends to zero, any such equilibrium results (in expectation) is the unique stable outcome of the static Spence model.

Noll, Roger G.

PD August 1988. **TI** Telecommunications Regulation in the 1990s. **AA** Stanford University. **SR** Stanford Center for Economic Policy Research Discussion Paper: 140; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 35. **PR** No Charge. **JE** 612, 635, 613. **KW** Telephone. Regulation. Antitrust. Public Policy.

AB The divestiture of AT&T and procompetitive federal regulation have fundamentally altered the course of the telecommunications industry, and with it the kinds of regulatory issues faced by both state and federal regulators. The purpose of this paper is to delineate the more important controversial issues in telecommunications regulation that will be addressed during the next few years. It begins by examining the conceptual models that stand behind divergent approaches to the industry, from advocates of reintegrated monopoly to proponents of virtually unlimited, unregulated competition everywhere. It then examines the core pending issues: new methods of price regulation (such as price caps and social contract regulation), equal access requirements (including open network architecture), cross-subsidization to maintain universal service, and line-of-business restrictions on local telephone companies.

O'Brien, James

TI Bank Equity Values, Bank Risk, and the Implied Market Values of Banks' Assets and Liabilities. **AU** Kuester, Kathleen A.; O'Brien, James.

OFlaherty, Brendan

PD January 1989. **TI** The Use of Monetary Authorities. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 417; Department of Economics, Columbia University, New York, NY 10027. **PG** 40. **PR** $5.00. **JE** 022, 311, 024. **KW** Principal-Agent Model. Monetary Authority. Monetary Policy. Walrasian Equilibrium.

AB What use is it for a group of agents to hire a monetary authority. I show why they might want to hire such an authority, basically by developing a variant of the Kiyotaki-Wright model of money. I also show that the monetary authority will never be able to achieve the first-best, Walrasian outcome. Even the second-best monetary policy is likely to be dynamically inconsistent.

PD January 1989. **TI** The Care and Handling of Monetary Authorities. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 418; Department of Economics, Columbia University, New York, NY 10027. **PG** 25. **PR** $5.00. **JE** 022, 311. **KW** Principal-Agent Theory. Negotiation. Term Length.

AB Sometimes a group of people will want to hire some agent (a monetary authority, for instance) to force them to cooperate with one another. This can cause problems, not only of the standard principal-agent type, but also of inconsistency, which appears here as renegotiation. The group faces a conflict between controlling the agent -- the agency problem -- and controlling themselves -- the inconsistency problem. We show that terms of office are a good way for this conflict to be resolved, and in fact, for sufficiently patient people, the renegotiation problem disappears. This model provides insights into why people dislike inflation, why the market for presidents does not clear in Walrasian fashion, and why the controversy of "rules versus discretion" provides no policy guidance.

Oh, Seonghwan

TI Have Money-Stock Fluctuations had a Liquidity Effect on Expected Real Interest Rates? **AU** Diba, Behzad T.; Oh, Seonghwan.

TI Money, Inflation, and the Expected Real Interest Rate. **AU** Diba, Behzad T.; Oh, Seonghwan.

Olsen, Trond E.

PD August 1988. **TI** Durable Goods Monopoly, Learning by Doing and the Coase Conjecture. **AA** Stanford University. **SR** Stanford Center for Economic Policy Research Discussion Paper: 141; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 26. **PR** No Charge. **JE** 022, 611, 511, 514. **KW** Durable Goods. Monopoly. Learning. Folk Theorem. Competition.

AB The Coase conjecture states that if a durable-goods monopolist can make offers to sell arbitrarily frequently, then in equilibrium it will charge the competitive price, and the market will be saturated quickly. This conjecture is shown to be refuted when production of the durable good is subject to learning by doing: For the linear case it is shown that there exists a stationary-strategy perfect equilibrium in which the monopolist charges competitive prices, but the market is saturated slowly. While this shows that the validity of the Coase conjecture is very sensitive to properties of the production technology, the paper also shows that the Folk Theorems for durable-goods markets seem to be robust with respect to such technological properties.

Onado, Marco

PD November 1988. **TI** The Role of Banking Crises in Recent Financial Instability. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 497; 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** No Charge. **JE** 312. **KW** Bank Failures. Risk. Financial Markets. Commercial Banks.

AB *It is a widespread belief that bank risks have increased* dramatically since the mid 1970s and that they not only determine a greater potential exposure to financial instability, but could lead to general crises and the disruption of the entire financial mechanism. Concerns about bank failures are expressed by many authors and by central banks and regulators. The analysis of actual experience shows that the traditional elements which end up in bank failures, namely fraud, credit risk and interest rate risk are more acute and widespread than ever before, especially in the United States.

Osano, Hiroshi

PD September 1988. **TI** Involuntary Unemployment and the Threat to Shirking Workers. **AA** Shiga University and Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 795; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 48. **PR** No Charge. **JE** 821, 824, 825, 833. **KW** Involuntary Unemployment. Shirking. Labor Contract. Moral Hazard. Wage Policy.

AB This paper examines the worker moral hazard problem under the two multi-period contract models in which firms can use layoff policies as well as deferred payment schemes as an incentive device. The key difference between these two models is the threat to shirking workers. One is a model in which firms threaten shirking workers with contract termination. The other is a model in which firms can make their wage and layoff policies contingent on whether workers shirk in the previous periods or not. The results obtained in both of these models show that the workers' incentive to shirk can yield the involuntary layoff and underemployment of junior or senior workers if workers are strictly risk averse. The results also exhibit that involuntary retention may arise only if firms cannot make their wage policies contingent on whether workers shirk in the previous periods or not.

PD December 1988. **TI** Real Business Cycles in a Dynamic Labor Contract Equilibrium. **AA** Shiga University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 809; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 17. **PR** No Charge. **JE** 824, 833, 113, 133, 023. **KW** Business Cycles. Labor Contracts. Social Planning. Competition.

AB This paper shows that the dynamically Pareto optimal allocation generated by a real business cycle model is equivalent to the equilibrium allocation generated by long-term labor contracts. The result provides and justifies the econometric models of long-term labor contracts for testing the real business cycle model. This finding can be exploited to explain why an economy strongly characterized by long-term labor contracts (i.e., the Japanese economy) have more tendencies towards equilibria than an economy with more competitive labor markets (i.e., the US economy).

Ostroy, Joseph M.

TI Groves Mechanisms in Continuum Economies: Characterization and Existence. **AU** Makowski, Louis; Ostroy, Joseph M.

Ostry, Jonathan

TI Terms of Trade Disturbances, Real Exchange Rates, and Welfare: The Role of Capital Controls and Labor Market Distortions. **AU** Edwards, Sebastian; Ostry, Jonathan.

TI Terms of Trade Disturbance, Real Exchange Rates and Welfare: The Role of Capital Controls and Labor Market Distortions. **AU** Edwards, Sebastian; Ostry, Jonathan.

PD April 1989. **TI** Government Purchases and Relative Prices In a Two-Country World. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/28; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** No Charge. **JE** 431, 411, 423, 321. **KW** Exchange Rate. Fiscal Policy. Intertemporal Model. Government Expenditures. Open Economy.

AB The effects of government expenditures on interest rates, terms of trade, and real exchange rates are examined in a three-good (importables, exportables, nontradables), two-country, intertemporal, optimizing model. Temporary spending increases (on tradable or nontradable goods) may raise or lower the world return on internationally traded bonds and may improve or worsen the current account of the country undergoing the fiscal expansion. The results are shown to differ substantially from those obtained in models employing a higher degree of commodity aggregation. The determinants of the comovement between the terms of trade and the real exchange rate are also examined.

Oswald, Andrew J.

TI The Economic Effects of Britain's Trade Unions. **AU** Blanchflower, David G.; Oswald, Andrew J.

TI Unionization and Employment Behavior. **AU** Blanchflower, David G.; Millward, Neil; Oswald, Andrew J.

TI The Wage Curve. **AU** Blanchflower, David G.; Oswald, Andrew J.

Otsuki, Toshiyuki

TI Macroeconomic Factors and the Japanese Equity Markets: The CAPMD Project. **AU** Brown, Stephen J.; Otsuki, Toshiyuki.

Pagan, Adrian R.

PD May 1989. **TI** Alternative Models for Conditional Stock Volatility. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2955; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $2.00. **JE** 042, 313, 131. **KW** Stock Returns. Stock

Market. Stock Prices.
AB This paper compares several statistical models for monthly stock return volatility. The focus is on U.S. data from 1834-1925 because the post-1926 data have been analyzed in more detail by others. Also, the Great Depression had levels of stock volatility that are inconsistent with stationary models for conditional heteroskedasticity. We show the importance of nonlinearities in stock return behavior that are not captured by conventional ARCH or GARCH models. We also show the nonstationarity of stock volatility, even over the 1834-1925 period.

Pagano, Marco

TI Confidence Crises and Public Debt Management. **AU** Giavazzi, Francesco; Pagano, Marco.

Pakes, Ariel

PD March 1989. **TI** Empirical Implications of Alternative Models of Firm Dynamics. **AU** Pakes, Ariel; Ericson, Richard. **AA** Pakes: Yale University. Ericson: Columbia University. **SR** National Bureau of Economic Research Working Paper: 2893; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 56. **PR** $2.00. **JE** 611, 022, 023. **KW** Heterogeneous Firms. Firm Behavior. Dynamic Model. Uncertainty. Competition.
AB This paper considers two models for analyzing the dynamics of firm behavior that allow for heterogeneity among firms, idiosyncratic (or firm-specific) sources of uncertainty, and discrete outcomes (exit and/or entry). Models with these characteristics are needed for the structural econometric analysis of several economic phenomema, including the behavior of capital markets when there are significant failure probabilities, and the analysis of productivity movements in industries with large amounts of entry and exit. In addition, these models provide a means of correcting for the self-selection induced by liquidation decisions in empirical studies of firms responses to alternative policy and environmental changes.

Paroush, Jacob

TI Debt Relief and Adjustment Policies. **AU** Landskroner, Yoram; Paroush, Jacob.

Pascoa, Mario Rui

PD October 1988. **TI** Differentiability of Demand and Finiteness of Equilibria. **AU** Pascoa, Mario Rui; Werlang, Sergio Ribeiro da Costa. **AA** Pascoa: University of Pennsylvania. Werlang: Fundacao Getulio Vargas and IMPA. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Science (CARESS) Working Paper: 88-20; 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** 021, 213. **KW** Demand Functions. Price Simplex. Exchange Economy. Walrasian Equilibrium.
AB In this paper we show that if a utility function is defined for positive real numbers is (i) strictly concave, (ii) differentiable, (iii) the derivative of u(x) is such that the gradient approaches infinity when the boundary is approached, (iv) the lower limit as x approaches a of the distance between gradients divided by the distance between x and a is greater than m(positive), and (v) the demand function is locally Lipschitzian in income, then the demand function is (a) differentiable in almost every price and income, (b) maps null sets into null sets and (c) satisfies Debreu's (1970) condition. In a pure exchange economy, with m consumers where utility functions satisfy the above assumptions, the set of equilibrium prices will be finite, for almost every endowment vector.

PD November, 1988. **TI** Local Uniqueness of Equilibria without Differentiability of Demand. **AU** Pascoa, Mario Rui; Werlang, Sergio Ribeiro da Costa. **AA** Pascoa: University of Pennsylvania. Werlang: Fundacao Getulio Vargas and IMPA. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 88-22; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 10. **PR** No Charge. **JE** 213, 021, 022. **KW** Exchange Economy. Demand Functions.
AB In this paper we give an example of a pure exchange economy where demand functions are not differentiable, but equilibria is finite for almost every endowment, although the set of endowments generating infinite equilibria is dense. We also establish the result that if demand functions are (i) approximately pointwise Lipschitzian in almost every price and income, say in a set A with null complement, and (ii) the image of the complement A' is a null set of bundles, then equilibria is locally unique.

PD November 1988. **TI** Approximate Purification of Nash Equilibrium in Nonatomic Games. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and the Social Sciences (CARESS) Working Paper: 88-21; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 22. **PR** No Charge. **JE** 026, 213. **KW** Nonatomic Game. Distributional Strategies. Pure Strategies. Payoff Function. Incomplete Information.
AB We study nonatomic games with a continuum of strategies such that payoffs depend on the distribution on the product space of types of players and strategies (or equivalently, on the mapping from types into mixed strategies). That is, on these nonatomic games it might matter which type plays what. We show that if payoff functions are equicontinuous there exists an epsilon-equilibrium in pure strategies. This result is related to the literature on approximate purification in games with incomplete information. We apply our result to nonatomic games where only the type of the payoff function is relevant and show that if the distribution of payoff function types is atomless, then there is a symmetric epsilon-equilibrium in pure strategies (that is, players with the same payoff function choose the same strategy.

Patinkin, Don

PD November 1988. **TI** In Defense of IS-LM. **AA** The Hebrew University and University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 537; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 22. **PR** $2.50; checks payable to University of California at Regents. **JE** 023, 031. **KW** Hicks. Keynes. IS-LM Diagrams.
AB Hicks' IS-LM diagram is examined from two viewpoints:

its validity as a representation of the General Theory and its usefulness as an analytical tool. From both viewpoints an affirmative answer is given: the first, on the basis of the text of the General Theory itself, as well as of Keynes' correspondence with Hicks; the second, by refuting various criticisms that have been made of the diagram, as well as showing the additional problems to which it has been applied.

Pearce, David G.

PD August 1988. **TI** The Interaction of Implicit and Explicit Contracts in Repeated Agency. **AU** Pearce, David G.; Stacchetti, Ennio. **AA** Pearce: Yale University. Stacchetti: Stanford University. **SR** Stanford Center for Economic Policy Research Discussion Paper: 144; 100 Encina Commons, Stanford University, Stanford, CA 94305. **PG** 29. **PR** No Charge. **JE** 022, 026. **KW** Principal-Agent Theory. Supergames. Contract Theory. Dynamic Models. Implicit Contracts.

AB Traditional agency theory assumes that the principal has no more information about the agent's actions than the enforcement authorities have. This is unrealistic in many settings, and in repeated models, additional information possessed by the principal changes the nature of the problem. Such information can be used in implicit, self-enforcing contracts between principal and agent, that supplement the usual explicit contracts. This paper studies the way in which the two kinds of contract are combined in constrained efficient equilibria of the agency supergame. The agent's compensation is comprised of both guaranteed payments and voluntary bonuses from the principal. We give a simple characterization of the composition of remuneration in the optimal dynamic scheme.

Peaucelle, Irina

PD 1988. **TI** Croissance Economique, Profit et Formes de Motivations Salariales: II L'incidence de la Protection Sociale. **AU** Peaucelle, Irina; Petit, Pascal. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8803; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 44. **PR** 20 FF. **JE** 825, 833, 821, 023. **KW** Work Incentives. Welfare State. Institutions. Labor Contracts.

AB Intensity and quality of work result from incentives which are tied with work organization and work remuneration. We have tried to specify the way in which the institutional framework, which surrounds the achievement of labor contracts, influences the choices and the effects of work incentives. A simple modelling of the interplay between firms' policies and macroeconomic dynamic of welfare states allows us to account for the micro and macro dimensions of the wage relationship. An empirical analysis tends to characterize, through factor analyses, the validity of the model and its national dimensions. Paper in French.

TI Heterogeneite I: Le cas lineaire. **AU** Gourieroux, Christian; Peaucelle, Irina.

Persson, Torsten

PD January 1989. **TI** Exchange Rate Variability and Asset Trade. **AU** Persson, Torsten; Svensson, Lars E. O. **AA** University of Stockholm. **SR** National Bureau of Economic Research Working Paper: 2811; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 431, 441, 411, 442, 311. **KW** Exchange Rates. International Trade. Foreign Investment. Portfolios.

AB In discussions about different international monetary arrangements it is often maintained that exchange rate variability has a negative influence on international trade and foreign investment. This paper addresses one specific aspect of this general issue, namely the effect of exchange rate variability on capital flows and international portfolio diversification. More precisely, we examine how different monetary policies -- and among those, policies that aim at stabilizing exchange rates -- determine the risk characteristics of nominal assets, and how these risk characteristics determine international portfolio composition and trade in assets, when international asset markets are incomplete.

PD April 1989. **TI** Signalling, Wage Controls and Monetary Disinflation Policy. **AU** Persson, Torsten; van Wijnbergen, Sweder. **AA** Persson: Institute for International Economic Studies, Stockholm. van Wijnbergen: World Bank and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2939; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 134, 133, 321, 311, 023. **KW** Price Controls. Inflation. Fiscal Policy. Monetary Policy.

AB Wage and price controls have a long and somewhat disreputable history, presumably because of their frequent use in many countries as short run substitutes for measures with more lasting effects on the inflation rate. It is clear that controls do have microeconomic costs, but can they also have macroeconomic benefits? Under which circumstances do controls help in bringing down inflation, and when do they just suppress it temporarily? What is the required supporting role of fiscal and monetary policy while they are in place? These are the issues addressed in this paper.

Peters, Wolfgang

PD 1988. **TI** Okonomische Analyse der Berufsunfahigkeitsrente: Risiko, Anreizstruktur und Versicherung. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-214; Sonderforschungsbereich 303 an der Universitat Bonn, Adenaueralle 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** No Charge. **JE** 915. **KW** Risk. Insurance. Moral Hazard.

AB Paper in German.

Petit, Pascal

TI Croissance Economique, Profit et Formes de Motivations Salariales: II L'incidence de la Protection Sociale. **AU** Peaucelle, Irina; Petit, Pascal.

TI Technological Diffusion and Investment Behavior: The Case of the Textile Industry. **AU** Antonelli, Cristiano; Petit, Pascal; Tahar, Gabriel.

Petruzzi, Christopher

TI Patent and Copyright Protection for Innovations in Finance. **AU** Judlowe, Stephen; Petruzzi, Christopher; Del Valle, Marguerite.

Pfeiffer, F.

TI The Max Clique Problem in Classes of String-Graphs. **AU** Middendorf, M.; Pfeiffer, F.

Phillips, Peter C. B.

PD March 1989. **TI** Testing for a Unit Root by Generalized Least Squares Methods in the Time and Frequency Domains. **AU** Phillips, Peter C. B.; Choi, In. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 899; Cowles Foundation for Research in Economics, 30 Hillhouse Avenue, Box 2125 Yale Station, New Haven, CT 06520. **PG** 80. **PR** No Charge. **JE** 211. **KW** Unit Root. Spectral Methods. Generalized Least Squares. Asymptotic Theory. Monte Carlo.

AB New time and frequency domain tests for the presence of a unit root are developed. The tests are based on generalized least squares (GLS) methods in both the time and the frequency domains. For the time domain tests, moving average processes are assumed for the error terms on the autoregression. For the frequency domain tests, general assumptions are made which allow for stationary and weakly dependent error processes. The limiting distributions of feasible GLS tests are derived under MA(1) errors in the time domain. This theory is extended to higher order moving average processes under an invertibility condition. The limiting distributions of both full and band spectrum tests in the frequency domain are also derived.
All of these limiting distributions are shown to be free of nuisance parameters. Some results on test consistency are also reported. Extensive Monte Carlo simulations are performed to study the size and power of the proposed tests in finite samples.

PD March 1989. **TI** The Durbin Watson Ratio under Infinite Variance Errors. **AU** Phillips, Peter C. B.; Loretan, Mico. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 898; Cowles Foundation for Research in Economics, 30 Hillhouse Avenue, Box 2125 Yale Station, New Haven, CT 06520. **PG** 46. **PR** No Charge. **JE** 211. **KW** Serial Correlation. Infinite Variance. LM Tests. Dynamic Regressions. Stable Processes. Asymptotic Theory.

AB This paper studies the properties of the von Neumann ratio for time series with infinite variance. The asymptotic theory is developed using recent results on the weak convergence of partial sums of time series with infinite variance to stable processes and of sample serial correlations to functions of stable variables. Our asymptotics cover the null of iid variates and general moving average (MA) alternatives. Regression residuals are also considered. In the static regression model the Durbin Watson statistic has the same limit distribution as the von Neumann ratio under general conditions. However, in dynamic models the results are more complex and more interesting.
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PD March 1989. **TI** Time Series Regression with a Unit Root and Infinite Variance Errors. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 897; Cowles Foundation for Research in Economics, 30 Hillhouse Avenue, Box 2125 Yale Station, New Haven, CT 06520. **PG** 22. **PR** No Charge. **JE** 211. **KW** Stable Processes. Infinite Variance. Quadratic Processes. Semiparametric Methods. Unit Roots. Random Walk.

AB Chan and Tran gives the limit theory for the least squares coefficient in a random walk with strictly stable errors. This note discusses their results and provides generalizations to the case of I(1) processes with weakly dependent errors whose distributions are in the domain of attraction of a stable law. General unit root tests are also studied. It is shown that the semiparametric corrections suggested by the author in other work for the finite variance case continue to work when the errors have infinite variance. The limit laws are expressed in terms of ratios of quadratic functionals of a stable process. The correction terms that eliminate nuisance parameter dependencies are random in the limit and involve multiple stochastic integrals that may be written in terms of the quadratic variation of the limiting stable process.

Pissarides, Christopher A.

PD January 1989. **TI** Relative Wage Flexibility in Four Countries. **AU** Pissarides, Christopher A.; Moghadam, Reza. **AA** Pissarides: Centre for Labour Economics, London School of Economics. Moghadam: University of Warwick and Centre for Labour Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 331; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 53. **PR** No Charge. **JE** 123, 824. **KW** Wages. Employment. Productivity. Industrial Sectors.

AB In this paper we estimate equations for relative hourly earnings for 50 industrial sectors from Sweden, Finland, Great Britain and the United States. We find that relative hourly earnings fluctuate less in Sweden than in the other three countries. In all four countries only a quarter to one third of the sectors show any influence of relative sector performance or labor requirement on relative hourly earnings. In the United States there are aggregate cyclical influences on relative earnings in most sectors, in the European countries only in a small minority of sectors.

Plewik, Szymon

PD December 1988. **TI** Partitions of Reals, Measurable Approach. **AU** Plewik, Szymon; Voigt, Bernd. **AA** Plewik: University of Kattowice. Voigt: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88548-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Partitions. Measurable Version.

AB We prove that if X has positive Lebesgue measure in each interval (0,epsilon), then there exists a sequence of positive real numbers such that each sum of these numbers belongs to X. This yields the measurable version of the theorem of Promel and Voigt on partitions of (0,1).

Polasky, Stephen

TI Knowledge-based Growth. **AU** Freeman, Scott; Polasky, Stephen.

Porter, Richard D.

TI M2 Per Unit of Potential GNP as an Anchor for the Price Level. **AU** Hallman, Jeffrey J.; Porter, Richard D.; Small, David H.

Porter, Robert H.

TI Random Reservation Prices and Bidding Behavior in OCS Drainage Auctions. **AU** Hendricks, Kenneth; Porter, Robert H.; Spady, Richard H.

TI Collusion in Auctions. **AU** Hendricks, Kenneth; Porter, Robert H.

Poterba, James

PD March 1989. **TI** Tax Reform and the Market for Tax-Exempt Debt. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2900; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** $2.00. **JE** 323, 312, 311, 313. **KW** Bonds. Interest Rates. Taxation. Yield Spread. Bond Prices.

AB This paper provides clear evidence that yield spread between long-term taxable and tax-exempt bonds responds to changes in expected individual tax rates, a finding that refutes theories of municipal bond pricing that focus exclusively on commercial banks or other financial intermediaries. The results support the conclusion that in the two decades prior to 1986, the municipal bond market was segmented, with different investor clienteles at short and long maturities. The Tax Reform Act of 1986 is likely to affect this market, however, since it has restricted tax benefits from tax-exempt bond investment by commercial banks.

PD May 1989. **TI** Dividends, Capital Gains, and the Corporate Veil: Evidence from Britain, Canada, and the United States. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2975; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 521, 522, 323, 611, 921. **KW** Consumption. Capital Gains. Dividends. Takeovers.

AB This paper investigates the effects of increased cash dividend payout, and of "forced realizations" of capital gains in corporate control transactions, on the level of aggregate consumption. The results support the proposition that investors respond differently to cash receipts from firms and to accruing capital gains. Consistent but weak evidence for the United States, Great Britain, and Canada suggests that higher dividend tax rates lower consumption. Time series evidence from the U.S. and U.K. also suggests that "forced realizations" of capital gains in takeovers may spur consumption, indicating a relatively unexplored link between corporate financial decisions and aggregate consumption.

Pradel, Jacqueline

TI Heterogeneite dans les Modeles a Representation Lineaire. **AU** Fourgeaud, Claude; Gourieroux, Christian; Pradel, Jacqueline.

Promel, Hans Jurgen

PD March 1987. **TI** Ramsey Theorems for Finite Graphs II. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** Promel: University of Bonn. Voigt: University of Bielefeld. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87457-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 23. **PR** No Charge. **JE** 213. **KW** Canonization Theorem. Ramsey Theorem. Sparse Graphs. Partition Theorem. Finite Order.

AB The main result of this paper is a sparse restricted canonizing partition theorem for finite ordered graphs and hypergraphs.

PD September 1988. **TI** Graham-Rothschild Parameter Words and Measurable Partitions. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** Promel: University of Bonn. Voigt: University of Bielefeld. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88524-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** No Charge. **JE** 213. **KW** Baire sets. Ramsey.

AB Generalizing earlier results of Moran and Strauss and of Carlson and Simpson it was shown in Promel and Voigt that Baire sets of k-parameter words are Ramsey. Motivated by the "duality" between category and measure, we investigate in this paper measurable sets of k-parameter words. We show that measurable sets of ascending k-parameter words are Ramsey, whereas in general measurable sets of k-parameter words fail to be Ramsey.

PD September 1988. **TI** Ramsey Theory for the Cantor Space. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** Promel: University of Bonn. Voigt: University of Bielefeld. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88530-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 14. **PR** No Charge. **JE** 213. **KW** Ramsey Theory. Cantor Space. Pigeonhole Principle.

AB We survey Ramsey type theorems for the Cantor space 2(omega).

PD March 1989. **TI** Aspects of Ramsey-Theory I: Sets. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** Promel: University of Bonn. Voigt: University of Bielefeld. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87495-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 123. **PR** No Charge. **JE** 213. **KW** Ramsey Theory. Ramsey Numbers. Cardinal Numbers. Partitions. Set Theory.

AB In this paper we survey some developments of Ramsey Theory which are directly related to partitions of sets. In chapter one some roots of Ramsey Theory are presented, including the celebrated Erdos-Szekeres result. Chapter two discusses quantitative aspects. A detailed discussion of the asymptotic behavior of Ramsey numbers is given. In section three some fast growing Ramsey functions are presented. Chapter four deals with another quantitative aspect of Ramsey's theorem, viz. the Erdos-Spencer discrepancy estimates are given. Chapter five discusses products and orders, including remarks on Zarankiewicz's problem as well as basic wqo theory. Finally, in chapter six partition relations for cardinal numbers may be found, that is the transfinite extensions of Ramsey's theorem.

Pulleyblank, William R.

TI Cutting Disjoint Discs by Straight Lines. **AU** Alon, N.; Katchalski, M.; Pulleyblank, William R.

Quandt, Richard E.

PD November 1988. **TI** Endogenous Output in an Aggregate Model of the Labor Market. **AU** Quandt, Richard E.; Rosen, Harvey S. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 245; Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 19. **PR** $2.00. **JE** 824, 821, 023. **KW** Labor Market. Output. Exogeneity. Labor Demand.

AB A common feature to most aggregative studies of the labor market is a marginal productivity expression in which the quantity of labor appears on the left hand side of the equation, and the right hand side includes the real wage and output. A number of researchers have cautioned that if the output variable is treated as exogenous, serious econometric difficulties may result. However, the assumption that output is exogenous has not been tested. In this paper, we estimate an equilibrium model of the labor market, and use it to test the assumption of output exogeneity. We find that the assumption that output is exogenous cannot be rejected by the data.

Quinzii, Martine

TI Real Effects of Money in General Equilibrium. **AU** Magill, Michael J. P.; Quinzii, Martine.

Quirk, Peter

PD January 1989. **TI** Issues of Openness and Flexibility for Foreign Exchange Systems. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/3; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** No Charge. **JE** 121, 431, 422, 421. **KW** Exchange Rates. Developing Countries. Exchange Markets. Foreign Exchange.

AB This paper surveys briefly the main issues for official management of foreign exchange, including the choice of exchange rate regime and exchange and trade restrictive systems. It concludes by identifying the main forms of arrangements that have demonstrated their merits and practicability for developing countries in recent years, including auction and interbank exchange markets, market-based forward exchange rates, import license auctions, open general import licensing, and liberalized capital controls.

Ramey, Garey

TI Advertising, Coordination and Signaling. **AU** Bagwell, Kyle; Ramey, Garey.

Ranis, Gustav

PD April 1989. **TI** Macro Policies, the Terms of Trade and the Spatial Dimension of Balanced Growth. **AA** Yale University. **SR** Yale Economic Growth Center Descussion Paper: 574; Economic Growth Center, Yale University, Box 1987 Yale Station, New Haven, Connecticut 06520. **PG** 31 pages. **PR** $2.00 plus postage. **JE** 111, 112, 021. **KW** Growth Theory. Economic Development.

AB This paper attempts to help redress a perceived recent imbalance in the literature and in the realm of policy discourse as between the open economy and domestic balanced growth ingredients of a successful development effort. It initially emphasizes the increased past compartmentalization and disarticulation as between the food producing agricultural and the export oriented non-agricultural sectors that has resulted from our undue preoccupation with the performance of the typical outward-looking enclave. It then proceeds to resurrect the "missing" balanced growth component by analyzing the role of domestic linkages, running from agriculture to non-agriculture. The spatial or locational dimensions of development are subsequently analyzed utilizing the concepts of the dualistic standard market within a general equilibrium framework.

Rasche, Robert

TI Long-Run and Interest Elasticities of Money Demand in the United States. **AU** Hoffman, Dennis; Rasche, Robert.

Razin, Assaf

TI International Spillovers of Taxation. **AU** Frenkel, Jacob A.; Razin, Assaf; Symansky, Steven.

Recski, Andras

PD December 1988. **TI** One-Story Buildings as Tensegrity Frameworks, III. **AU** Recski, Andras; Schwarzler, Werner. **AA** Recski: University of Budapest. Schwarzler: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88544-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** No Charge. **JE** 213. **KW** Diagonal Cables. Rigid Graphs. Minimum System.

AB The minimum number of diagonal cables to make a one-story building infinitesimally rigid and the characterization of the minimum systems in two special cases were given in Part I and Part II. We now characterize the minimum systems in the general case.

Regev, Haim

TI High Tech Firms in Israeli Industry. **AU** Bregman, Arie; Fuss, Melvyn A.; Regev, Haim.

Reinhart, Carmen

PD April 1989. **TI** A Model of Adjustment and Growth: An Empirical Analysis. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/89/32; International Monetary Fund, Washington, DC 20431. **PG** 38. **PR** No Charge. **JE** 111, 121, 431, 411. **KW** Growth Theory. Developing Countries. Devaluation.

AB This paper develops a model merging the monetary approach to the balance of payments and a neoclassical growth model into a unified framework in which inflation, growth, and the balance of payments are simultaneously determined. The empirical part of the paper presents estimates of the key parameters of the model for a sample of seven diverse developing countries and tests the validity of a subset of the theoretical assumptions. The estimated model is then used for a variety of comparative static exercises, including the effects of fiscal and monetary policy changes, and devaluation.

Reitzes, James D.

PD January 1989. **TI** The Impact of Tariffs and Quotas on Strategic R&D Behavior. **AA** Federal Trade Commission. **SR** Federal Trade Commission Bureau of Economics Working Paper: 170; Bureau of Economic, Federal Trade Commission, 6th and Pennsylvia Ave. NW, Washington, D.C. 20580. **PG** 40. **PR** No charge. **JE** 611, 616, 621, 422, 022. **KW** Quotas. Two Stage Games. Strategic Behavior. Duopoly. Tariffs.

AB Tariffs and quotas are compared to assess their effects on firm behavior in a two stage Cournot duopoly game, where R&D (or capital) is chosen initially and output is selected subsequently. In this quantity setting game, the imposition of a quota may remove the possibility of a pure strategy equilibrium, leaving only a mixed strategy equilibrium. Under either potential equilibria, a quota leads to higher domestic profits than those obtained under a comparably restrictive tariff. However, both domestic R&D and output are relatively lower in a pure strategy, cum-quota equilibrium. Two potential pure strategy equilibria may result under apparently nonbinding quotas.

Rendl, Franz

TI Constrained Spanning Trees and the Travelling Salesman Problem. **AU** Leclerc, Matthias; Rendl, Franz.

TI A Multiply Constrained Matroid Optimization Problem. **AU** Leclerc, Matthias; Rendl, Franz.

TI Constrained Matching Problems and Pfaffian Graphs. **AU** Leclerc, Matthias; Little, Charles H. C.; Rendl, Franz.

TI K-Best Constrained Bases of a Matroid. **AU** Leclerc, Matthias; Rendl, Franz.

Review of the Year's Work, 1987/88

PD October 1988. **TI** Review of the Year's Work, 1987/88. **AA** Centre for Labour Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 328; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 35. **PR** No Charge. **JE** 824, 825, 131, 134. **KW** Unemployment. Inflation. Productivity.
AB Our work concentrates on the problems of unemployment, inflation and productivity. Most of this report discusses the substance of our research over the last year.

Reynaud, Benedicte

PD October 1987. **TI** Les Regles et L'incompletude du Contrat de Travail dans le Paradigme Standard. **AA** CNRS-CEPREMAP. **SR** CEPREMAP Discussion Paper: 8742; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 42. **PR** 20 FF. **JE** 833, 824, 821, 022. **KW** Employment. Labor Contracts. Labor Market. Walrasian Model.
AB The incompleteness of the labor contract requires that rules evaluate individual behaviors and define the terms of exchange. This article focuses on the analysis of rules in the standard paradigm, in the case of qualitative uncertainty. It shows, in a first part, why the incompleteness of the labor contract is a puzzle for the Walrasian model (I). It analyzes, in a second part, some difficulties which arise from an integration of internal labor market rules into this paradigm (II). Paper in French.

Reynoso, Alejandro

TI Financial Factors in Economic Development. **AU** Dornbusch, Rudiger; Reynoso, Alejandro.

Richardson, Henry R.

TI Mean-Variance Hedging in Continuous Time. **AU** Duffie, J. Darrell; Richardson, Henry R.

Richardson, J. David

PD March 1989. **TI** Empirical Research on Trade Liberalization with Imperfect Competition: A Survey. **AA** University of Wisconsin. **SR** National Bureau of Economic Research Working Paper: 2883; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 57. **PR** $2.00. **JE** 421, 422, 411. **KW** Trade Policy. General Equilibrium Model. Imperfect Competition.
AB This paper attempts a synthetic census of the calibration/counterfactual style of empirical research on the benefits of trade liberalization with imperfect competition and scale economies. Computable general equilibrium studies are surveyed, as are a large number of partial equilibrium studies in the same style. Microeconomic foundations common to almost all of the studies are discussed algebraically, and the corresponding general equilibrium structure is discussed graphically.

Rieder, Jorg

PD April 1988. **TI** The Lattices of Matroid Bases and Exact Matroid Bases. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.50; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 11. **PR** No Charge. **JE** 213. **KW** Matroid Bases. Lattices. Matroids. Basis.
AB Let M be a matroid on E and R subset of or equal to E. We show that the lattice generated by the incidence vectors of the bases of M is always that of a partition matroid. If we consider only bases B satisfying |B intersect R| = p, it is proved that the corresponding lattice is the intersection of the basis lattice of M with the hyperplane arising from the condition |R intersect B| = p.

PD December 1988. **TI** The Lattice of the Intersection of Two Partition Matroids. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.58; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 9. **PR** No Charge. **JE** 213. **KW** Lattices. Partition Matroids. Incidence Vectors.
AB We determine the lattice in R(1E1) generated by the incidence vectors corresponding to the bases of the intersection of two partition matroids P and Q on the same finite set E. We give a basis of the lattice and show that - if a rank condition is satisfied - the lattice of the intersection is the same as the intersection of the two lattices generated by the incidence vectors of the bases of P and Q respectively.

Riordan, Michael H.

TI High and Declining Prices Signal Product Quality. **AU** Bagwell, Kyle; Riordan, Michael H.

Rodgers, Willard

TI Measurement Error in Cross-Sectional and Longitudinal Labor Market Surveys: Results from Two Validation Studies. **AU** *Bound, John; Brown, Charles; Duncan, Greg; Rodgers, Willard.*

Rodrik, Dani

PD April 1989. **TI** Strategic Trade Policy when Domestic Firms Compete against Vertically Integrated Rivals. **AU** Rodrik, Dani; Yoon, Chang Ho. **AA** Rodrik: Harvard University. Yoon: Korea University. **SR** National Bureau of Economic Research Working Paper: 2916; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $2.00. **JE** 411, 421, 422. **KW** Vertical Integration. International Competition. Tariffs. Imports. Exports. Subsidies.
AB This paper models the international competition between a domestic firm and its vertically integrated foreign rival. The domestic firm has the choice of developing its own production capability for an intermediate input, or of importing it from the foreign firm at a price set by the latter. In this setting, and under reasonable cost assumptions, the foreign firm will always

choose to supply the domestic firm as long as it cannot monopolize the final good market by withholding supply. A tariff placed on the imports of the input by the home government will be borne entirely by the foreign firm, and will be welfare increasing.

TI Patents, Appropriate Technology, and North-South Trade. **AU** Diwan, Ishac; Rodrik, Dani.

Roe, Terry L.

TI Existence of Equilibria in Lobbying Economies. **AU** Coggins, Jay S.; Graham, Tomasi Theodore; Roe, Terry L.

Rogerson, William P.

PD November 1988. **TI** Calculating the Cost of Capital for the Purposes of Input Substitution. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 806; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 25. **PR** No Charge. **JE** 522, 514, 511, 313. **KW** Business Investment. Investment. CAPM. Decision Theory. Finance. Asset Pricing.

AB An important function of management is capital budgeting -- deciding what sorts of new investment projects to undertake. A major stumbling block has been that problems involving valuation of risky returns are very difficult to analyze. In contrast the problem facing a risk neutral decision maker with a known cost of borrowing money is extremely simple. Thus an important achievement of modern financial theory has been to show that it is often the case that management's complicated decision making problem of whether to accept or reject a risky project is equivalent to a problem where management is risk neutral and can borrow money at some interest rate R where R is greater than the risk free rate. The value R is often called the "hurdle rate". Furthermore elegant derivations of the appropriate hurdle rate can be obtained through the capital asset pricing model.

Rogoff, Kenneth

TI Developing Country Borrowing and Domestic Wealth. **AU** Gertler, Mark; Rogoff, Kenneth.

Romer, Christina D.

PD May 1989. **TI** Does Monetary Policy Matter? A New Test in the Spirit of Friedman and Schwartz. **AU** Romer, Christina D.; Romer, David. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 2966; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 134, 133, 131, 023. **KW** Monetary Policy. Federal Reserve. Inflation. Economic Fluctuations. Recessions.

AB The central part of the paper is a study of postwar U.S. monetary history. We identify six episodes in which the Federal Reserve in effect decided to attempt to create a recession to reduce inflation. We find that a shift to anti-inflationary policy led, on average, to a rise in the unemployment rate of two percentage points, and that this effect is highly statistically significant and robust to a variety of changes in specification. We reach three other major conclusions. First, the real effects of these monetary disturbances are highly persistent. Second, the six shocks that we identify account for a considerable fraction of postwar economic fluctuations. And third, evidence from the interwar era also suggests that monetary disturbances have large real effects.

Romer, David

TI Does Monetary Policy Matter? A New Test in the Spirit of Friedman and Schwartz. **AU** Romer, Christina D.; Romer, David.

Rosen, Harvey S.

TI Intertemporal Analysis of State and Local Government Spending: Theory and Tests. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S.

TI Endogenous Output in an Aggregate Model of the Labor Market. **AU** Quandt, Richard E.; Rosen, Harvey S.

TI The "Rationality" of Municipal Capital Spending: Evidence from New Jersey. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S.

TI Recent Trends in Housing Conditions among the Urban Poor. **AU** Blank, Rebecca M.; Rosen, Harvey S.

TI Municipal Construction Spending: An Empirical Examination. **AU** Holtz-Eakin, Douglas; Rosen, Harvey S.

Rosenthal, Stuart S.

TI Capital Gains Taxation and the Demand for Owner-Occupied Housing. **AU** Hoyt, William H.; Rosenthal, Stuart S.

Roubini, Nouriel

PD April 1989. **TI** Government Spending and Budget Deficits in the Industrial Economies. **AU** Roubini, Nouriel; Sachs, Jeffrey D. **AA** Roubinin: Yale University. Sachs: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2919; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** $2.00. **JE** 122, 131, 113. **KW** Governments. Coalitions. Deficits. Government Spending.

AB In this paper, try to interpret several important trends in the size of governments and government deficits in the OECD economies: the rapid increase in the public spending to GDP ratio in the 1970s; the sharp rise in budget deficits and in debt-GNP ratios after 1973; and the early signs of a slowdown or reversal in the rise of the spending ratios in the 1980s. These long run values appear to depend on the political and institutional characteristics of the various economies.

Rubinfeld, Daniel L.

PD December 1988. **TI** Micro-Estimation of the Demand for Schooling: Evidence from Michigan and Massachusetts. **AU** Rubinfeld, Daniel L.; Shapiro, Perry. **AA** Rubinfeld: University of California, Berkeley. Shapiro: University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 284; Department of Economics, University of California at Santa Barbara, Santa Barbara, CA 93106. **PG** 28. **PR** No Charge. **JE** 912, 851. **KW** Education. Public Schools. Demand Functions.

AB Micro as well as macro studies of the demand for local

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public schooling are quite common. The more standard macro studies, which rely on precinct voting data and/or school district expenditure data, frequently require "median voter" assumptions. Sometimes there is limited data; often there is an uncomfortably small set of exogenous variables. In particular, with macro studies, it is virtually impossible to distinguish the effects of individual characteristics from neighborhood characteristics. Micro studies, which rely explicitly on the use of survey instruments, involve more extensive data sets and more variables. But they are subject to biases and measurement errors that may be associated with the survey process. In this paper we update our knowledge of the micro side of the picture, and at the same time confront a number of troubling issues that overlay the micro-versus-macro debate.

Rubinstein, Ariel

PD January 1989. **TI** A Comment on the Logic of "Agreeing to Disagree" Type Results. **AU** Rubinstein, Ariel; Wolinsky, Asher. **AA** Rubinstein: The Hebrew University. Wolinsky: Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 822; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PR** No Charge. **JE** 026, 213. **KW** Game Theory. Information.

AB The paper explores the logic of the "agreeing to disagree" type results. It identifies two properties of predicates over sets, being preserved under union and under difference, which are the key for the proofs of these results. We present a proposition, in which the property of being preserved by union is used, from which Aumann's, Milgrom and Stokey's and other results in this spirit follow as conclusions. We present a proposition based on both of these properties which implies Samet's generalization of Aumann's result to information structures which are not described by partitions. This result also explains why Milgrom and Stokey's result could not be extended to these information structures. The usefulness of the two generalizations is demonstrated by two additional examples of "agreeing to disagree" type results.

Rucinski, Andrzeij

TI Ramsey Properties of Random Graphs. **AU** Luczak, Tomasz; Rucinski, Andrzeij; Voigt, Bernd.

Rudebusch, Glenn D.

TI Is Consumption Too Smooth? Long Memory and the Deaton Paradox. **AU** Diebold, Francis X.; Rudebusch, Glenn D.

Rutherford, Thomas F.

TI The Welfare Effects of Customs Union Accession. **AU** Harrison, Glenn W.; Rutherford, Thomas F.; Wooton, Ian.

Rutsch, Ursula

PD December 1987. **TI** The Arborescence Lattice. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87.48; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213. **KW** Directed Graph. Incidence Vector. Lattice. Convex Hull.

AB Let G = (V,D) be a directed graph and A the set of incidence vectors of arborescences of G. A well known approach in combinatorial optimization uses the characterization of the convex hull spanned by these vectors. In this paper we describe the lattice generated by A.

Ruttan, Vernon W.

TI The Sources of the Basic Human Needs Mandate. **AU** Sartorius, Rolf H.; Ruttan, Vernon W.

Ruud, Paul A.

PD December 1988. **TI** Extensions of Estimation Methods Using the EM Algorithm. **AA** University of California at Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 8899; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 59. **PR** No Charge. **JE** 211, 214. **KW** EM Algorithm. Method of Moment. Limited Dependent Variable. ARMA. Missing Data. Simulation Studies.

AB The EM algorithm described by Dempster, Laird and Rubin in 1977 is reviewed with the purpose of clarifying several misperceptions in the statistical and econometric literature. The clarifications lead to several applications of the algorithm to models that have appeared to be less tractable. The relationship between the EM algorithm and the method of scoring is also explained, providing estimators of the score and the information from the EM algorithm. The EM algorithm is extended to missing data problems and an estimation method based on simulation.

Saari, Donald G.

PD January 1989. **TI** The Borda Dictionary. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 821; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PR** No Charge. **JE** 025, 213. **KW** Voting. Arrow's Theorem. Borda Count. Candidates. Social Choice.

AB For n candidates, a profile of voters defines a unique Borda election ranking for each of the [2 to the n-(n+1)] subsets of two or more candidates. The Borda Dictionary is the set of all of these election listings that occur for any choice of a profile. As such, the dictionary contains all positive features, all flaws, and all paradoxes that can occur with sincere Borda elections. After the Borda Dictionary is characterized, it is used to show in what ways the Borda Count (BC) is an improvement over other positional voting methods and to derive several new BC properties.

PD January 1989. **TI** Calculus and Extensions of Arrow's Theorem. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 820; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PR** No Charge. **JE** 025, 213. **KW** Arrow's Theorem. Preferences. Possibility Theorems. Nash Equilibrium.

AB A discrete analog for a calculus argument about mappings between spaces is developed. This discrete "calculus argument" is used to characterize the "kinds of axioms" that lead to conclusions similar to that of Arrow's Theorem. In this manner, not only are new extensions of Arrow's theorem found, but this approach also is applied to economic allocation and welfare procedures, paradoxes from statistics and probability, the Hurwicz-Schmeidler result about Pareto optimal Nash

equilibria, the Gibbard-Satterthwaite theorem, Nakamura's Theorem about simple games, etc..
Furthermore, a new, sharp class of possibility theorems are derived; they hold not only for transitive preferences, but for utility functions, probability measures, etc.

PD February 1989. **TI** Relationship Admitting Families of Candidates. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 823; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 37. **PR** No Charge. **JE** 025, 213. **KW** Borda Count. Voting. Social Choice. Elections.
AB A central theme in social choice is to determine when must there be a relationship among a group's sincere election rankings of several different subsets of candidates. Necessary and sufficient conditions are derived for a family of subsets of candidates to determine when there is a choice of positional voting methods so that there are relationships among the election rankings. The same issue is resolved for a related family of social choice mappings. Then, in part, these necessary and sufficient conditions are used i) to analyze sequential voting procedures, ii) to show how to create new classes of axiomatic representations for social choice mappings that uniquely characterize the Borda Count, and iii) to determine the limits of indeterminacy for positional voting election outcomes.

Sabidusse, G.

TI Minimal Graphs Without Bilateral Symmetry: The Case of Induced Length 4. **AU** Nesetril, Jaroslav; Sabidusse, G.

Sachs, Jeffrey D.

PD March 1989. **TI** Social Conflict and Populist Policies in Latin America. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2897; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 121, 113, 133. **KW** Income Distribution. Latin America. Politics. Macroeconomic Policy. Economic Performance. Decision makers.
AB The central hypothesis of this paper is that high income inequality in Latin America contributes to intense political pressures for macroeconomic policies to raise the incomes of lower income groups, which in turn contributes to bad policy choices and weak economic performance. The paper looks in detail at one common type of policy failure: the populist policy cycle. This particular type of Latin American policymaking, characterized by overly expansionary macroeconomic policies which lead to high inflation and severe balance of payment crises, has been repeated so often, and with such common characteristics, that it plainly reveals the linkages from social conflict to poor economic performance.

TI Government Spending and Budget Deficits in the Industrial Economies. **AU** Roubini, Nouriel; Sachs, Jeffrey D.

Sadka, Efraim

TI Von Thuenen's Model of the Dual Economy. **AU** Nerlove, Marc L.; Sadka, Efraim.

Safford, J. Claire

TI More on the Distribution of Consumer Price Changes in the U.K. **AU** Mizon, Grayham E.; Safford, J. Claire; Thomas, Stephen H.

Sahi, Siddhartha

TI Repeated Trade and the Velocity of Money. **AU** Dubey, Pradeep; Sahi, Siddhartha; Shubik, Martin.

Salant, Stephen W.

TI The Profitability of Exogenous Output Contractions: A Comparative-Static Analysis with Application to Strikes, Mergers and Export Subsidies. **AU** Gaudet, Gerard; Salant, Stephen W.

TI Uniqueness of Cournot Equilibrium: New Results from Old Methods. **AU** Gaudet, Gerard; Salant, Stephen W.

Sandmann, Klaus

PD January 1989. **TI** The Pricing of Options with an Uncertain Interest Rate: A Discrete Time Approach. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-114; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 23. **PR** No Charge. **JE** 313, 311, 212. **KW** Interest Rate. Binomial Model. Stock Market. Risk Minimization. Options.
AB The aim of the paper is to look at the pricing of European type options under the assumption of a stochastic interest rate in a discrete time context. Therefore, the well known binomial approach for the description of the stock price movements is combined with the term structure model of Sandmann and Sondermann. Basically two problems are connected with this approach. First, it is necessary to formulate a relationship between stock price movements and interest rate movements. It turns out that correlation is not enough. Second, it is no longer possible to set up a self-financing strategy to duplicate the option. To solve the latter problem, the idea of risk-minimizing strategies of H. Follmer and D. Sondermann is used. So the paper gives a hint that the situation may become complicated in a very basic formulation, if one allows the term structure to be stochastic.

Sartorius, Rolf H.

PD January 1989. **TI** The Sources of the Basic Human Needs Mandate. **AU** Sartorius, Rolf H.; Ruttan, Vernon W. **AA** Sartorius: Humphrey Institute of Public Affairs, University of Minnesota. Ruttan: University of Minnesota. **SR** University of Minnesota Economic Development Center Bulletin: 88-4; 231 Classroom Office Building, University of Minnesota, St. Paul, MN 55108. **PG** 57. **PR** No Charge. **JE** 443, 112, 113, 121. **KW** Human Needs. Foreign Aid. Foreign Development. Development Policy.
AB In 1973 Congress initiated a significant departure in United States foreign development assistance policy. These changes were referred to in government as "New Directions". In popular and professional discussion they were increasingly referred to as the Basic Human Needs (BHN) mandate. Our aim in this essay is to attempt to understand the sources of the BHN mandate. This will involve examining the evolution of United States development assistance policy from the mid-1960s to the early 1970s.

Saunders, Anthony

PD March 1989. **TI** Banks and Securities Markets. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 509; 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** 47. **PR** No charge. **JE** 312, 315, 311. **KW** Banks. Securities. Bonds. Portfolios. Public Policy.

AB This paper intends to provide an overview of the broad trends and public policy issues relating to banks involvement in securities activities (bonds, equities, options, futures, etc.). In Section II we look at the role of banks extending credit to brokers, dealers and investors. In Section III we analyze the role played by banks' in the clearance, settlement and payment of security trades. In Section IV, the role of banks as fund managers and trustees is analyzed. In Section V banks' holding of securities and their portfolio composition is discussed. In Section VI the activities of U.S. banks' in overseas markets are summarized and differences among countries in security market bank activity regulations are analyzed. Section VII, reviews some new security activities by banks' that have raised important public policy issues and concerns.

Schmidt, Roland

TI Determinants of Contract Wages in Germany. **AU** Neumann, Manfred J. M.; Schmidt, Roland; Schulte, Elisabeth.

Schmitz, Heinz Peter

TI Size Distributions of Incomes and Expenditures Testing the Parametric Approach. **AU** Henninger, Christoph; Schmitz, Heinz Peter.

Scholz, John T.

TI A Behavioral Approach to Compliance: OSHA Enforcement's Impact on Workplace Accidents. **AU** Gray, Wayne B.; Scholz, John T.

Schrader, Rainer

TI Mathematische Modelle fur Bausparkollektive. **AU** Bachem, Achim; Korte, Bernhard; Schrader, Rainer.

TI The Communication Complexity of Interval Orders. **AU** Faigle, Ulrich; Schrader, Rainer; Turan, Gyorgy.

Schrijver, A.

PD September 1988. **TI** Homotopic Routing Methods. **AA** University of Tilburg. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88522-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 59. **PR** No Charge. **JE** 213. **KW** Planar Graphs. Topology. Set Theory. Disjoint Paths.

AB No abstract available.

Schulte, Elisabeth

TI Determinants of Contract Wages in Germany. **AU** Neumann, Manfred J. M.; Schmidt, Roland; Schulte, Elisabeth.

Schultz, T. Paul

PD May 1989. **TI** Investment in Women, Economic Development, and Improvements in Health in Low-Income Countries. **AA** Yale University. **SR** Yale Economic Growth Center Discussion Paper: 576; Economic Growth Center, Yale Station, New Haven, Connecticut 06520. **PG** 31. **PR** 2.00 plus postage. **JE** 851, 825, 914, 121, 913. **KW** Human Capital. Productivity. Education. Health. Technology.

AB The secular growth in investments in education in low income countries is commonly interpreted as an economically efficient response of poor people and their governments to these high internal rates of return on additional schooling. The rates of return to public and private investments in health are more difficult to assess. Both education and health investments, however, are not provided equally to women and to men in many low income countries, despite evidence suggesting returns are not dissimilar. This asymmetry is particularly evident in South and West Asia and North and subSaharan Africa. This imbalance in human capital investments in women and men is the problem explored in this paper.

Schwarzler, Werner

TI One-Story Buildings as Tensegrity Frameworks, III. **AU** Recski, Andras; Schwarzler, Werner.

Schweizer, Martin

PD March 1989. **TI** Option Hedging for Semimartingales. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-121; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 33. **PR** No Charge. **JE** 313, 314, 311. **KW** Contingent Claims. Continuous Trading. Martingale. Hedging. Stochastic Model.

AB We consider a general stochastic model of frictionless continuous trading where the price process is an incomplete semimartingale. Our objective is to hedge contingent claims by using trading strategies with a small risk. To this end, we introduce a notion of local risk-minimality and show its equivalence to a new kind of stochastic optimality equation. The solution of this equation is discussed in detail, and several examples are provided. Our approach contains previous treatments of option trading as special cases.

PD March 1989. **TI** p-Energy O and Orthogonality of Martingales. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-122; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 25. **PR** No Charge. **JE** 211. **KW** Risk Minimization. Martingale. Orthogonality.

AB We characterize the orthogonality of martingales as a property of risk-minimality under certain perturbations by stochastic integrals. The integrator can be either a martingale or a semimartingale; in the latter case, the finite variation part must have 2-energy 0. This characterization is based on convergence results for processes of p-energy 0 and on semimartingale differentiation techniques.

Schwert, G. William

PD December 1988. **TI** Tests for Unit Roots: A Monte Carlo Investigation. **AA** University of Rochester. **SR** National Bureau of Economic Research Technical Paper: 73; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00.

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JE 211. **KW** Unit Roots. ARIMA. Models. Stationarity. Monte Carlo.

AB Recent work by Said and Dickey (1984,1985), Phillips (1987), and Phillips and Perron (1988) examines tests for unit roots in the autoregressive part of mixed autoregressive-integrated-moving average (ARIMA) models (tests for stationarity). Monte Carlo experiments show that these unit root tests have different finite sample distributions than the unit root tests developed by Fuller (1976) and Dickey and Fuller (1979,1981) for autoregressive processes. In particular, the tests developed by Phillips (1987) and Phillips and Perron (1988) seem more sensitive to model misspecification than the high order autoregressive approximation suggested by Said and Dickey (1984).

PD May 1989. **TI** Stock Volatility and the Crash of '87. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2954; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 313, 131. **KW** Stock Volatility. Stock Market. Stock Prices. Stock Index.

AB This paper analyzes the behavior of stock return volatility using daily data from 1885 through 1987. The October 1987 stock market crach was unusual in many ways relative to prior history. In particular, stock volatility jumped dramatically during and after the crash, but it returned to lower, more normal levels quickly. I use data on implied volatilities from call option prices and estimates of volatility from futures contracts on stock indexes to confirm this result.

PD May 1989. **TI** Heteroskedasticity in Stock Returns. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2956; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 20. **PR** $2.00. **JE** 313, 311. **KW** Portfolio. Asset Prices. CAPM. Volatility. Stock Market.

AB We use predictions of aggregate stock return variances from daily data to estimate time-varying monthly variances for size-ranked portfolios. We propose and estimate a single factor model of heteroskedasticity for portfolio returns. This model implies time-varying betas. Implications of heteroskedasticity and time-varying betas for tests of the capital asset pricing model (CAPM) are then documented. Accounting for heteroskedasticity increases the evidence that risk-adjusted returns are related to firm size. We also estimate a constant correlation model. Portfolio volatilities predicted by this model are similar to those predicted by more complex multivariate generalized autoregressive conditional heteroskedasticity (GARCH) procedures.

PD May 1989. **TI** Indexes of United States Stock Prices from 1802 to 1987. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2985; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313. **KW** Stock Market. Portfolios. Stock Returns. Stock Index.

AB Monthly stock returns from Smith and Cole [1935], Macaulay [1938] and Cowles [1939] are compared and contrasted with the returns to the CRSP value and equal-weighted portfolios of New York Stock Exchange (NYSE) stocks. Daily stock returns from Dow Jones [1972] and Standard & Poor's [1986] are compared and contrasted with the returns to the CRSP value and equal weighted portfolios of NYSE and American Stock Exchange (AMEX) stocks. Effects of dividends, nonsynchronous trading and time averaging are analyzed. Splicing together the best indexes gives monthly data from 1802-1987 (2,227 observations) and daily data from 1885-1987 (28,884 observations.).

PD May 1989. **TI** Business Cycles, Financial Crises and Stock Volatility. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 2957; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 133, 131. **KW** Volatility. Stock Prices. Stock Market. Business Cycle.

AB This paper shows that stock volatility increases during recessions and financial crises from 1834-1987. The evidence reinforces the notion that stock prices are an important business cycle indicator. Using two different statistical models for stock volatility, I show that volatility increases after major financial crises. Moreover, stock volatility decreases and stock prices rise before the Fed increases margin requirements. Thus, there is little reason to believe that public policies can control stock volatility. The evidence supports the observation by Black [1976] that stock volatility increases after stock prices fall.

Sebo, Andras

PD 1988. **TI** Integer Plane Multicommodity Flows with a Bounded Number of Demands. **AA** University of Grenoble. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88534-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** No Charge. **JE** 213. **KW** Flow Problems. Complete Flow. Planar Network. Polynomial Algorithm. Integer Solution.

AB We give a polynomial algorithm to find integer solutions to multicommodity flow problems in which the union of "capacity-" and "demand-edges" forms a planar graph, and the number of demand edges is bounded by a prefixed integer k. This problem was solved earlier for k = 2 by Seymour and for k = 3 by Korach. For k = 4 much work has been done by Korach and Newmann. We solve it for arbitrary k, but it is still open whether there exists a polynomial algorithm without fixing k. We prove, however, a useful reformulation of the general problem as well.

Segal, Uzi

PD December 1988. **TI** First Order Versus Second Order Risk Aversion. **AU** Segal, Uzi; Spivak, Avia. **AA** Segal: University of California at Los Angeles and University of Toronto. Spivak: Boston University and Ben Gurion University. **SR** University of California at Los Angeles Department of Economics Working Paper: 540; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 24. **PR** $2.50; checks payable to University of California at Regents. **JE** 026, 022. **KW** Risk Aversion. Preferences. Insurance.

AB This paper defines a new concept of attitude towards risk. For an actuarially fair random variable epsilon pi(t) is the risk premium the decisionmaker is willing to pay to avoid t(epsilon). In expected utility, and as it turns out, in the case of smooth Frechet differentiability of the representation functional, derivation of pi(0) = 0. There are models (e.g., rank dependent probabilities) in which change in pi with respect to t evaluated at t = 0 doesn't equal zero. We call the latter attitude as being of order 1, and we call the first one attitude of order 2. These concepts are then applied to analyze the problem of full insurance.

Shapiro, Perry

TI Micro-Estimation of the Demand for Schooling: Evidence from Michigan and Massachusetts. **AU** Rubinfeld, Daniel L.; Shapiro, Perry.

Sheffrin, Steven M.

PD February 1989. **TI** Present Value Tests of an Intertemporal Model of the Current Account. **AU** Sheffrin, Steven M.; Woo, Wing Thye. **AA** University of California at Davis. **SR** University of California at Davis Research Program in Applied Macro and Macro Policy: 61; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 25. **PR** No Charge. **JE** 431, 121, 221, 411. **KW** Current Account. Intertemporal Trade. Consumption. Developed Countries.

AB This paper develops an econometric approach to test a simple version of an intertemporal current account model which is related to recent work on the consumption function. Results are presented for four countries. In two of these countries, the model does a satisfactory job of explaining changes in the current account.

Shen, T. Y.

PD January 1989. **TI** Transaction Costs, Behavior Modes and Chinese Reform. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 334; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 36. **PR** No Charge. **JE** 053, 124, 112. **KW** Transaction Costs. Behavior Modes. Socialist Reform. Capitalism. Socialism.

AB In the new institutional economics of Commons, Coase and Williamson, transaction costs and behavior modes have been used to explain the emergence and development of firms in a capitalist economy. This paper extends their work and applies these two tenets to shed light on the recent socialist reform in China. A simple framework is developed to bind behavioral modes to transaction costs. Coupled with a utility function to represent the interests of the authority in a socialist regime, the framework is used to derive an explanation of the causes and directions of institutional change in a socialist economy.

PD March 1989. **TI** Towards A General Theory of X-Efficiency. **AA** University of California at Davis. **SR** University of California at Davis Economics Department Working Paper: 336; Department of Economics, University of California at Davis, Davis, CA 95616. **PG** 34. **PR** No Charge. **JE** 022, 921. **KW** Behavior Theory. Dynamic Models. Network. Effort Choice. Intertemporal Utility.

AB The principal discretionary variable for a person seeking economic success is efficiency. Efficiency is determined jointly by interacting economic and psychological variables, with many intertemporal feedbacks. This paper explores a dynamic framework that illustrates how the key facets in the economic life of an individual -- exertion, output, income, consumption and saving, and utility -- constitute an interwoven network. Special attention is given to two of the linkages: effort choice and the intertemporal relationship of utilities. The traditional economic model is shown to be a special case of the more general behavioral models based on the Matching Law in psychology.

Shiller, Robert J.

PD December 1988. **TI** Initial Public Offerings: Investor Behavior and Underpricing. **AA** Yale University. **SR** National Bureau of Economic Research Working Paper: 2806; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 311. **KW** Investment. Underpricing. Stockbrokers.

AB A questionnaire survey of investors in initial public offerings (IPO's) was undertaken to learn about patterns of investor behavior that might be relevant to theories of their underpricing. Respondents were asked for their perception of the allocation process, their concern with stockbroker or underwriter reputation, their theories of IPO underpricing, and their communications and information sources. Results are interpreted as supporting the notion that there is an element of truth in some existing theories of IPO underpricing, and also suggesting different hypotheses. The impresario hypothesis is that underwriters deliberately underprice to obtain publicity and promote enthusiasm. Other hypotheses suggested by the results are an investor risk perception hypothesis and a fairness-relationship hypothesis.

Shleifer, Andrei

TI Positive Feedback Investment Strategies and Destabilizing Rational Speculation. **AU** De Long, JB; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert.

Shubik, Martin

TI Repeated Trade and the Velocity of Money. **AU** Dubey, Pradeep; Sahi, Siddhartha; Shubik, Martin.

PD March 1989. **TI** The Transactions Cost of Money (A Strategic Market Game Analysis). **AU** Shubik, Martin; Yao, Shuntian. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 903; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 24. **PR** $2.00. **JE** 021, 022, 213. **KW** Strategic Game. Exchange Economy. Transaction Costs.

AB The payments system of a modern economy is a peculiar mix of technological and institutional factors. Trade takes time and involves some form of money or credit. Going to the bank or arranging credits is expensive. Baumol (1952) and Tobin (1956) address the costs of transactions. However both the Baumol and the Tobin analysis was carried out in a partial equilibrium context. Here we address the task of considering the costs of banking in a closed strategic market game.

PD April 1989. **TI** Gold, Liquidity and Secured Loans in a Multistage Economy - Part II: Many Durables Land and Gold. **AU** Shubik, Martin; Yao, Shuntian. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 904; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 29. **PR** $2.00. **JE** 021, 022, 213. **KW** Exchange Economy. Gold. Strategic Games. Durables.

AB In a previous paper (Shubik and Yao, 1988) we examined a multistage exchange economy with m perishable goods and one infinitely durable gold used as money. We considered an economy without credit and one with one hundred percent secured loans. In this paper we consider an economy with m(1) goods which have finite lives and m(2) goods which are of infinite durability. Historically the two durables which have been prominent in economic activity have been gold and land, although one might wish to include platinum and some other items.

Siegel, Donald

TI The Effect of TaKeovers on the Employment and Wages of Central-Office and Other Personnel. **AU** Lichtenberg, Frank R.; Siegel, Donald.

TI The Impact of R&D Investment on Productivity - New Evidence Using Linked R&D-LRD Data. **AU** Lichtenberg, Frank R.; Siegel, Donald.

TI The Effect of Takeovers on the Employment and Wages of Central-Office and Other Personnel. **AU** Lichtenberg, Frank R.; Siegel, Donald.

Simon, Carl P.

PD July 1988. **TI** Some Fine-Tuning for Dominant Diagonal Matrices. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-14; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 6. **PR** No Charge. **JE** 213. **KW** Linear Algebra. Linear Programming. Linear Systems.

AB Given a linear system Ax = b, where A is a dominant diagonal matrix with positive diagonals and non-positive off-diagonals, but b has both positive and negative components, necessary and sufficient conditions on b(j) are derived to guarantee that x(j) is positive.

Simon, Carol J.

PD November 1988. **TI** The Role of Reputation in Equity Markets. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 535; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 44. **PR** $2.50; checks payable to University of California at Regents. **JE** 521, 313, 311, 314. **KW** Public Offerings. Capital Market. Signalling. Reputation. Investment.

AB This paper examines the returns to seller reputation in the market for initial public offerings. Investors adaptively learn about the quality of new issues by observing the past quality of issues underwritten by specific investment bankers. Underwriters are hypothesized to invest in intangible (reputation) capital to signal the production of high quality issues. Investment takes the form of underpricing in periods where the firm lacks an established reputation. A competitive return on the acquisition reputation capital is enjoyed in subsequent periods. Empirical analysis of the spreads charged by underwriters and the offer price set on the IPO generally supports the underpricing hypothesis.

PD November 1988. **TI** Increasing Risk by Regulating Risk-Taking: Direct Investment Regulations in the Savings & Loan Industry. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 536; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 28. **PR** $2.50; checks payable to University of California at Regents. **JE** 522, 314, 613. **KW** Investment. Portfolios. Regulations. Banking.

AB This paper empirically examines the effect of direct investment regulations on S&L profitability, risk and the probability of failure. Current regulations restricting investment in equity assets are found to constrain S&L's to strictly inferior investment portfolios. Simulation analyses suggest regulated portfolios may increase the probability of S&L failure.

PD December 1988. **TI** The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 541; Department of Economics - University of California at Los Angeles, Los Angeles, CA 90024. **PR** $2.50. **JE** 522, 613. **KW** Disclosure. Regulation. Securities Act. Firm Stock.

AB This paper examines the effects of changes in financial disclosure mandated by the Securities Act of 1933 on the distribution of returns earned by investors in new stock issues. Empirical tests control for prior seasoning (experience) and the existence of third-party appraisal. Findings suggest that prior to regulation investors held rational price expectations in markets characterized by low information costs. The dispersion of abnormal returns (investors' forecast errors) is significantly lower following the Securities Act.

Sklivas, Steven D.

PD December 1988. **TI** Capital Accumulation in an Intertemporal Duopoly. **AU** Sklivas, Steven D.; McLean, Richard P. **AA** Sklivas: Columbia University. McLean: Rutgers University. **SR** Columbia Department of Economics Working Paper: 415; Department of Economics, Columbia University, New York, NY 10027. **PG** 66. **PR** $5.00. **JE** 022, 026, 213. **KW** Duopoly. Dynamic Model. Finite Horizon. Perfect Equilibrium.

AB The dynamic duopoly model of Fudenberg and Tirole (1983) is extended to discrete time and a finite horizon. It is shown that there exists one and at most two subgame perfect equilibrium paths when there is a large number of periods and the discount factor is close to one. Along these paths, each firm invests as quickly as possible to its final capital stock. Lastly, we show that as the number of periods approaches infinity and the discount factor approaches one, the set of subgame perfect equilibrium paths converges to a discrete time version of a solution originally proposed in Spence(1979) for the continuous time undiscounted case.

Small, David H.

TI M2 Per Unit of Potential GNP as an Anchor for the Price Level. **AU** Hallman, Jeffrey J.; Porter, Richard D.; Small, David H.

Smith, Clifford W. Jr

TI Ownership Structure and Voting on Antitakeover Amendments. **AU** Brickley, James A.; Lease, Ronald C.; Smith, Clifford W. Jr.

Sobel, Joel

TI On the Effectiveness of Liability Rules when Agents are not Identical. **AU** Emons, Winand; Sobel, Joel.

Solon, Gary

TI Real Wages over the Business Cycle. **AU** Barsky, Robert B.; Solon, Gary.

TI Effects of Family and Community Background on Men's

Economic Status. **AU** Corcoran, Mary; Gordon, Roger H.; Laren, Deborah; Solon, Gary.

Sonstelie, Jon

TI The Streetcar and Residential Location in Nineteenth Century Philadelphia. **AU** Gin, Alan; Sonstelie, Jon.

Soskice, David W.

PD December 1988. **TI** Medium-Run Keynesianism: Hysteresis and Capital Scrapping. **AU** Soskice, David W.; Carlin, Wendy J. **AA** Soskice: University College Oxford. Carlin: University College London. **SR** University College London Discussion Paper: 88-26; Department of Economics, University College London, Gower Street, LONDON, WC1E 6BT. **PG** 17. **PR** 150 sterling. **JE** 023, 134, 821, 133. **KW** Hysteresis. Unemployment. Inflation. Capacity Utilization.

AB A simple macroeconomic model is presented which can account for the twin phenomena observed in the United Kingdom in the 1980s of (i) rising capacity utilization combined with rising unemployment and (ii) a rising NAIRU as actual unemployment increased. Unlike previous models of hysteresis which focus on "insider-outsider" features of the labor market, we examine the effects of capital scrapping on the rate of unemployment at which inflation is constant (the NAIRU). The NAIRU reflects price and wage setting behavior of imperfectly competitive firms and unionized workers. With profit margins directly related to capacity utilization and the bargained expected real wage inversely related to unemployment, the NAIRU will depend in the medium run on the pattern over time of changes in the capital stock. This in turn depends on the aggregate demand implications of government policy.

Spady, Richard H.

TI Random Reservation Prices and Bidding Behavior in OCS Drainage Auctions. **AU** Hendricks, Kenneth; Porter, Robert H.; Spady, Richard H.

Spencer, Barbara J.

PD April 1989. **TI** Vertical Foreclosure and International Trade Policy. **AU** Spencer, Barbara J.; Jones, Ronald. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2920; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $2.00. **JE** 411, 421, 422, 431. **KW** Manufacturing. Vertical Integration. Exports.

AB We examine conditions under which a low cost vertically integrated manufacturer has an incentive to export an intermediate product to its higher cost (vertically integrated) rival rather than to vertically foreclose, fully cutting off supplies. The nature of supply conditions in the importing country, the size of an import tariff on the final good and optimal policy by the exporting country are all shown to be important for this decision. The exporting country may gain by taxing exports of the final (Cournot) product even though, under Cournot, an export subsidy is optimal in the absence of a market for intermediates.

Spiegel, Matthew I.

PD August 1988. **TI** A Theory of the Corporation: Dividends, Mergers and the Distribution of Shares. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-02; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 29. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 514, 521, 511, 022. **KW** Dividends. Mergers. Wages. Corporate Control. Shareholders.

AB This paper presents a simple three line model of the corporation in which it is costly for shareholders to alter policy decisions implemented by management. Explicitly modeling the means by which management and shareholders interact allows a direct analysis of their behavior. The paper explores the implication of this for three different topics. The model within the equilibrium section predicts that larger firms will have higher levels of managerial compensation and smaller controlling shareholders. The merger model explains why managers may be willing to pay more for targets than necessary and consequently why they may actively structure tender offers to prevent their shareholders from profiting on the acquisition. The last section shows dividends may be preferable to capital gains even when there is a differential tax rate.

PD January 1989. **TI** Mergers when Control is Costly. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-03; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 28. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 514, 521, 511, 022. **KW** Mergers. Corporate Control. Wages. Shareholders.

AB This paper shows that management's wage maximizing strategy in a merger leaves their own controlling shareholder without any profits while enriching the target owners. The model assumes that managers present contracts and if a shareholder does not like the proffered plan he can run a costly control contest. Under these conditions wages become positively related to the dilution of the firm's shares. From a managerial perspective, mergers can futher stretch the shareholder base, allowing for larger equilibrium wages. The model also finds that the form of financing does not alter this conclusion. Since managerial wages determine when mergers will occur, the paper finds that socially harmful conglomerations may take place. Finally, it is shown that mergers that increase control costs will, all else equal, result in higher postmerger wages.

PD March 1989. **TI** A Theory of Predictable Excess Returns in Real Estate. **AU** Spiegel, Matthew I.; Strange, William. **AA** Spiegel: Columbia University. Strange: Bowdoin Colllege. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-09; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 31. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 315, 932, ,921. **KW** Real Estate. Credit Constraints. Banking. Mortgages. Home Ownership. Households.

AB A principal-agent model is employed to characterize the equilibrium mortgage contract. The value of a house depends on the lender who writes the mortgage contract with which it is purchased. Because of this, the buyer is exposed to moral hazard. In some situations, this can lead to ineffcent maintenance and predictable excess returns to home ownership.

Even though there are potential buyers willing to pay back more money, the bank will not write loans for these consumers because of the adverse incentive such an action.

Spindt, Paul A.

PD March 1989. **TI** Underpricing of Seasoned Issues: The Case of U.S. Treasury Bills. **AU** Spindt, Paul A.; Stolz, Richard W. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 54; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 39. **PR** No Charge. **JE** 313, 311. **KW** Treasury Bills. Underpricing. Capital Markets. Error Terms. Stochastic Coefficients. Securities.

AB Studies of the pricing of newly issued securities have found systematically that new issues of debt or equity tend to be underpriced in primary markets. We extend this research by investigating differences in the primary and coincident secondary market prices of Treasury bills. We begin by documenting empirically the differences between the two markets' prices for the same bill. Next, we present a model of the primary market that has the secondary market operating coincidentally. Finally, we explore some of the empirical implications of the model. Overall, we find that bills are cheaper to buy in the primary market, and that this underpricing is explained substantially as a consequence of the auction mechanism used by the Treasury.

Spivak, Avia

TI First Order Versus Second Order Risk Aversion. **AU** Segal, Uzi; Spivak, Avia.

Stacchetti, Ennio

TI The Interaction of Implicit and Explicit Contracts in Repeated Agency. **AU** Pearce, David G.; Stacchetti, Ennio.

Stafford, Frank

TI Daycare Subsidies and Labor Supply in Sweden. **AU** Gustafsson, Siv; Stafford, Frank.

Startz, Richard

TI A Markov Model of Heteroskedasticity, Risk, and Learning in the Stock Market. **AU** Turner, Christopher M.; Nelson, Charles R.; Startz, Richard.

Stein, Jeremy

TI Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. **AU** Froot, Kenneth A.; Stein, Jeremy.

Stewart, Mark B.

TI Unions and the Financial Performance of British Private Sector Establishments. **AU** Machin, Stephen J.; Stewart, Mark B.

Stiglitz, Joseph E.

TI Toward a Theory of Rigidities. **AU** Greenwald, Bruce C.; Stiglitz, Joseph E.

TI Financial Market Imperfections and Productivity Growth. **AU** Greenwald, Bruce C.; Stiglitz, Joseph E.

PD May 1989. **TI** Incentives, Information, and Organizational Design. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2979; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 021, 022. **KW** Resource Allocation. Market Economy. Decision Theory. Incentives. Market allocation.

AB This paper explores the interaction between incentives, information, and organizational design. It argues that the virtues of the market economy do not lie so much in the vision of competition and decentralization embodied in the Arrow-Debreu model, or the Lange-Lerner-Taylor analysis of market socialism, as they do in those more recent models analyzing competition as contests (Nalebuff-Stiglitz, Lazear-Rosen) and decentralization as a structure of decision making, in environments in which imperfect information is dispersed among numerous individuals (humans are fallible) and accordingly, some method of aggregation has to be found. The paper shows how this alternative perspective provides insights into the role that time plays in resource allocation. We are able to provide an explanation, for instance, for why in time of economic crisis (such as wars) most economies abandon reliance on market mechanisms.

PD May 1989. **TI** Markets and Development. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2961; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 121, 112. **KW** Developing Countries. Market Failure. Imperfect Information. Learning.

AB This paper explores the causes and consequences of the more important market failures which impede the development of LDCs, and explains why the non-market institutions which often ameliorate the effects of market failures in developed countries are less effective in doing so in LDCs. This paper focuses, in particular, on those market failures which arise from imperfect information (as in the capital market) or which are almost inevitably associated with the learning which must occur if the less developed countries are successfully to make the transition to being more developed. Government interventions need to recognize the source of market failures; information problems affect the government no less than the private sector.

Stock, Detlev

PD November 1988. **TI** Empirical Tests of the Overreaction Hypothesis for the German Stock Market. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-102; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 18. **PR** No Charge. **JE** 313, 311. **KW** Stock Market. Trading Strategies. Market Inefficiency. Portfolios.

AB In a financial setting these findings suggest that investors "overreact" to new information with the consequence that prices temporarily depart from their underlying fundamental values. Therefore, it is more expedient to gather stocks in portfolios which are initially regarded with pessimism than those stocks which already jumped up under the impression of some favorable events. Applying these considerations to a contrarian stock selection strategy, i.e. buying losers and selling winners short, De Bondt and Thaler reported that large abnormal returns could be earned. As their strategy is based on past return data alone, it contradicts the weakest form of market efficiency. A further reason why their work is worth mentioning is the fact that it represents a first attempt to apply a test for a behavioral principle to the stock market. This paper offers the results of empirical tests of De Bondt and Thaler's "overreaction hypothesis" for the German stock market. Evidence of weak form market inefficiency is found.

Stolz, Richard W.

TI Underpricing of Seasoned Issues: The Case of U.S. Treasury Bills. **AU** Spindt, Paul A.; Stolz, Richard W.

Strange, William

TI A Theory of Predictable Excess Returns in Real Estate. **AU** Spiegel, Matthew I.; Strange, William.

Subrahmanyam, Marti G.

TI Default Risk and the Valuation of High-Yield Bonds: A Methodological Critique. **AU** Ambarish, Ramasastry; Subrahmanyam, Marti G.

Summers, Lawrence H.

TI Should Nations Learn to Live with Inflation. **AU** Fischer, Stanley; Summers, Lawrence H.

TI Positive Feedback Investment Strategies and Destabilizing Rational Speculation. **AU** De Long, JB; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert.

Svensson, Lars E. O.

TI Exchange Rate Variability and Asset Trade. **AU** Persson, Torsten; Svensson, Lars E. O.

Swamy, P. A. V. B.

PD March 1989. **TI** Forecasting Australian Monetary Aggregates. **AU** Swamy, P. A. V. B.; Tavlas, George S. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 55; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** No Charge. **JE** 131, 132, 311. **KW** Forecasting. Monetary Aggregates. Random Walk. Autoregressive Error Terms. Stochastic Coefficients.

AB The problem of predicting three monetary aggregates -- the monetary base, M1 and M3 -- is examined using three specifications: (i) a partial adjustment model where the order of the autoregressive process of the error term is allowed to exceed unity; (ii) a partial adjustment model augmented by a distributed lag on inflation; and (iii) an inflation augmented model with time-varying slopes. Forecasts from the respective specifications are compared to forecasts based on a random walk model.

Sweeney, James

TI Time Inconsistency and the Advantage of Not Committing: The Importer of an Exhaustible Resource. **AU** del Sol, Patricio; Sweeney, James.

Symansky, Steven

TI International Spillovers of Taxation. **AU** Frenkel, Jacob A.; Razin, Assaf; Symansky, Steven.

Szapary, Gyorgy

TI The Evolving Role of Fiscal Policy in Centrally Planned Economies Under Reform: The Case of China. **AU** Blejer, Mario I.; Szapary, Gyorgy.

Tabellini, Guido

PD October 1988. **TI** Domestic Politics and the International Coordination of Fiscal Policies. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 529; Department of Economics - University of California at Los Angeles, Los Angeles, CA 90024. **PG** 30. **PR** $2.50. **JE** 023, 025, 322, 321, 423. **KW** Fiscal Policy. Budget Deficit. Political Economy. International Coordination. Public Spending.

AB This paper investigates the desirability of international fiscal policy coordination in the presence of a domestic political distortion. The domestic distortion results from the inability of the current policymaker to enter into a binding agreement with future policymakers about the composition of public spending. This distortion generates a bias towards budget deficits. International coordination can exacerbate the deficit bias, and thus reduce social welfare at home and abroad. The reason is that international coordination enables the domestic and foreign governments to form a coalition that excludes future policymakers. This international coalition reduces the cost of running a budget deficit, and thus enhances the adverse effects of the domestic political distortion.

TI External Debt, Capital Flight and Political Risk. **AU** Alesina, Alberto; Tabellini, Guido.

PD December 1988. **TI** Voting on the Budget Deficit. **AU** Tabellini, Guido; Alesina, Alberto. **AA** Tabellini: University of California, Los Angeles. Alesina: Harvard University. **SR** University of California at Los Angeles Department of Economics Working Paper: 539; Department of Economics, University of California at Los Angeles, Los Angeles, CA 90024. **PG** 35. **PR** $2.50. **JE** 322, 321, 025. **KW** Fiscal Deficit. Voting. Balanced Budget. Fiscal Policy. Social Choice. Majority Rule. Government Spending.

AB This paper analyzes a model in which different rational individuals vote over the composition and time profile of public spending. Potential disagreement between current and future majorities generates instability in the social choice function that aggregates individual preferences. In equilibrium a majority of the voters may favor a budget deficit. The size of the deficit under majority rule tends to be larger the greater is the polarization between current and potential future majorities. The paper also shows that a balanced budget is ex ante efficient. A balanced budget amendment, however, is not durable under majority rule.

Tahar, Gabriel

TI Technological Diffusion and Investment Behavior: The Case of the Textile Industry. **AU** Antonelli, Cristiano; Petit, Pascal; Tahar, Gabriel.

Tardos, Eva

TI Note on Weintraub's Minimum Cost Flow Algorithm. **AU** Barahona, Francisco; Tardos, Eva.

Tavlas, George S.

TI Forecasting Australian Monetary Aggregates. **AU** Swamy, P. A. V. B.; Tavlas, George S.

Taylor, John B.

PD March 1989. **TI** Policy Analysis with a Multicountry Model. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2881; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $2.00. **JE** 432, 411, 122, 133, 132. **KW** Monetary Policy. Economic Fluctuations. Exchange Rates. Developed Countries. Economic Policy.

AB This paper summarizes the results of an empirical study of alternative international monetary arrangements using a multicountry, rational expectations, econometric model of the G-7 countries: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. The model is fit to quarterly data and the effect of different monetary rules on the performance of the economy is determined by stochastic simulations of the estimated model.

Teja, Ranjit S.

TI Macroeconomics and Famine. **AU** Chadha, Bankim; Teja, Ranjit S.

Thomas, Stephen H.

TI More on the Distribution of Consumer Price Changes in the U.K. **AU** Mizon, Grayham E.; Safford, J. Claire; Thomas, Stephen H.

Thorlund, Petersen Lars

TI On Strictly Competitive and Zero-Sum Games. **AU** Leininger, Wolfgang; Thorlund, Petersen Lars; Weibull, Jorgen W.

Thursby, Marie

PD May 1989. **TI** Tariffs with Private Information and Reputation. **AU** Thursby, Marie; Jensen, Richard. **AA** Thursby: Purdue University. Jensen: University of Kentucky. **SR** National Bureau of Economic Research Working Paper: 2959; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 411, 026. **KW** Trade Policy. Tariffs. Noncooperative Games. Nash Equilibrium. Government Policy.

AB When governments choose trade policy, rarely do they have complete information. At the time decisions are made, policymakers have only estimates of market responses, as well as the responses of foreign governments. In many realistic situations, even the policy objectives of other governments may not be known. For example, the balance of constitutional powers in the United States is often cited as a source of confusion as to objectives of U.S. trade policy. In this paper we examine the Bayesian Nash equilibria of several noncooperative tariff games with incomplete information. In the models examined, the home country has private information about whether its government is a low or high tariff type. If the foreign government is uncertain about this type in a one-shot game, its Nash equilibrium tariff will be lower (higher) than if it knew the home government were a low (high) tariff type.

Tornell, Aaron

PD October 1988. **TI** Real vs. Financial Investment: Can Tobin Taxes Eliminate the Irreversibility Distortion. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 408; Department of Economics, Columbia University, New York, NY 10027. **PG** 32. **PR** $5.00. **JE** 112, 411, 441. **KW** Developing Countries. Capital Investment. Mean Reversion. Decision Rule.

AB In the recent past several developing countries have failed to achieve significant real capital investment despite episodes of large capital inflows. Although there are real projects with seemingly high returns, investors prefer to wait for the correct time to invest. In this paper we address this issue by considering a two-sector economy where investment in real capital is irreversible and debt-financed. Furthermore, the interest rate, which is determined in the financial sector, is random as a result of volatile expectations. In this economy the expected return on real capital is above the expected interest rate. This is because the option to wait for lower interest rates has a positive value. In the presence of rumors, taxes on international financial transactions (Tobin taxes) reduce the variance of the domestic interest rate, while leaving its mean unchanged. As a result, they induce more investment in irreversible real capital. The model borrows from the irreversible investment literature. A difference with other models is that the source of noise is a mean-reverting process not just a geometric Brownian motion. nov.

Tovey, Craig A.

TI How Hard is it to Control an Election. **AU** Bartholdi, III John J.; Tovey, Craig A.; Trick, Michael A.

Tracy, Joseph S.

TI Public Sector Bargaining and the Local Budgetary Process. **AU** Gyourko, Joseph; Tracy, Joseph S.

Trick, Michael A.

PD April 1989. **TI** A Linear Relaxation Heuristic for the Generalized Assignment Problem. **AA** Carnegie Mellon University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89568-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 16. **PR** No Charge. **JE** 213. **KW** Lower Bound. Network. Optimization.

AB We examine the basis structure of the linear relaxation of the generalized assignment problem. The basis gives a surprising amount of information. This leads to a very simple heuristic that uses only generalized network optimization codes. Lower bounds can be generated by cut generation, where the violated inequalities are found directly from the relaxation basis. An improvement heuristic with the same flavor is also presented.

TI How Hard is it to Control an Election. **AU** Bartholdi, III John J.; Tovey, Craig A.; Trick, Michael A.

Truman, Edwin M.

PD February 1989. **TI** Approaches to Managing External Equilibria: Where We Are, Where We Might Be Headed, and How We Might Get There. **AA** Division of International Finance, Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 342; Division of International Finance Board of Governors of the Federal Reserve System, Washington, DC 20551. **PG** 30. **PR** No Charge. **JE** 443, 431, 322, 321. **KW** Exchange Rates. Fiscal Policy. Budget Deficit. Current Account.

AB This paper examines the issue of the United States external deficit in a global context. First, the paper considers certain aspects of the current economic situation that have contributed to the United States deficit and the progress that has been made to date in laying the basis for its narrowing. Second, the paper raises some questions about the international economic implications of a substantial reduction in the United States fiscal deficit, about the need for additional impetus to bring about further adjustment in the United States current account deficit, and about the preparedness of other industrial countries to absorb the elimination of the United States external deficit. Finally, the paper sketches a few scenarios for the United States external adjustment process and comments briefly on them as alternatives.

Tsybakov, A. B.

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

Turan, Gyorgy

TI The Communication Complexity of Interval Orders. **AU** Faigle, Ulrich; Schrader, Rainer; Turan, Gyorgy.

Turner, Christopher M.

PD January 1989. **TI** A Markov Model of Heteroskedasticity, Risk, and Learning in the Stock Market. **AU** Turner, Christopher M.; Nelson, Charles R.; Startz, Richard. **AA** University of Washington. **SR** National Bureau of Economic Research Working Paper: 2818; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 311. **KW** Stock Market. Risk Premium. Markov Process. Uncertainty. Asset Pricing.

AB Risk premia in the stock market are assumed to move with time varying risk. We present a model in which the variance of the excess return of a portfolio depends on a state variable generated by a first-order Markov process. A model in which the realization of the state is known to economic agents, but unknown to the econometrician, is estimated. The parameter estimates are found to imply that the risk premium declines as the variance of returns rises. We then extend the model to allow agents to be uncertain about the state. Agents make their decisions in period t using a prior distribution of the state based only on past realizations of the excess return through period t - 1 plus knowledge of the structure of the model. The parameter estimates from this model are consistent with asset pricing theory.

Turnovsky, Steven

PD March 1989. **TI** The Term Structure of Interest Rates and the Effects of Macroeconomic Policy. **AA** University of Washington. **SR** National Bureau of Economic Research Working Paper: 2902; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 321, 131, 133. **KW** Monetary Policy. Fiscal Policy. Interest Rates. Term Structure.

AB This paper analyzes the effects of monetary and fiscal policy shocks on the term structure of interest rates. The effects of temporary versus permanent, unanticipated versus anticipated, policy disturbances and the responses of long versus short, and real versus nominal, rates are contrasted. The main results are summarized in a series of propositions. Ammong them, the finding that an unanticipated permanent fiscal expansion impacts more on long term rates, may help explain their observed excessive volatility. The effects of structural changes on the relative variance are also discussed, with the effect which operates through the impact on private speculative behavior being emphasized.

Uhlich, Gerald R.

PD November 1988. **TI** An Area Theory for Experimental Two-Person Characteristic Function Games. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-105; Sonderforschungsbereich 303 an der Universitat Bonn, Adenaueralle 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 27. **PR** No Charge. **JE** 026, 215. **KW** Two-Person Games. Characteristic Functions. Bargaining Games.

AB There are many theories of two-person bargaining games, but most of them do not seem to have much relevance for the explanation of laboratory experiments. This may be due to the fact, that most of the theories are normative rather than descriptive. The experimental literature on two-person games does not offer a well supported descriptive theory. Since no experimental data were available, it was necessary to conduct an experiment. The aim of this paper is to compare reasonable theories which are based on equity and parity norms. Moreover, the present paper is concerned with the experimental testing of a new descriptive approach to the bargaining problem.

Ulph, Alistair

PD 1988. **TI** Gains and Losses from Cartelisation in Markets for Exhaustible Resources in the Absence of Binding Future Contracts. **AU** Ulph, Alistair; Ulph, David T. **AA** Ulph, A.: University of Southampton. Ulph, D.: University of Bristol. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8814; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 39. **PR** No Charge. **JE** 721, 723, 022. **KW** Imperfect Competition. Exhaustible Resources. Natural Resources. Commitments.

AB To capture the important features of some markets for exhaustible resources, we need to address two rather different sorts of commitments which the producers may or may not be able to enter into, and in this paper we wish to explore the interactions between these two forms of commitments. The analysis is applied to a market for an exhaustible resource where there are a few (in fact, two) large producers, and a large number of small producers who act competitively. We shall consider the outcomes in four scenarios arising from different assumptions about the possibilities of making the two sets of commitments.

TI Costs of Inflation. **AU** Driffill, John; Mizon, Grayham E.; Ulph, Alistair.

Ulph, David T.

TI Gains and Losses from Cartelisation in Markets for Exhaustible Resources in the Absence of Binding Future Contracts. **AU** Ulph, Alistair; Ulph, David T.

van Damme, Eric

TI Signalling in a Dynamic Labor Market. **AU** Noldeke, Georg; van Damme, Eric.

TI Equilibrium Selection in the Spence Signaling Game. **AU** Guth, Werner; van Damme, Eric.

Van Drunen, Leonard D.

TI Internal Corporate Restructuring: An Empirical Analysis. **AU** Brickley, James A.; Van Drunen, Leonard D.

van Wijnbergen, Sweder

TI Signalling, Wage Controls and Monetary Disinflation Policy. **AU** Persson, Torsten; van Wijnbergen, Sweder.

PD April 1989. **TI** Capital Controls and the Real Exchange Rate. **AA** The World Bank. **SR** National Bureau of Economic Research Working Paper: 2940; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $2.00. **JE** 431, 422, 411, 023. **KW** Capital Controls. Exchange Rates. Expenditures. Import Taxes.

AB Using an intertemporal, two-country general equilibrium model, I demonstrate that international asymmetries in expenditure patterns determine the real exchange rate effects of capital controls. Capital import taxes lower world interest rates, but raise home interest rates. These changes in interest rates bring about a change in the composition of world expenditure, with a shift of home expenditure from the present ("today") to the future ("tomorrow"), and a shift of foreign aggregate expenditure from tomorrow to today. When consumers have a preference for domestically produced goods, the shift in composition of world expenditure caused by interest rate changes implies a decline in demand today for home goods.

Varian, Hal R.

PD September 1988. **TI** Goodness-of-Fit in Demand Analysis. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-11; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 18. **PR** No Charge. **JE** 022, 024, 213. **KW** Revealed Preference. Optimization. Nonparametric. Demand Analysis.

AB Revealed preference analysis provides a definitive method to test for optimizing behavior. However, it has been criticized because it fails to allow for approximate satisfaction of optimizing behavior. In this paper, I outline some possible solutions to this problem. These solutions suggest some novel measurements of goodness-of-fit in parametric demand estimation.

Vegh, Carlos

TI Dual Exchange Markets Under Incomplete Separation: An Optimizing Model. **AU** Bhandari, Jagdeep S.; Vegh, Carlos.

Vickrey, William

PD August 1988. **TI** The Backward Art of Utility Pricing. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 404; Department of Economics, Columbia University, New York, NY 10027. **PG** 13. **PR** $5.00. **JE** 613, 723. **KW** Utility Rates. Regulation. Public Utilities. Resource Utilization. Energy.

AB In the past primary attention has been given to the effect of rates on the profitability of the utility and on overall equity between it and its customers, and among customers, to the relative disregard of the effect of rate structure on the efficiency of resource utilization. A horrible example of this is found in the way demand charges are imposed, If, for example, we have a monthly charge of $10 per kilowatt for peak demand measured over a 15 minute interval, one additional kilowatt-hour consumed during the critical 15 minute period of the customer's monthly peak will result in a charge of $40 for that 1 KWH. Worse, if a 12-month 90 per cent ratchet is applied, the cost to the customer of a critical KWH of usage could be as high as $436.00. Faced with such charges, customers find it profitable to install costly load-control devices, in many cases with relatively little likelihood of contributing significantly to the easing of loads at times of system stringency.

Vila, Jean Luc

TI Optimal Dynamic Hedging. **AU** Grossman, Sanford J.; Vila, Jean Luc.

Voigt, Bernd

TI Ramsey Theorems for Finite Graphs II. **AU** Promel, Hans Jurgen; Voigt, Bernd.

TI Graham-Rothschild Parameter Words and Measurable Partitions. **AU** Promel, Hans Jurgen; Voigt, Bernd.

TI Ramsey Theory for the Cantor Space. **AU** Promel, Hans Jurgen; Voigt, Bernd.

TI Partitions of Reals, Measurable Approach. **AU** Plewik, Szymon; Voigt, Bernd.

TI Aspects of Ramsey-Theory I: Sets. **AU** Promel, Hans Jurgen; Voigt, Bernd.

TI Ramsey Properties of Random Graphs. **AU** Luczak, Tomasz; Rucinski, Andrzeij; Voigt, Bernd.

Von Weizsacker, Robert

TI Economic Consequences of an Aging Population. **AU** Bos, Dieter; Von Weizsacker, Robert.

Wadhwani, Sushil B.

TI The Effect of the Stock Market on Investment: A Comparative Study. **AU** Mullins, Mark; Wadhwani, Sushil B.

TI Insider Forces and Wage Determination. **AU** Nickell, Stephen John; Wadhwani, Sushil B.

TI Transmission of Volatility Between Stock Markets. **AU** King, Mervyn; Wadhwani, Sushil B.

Wadsworth, Jonathan

PD January 1989. **TI** Unemployment Benefits and Search Effort in the UK Labour Market. **AA** Centre for Labour Economics, London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 333; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 31. **PR** No Charge. **JE** 824, 822, 821. **KW** Unemployment. Job Search. Unemployment Benefits. Vacancy.

AB In this paper we investigate the impact that receipt of unemployment benefit has on job search effort. Utilizing data drawn from the 1984 Labor Force Survey we show that, after controlling for potential selectivity bias, those claiming benefit search harder than non-claimants. Further, benefit claimants maintain a closer attachment to the labor market and appear more able to prolong search effort. Receipt of unemployment benefit increases the likelihood of contacting a job vacancy.

Waldman, Michael

PD September 1988. **TI** The Simple Case of Entry Deterrence Reconsidered. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 517; Department of Economics, University of California at Los Angeles, Los Angeles, CA 90024. **PR** $2.50. **JE** 022, 611, 621, 514, 522. **KW** Entry Deterrence. Excess Capacity. Entry Barriers. Sunk Costs. Technology.

AB This paper reconsiders what I will refer to as the simple case of entry deterrence, i.e., a static framework wherein a single incumbent firm faces a single potential entrant and the entry deterring investment is sunk capacity. The paper demonstrates that one of the main conclusions of Dixit (1980) is not robust to changes in the technology considered. For example, if one changes the specification to a technology which Dixit himself suggested would be more plausible, then excess capacity results in the spirit of Spence (1977) become quite common. The paper also considers related issues such as whether incumbent firms will ever hold "idle capacity", and whether excess capacity would ever be held by an entrant.

TI Transfers in Kind: Why They Can be Efficient and Non-Paternalistic. **AU** Bruce, Neil; Waldman, Michael.

Waldmann, Robert

TI Positive Feedback Investment Strategies and Destabilizing Rational Speculation. **AU** De Long, JB; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert.

Walker, James R.

TI The Third Birth in Sweden. **AU** Heckman, James J.; Walker, James R.

Wang, Jian Ye

PD May 1989. **TI** Foreign Investment and Technology Transfer: A Simple Model. **AU** Wang, Jian Ye; Blomstrom, Magnus. **AA** Wang: Columbia University. Blomstrom: Stockholm School of Economics. **SR** National Bureau of Economic Research Working Paper: 2958; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $2.00. **JE** 442, 441, 423. **KW** Investment. Technology. Multinationals. International Business.

AB This paper develops a model in which international technology transfer through foreign direct investment emerges as an endogenized equilibrium phenomenon, resulting from the strategic interaction between subsidiaries of multinational corporations and host country firms. The model explicitly recognizes two types of costs -- the costs to the multinational of transferring technology to its subsidiaries and the learning costs of domestic firms -- and treats technology transfer in a game theoretic context. The model points to the importance of the learning efforts of host country firms in increasing the rate at which MNCs transfer technology.

Wanka, Alfred

TI On Adjoints and Dual Matroids. **AU** Alfter, Marion; Kern, Walter; Wanka, Alfred.

PD November 1988. **TI** On First Experiences With the Implementation of a Newton Based Linear Programming Approach. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.59; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 14. **PR** No Charge. **JE** 213, 211, 214. **KW** Linear Programming. Newton's Method. Cholesky Factorization.

AB This paper presents the implementation of an exterior point linear programming approach introduced by Betke. In every iteration of this algorithm Newton's method is used in order to determine nearest points of two convex sets. The method is simple to implement, fully exploits sparsity and at the presence of rounding errors it achieves high precision and stability.

PD November 1988. **TI** Interior and Exterior Methods of Linear Programming. **AA** University of Cologne. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88.60; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 8. **PR** No Charge. **JE** 213, 211, 214. **KW** Linear Programming. Exterior Point. Algorithm.

AB This paper surveys some important landmarks of linear programming with particular emphasis on the comparison of two recent approaches, namely Karmarkar's method and a Newton-based exterior point algorithm.

Warga, Arthur D.

PD January 1989. **TI** Bond Returns, Liquidity and Missing Data. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-01; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 39. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 313. **KW** Bond Returns. Liquidity. Portfolios. Bonds. Capital Market.

AB In this paper we carry out an historical examination of holding period returns to constant duration portfolios of U.S. Government Notes and Bonds. An attempt is made to measure the return premium generated by liquidity differences in bonds. The approach taken involves comparing constant duration portfolios constructed in two distinct ways: one employing only recently issued bonds and one employing all bonds satisfying a given duration range. Comparisons of the resulting series are made meaninful by choosing narrow duration ranges in the portfolio formation procedure. This in turn induces a missing data problem in the time series that are created. Parameters of return distributions are therefore estimated employing a maximum likelihood framework that explicitly accounts for the missing data.

Warshawsky, Mark J.

PD March 1989. **TI** The Adequacy of Funding of Private Defined Benefit Pension Plans. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 58; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 46. **PR** No Charge. **JE** 313, 521, 541. **KW** Pensions. Corporate Liability. Accounting Standards.

AB This paper briefly surveys the literature on the relevant economic factors and the appropriate conceptual framework for measuring pension obligations. It also summarizes the history of financial accounting standards used for calculating and reporting the liability of a pension plan. The paper reports, on disclosed and adjusted bases, the recent funding status of a large sample of sponsors of private pension plans and highlights how alternative assumptions and definitions of pension liabilities will affect the adequacy and appropriateness of plan funding. This paper focuses on defined benefit plans -- pensions under which the benefit level is predetermined and employer contributions are adjusted to meet anticipated liabilities.

Weibull, Jorgen W.

TI On Strictly Competitive and Zero-Sum Games. **AU** Leininger, Wolfgang; Thorlund, Petersen Lars; Weibull, Jorgen W.

Welsch, Heinz

TI Simulatane Bestimmung der Wechselkurse der wichtigsten Wahrungen. **AU** Krelle, Wilhelm; Welsch, Heinz.

Werlang, Sergio Ribeiro da Costa

TI Differentiability of Demand and Finiteness of Equilibria. **AU** Pascoa, Mario Rui; Werlang, Sergio Ribeiro da Costa.

TI Local Uniqueness of Equilibria without Differentiability of Demand. **AU** Pascoa, Mario Rui; Werlang, Sergio Ribeiro da Costa.

Werner, Hans Joachim

PD 1988. **TI** More on Generalizations of the Reverse Order Law. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-115; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 24. **PR** No Charge. **JE** 211. **KW** Reverse Order Law. Complex Matrices. Linear Algebra.

AB Let A and B be complex matrices such that AB exists. As is well known, the reverse order law does not always hold for Moore-Penrose inversion, that is, (AB) transpose is not always ((B transpose)(A transpose)). In this paper several new results of a reverse order law type relative to the more general setting of generalized inversion are discussed. Some known results for the reverse order law relative to Moore-Penrose inversion are also reobtained as special case.

Werner, Jan

TI Equilibria with Options: Existene and Indeterminacy. **AU** Krasa, Stefan; Werner, Jan.

Wernerfelt, Birger

PD December 1988. **TI** Economic Organization of Trading Relationship Hierarchies and Asset Ownership. **AA** Kellogg Graduate School of Management, Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 824; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 38. **PR** No Charge. **JE** 026, 611, 022. **KW** Hierarchy. Asset Ownership. Trading. Imperfect Market. Investment.

AB I consider a trading relationship nested in an imperfect market for trading partners. Comparing "hierarchical institutions" and "market institutions". I show that both may achieve asymptotic efficiency as trades become frequent and small. Because hierarchical trading institutions require less communication per round, they are more attractive when trades are frequent. If a partially relationship-specific investment needs to be made ex ante, and ex post trading takes place in a hierarchy, the model suggests that the hierarchically superior trader should own the asset.

Whalley, John

TI Taxes and Capital Formation: How Important is Human Capital?. **AU** Davies, James; Whalley, John.

White, Michelle J.

PD October 1988. **TI** Legal Complexity. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-12; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 22. **PR** No Charge. **JE** 916. **KW** Law. Lawyers. Common Law. Tax Law.

AB This paper proposes a framework for analyzing the level and form of legal complexity in statutory and common law, assuming that income-maximizing lawyers influence complexity so as to maximize their earnings. A number of interesting results emerge. Lawyers are shown to prefer an intermediate level of legal complexity, regardless of whether they represent plaintiffs or defendants. This result is robust to changes in the form of legal complexity, to changes in litigants' attitudes toward risk, and to the system used of paying for legal costs, as long as lawyers' fees depend on the level of legal complexity. In legal fields where typical cases involve high stakes, such as antitrust, lawyers are shown to prefer that the law be more complex. The model is also applied to analyze complexity in tax law. The Internal Revenue System is shown in certain circumstances to favor the highest possible level of complexity.

PD November 1988. **TI** An Empirical Test of the Efficiency of Liability Rules in Accident Law. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 89-13; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 19. **PR** No Charge. **JE** 916, 921, 024. **KW** Incentives. Automobile. Accidents. Negligence. Insurance.

AB In this paper, a theoretically testable model of the incentives for injurers and victims to avoid accidents under both the comparative and contributory negligence rules is developed. The model takes account of the fact that in the automobile accident context, drivers do not know in advance with whom they will be involved in an accident and whether they will be the injurer or the victim, or both, when an accident occurs. It also allows for uncertainty in legal decision making. The theoretical model suggests that either liability rule could give drivers incentives to take economically efficient levels of care to avoid accidents, but only in special cases. The model is tested using a data set of rear end automobile accidents. The results suggest, first, that incentives to take care to avoid accidents are stronger under the newer comparative negligence rule than under the older contributory negligence rule and, second, that the incentives set up by both liability rules for drivers to avoid accidents are weaker than is economically efficient.

Winters, Alan L.

PD November 1988. **TI** The National Security Argument for Agricultural Protection. **AA** University College of North Wales. **SR** Centre for Economic Policy Research Discussion Paper: 287; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 43. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 713, 421, 114. **KW** Agricultural Policy. Embargoes. National Security. Agricultural Trade.

AB Agricultural support is often advocated as a means to national security. This is misguided. At current levels of consumption there is considerable scope for substitution away from food without catastrophic welfare losses, and even in the total absence of imports the United Kingdom could feed itself. Oil and chemical inputs into agriculture are probably more vulnerable to embargo than food, there having been virtually no past instances of successful food embargoes. If a food embargo is felt likely, the correct policy response would be to store food for the short run and agricultural inputs -- especially natural fertility -- to allow a rapid expansion of output in the longer run. Current 'high price, high output' agricultural policies increase dependence on vulnerable inputs (energy) and exhaust the soil. They probably reduce national security.

PD November 1988. **TI** Voluntary Export Restraints: UK Restrictions on Imports of Leather Footwear from Eastern Europe. **AU** Winters, Alan L.; Brenton, P. A. **AA** University College of North Wales. **SR** Centre for Economic Policy Research Discussion Paper: 283; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 52. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 421, 422, 124, 631. **KW** Export Restraints. Shoes. Eastern Europe. Rationed Markets. Barriers to Trade. England. Import Restrictions.

AB A prominent feature of international trading relations since 1970 has been the spread of quantitative restrictions on imports. This paper describes initial work to quantify and assess the economic effects of such nontariff barriers (NTBs), taking as a case study the United Kingdom footwear industry. By way of example it considers the demand side effects of the voluntary export restraint on UK leather footwear imports from Comecon countries. Previous studies of NTBs have assumed that prices rise so as to clear the market following the imposition of quantitative restrictions. This paper departs from this practice by allowing for nonprice rationing in response to NTBs. We apply the Rotterdam model to describe the geographical allocation of imports since it provides a theoretically consistent but general system of demand equations and admits the simultaneous estimation of regimes in which quantity is determined endogenously and in which it is constrained.

Witte, Ann

TI Experimental Assessment of the Effect of Vocational Training on Youthful Property Offenders. **AU** Lattimore, Pamela; Witte, Ann; Baker, Joanna.

Wolinsky, Asher

PD December 1988. **TI** Information Revelation in a Market with Pairwise Meetings. **AA** Northwestern University. **SR** Northwestern Center for Mathematical Studies in Economics and Management Science Working Paper: 815; J. L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PR** No Charge. **JE** 026, 022. **KW** Asymmetric Information. Trading. Rational Expectations.

AB The paper presents a simple pairwise meetings model of trade. The new feature is that agents have asymmetric information about the true state of the world. The focus is on the transmission of the information through the process of trade. The qualitative question: to what extent is the information revealed to uninformed agents through the trading process, when the market is in some sense frictionless? In particular: does the decentralized process give rise to full revelation results as derived by the literature on rational expectations for centralized and competitive environments? In the context of the model of this paper, it turns out that the information is not fully revealed to uninformed agents, even when the market is in some sense approximately frictionless.

TI A Comment on the Logic of "Agreeing to Disagree" Type Results. **AU** Rubinstein, Ariel; Wolinsky, Asher.

Wolken, John D.

TI Returns to Bidders and Targets in the Acquisition Process: Evidence from the Banking Industry. **AU** Hannan, Timothy H.; Wolken, John D.

TI Systematic Risk, Market Structure, and Entry Barriers. **AU** Liang, J. Nellie; Wolken, John D.

Won, Yun Hi

TI The Long-Run Impact on Federal Tax Revenues and Capital Allocation of a Cut in the Capital Gains Tax Rate. **AU** Hendershott, Patric H.; Won, Yun Hi.

Woo, Wing Thye

TI Present Value Tests of an Intertemporal Model of the Current Account. **AU** Sheffrin, Steven M.; Woo, Wing Thye.

Woodbury, John R.

TI Do Government-Imposed Ownership Restrictions Inhibit Efficiency?: The Case of the FCC's Doupoly Rule. **AU** Anderson, Keith B.; Woodbury, John R.

Woolley, J. Michael

TI Consumer Information, Price and Nonprice Competition Among Hospitals. **AU** Frech, H. E. III; Woolley, J. Michael.

Wooton, Ian

TI The Welfare Effects of Customs Union Accession. **AU** Harrison, Glenn W.; Rutherford, Thomas F.; Wooton, Ian.

Wright, Randall

TI Fiat Money in Search Equilibrium. **AU** Kiyotaki, Nobuhiro; Wright, Randall.

Wright, Robert E.

PD October 1988. **TI** Gender Discrimination in the British Labour Market: A Reassessment. **AU** Wright, Robert E.; Ermisch, John F. **AA** Wright: Birkbeck College. Ermisch: National Institute of Economics and Social Research. **SR** Centre for Economic Policy Research Discussion Paper: 278; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 30. **PR** 1

pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 824, 851, 917. **KW** Wages. Women. Discrimination. England. Human Capital. Employment.
AB For the first time, nationally representative data on women's employment histories are used to study the gap between women's and men's pay in Great Britain. It is decomposed into a gap attributable to gender differences in human capital characteristics (such as education, work experience, and time spent out of employment by women), and a gap attributable to gender discrimination. Using data collected in the 1980 Women and Employment Survey, we find that women's wages would be between 20 and 25 per cent higher in the absence of discrimination. This is somewhat higher than previous estimates have indicated.

Yang, Xiaokai

PD May 1988. **TI** Development, Structural Changes, and Urbanization. **AA** Monash University. **SR** Yale Economic Growth Center Discussion Paper: 575; Economic Growth Center, Yake University, Box 1987 Yale Station, New Haven, Connecticut 06520. **PG** 39 pages. **PR** $2.00 plus postage. **JE** 931, 021, 022. **KW** Specialization. Transaction Costs.
AB This paper constructs an equilibrium model by formalizing a trade-off between the gains from trade based on increasing returns to specialization and transaction costs. The relationship between development, structural changes, and urbanization is investigated. In addition, the function of a free market in searching for the efficient market structure is explored.

Yao, Shuntian

TI The Transactions Cost of Money (A Strategic Market Game Analysis). **AU** Shubik, Martin; Yao, Shuntian.

TI Gold, Liquidity and Secured Loans in a Multistage Economy - Part II: Many Durables Land and Gold. **AU** Shubik, Martin; Yao, Shuntian.

Yoon, Chang Ho

TI Strategic Trade Policy when Domestic Firms Compete against Vertically Integrated Rivals. **AU** Rodrik, Dani; Yoon, Chang Ho.

Younes, Yves

PD 1988. **TI** Jeux dans les Structures Incompletes de Marches et Difficultes de la Coordination par le Marche. **AA** CEPREMAP-CNRS. **SR** CEPREMAP Discussion Paper: 8804; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 56. **PR** 25 FF. **JE** 026, 022, 023. **KW** Coordination Failures. Incomplete Market. Overlapping Generation Models. Game Theory. Money. Market Structure.
AB The objective of this paper is to build a framework in which vicious circles due to difficulties of coordination through the Market can be analyzed in terms of the Theory of Games. It provides an imbedding for overlapping generations models, models with incomplete market structures, (with flexible prices or sticky prices) and for many models of macroeconomic theory. Obviously, this framework provides us with a tool which allows a natural analysis of the role of money in the trading process.

PD 1988. **TI** Sur les Difficultes de la Coordination par le Marche. **AA** CEPREMAP. **SR** CEPREMAP Discussion Paper: 8812; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 48. **PR** 20 FF. **JE** 022, 021. **KW** Rationing. Fix Price Model. Market Coordination. Flexible Prices.
AB Difficulties of coordination through the market give rise to vicious circles and/or phenomena of rationing. In order to formulate in an interesting way these problems of vicious circles and rationing when prices are flexible, we embed the usual approaches in more general ones. The first embedding generation model and the second one, on a generalization of the fix price model. Paper in French.

PD January 1989. **TI** Games in Incomplete Market Structures and Difficulties of Coordination Through the Market. **AA** C.E.P.R.E.M.A.P. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-217; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 58. **PR** No Charge. **JE** 021, 313, 311. **KW** Financial Markets. Externalities. Nash Equilibrium.
AB The theory of incomplete markets models (I.M.M.) cannot be reduced to the analysis of the canonical model with spot markets and securities and has something general to say about the way exchanges are made and how this phenomenon entails difficulties of coordination through the market. In a nutshell one shall try to picture - in terms of equilibrium concepts - a weakening of interdependance among markets, without destroying it totally, i.e. without making partial equilibrium analysis, concealed or not. This approach gives some substance to the notion of market. A strong version of the idea that two agents can meet on one market at most (acyclicity) entails at least a partial "absence of double coincidence of wants".

Zadra, Giuseppe

PD November 1988. **TI** Stock Market Volatility and Financial Crisis. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 498; 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** 50. **PR** No Charge. **JE** 313, 311. **KW** Asset Market. Stock Returns. Finance.
AB The assignment I was given requires an analysis of potential relationships between stock market volatility and financial crisis and suggests that stock market volatility is a determining factor of financial crisis. In this paper I shall try to verify: (1) whether or not there is an intrinsic volatility in stock markets; (2) what the causes of this volatility are; (3) whether or not this volatility could be considered by itself a cause of financial crisis; (4) what the regulatory measures are which could either reduce volatility or avoid financial crisis.

Zaman, Asad

PD February 1989. **TI** Consistency Via Type 2 Inequalities: A Generalization of Wu's Theorem. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-89-04; First Boston Series, Graduate School of Busines, Columbia University, New York, NY 10027. **PG** 18. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** 211. **KW** Consistency. M Estimators. Nonlinear Regression.

AB Wu introduced a new technique for proving consistency of least squares estimators in nonlinear regression. This paper extends his results in three directions. First, we consider the minimization of arbitrary functions (M-estimators instead of least squares). Second, we use an improved type 2 inequality. Third, an extension of Kronecker's lemma yields a more powerful result.

TI What Do Heteroskedasticity Tests Detect?. **AU** Dutta, Jayasri; Zaman, Asad.

Zame, William R.

PD December 1988. **TI** Asymptotic Behavior of Asset Markets, I: Asymptotic Inefficiency. **AA** State University of New York at Buffalo. **SR** Universitat Bonn *Sonderforschungsbereich 303 - Discussion Paper:* A-220; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 51. **PR** No Charge. **JE** 313, 311, 021. **KW** Incomplete Markets. Stock Market. Assets. Equilibrium Allocation.

AB This paper presents a model of an asset market with an infinite number of states of the world. Equilibria exist (under standard assumptions) provided that assets are denominated in a single numeraire commodity (or in units of account). For a given sequence of assets, necessary and sufficient conditions are established that the equilibria of the finite asset markets necessarily converge to an efficient allocation or to an equilibrium allocation of the underlying complete contingent claims market. The set of assets failing this condition is generic: it contains a countable intersection of dense, open sets.

Zang, Israel

TI Competitively Cost Advantageous Mergers and Monopolization. **AU** Kamien, Morton I.; Zang, Israel.

Zarnowitz, Victor

PD January 1989. **TI** Major Macroeconomic Variables and Leading Indexes: Some Estimates of Their Interrelations, 1886-1982. **AU** Zarnowitz, Victor; Braun, Phillip. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 2812; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 131, 023, 133, 134. **KW** Fluctuations. Price Indexes. Output. Inflation. Economic History.

AB We examine the interactions within sets of up to six variables representing output, alternative measures of money and fiscal operations, inflation, interest rate, and indexes of selected leading indicators. Quarterly series are used, each taken with four lags, for three periods: 1949-82, 1919-40, and 1886-1914. The series are in stationary form, as indicated by unit root tests. For the early years, the quality of the available data presents some serious problems. We find evidence of strong effects on output of the leading indexes and the short-term interest rate. The monetary effects are greatly reduced when these variables are included. Most variables depend more on their own lagged values than on any other factors, but this is not true of the rates of change in output and the composite leading indexes. Some interesting interperiod differences are noted and discussed.

Zejan, Mario

TI Why Do Multinational Firms Seek Out Joint Ventures?.
AU Blomstrom, Magnus; Zejan, Mario.

Zilcha, Itzhak

TI Pricing of Exports and Exchange Rate Uncertainty.
AU Donnenfeld, Shabtai; Zilcha, Itzhak.