

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)

Abowd, John M.

PD April 1990. **TI** The Internationalization of the U.S. Labor Market. **AU** Abowd, John M.; Freeman, Richard B. **AA** Abowd: Cornell University. Freeman: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3321; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 39. **PR** \$2.00. **JE** 823, 431, 441, 821. **KW** Immigration. Foreign Investment. Trade Deficit.

AB During the 1970s and 1980s immigration, trade, and foreign investment became increasingly important in the U.S. labor market. The number of legal and illegal immigrants to the country increased, altering the size and composition of the work force and substantially raising the immigrant share of labor in gateway cities. Foreign trade rose relative to gross national product, and a massive trade deficit developed in the 1980s. Foreign investment in the U.S. grew rapidly, with foreign direct investment increasing until three percent of American workers were employed in foreign-owned firms. Whereas once labor market analysts could look upon the U.S. as a largely closed economy, the changes of the 1970s and 1980s brought about the internationalization of U.S. Labor market. In this paper we show that the first order effects of immigration on the labor market arise primarily from the geographic variation in immigrant shares of the local labor force.

TI Product Market Competition, Union Organizing Activity, and Employer Resistance. **AU** Farber, Henry S.; Abowd, John M.

Agenor, Pierre-Richard

PD March 1990. **TI** Stabilization Policies in Developing Countries with a Parallel Market for Foreign Exchange: A Formal Framework. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/16; International Monetary Fund, Washington, DC 20431. **PG** 34. **PR** not available. **JE** 131, 431, 411. **KW** Exchange Rates. Developing Economy. Economic Fluctuations. Trade Model. Exchange Market.

AB The paper develops and tests a model of a developing economy that incorporates trade and capital restrictions, illegal transactions, a parallel foreign exchange market, currency substitution features, and forward-looking rational expectations. Temporary expansionary demand policies are associated with an increase in output and prices, a fall in the stock of net foreign assets, and a depreciation of the parallel exchange rate. The speed of adjustment is inversely related to the degree of rationing in the official foreign currency market. A one-for-all devaluation of the official exchange rate has no

long-term effect on the premium.

Aghion, Philippe

PD April 1990. **TI** Why Legal Restrictions on Private Contracts Can Enhance Efficiency. **AU** Aghion, Philippe; Hermalin, Benjamin E. **AA** Aghion: Massachusetts Institute of Technology and DELTA-HEC, Paris. Hermalin: University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-140; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 39. **PR** \$3.50. **JE** 026, 022, 916. **KW** Contract Law. Asymmetric Information. Bankruptcy. Signalling. Contract Theory.

AB This paper demonstrates that laws restricting the terms of private contracts can improve efficiency. When parties to a contract are asymmetrically informed, then the better-informed party may attempt to use the terms of the contract to signal information. As a consequence of this signalling, the terms of the contract can be inefficient. By restricting the amount of signalling, contract restrictions can improve efficiency. We apply this insight to show why laws limiting liability in bankruptcy, or, more generally, limiting damages for breach of contract, and laws mandating employer-provided benefits can enhance efficiency.

Aiyagari, S. Rao

PD April 1990. **TI** The Output, Employment, and Interest Rate Effects of Government Consumption. **AU** Aiyagari, S. Rao; Christiano, Lawrence J.; Eichenbaum, Martin. **AA** Aiyagari and Christiano: Federal Reserve Bank of Minneapolis. Eichenbaum: Northwestern University. **SR** National Bureau of Economic Research Working Paper: 3330; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 43. **PR** \$2.00. **JE** 111, 023, 131. **KW** Government Spending. Growth Model. Consumption.

AB This paper investigates the impact on aggregate variables of changes in government consumption in the context of a stochastic, neoclassical growth model. We show, theoretically, that the impact on output and employment of a persistent change in government consumption exceeds that of a temporary change. We also show that, in principle, there can be an analog to the Keynesian multiplier in the neoclassical growth model. Finally, in an empirically plausible version of the model, we show that the interest rate impact of a persistent government consumption shock exceeds that of a temporary one. Our results provide counter examples to existing claims in the literature.

Aizenman, Joshua

PD February 1990. **TI** Externalities, Incentives, and

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Economic Reforms. **AU** Aizenman, Joshua; Isard, Peter. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/10; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** 112, 443, 113, 027. **KW** Externalities. Policy Coordination. Economic Reforms. Government Policy. **AB** The paper emphasizes the role of institutions and incentives in the presence of externalities. An economy with multiple public decision makers is likely to experience "overspending," "undertaxing," "overborrowing," and "overinflation" unless effective institutions exist for overcoming coordination failure. External financing may weaken incentives for adjustment over the longer run unless assistance is made conditional on fundamental institutional reforms. The paper also analyzes reforms that strengthen incentives to provide effort. Uncertainty regarding future taxes reduces present effort and the responsiveness of output to market signals. In addition, the paper addresses the adverse effects of bank insurance and soft budget constraints.

Alessie, Rob

PD July 1989. **TI** The Working Behaviour of Young People in the Rural Cote D'Ivoire: Evidence from the LSMS Panel. **AU** Alessie, Rob; Baker, Paul; Blundell, Richard; Heady, Christopher; Meghir, Costas. **AA** Alessie: Tilburg University. Baker: Institute for Fiscal Studies. Blundell, Heady and Meghir: University College London. **SR** University College London Discussion Paper: 90-01; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 41. **PR** 2.00 pounds. **JE** 824, 821, 121. **KW** Labor Force Participation. Structural Adjustment. Panel Data. Labor Market. Labor Supply. Human Capital. Employment. **AB** This paper reports on research into the working patterns of young people in rural Cote d'Ivoire, paying particular attention to the effects of such economic variables as income and prices. The data used in this study came from the Living Standards Measurement Study (LSMS) of Cote d'Ivoire for years 1985 and 1986, a semi-panel survey that provides us with an opportunity to observe how particular individuals have adjusted their labor force participation in response to changes in the economic environment.

Alexander, Ian

TI Banks and Securities Markets: Corporate Financing in Germany and the UK. **AU** Mayer, Colin; Alexander, Ian.

Alogoskoufis, George S.

PD April 1987. **TI** Monetary Policy and the Informational Implications of the Phillips Curve in an Open Economy. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/11; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 29. **PR** not available. **JE** 023, 311, 411. **KW** Monetary Policy. Phillips Curve. Open Economy. Capital Mobility.

AB In this paper I examine optimal monetary policy and the informational implications of the Phillips curve in a stochastic model of a small open economy. It is assumed that the economy produces both traded and non-traded goods, it faces a number of unanticipated transitory demand, supply and foreign disturbances, and that capital mobility is perfect. It is also assumed that wages are not only indexed to the price level, but

respond to the state of the labor market as well. If information about current disturbances is imperfect, this gives independent informational content to wages, over and above the informational content of other aggregate prices. The optimal policy in this model implies both exchange market intervention and wage accommodation, as the exchange rate and wages are only partially correlated signals about the unobserved disturbances.

PD May 1987. **TI** Competitiveness, Oil Prices and Government Expenditure in the United Kingdom Business Cycle. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/7; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 28. **PR** not available. **JE** 131, 322, 132, 133. **KW** Oil Prices. Business Cycle. Economic Fluctuations. Government Expenditures.

AB In this paper I put forward, estimate and test a model of the effects of competitiveness, oil prices and government expenditure on output fluctuations in the United Kingdom. The model is based on the distinction between traded and non-traded goods, the latter being produced both in the private and public sectors. The model can account for the properties of the data as it cannot be rejected by either misspecification or specification tests. On the basis of the estimates it appears that competitiveness and government expenditure have been equally important independent sources of output fluctuations, both before and after 1973. However, as one would have expected, real oil prices were the most important contributor in the post 1973 period.

PD October 1987. **TI** On Optimal World Stabilization and the Target Zones Proposal. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/15; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 36. **PR** not available. **JE** 432, 431, 423, 411. **KW** Monetary System. Exchange Rates. Target Zones. International Coordination.

AB In this paper I examine issues of optimal stabilization in two types of world economy, a competitive one where all countries are small, and one where there is a Stackelberg leader. The focus is on the target zones proposal of Williamson (1985), according to which there should be a periodic fixing of exchange rates at levels consistent with equilibrium real rates, and an assignment of world monetary policy to the international monetary stability objective, and domestic stabilization policies to the internal balance objectives of individual economies. In a first best world, where all economies use both monetary and fiscal policy, this appears to be the optimal arrangement. In a second best world, where fiscal policy cannot be used, the additional constraint imposed by target zones might hinder rather than promote world stabilization. However, if the only constrained country is the Stackelberg leader, target zones might reproduce the optimal world monetary arrangement quite closely.

PD October 1987. **TI** Wage Setting and Labour Market Adjustment in the Main Industrial Economies. **AU** Alogoskoufis, George S.; Manning, Alan. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/1; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 46. **PR** not available. **JE** 824, 832, 122. **KW** Wages. Unemployment. Labor Demand. Labor Market.

Developed Countries.

AB In this paper we examine alternative sources of unemployment persistence in the main industrial economies. We look at persistence in labor demand, insider membership dynamics, and persistence in wage aspirations. The results suggest that insider membership dynamics cannot by themselves explain the differences between the recent European experience and the Japanese and USA unemployment experiences. They also suggest that the main difference between the European economies and Japan does not lie in labor demand, insider membership or wage aspirations persistence, but on the weight put to employment relative to wages in the Japanese wage setting process. The model used is less successful in accounting for employment fluctuations in France and the USA, as we are unable to find a downward sloping labor demand curve for these economies.

PD March 1988. **TI** Traded Goods, Competitiveness and Aggregate Fluctuations in the United Kingdom. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/7; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 46. **PR** not available. **JE** 131, 411, 023. **KW** Competitiveness. Wages. United Kingdom. Aggregate Fluctuations. Trade Theory.

AB In this paper I present an investigation of the relationships between wage adjustment, competitiveness, and aggregate fluctuations in the United Kingdom. This is done in the context of a model based on the distinction between internationally traded and non-traded goods, which is estimated and thoroughly tested. The traded goods sector is assumed a price taker, and the focus is on the supply side. Competitiveness is defined as the relative price of traded to non-traded goods. The model can account quite well for fluctuations in competitiveness, output, wages and the terms of trade and is used to examine the macroeconomic effects of a variety of disturbances. The results suggest output flexibility and wage-price rigidity, a combination that produces patterns of macroeconomic adjustment, which parallel the predictions of Keynesian demand side models.

PD February 1989. **TI** Macroeconomic Policy and the External Constraint in the Dependent Economy: The Case of Greece. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 89/3; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 42. **PR** not available. **JE** 131, 431, 411, 133. **KW** Macroeconomic Policy. Balance of Payments. Exchange Rates. Greece. Open Economy.

AB In this paper I examine the tradeoffs between internal and external balance and the role of macroeconomic policy in Greece. I estimate and test versions of the two main alternative open economy macromodels, the imperfect substitutes, one sector model, and the two sector model with non-traded goods. Both are real general equilibrium models that highlight the pivotal role of wage and price setting for the determination of output, competitiveness and external balance. The results are unfavorable to the more well known imperfect substitutes model, which is the one mainly used for modelling aggregate fluctuations in the main industrial economies.

PD March 1989. **TI** The Phillips Curve and the Lucas Critique: Some Historical Evidence. **AU** Alogoskoufis, George S.; Smith, Ronald P. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 89/4;

Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 20. **PR** not available. **JE** 134, 131, 122, 133. **KW** Phillips Curve. Lucas Critique. Inflation. Wages. Gold Standard.

AB This paper presents an investigation of the empirical significance of the Lucas critique for the Phillips curve. The investigation is carried out with annual historical time series for the United Kingdom (1857-1987) and the United States (1892-1987). The results, for two different models of the Phillips curve, suggest that there are sizeable and statistically significant shifts in the parameters of wage equations when the process generating price inflation changes. The two major shifts that we identified coincide with the abandonment of the classical gold standard in 1914, and the disintegration of the Bretton Woods gold-dollar standard in the late 1960's.

PD April 1989. **TI** Tests of Alternative Wage Employment Bargaining Models with an Application to the UK Aggregate Labour Market. **AU** Alogoskoufis, George S.; Manning, Alan. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 89/5; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 25. **PR** not available. **JE** 824, 832, 831. **KW** Employment. Wages. Bargaining. Trade Unions. Collective Bargaining.

AB In this paper we propose a test that discriminates among alternative models of bargaining for wages and employment. The test rests on a theoretical framework which encompasses both the labor demand and the efficient bargain models of wage and employment determination. It is based on testing the cross equation restrictions implied for coefficients of union power variables in reduced form wage and employment equations. The test is illustrated for the Layard and Nickell model of the aggregate UK labor market, and for UK manufacturing data. It is found that one can reject both the labor demand model and the hypothesis that wage employment bargains are efficient, in favor of a generalized model of inefficient bargaining for wages and employment.

PD June 1990. **TI** International Costs and Benefits From EMU. **AU** Alogoskoufis, George S.; Portes, Richard. **AA** Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 424; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 33. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 431, 432, 423. **KW** Monetary Union. Policy Coordination. Currency. Monetary Policy. Fiscal Policy.

AB In this paper we examine the international implications of monetary union in the European Community (EMU) and the associated international costs and benefits. We consider prospective changes in international institutions, the potential role of the ecu as an international currency, and the implications of EMU for the international coordination of monetary and fiscal policies.

Altonji, Joseph G.

PD September 1990. **TI** Labor Supply, Hours Constraints and Job Mobility. **AU** Altonji, Joseph G.; Paxson, Christina H. **AA** Altonji: Northwestern University and National Bureau of Economic Research. Paxson: Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 271; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 32.

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PR \$1.50. **JE** 823, 824, 821. **KW** Labor Supply. Hours Constraints. Job Mobility.

AB If hours can be freely varied within jobs, the effect on hours of changes in preferences for those who do change jobs should be similar to the effect on hours for those who do not change jobs. Conversely, if employers restrict hours choices, then changes in preferences should affect hours more strongly when the job changes than when it does not change. For a sample of married women we find that changes in many of the labor supply preference variables produce much larger effects on hours when the job changes.

Altshuler, Rosanne

PD May 1990. **TI** Incentive Effects of Foreign Tax Credits on Multinationals. **AU** Altshuler, Rosanne; Fulghieri, Paolo. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 478; Department of Economics, Columbia University, New York, New York 10027. **PG** 38. **PR** \$5.00. **JE** 442, 323, 522, 521. **KW** Multinationals. Taxation. Foreign Tax Credit. Corporations.

AB American multinationals are taxed on the basis of their worldwide income. To prevent the double taxation of foreign source income, the U.S. allows multinationals to credit tax payments made to foreign treasuries against domestic tax obligations. However, the credit is limited to the U.S. tax liability on foreign source income. Multinationals that have total tax liabilities abroad that exceed the U.S. tax liability on foreign source income are constrained in their use of the foreign tax credit and are said to be in "excess credits." In this paper we explicitly model the dependence of tax-related incentives on the credit situations of U.S. parent corporations. In particular we consider how incentives change as multinationals switch into and out of "excess credits."

Amann, Erwin

PD June 1990. **TI** Long-Term Contracts in International Trade. **AU** Amann, Erwin; Marin, Dalia. **AA** Amann: Universitat Dortmund. Marin: Institute for Advanced Study, Austria. **SR** Centre for Economic Policy Research Discussion Paper: 413; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 29. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 421, 422, 411, 441. **KW** Futures Market. Incomplete Markets. International Trade. Commodities.

AB Countertrade agreements in international trade refer to a practice in which an exporter agrees to purchase in the future, from the importer, commodities proportional to his original export sale. The paper analyzes why it might be efficient for agents to undertake trade through a reciprocal long-term transaction rather than a conventional spot transaction. More specifically, the paper argues that countertrade represents a rational response to market incompleteness because it allows the forward selling of commodities where no organized futures market exists. In this way countertrade helps reduce risk by providing information on future market conditions and by offering insurance against random fluctuations in these conditions.

Anderson, Robert M.

PD June 1990. **TI** Nonstandard Methods in Mathematical Economics. **AA** University of California, Berkeley.

SR University of California at Berkeley Working Paper in Economics: 90-143; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 133. **PR** \$3.50. **JE** 213. **KW** Nonstandard Analysis. Measure Theory. General Equilibrium Theory. Real Analysis. Mathematical Economics.

AB Nonstandard analysis is a mathematic technique widely used in diverse areas in pure and applied mathematics, including probability theory, mathematical physics, functional analysis. Our primary goal is to provide a careful development of nonstandard methodology in sufficient detail to allow the reader to use it in diverse areas in mathematical economics. This requires some work in mathematical logic. More importantly, it requires a careful study of the nonstandard treatment of real analysis, measure theory, topological spaces and so on.

Andersson, Krister

PD July 1990. **TI** Possible Implications of Integrating the Corporate and Individual Income Taxes in the United States. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/66; International Monetary Fund, Washington, DC 20431. **PG** 42. **PR** not available. **JE** 313, 323. **KW** Corporate Taxes. Income Taxes. Tax System.

AB The classical corporate profits tax in the United States involves non-neutralities between: different sources of financing; different forms of business organization; and retaining or distributing earnings and may result in the U.S. investor being at a disadvantage vis-a-vis foreign investors. An international comparison is provided, and the potential effects of different integration schemes on the user cost of capital and tax revenues are assessed. The integration of corporate and individual income taxes in the United States would lead to a more efficient domestic and worldwide allocation of resources.

Andrews, Donald W. K.

PD October 1989. **TI** Estimation of Polynomial Distributed Lags and Leads with End Point Constraints. **AU** Andrews, Donald W. K.; Fair, Ray C. **AA** Yale University. **SR** National Bureau of Economic Research Technical Paper: 79; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 16. **PR** \$2.00. **JE** 211, 212. **KW** Lag Length. Distributed Leads. Rational Expectations. Asymptotic Theory.

AB This paper considers the use of the polynomial distributed lag (PDL) technique when the lag length is estimated rather than fixed. We focus on the case where the degree of the polynomial is fixed, the polynomial is constrained to be zero at a certain lag length q , and q is estimated along with the other parameters. We extend the traditional PDL setup by allowing q to be real-valued rather than integer-valued, and we derive the asymptotic covariance matrix of all the parameter estimates, including the estimate of q . The paper also considers the estimation of distributed leads rather than lags, a case that can arise if expectations are assumed to be rational.

Angrist, Joshua D.

PD March 1990. **TI** Does Labor Supply Explain Fluctuations in Average Hours Worked. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3312; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33.

PR \$2.00. **JE** 824, 821, 131. **KW** Labor Supply. Intertemporal Substitution Model. Economic Fluctuations.

AB Economists have long debated over what labor supply has to do with fluctuations in hours worked. This paper uses a time series of cross-sections from the 1964-88 Current Population Surveys to study whether microeconomic intertemporal substitution models can explain time series fluctuations in annual averages. Conditional on a parametric trend, labor supply equations fit the 1975-87 data remarkably well. But estimates for 1963-74 are not robust, and estimated labor supply elasticities are much lower in the earlier period.

PD June 1990. **TI** Does Compulsory School Attendance Affect Schooling and Earnings? **AU** Angrist, Joshua D.; Krueger, Alan B. **AA** Angrist: Harvard University, and National Bureau of Economic Research. Krueger: Princeton University and National Bureau of Economic Research. **SR** Princeton Industrial Relations Section Working Paper: 273; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 51. **PR** \$2.00. **JE** 824, 851. **KW** Schooling. Human Capital. Wages.

AB This paper presents evidence showing that individuals' season of birth is related to their educational attainment because of the combined effects of school start age policy and compulsory school attendance laws. In most school districts, individuals born in the beginning of the year start school at a slightly older age, and therefore are eligible to drop out of school after completing fewer years of schooling than individuals born near the end of the year. Our estimates suggest that as many as 25 percent of potential dropouts remain in school because of compulsory schooling laws. We estimate the impact of compulsory schooling on earnings by using quarter of birth as an instrumental variable for education in an earnings equation. This provides a valid identification strategy because date of birth is unlikely to be correlated with omitted earnings determinants.

Anstreicher, Kurt M.

PD April 1990. **TI** A Family of Search Directions for Karmarkar's Algorithm. **AU** Anstreicher, Kurt M.; Watteyne, Patrick. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9030; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 17. **PR** not available. **JE** 213, 214. **KW** Linear Programming. Karmarkar's Algorithm. Projective Algorithm.

AB We consider a new family of search directions for the standard form variant of Karmarkar's projective linear programming algorithm. The family includes the usual projected gradient direction, and also a direction first proposed by Mike Todd. We prove that any choice from the family preserves the algorithm's polynomial time complexity. We then examine the computational behavior of the algorithm using different choices of directions. Although the theoretical complexity is the same for the different directions, in practice we find wide variations in algorithm performance. One particular choice consistently requires about 20% fewer iterations than the usual direction, while another requires a number of iterations which grows rapidly with problem size. Our computational results also demonstrate that a small number of monotonic steps on early iterations may considerably improve the performance of the algorithm.

Araoz, Julian

PD December 1989. **TI** Search in Horn's Knowledge Bases and the Simplex Algorithm. **AA** Universidad Simon Bolivar. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89617-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 10. **PR** no charge. **JE** 213. **KW** Linear Programming. Hypergraph Model. Simplex Algorithm.

AB It has been proved that deduction in propositional Horn's clauses systems is equivalent to feasibility of a linear program associated to a directed hypergraph flow model which correspond to the Horn's clauses systems. Here, we show that bottom up search is equivalent to solve the linear program using the Simplex algorithm and top down search correspond to the application of the dual Simplex algorithm.

Arnott, Richard

PD April 1900. **TI** The Welfare Economics of Moral Hazard. **AU** Arnott, Richard; Stiglitz, Joseph. **AA** Arnott: Boston College. Stiglitz: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3316; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** \$2.00. **JE** 024, 022. **KW** Market Failure. Moral Hazard. Competitive Equilibrium. Welfare Analysis.

AB This paper shows that, except in certain limiting cases, competitive equilibrium with moral hazard is constrained inefficient. The first section compares the competitive equilibrium and the constrained social optimum in a fairly general model, and identifies types of market failure. Each of the subsequent sections focuses on a particular market failure.

PD February 1990. **TI** The Ramsey Problem for Congestible Facilities. **AU** Arnott, Richard; Kraus, Marvin. **AA** Boston College. **SR** National Bureau of Economic Research Technical Paper: 84; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** \$2.00. **JE** 021, 621. **KW** Firm Theory. Ramsey Problem. Cost Functions. Microeconomics.

AB In recent years, a new set of models drawing on Vickrey [1969] has been developed to analyze the economics of congestible facilities. These models are structural in that they derive the cost function from consumers' time-of-use decisions and the congestion technology. Standard models, in contrast, simply assume the general form of the cost function. We apply the new approach to analyze the Ramsey problem for a congestible facility, and show that the solution generally entails cost inefficiency. Standard models have failed to reveal this result because they treat the cost function as completely determined by technology.

Asami, Yasushi

PD February 1990. **TI** On the Design of Noncooperative Games Supporting Optimal Spatial Allocations. **AU** Asami, Yasushi; Fujita, Masahisa; Thisse, Jacques-Francois. **AA** Asami: University of Tokyo. Fujita: University of Pennsylvania and CORE. Thisse: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9019; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 34. **PR** not available. **JE** 611, 931. **KW** Urban Economics. Location Models. Consumption. Land. Spatial Economy. Households. Marginal Cost Pricing.

AB As is well known, location models are often subject to nonexistence of equilibria; even when an equilibrium exists, it is seldom socially efficient. With these difficulties in mind, we design noncooperative games supporting the optimal allocation in a spatial economy formed by a continuum of households and a small number of firms. To this effect, we introduce into a model of spatial competition the consumption of land by households. Using the process of land capitalization, we specify a firm's payoff as the sum of its profit and its share of the total land rent; firms choose price and location simultaneously. Households choose their location, lot size and consumption of the firms' product in response to firms' decisions. We show that, for a fixed number of firms, the unique Nash equilibrium is given by the socially optimal locations of firms together with marginal cost pricing. When the number of firms is variable, the optimal allocation can be sustained as a free-entry equilibrium.

Asano, Takao

PD February 1990. **TI** Optimal Parallel Algorithms for Circular-Arc Graphs. **AA** Sophia University, Japan. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90630-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** no charge. **JE** 213, 214. **KW** Circular-arc Graphs. Computer Algorithms.

AB We consider the following problems on circular-arc graphs: the maximum independent set problem, the minimum clique covering problem and the minimum dominating set problem. Specifically, we present parallel algorithms that solve these three problems in $O(\log n)$ time using $O(n)$ processors in the EREW PRAM model if a circular-arc graph is given by its intersection model of n arcs on a circle. Furthermore, if the end-points of the arcs are sorted in advance, then they require $O(n/\log n)$ processors. Our algorithms are optimal since the problems have $\Sigma(n)$ lower bound for the unsorted-arcs case, and $\Sigma(n)$ for the sorted-arcs case.

Ashenfelter, Orley

PD July 1990. **TI** An Experimental Comparison of Dispute Rates in Alternative Arbitration Systems. **AU** Ashenfelter, Orley; Currie, Janet; Farber, Henry S.; Spiegel, Matthew. **AA** Ashenfelter: Princeton University. Currie: University of California, Los Angeles. Farber: Massachusetts Institute of Technology. Spiegel: Columbia University. **SR** Princeton Industrial Relations Section Working Paper: 267; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 52. **PR** \$2.00. **JE** 832, 821, 215. **KW** Arbitration. Bargaining. Experimental Economics.

AB This paper reports the results of a systematic experimental comparison of the effect of alternative arbitration systems on dispute rates. The key to our experimental design is the use of a common underlying distribution of arbitrator "fair" awards in the different arbitration systems. This allows us to compare dispute rates across different arbitration procedures where we hold fixed the amount of objective underlying uncertainty about the arbitration awards. There are three main findings. First, dispute rates are inversely related to the monetary costs of disputes. Second, the dispute rate in a final offer arbitration system is at least as high as the dispute rate in a comparable conventional arbitration system. Third, dispute rates are inversely related to the uncertainty costs of disputes.

PD September 1990. **TI** Lawyers as Agents of the Devil

in a Prisoner's Dilemma Game. **AU** Ashenfelter, Orley; Bloom, David. **AA** Ashenfelter: Princeton University. Bloom: Columbia University. **SR** Princeton Industrial Relations Section Working Paper: 270; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 32. **PR** \$1.50. **JE** 916, 022. **KW** Lawyers. Arbitration System. Prisoner's Dilemma.

AB The goal of this paper is to explore the possibility that the costs and benefits of legal representation are structured so that each individual party seeks legal representation in the hope of exploiting the other party, while knowing full well that failing to do so will open up the possibility of being exploited. The first part of the paper shows how the structure of the incentives faced by the parties may be estimated, and the second describes the results of empirical tests in several different settings. The empirical results strongly suggest that the parties do face "prisoner's dilemma" incentives, although no attempt is made to determine whether the parties respond to these incentives.

Atack, Jeremy

PD August 1990. **TI** How Long was the Workday in 1880. **AU** Atack, Jeremy; Bateman, Fred. **AA** Atack: University of Illinois. Bateman: Indiana University. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 15; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 48. **PR** \$2.00. **JE** 042, 824, 821. **KW** Employment. Labor Force. Manufacturing.

AB We know remarkably little about the length of the working day before the 1880's. In this paper, we summarize what is known about the trend in the length of the workday in American manufacturing industry from 1830 to 1890. We then develop estimates of the daily hours of work and form the basis for our ongoing research into the performance and operation of the industrial labor market in America in the late nineteenth century. We conclude on the basis of our firm level sample data that the average workday in American manufacturing industry in 1880 was almost exactly ten hours, placing the attainment of the ten hour day almost a decade earlier than hitherto supposed.

Atkins, Fiona

PD December 1986. **TI** Land Reform: A Failure of Neoclassical Theorisation. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/3; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 29. **PR** not available. **JE** 112, 717. **KW** Land Reform. Rent. Land Ownership.

AB Land reform was once a key component of development strategies but has fallen from favor. The popularity of the policy reflected a diversity of beliefs regarding its positive impact on productive efficiency, distributional equity, political, social and economic structures. The dominant economic arguments have emphasized the joint efficiency and equity effects. The author suggests that the fall from grace is a result partly of a changed political and economic reality and partly of a failure to develop a coherent theory of land reform. The failure of theoretical analysis is seen through an examination of the concepts of rent and ownership and their relation to land. The typical discussion and comprehension of land reform is illustrated and criticized with reference to a study of Brazilian land reform and to statements and positions of international institutions.

PD October 1988. **TI** Landed Property and the Law. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/12; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 43. **PR** not available. **JE** 717, 716, 711, 112. **KW** Property Rights. Labor Supply. Land Reform.

AB Many underdeveloped economies are confronted with the coexistence of idle land and surplus labor. This contradictory situation is partly a result of a landed property system and set of supportive laws which arose to deal with a problem of labor shortage. In contrast to Boserup this paper argues that individual property rights arose in order to create an artificial labor surplus rather than as a response to actual labor surplus. The structure of landed property is an important influence on labor supply and should be understood in this context. It is argued that property laws often develop not only as supportive of an existing structure but, are frequently part of a conscious policy to manipulate labor availability. Such a role can be seen for some land reforms. The relation between property law and labor supply is illustrated with reference to Jamaica.

Attanasio, Orazio P.

PD January 1990. **TI** Credit, Money and Consumption: Time Series Evidence for Italy. **AU** Attanasio, Orazio P.; Weber, Guglielmo. **AA** Attanasio: Stanford University. Weber: University College London. **SR** University College London Discussion Paper: 90-03; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 24. **PR** 2.00 pounds. **JE** 921, 313, 315. **KW** Consumer Credit. Capital Markets. Consumption. Liquidity Constraints.

AB In this paper we investigate the importance of capital market imperfections for Italian consumers. We specify an intertemporal maximization problem where monetary assets yield liquidity services and consumers are subject to net wealth constraints. This produces a non-standard consumption growth equation which we estimate on Italian aggregate data. On the basis of our estimates we compute the shadow price of the net wealth constraint over individual quarters of the sample period (1976q2-1988q4) and comment on the likely causes of the varying degree of severity of credit restrictions facing Italian households.

Baker, Paul

TI The Working Behaviour of Young People in the Rural Cote D'Ivoire: Evidence from the LSMS Panel. **AU** Alessie, Rob; Baker, Paul; Blundell, Richard; Heady, Christopher; Meghir, Costas.

Baldwin, Richard E.

PD April 1990. **TI** Re-Interpreting the Failure of Foreign Exchange Market Efficiency Tests: Small Transaction Costs, Big Hysteresis Bands. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3319; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** \$2.00. **JE** 441, 132. **KW** Transaction Costs. Uncertainty. Speculation. Interest Rates. Foreign Currency.

AB Small transaction costs and uncertainty imply that optimal cross-currency interest rate speculation is marked by a first-order hysteresis band. Consequently uncovered interest parity does not hold and market efficiency tests based on it are misspecified. Indeed measured prediction errors are a

combination of true prediction errors and a wedge that consists of the "option value" of being in foreign currency and either plus or minus the transaction cost. Due to the nature of this wedge, we should expect measured prediction errors to be serially correlated, correlated with the current forward rate and perhaps have a non-zero mean, if the interest differential itself is serially correlated. The existence of the wedge helps account both for the failure of market efficiency tests and the difficulties in finding an empirically successful model of the risk premium.

Balino, Tomas J. T.

TI Issues in Recent Banking Crises. **AU** Sundararajan, V.; Balino, Tomas J. T.

Barkai, Haim

PD April 1990. **TI** The Role of Monetary Policy in Israel's 1985 Stabilization Effort. **AA** Hebrew University of Jerusalem. **SR** International Monetary Fund Working Paper: WP/90/29; International Monetary Fund, Washington, DC 20431. **PG** 71. **PR** not available. **JE** 121, 133, 134, 311. **KW** Monetary Policy. Fiscal Policy. Exchange Rate. Inflation. Stabilization Policy.

AB Comparing the performances of the Austral, Cruzado and Sheqel programs shows that the latent suggestion that a "heterodox" stabilization program can be implemented without tight fiscal discipline to support a restrictive monetary policy, though welcome in the political arena, is unwarranted. Freezes, pegs and controls alone are bound to lead to dismal failure. A highly restrictive monetary policy sustained by a tight fiscal policy persisting for a lengthy interval (in terms of the political horizon), supported by a stable exchange rate as a highly visible nominal anchor and by a temporary but significant erosion of real wages, have succeeded to contain a runaway inflation in Israel.

Barro, Robert J.

PD April 1990. **TI** World Real Interest Rates. **AU** Barro, Robert J.; Sala i Martin, Xavier. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3317; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** \$2.00. **JE** 441, 122, 224. **KW** Developed Countries. Interest Rates. Investment. Saving.

AB We think of the expected real interest rate for ten OECD countries (our counterpart of the world economy) as determined by the equation of aggregate investment demand to aggregate desired saving. Stock market returns isolate shifts to investment demand, and changes in oil prices, monetary growth, and fiscal variables isolate shifts to desired saving. We estimated the reduced form for GDP-weighted world averages of the expected short-term real interest rate and the investment ratio over the period 1959-88. The estimates reveal significant effects in the predicted direction for world stock returns, oil prices, and world monetary growth, but fiscal variables turned out to be unimportant.

Bartelsman, Eric J.

PD April 1990. **TI** R&D Spending and Manufacturing Productivity: An Empirical Analysis. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 122; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551.

PG 39. **PR** no charge. **JE** 226, 631, 621. **KW** Manufacturing. Productivity. R&D. Returns to Scale.

AB This paper provides estimates of output elasticities of R&D stocks for U.S. manufacturing at the product group level of aggregation. Also computed are estimates of returns to scale and measures of productivity growth. The estimates are produced using cross-sectional time series data for 450 four-digit industries and R&D data for 25 product groups. Private R&D is seen to have a positive effect on average, while federally funded R&D has a negligible effect. Assumptions about perfect competition and constant returns to scale are relaxed; constant returns is rejected for less than half of the product groups although the degree of returns to scale is small.

PD April 1990. **TI** Federally Sponsored R&D and Productivity Growth. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 121; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 31. **PR** no charge. **JE** 621, 851, 226, 323. **KW** R&D. Productivity. Human Capital. Growth Rates.

AB Externalities in knowledge lead to a sub-optimal allocation of human capital to research. In a model with endogenous technological change this results in a low productivity growth rate, which would be increased with a subsidy to the research sector. Yet, the effect of federally sponsored R&D on growth is predicted to be ambiguous if sponsored R&D is not a perfect substitute for private R&D. At low levels, increases in sponsored R&D increase the growth rate. However, after reaching a peak, growth is reduced with more sponsored R&D. This effect is due to crowding out of human capital which becomes stronger than the positive effect of research spillovers.

Bateman, Fred

TI How Long was the Workday in 1880. **AU** Attack, Jeremy; Bateman, Fred.

Baumol, H.

TI On the Economies of the Performing Arts in the USSR and the USA: A Preliminary Comparison of the Data. **AU** Rubinstein, A.; Baumol, William J.; Baumol, H.

Baumol, William J.

PD August 1990. **TI** Technological Imperatives, Productivity and Insurance Costs. **AA** New York University and Princeton University. **SR** New York University Economic Research Reports: 90-35; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 23. **PR** no charge. **JE** 635, 226, 613. **KW** Productivity. Insurance Industry. Insurance Rates. Growth Rates.

AB The data show that insurance rates have, over the entire postwar period, risen persistently and cumulatively at rates substantially more rapid than the economy's rate of inflation. This paper offers a technological explanation of that phenomenon, taking insurance rates to be the price of a bundle of services including record keeping, information, legal services, medical services, automotive repair, etc. Each of these is shown to be an economic activity whose technology does not lend itself to rapid productivity growth. The result has been, according to data provided in the paper, that each of these has a record of productivity growth slower than that of the economy

as a whole. The result, inevitably, has been rising real costs and prices, because services such as health care, legal services, auto repair and, consequently, insurance, are all subject to what has been called "the cost disease of the personal services."

TI On the Economies of the Performing Arts in the USSR and the USA: A Preliminary Comparison of the Data. **AU** Rubinstein, A.; Baumol, William J.; Baumol, H.

PD August 1990. **TI** Beyond Allocative Efficiency: How Perfect are the "Perfect" Market Forms?. **AA** New York University and Princeton University. **SR** New York University Economic Research Report: 90-37; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 43. **PR** no charge. **JE** 024, 514. **KW** Competition. Welfare Analysis. Product Quality. Social Welfare Function.

AB The paper deals with the social welfare implications of reputedly ideal market forms -- perfect competitions and perfect contestability. It shows that they tend to stimulate poor product quality and adulteration. In addition, they preclude the firm from voluntary undertaking of "socially-responsible" behavior such as avoidance of damage to the environment during the course of production or financial contributions to education, health care and the arts. Another shortcoming of these market forms -- their compatibility with involuntary unemployment -- was, it is shown, recognized early by economists such as J.B. Say and Ricardo. The analysis shows, in contrast, that these market forms perform well in preventing discrimination by race or sex and in eliciting socially optimal timing of innovation.

Bayoumi, Tamim

PD July 1990. **TI** The 1990 Reform of United Kingdom Local Authority Finance. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/58; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** 324, 325. **KW** Government Finance. Taxes. Poll Tax. Local Government.

AB In April 1990, the U.K. Government implemented the largest change to local authority finance in England and Wales since the postwar period. It involves the introduction of a poll tax on domestic residents, the centralization of local business taxes, and an overhaul of Central Government grants. This paper analyzes the effect of these reforms on local government and the wider economy.

Becker, Gary S.

PD December 1989. **TI** Human Capital, Fertility, and Economic Growth. **AU** Becker, Gary S.; Murphy, Kevin M.; Tamura, Robert. **AA** University of Chicago. **SR** Economics Research Center/NORC Discussion Paper: 90-5; Economics Research Center/NORC, 6030 S. Ellis, Chicago, Illinois 60637. **PG** 32. **PR** \$2.00; send requests to Librarian, NORC. **JE** 851, 921, 111. **KW** Human Capital. Fertility. Consumption. Growth Theory.

AB Our model of growth departs from both the Malthusian and neoclassical approaches by placing investments in human capital at the center. Crucial to our analysis is the assumption that rates of return on investment in human capital rise rather than decline as the stock of human capital increases, at least until the stock becomes large. The reason is that education and

other sectors that produce human capital use educated and other skilled inputs more intensively than do sectors that produce consumption goods and physical capital. This leads to multiple steady states: an undeveloped steady state with little human capital and low rates of return on investments in human capital, and a developed steady state with much higher rates of return and a large and perhaps growing stock of human capital.

PD April 1990. **TI** An Empirical Analysis of Cigarette Addiction. **AU** Becker, Gary S.; Grossman, Michael; Murphy, Kevin M. **AA** Becker and Murphy: University of Chicago. Grossman: City University of New York. **SR** National Bureau of Economic Research Working Paper: 3322; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** \$2.00. **JE** 913, 711. **KW** Health. Addiction. Tobacco. Intertemporal Model. Agriculture.

AB We use a framework suggested by a model of rational addiction to analyze empirically the demand for cigarettes. The data consist of per capita cigarettes sales (in packs) annually by state for the period 1955 through 1985. The empirical results provide support for the implications of a rational addiction model that cross price effects are negative (consumption in different periods are complements), that long-run price responses exceed short-run responses, and that permanent price effects exceed temporary price effects. A 10 percent permanent increase in the price of cigarettes reduces current consumption by 4 percent in the short run and by 7.5 percent in the long run. In contrast, a 10 percent increase in the price for only one period decreases consumption by only 3 percent.

Becker, William

PD June 1990. **TI** The Learning Effect of Assessment and Evaluation in High School. **AU** Becker, William; Rosen, Sherwin. **AA** Becker: Indiana University-Bloomington. Rosen: University of Chicago. **SR** Economics Research Center/NORC Discussion Paper: 90-7; Economics Research Center/NORC, 6030 S. Ellis, Chicago, Illinois 60637. **PG** 22. **PR** \$2.00; send requests to Librarian, NORC. **JE** 912, 851. **KW** Education. Academics. Human Capital. Learning.

AB The implications for student behavior of different standards in testing are explored and the importance of a student's position in the distributions of a student attainment is demonstrated using explicit economic models. We show that competition between students does stimulate academic effort provided students are appropriately rewarded for achieving. We argue that stratifying students into groups in which each has a chance for success may be preferred to the setting of a single national standard.

Benabou, Roland

PD April 1990. **TI** The Informativeness of Prices: Search with Learning and Inflation Uncertainty. **AU** Benabou, Roland; Gertner, Robert. **AA** Benabou: Massachusetts Institute of Technology. Gertner: University of Chicago. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 555; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 52. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 022, 134, 026. **KW** Inflation. Search Theory. Learning. Prices.

AB Sources of aggregate cost uncertainty, such as real shocks or unanticipated inflation, reduce the information

content of prices by making it difficult to separate relative and aggregate price variations. But when agents can acquire information, for instance by searching, such increased noise may in fact lead them to become better informed in equilibrium, and prices will reflect increased competition. To examine this issue, we develop a model of search with learning, in which consumers search optimally from an unknown price distribution, while firms price optimally given consumers' search rules. We show that the decisive factor in whether inflation variability increases or reduces the incentive to search, and thereby market efficiency is the size of informational costs.

Benhabib, Jess

PD April 1990. **TI** Homework in Macroeconomics I: Basic Theory. **AU** Benhabib, Jess; Rogerson, Richard; Wright, Randall. **AA** Benhabib: New York University. Rogerson and Wright: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3344 Part I; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** \$2.00. **JE** 921, 023. **KW** Household Production. Macroeconomic Model. Consumer Economics.

AB This paper argues that the home, or nonmarket, sector is empirically large, whether measured in terms of the time devoted to household production activities or in terms of the value of home produced output. We also argue that there may be a good deal of substitutability between the market and nonmarket sectors, and that this may be an important missing element in existing macroeconomic models. Symmetrically with the market, household production uses labor and capital to produce a nonmarket consumption good according to a possibly stochastic technology. We show any model with home production is observationally equivalent to another model without home production, but with different preferences. However, for a given set of preferences, incorporating household production can dramatically change the nature and the interpretation of several macroeconomic phenomena.

PD April 1990. **TI** Homework in Macroeconomics II: Aggregate Fluctuations. **AU** Benhabib, Jess; Rogerson, Richard; Wright, Randall. **AA** Benhabib: New York University. Rogerson and Wright: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3344 Part II; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** \$2.00. **JE** 921, 131, 133, 132. **KW** Household Production. Economic Fluctuations. Business Cycle.

AB This paper explores the implications of including home, or nonmarket, production in an otherwise standard model of cyclical fluctuations. In particular, we generalize the stochastic growth model, or the real business cycle model, to include a household sector using the basic framework that labor economists have studied for some time. Symmetrically with the market sector, the household sector uses labor and capital to produce output according to a stochastic technology. We calibrate the model based on microeconomic evidence and long run considerations, simulate it, and examine its statistical properties. Our finding is that introducing home production significantly improves the quantitative performance of the standard model along several dimensions simultaneously. It also implies a very different interpretation of the nature of aggregate fluctuations.

PD May 1990. **TI** Vintage Capital, Investment and

Growth. AU Benhabib, Jess; Rustichini, Aldo. AA Benhabib: New York University. Rustichini: Northwestern University. SR New York University Economic Research Reports: 90-22; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 43. PR no charge. JE 111, 131, 023. KW Growth Theory. Investment. Economic Fluctuations. Dynamic Model.

AB We study the dynamics of growth and investment in a continuous time model with vintage capital. Vintage capital models may be characterized by non-exponential rates of depreciation and technical change and can incorporate "gestation lags" as well as "learning by doing". We investigate the effect of such features on the dynamics of investment and growth and show how they can contribute to explain the volatile nature of investment time series.

PD May 1990. TI Endogenous Fertility and Growth. AU Benhabib, Jess; Nishimura, Kazuo. AA Benhabib: New York University. Nishimura: Kyoto University and Australian National University. SR New York University Economic Research Reports: 90-20; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 21. PR no charge. JE 111, 921, 851, 023. KW Fertility. Growth Theory. Altruism. Households. Wealth.

AB We extend the Barro-Becker (1989) model by introducing technical progress and a general altruism function towards children. We characterize the dynamics of accumulation in terms of the parameters of the altruism function. In particular we are interested in the correlation of wealth and fertility across multiple steady states and along the optimal path, which may in some cases be oscillatory. We provide characterizations in terms of the parameters of the altruism function. We also discuss a variant of the model with human capital and with an endogenous choice of the amount of schooling for children.

Berck, Peter

PD July 1990. TI The Use of Computable General Equilibrium Models to Assess Water Policies. AU Berck, Peter; Robinson, Sherman; Goldman, George. AA University of California at Berkeley. SR University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 545; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. PG 28. PR \$5.60. JE 212, 225, 021, 721, 711. KW General Equilibrium Models. Social Accounting Matrix. Agriculture.

AB This paper discusses basic issues in project analysis and shows how these issues can be resolved in a computable general equilibrium (CGE) framework. The role of border prices and intersectoral linkages is explored. The CGE framework is compared to less comprehensive frameworks, including benefit-cost analysis, input-output models, multi-market models, and models based on social accounting matrices (SAMs). An illustrative CGE model of the southern portion of the San Joaquin Valley is constructed and is used to find the effects of reducing water inputs on aggregate Valley gross domestic product (GDP) and on sectoral output, employment, and land use. The model is also used to determine demand curves for water by the southern portion of the Valley, given alternative specifications of production technology.

Berger, Allen N.

PD December 1989. TI Some Evidence on the Empirical Significance of Credit Rationing. AU Berger, Allen N.; Udell, Gregory F. AA Berger: Board of Governors of the Federal Reserve System. Udell: New York University. SR New York University Salomon Brothers Center Working Paper: S-90-4; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. PG 25. PR not available. JE 921, 315, 311. KW Credit. Credit Rationing. Monetary Policy.

AB There has been much debate over whether credit rationing by banks is a significant macroeconomic phenomenon. Some argue that rationing is an important mechanism for the transmission of monetary policy, others argue that rationing is limited to marginal pools of borrowers, while still others argue that various loan contract features substantially resolve the type of information problems which cause equilibrium credit rationing. This paper provides empirical evidence which may help resolve debates.

Bernard, Jean-Thomas

PD April 1990. TI Have Multinationals Overchanged Canada for Oil Imports. AU Bernard, Jean-Thomas; Weiner, Robert J. AA Bernard: GREEN, Universite Laval. Weiner: Brandeis University and Harvard University. SR Harvard Energy Security Program Discussion Paper: E-90-02; Energy and Environmental Policy Center, John F. Kennedy School of Government, Harvard University, 79 John F. Kennedy Street, Cambridge, MA 02138. PG 27. PR \$7.50. JE 442, 723, 632. KW Multinational Corporations. Oil. Petroleum. Imports.

AB This paper is part of a project presenting the first systematic evidence on transfer pricing in multinational corporations. We examine the petroleum industry, which in Canada has been dominated by foreign multinationals. We take advantage of a unique transaction level database to resolve an ongoing Canadian debate over transfer pricing of crude oil imports.

Berndt, Ernst R.

PD June 1990. TI Price Indexes for Microcomputers: An Exploratory Study. AU Berndt, Ernst R.; Griliches, Zvi. AA National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 3378; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 41. PR \$2.00. JE 631, 227. KW Price Index. Microcomputers. Prices.

AB In this paper we focus on alternative procedures for calculating and interpreting quality-adjusted price indexes for microcomputers, based on a variety of estimated hedonic price equations. Our data set comprises an unbalanced panel for 1265 model observations from 1982 to 1988, and includes both list and discount prices. We develop and implement empirically a specification test for selecting preferable hedonic price equations, and consider in detail the alternative interpretations of dummy variable coefficients having time and age, vintage and age, and all the time, age, and vintage dummy variables as regressors.

Bertola, Giuseppe

PD February 1990. TI Kinked Adjustment Costs and Aggregate Dynamics. AU Bertola, Giuseppe; Caballero,

Ricardo J. AA Bertola: Princeton University. Caballero: Columbia University. SR Columbia Department of Economics Working Paper: 465; 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 131, 133, 132. KW Dynamic Models. Adjustment Costs. Time Series. Macroeconomics.

AB Because adjustment costs may make infrequent corrections preferable to partial continuous adjustment, microeconomic units often behave quite differently from representative agents in aggregate dynamic models. Idiosyncratic uncertainty precludes perfect coordination of microeconomic adjustment and explains the much smoother behavior of aggregate variables. This paper reviews and extends models of optimal adjustment under uncertainty and of dynamic aggregation, and argues that unsynchronized microeconomic adjustment can provide a sensible, structural interpretation of macroeconomic time series.

PD June 1990. TI Irreversibility and Aggregate Investment. AU Bertola, Giuseppe; Caballero, Ricardo J. AA Bertola: Princeton University and CEPR. Caballero: Columbia University. SR Columbia Department of Economics Working Paper: 488; Department of Economics, Columbia University, New York, New York 10027. PG 26. PR \$5.00. JE 226, 111, 022. KW Investment. Capital.

AB Investment is often irreversible: once installed, capital has little or no value unless used in production. This paper proposes and solves a model of sequential irreversible investment, characterizes the aggregate implications of microeconomic irreversibility and idiosyncratic uncertainty, and interprets U.S. data in light of the theoretical results.

PD June 1990. TI Reserves and Realignment in a Target Zone. AU Bertola, Giuseppe; Caballero, Ricardo J. AA Bertola: Princeton University and CEPR. Caballero: Columbia University. SR Columbia Department of Economics Working Paper: 487; Department of Economics, Columbia University, New York, New York 10027. PG 16. PR \$5.00. JE 431, 311. KW Exchange Rates. Target Zones. Monetary Policy. Government Intervention.

AB The recent literature on target zones has emphasized expectational effects that make exchange rates a nonlinear function of their fundamental determinants when intervention is assumed to be infrequent. We propose a stylized probabilistic framework in which these issues can be studied along with realistic concerns about the sustainability of the intervention scheme. The effect of nonlinear intervention on the level of exchange rates and on its sensitivity to movements in fundamentals depends on the level of reserves. In the simple model we consider, all these effects cancel each other out when the possible reserve levels are weighed by their long run frequency.

Besley, Timothy

PD May 1990. TI The Economics of Rotating Savings and Credit Associations. AU Besley, Timothy; Coate, Stephen; Loury, Glenn C. AA Besley: Princeton University. Coate and Loury: Harvard University. SR Massachusetts Institute of Technology Department of Economics Working Paper: 556; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. PG 54. PR \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. JE 314, 315, 311.

KW Financial Intermediation. Savings. Credit Market.

AB This paper examines the role and performance of an institution for allocating savings which is observed worldwide: rotating savings and credit associations. We develop a general equilibrium model of an economy with an indivisible durable consumption good and compare and contrast these informal institutions with credit markets and autarkic saving in terms of the properties of their allocations and the expected utility which they obtain. We also characterize Pareto efficient and expected utility maximizing allocations for our economy, which serve as useful benchmarks for the analysis. Among our results is the striking finding that rotating savings and credit associations which allocate funds randomly may sometimes yield a higher level of expected utility to prospective participants than would a perfect credit market.

Bhagwati, Jagdish N.

PD February 1990. TI U.S. Trade Policy at Crossroads. AA Columbia University. SR Columbia Department of Economics Working Paper: 464; Department of Economics, Columbia University, New York, New York 10027. PG 71. PR \$5.00. JE 422. KW Trade Policy. Protectionism. Export Restraints.

AB The popular perception, as also the objective reality, of U.S. trade policy are that it is in a state of flux; indeed, that it may have taken a turn for the worse. It is not just that the United States Administration succumbed rather excessively during the 1980s to the rising demands for protection against imports by negotiating several significant export restraints. Rather, the disturbing shifts are in a weakened commitment to multilateralism, manifesting itself in a variety of new ways. The new embrace of regional arrangements and, in particular, the departure from GATT principles of "doing business" by asserting, for instance, that demands can be made for unilateral trade concessions by others and enforced by threats of retaliation, are evidence of the changed trade policy.

PD February 1990. TI The International Trading System. AA Columbia University. SR Columbia Department of Economics Working Paper: 463; Department of Economics, Columbia University, New York, New York 10027. PG 27. PR \$5.00. JE 121, 113, 422, 823. KW Developing Countries. Commercial Policy. Human Capital. International Migration.

AB Here, I shall recount only three of the many intellectual accomplishments focusing on the early lead that UNCTAD has provided on questions that have attracted academic attention and invited policy redress in national and international fora. (i) The question of value-added protection, or effective protection as we now call it, came up repeatedly at the UNCTAD in the 1960's as developing country spokesmen focused on escalation in tariff structures and on the distorting incentives they provided to shift processing towards the developed countries. (ii) Again, while the demand to extend GATT trade discipline to services has focused attention on services since the early 1980's, and the Uruguay Round is seized with the issue, it is not widely known that UNCTAD was the pioneer in dealing with services as a trade and as a developmental issue. (iii) Finally, I must also mention the outstanding work done at UNCTAD in relation to skilled migration from the developing countries and policy responses thereto.

Bhaskar, V.

PD October 1989. TI Testing a Model of the Kinked

Demand Curve. AU Bhaskar, V.; Machin, S.; Reid, G. AA Bhaskar: Delhi School of Economics and University College London. Machin: University College London. Reid: University of Edinburgh. SR University College London Discussion Paper: 89-17; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PG 27. PR 2.00 pounds. JE 616, 611, 511, 022. KW Pricing. Oligopoly. Demand Curve.

AB This paper analyzes survey data on the responses firms expect from their competitors when they change prices. There is evidence of an asymmetry in expected responses, which proves consistent with a modified version of the kinked demand curve. The asymmetry in responses is more pronounced in recessionary conditions, as suggested by the theoretical model.

Bizer, David S.

PD May 1990. TI Testing the Positive Theory of Government Finance. AU Bizer, David S.; Durlauf, Steven N. AA Bizer: Johns Hopkins University. Durlauf: Stanford University. SR National Bureau of Economic Research Working Paper: 3349; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 21. PR \$2.00. JE 323. KW Tax Policy. Taxes. Government Finance. Public Finance.

AB Researchers characterizing optimal tax policies for dynamic economies have reasoned that optimally chosen tax rates should approximately follow a random walk. We conduct a frequency-domain examination of the properties of the tax rate series and conclude that while there is a substantial smoothing role for debt, one rejects the hypothesis that the first difference in the series is white noise. This conclusion follows both from an analysis of the entire spectral distribution function of tax changes as well as from the behavior of individual frequencies. The source of the rejection is pronounced activity of tax changes at an eight year cycle which is suggestive of an electoral component to tax changes.

Blackmon, Glenn

PD June 1990. TI Fragile Commitments and the Regulatory Process. AU Blackmon, Glenn; Zeckhauser, Richard. AA Harvard University. SR Harvard Energy and Environmental Policy Center Discussion Paper: E-90-08; Energy and Environmental Policy Center, J. F. Kennedy School of Government, Harvard University, 79 John F. Kennedy St., Cambridge, MA 02138. PG 45. PR \$7.50. JE 613. KW Regulation. Government Regulation. Utilities. Capital Investment.

AB Once a regulated utility firm has made an irreversible capital investment, that investment becomes vulnerable to appropriation by a regulator. A pro-consumer regulator can increase immediate consumer benefits by appropriating the sunk investment. An efficiency-seeking regulator may also find appropriation attractive, because it allows for marginal cost pricing and therefore greater societal benefits. Regulators' commitments to repay sunk investments thus prove fragile; they can break easily in response to the temptation to maximize consumer welfare or societal benefits, or in response to consumer pressures. The incentives and strategies of investors, consumers, and the regulator are explored in a game-based model of regulation.

Blake, Andrew

TI The Consequences of Measurement Errors for Money

GDP Targeting. AU McKay, Andrew; Blake, Andrew; Weale, Martin.

Blanchflower, David G.

PD April 1990. TI Going Different Ways: Unionism in the U.S. and Other Advanced OECD Countries. AU Blanchflower, David G.; Freeman, Richard B. AA Blanchflower: Center for Labor Economics and Dartmouth College. Freeman: Harvard University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 3342; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 54. PR \$2.00. JE 831, 824, 122. KW Unions. Wage Differentials. Employment. Developed Countries.

AB In this paper we compare the changing pattern of unionization in OECD countries, review existing evidence, and present new information on cross-country differences in union-nonunion differentials in labor market outcomes, largely from the micro data files of the International Social Survey Programme cross-country surveys of 1985-87. Our analysis shows that American unions have a larger effect on wages but not on other outcomes than unions in other countries. We argue that the high union premium in the U.S. contributed to the decline in U.S. union density and to the consequent divergence of the U.S. industrial relations system from those in most OECD countries.

Blejer, Mario I.

PD July 1990. TI Fiscal Policy, Labor Markets, and the Poor. AU Blejer, Mario I.; Chu, Ke-young. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/62; International Monetary Fund, Washington, DC 20431. PG 19. PR not available. JE 914, 921, 911, 824. KW Poverty. Nutrition. Labor Supply. Health.

AB In designing policy measures, including possible social safety nets, targeted to the poor, it is important to fully understand the efficiency implications of these measures. There is abundant macroeconomic literature on their negative effects on the poor's work effort. The literature, however, does not adequately recognize the positive effects of these measures on improved nutrition and health of the poor or on aggregate supply. This paper presents an analytical framework to trace both the positive efficiency implications, as well as the resource (or cost) implications of such policies.

Blinder, Alan S.

TI The Resurgence of Inventory Research: What Have We Learned?. AU Maccini, Louis J.; Blinder, Alan S.

Blitzer, Charles R.

PD May 1990. TI The Potential for Reducing Carbon Emission from Increased Efficiency: A General Equilibrium Methodology. AU Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander. AA Blitzer: World Bank. Eckaus: Massachusetts Institute of Technology. Lahiri: University of Lowell. Meeraus: GAMS Development Corporation. SR Massachusetts Institute of Technology Department of Economics Working Paper: 559; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. PG 43. PR \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. JE 723, 722, 132. KW Energy. Oil.

Pollution. Fuel Efficiency.

AB One approach to reduction of carbon emissions that has often been suggested is through an increase in the efficiency of use of hydrocarbon fuels, i.e., achieving more output for the same amount or lesser fuel input. It seems like an obviously desirable prescription, particularly if it can be done with just a little improvement in technique and tuning. Something for nothing is always a good trade. This paper presents a methodology for analyzing the potential for reduction in carbon emissions through increased fuel efficiency and provides an illustration of the method.

PD June 1990. **TI** A General Equilibrium Analysis of the Effects of Carbon Emission Restrictions on Economic Growth in a Developing Country. **AU** Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander **AA** Blitzer World Bank. Eckaus: Massachusetts Institute of Technology. Lahiri: University of Lowell. Meeraus: GAMS Development Corporation. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 558; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 44. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 723, 722, 121, 613. **KW** Energy. Pollution. Environment. Environmental Policy.

AB The consequences of environmental damage spread beyond the sectors in which they originate and have repercussions beyond their immediate impact. The same is true of policies designed to deal with environmental traumas. Computable general equilibrium models are particularly appropriate for the analysis of such issues as they make it possible to trace both the consequences of environmental damage and of proposals to deal with these effects. This paper is intended as a demonstration of the potential uses of a multisectoral, intertemporal, programming model embodying significant non-linearities in production and consumption to analyze the effects of environmental policies.

Bloom, David

TI Lawyers as Agents of the Devil in a Prisoner's Dilemma Game. **AU** Ashenfelter, Orley; Bloom, David.

Blough, Stephen R.

PD October 1989. **TI** The Relationship Between Power and Level for Generic Unit Root Tests in Finite Samples. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 232; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 50. **PR** no charge. **JE** 211. **KW** Unit Roots. Spurious Regressions. Stationarity. Finite Samples.

AB In finite samples, any stationary process can be arbitrarily well approximated by near-stationary unit root processes. This continuity implies that a unit root test with high power against some stationary alternative necessarily has high probability of false rejection for nearby unit root processes. However, the same continuity implies that stationary processes and nearby unit root processes need not be distinguished for subsequent inference. This paper demonstrates these theoretical results, and provides Monte Carlo evidence on the tradeoff between power and level for common unit root tests and on the incidence of spurious regressions between pairs of near-stationary processes.

PD March 1990. **TI** Unit Roots, Stationarity, and Persistence in Finite Sample Macroeconometrics. **AA** Johns

Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 241; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 25. **PR** no charge. **JE** 211, 212. **KW** Specification Bias. Unit Roots. Stationarity. Finite Samples.

AB In finite samples, the classes of unit root and stationary processes are not meaningfully distinct. No properties of finite sample estimation and testing, finite horizon forecasting, or discounted infinite horizon forecasting are determined by the presence or absence of a unit root. This paper uses simple continuity arguments to establish these results. It then considers the implications for macroeconomic practice, and finds that the misconception that unit root and stationary processes are distinct classes has led to misleading analysis. For example, "stationary" and "unit root" specifications have been treated as non-nested, with unit root tests or other diagnostics used to choose between them. This practice arbitrarily rules out intermediate specifications, and may introduce serious problems of specification bias.

Blundell, Richard

TI The Working Behaviour of Young People in the Rural Cote D'Ivoire: Evidence from the LSMS Panel. **AU** Alessie, Rob; Baker, Paul; Blundell, Richard; Heady, Christopher; Meghir, Costas.

PD September 1989. **TI** What do We Learn About Consumer Demand Patterns from Micro-Data. **AU** Blundell, Richard; Pashardes, Panos; Weber, Guglielmo. **AA** Blundell and Weber: University College London and the Institute for Fiscal Studies. Pashardes: City University and the Institute for Fiscal Studies. **SR** University College London Discussion Paper: 89-18; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 41. **PR** 2.00 pounds. **JE** 229, 921, 132. **KW** Consumer Demand. Households. Micro-Data. Aggregation.

AB The aim of this paper is to assess the importance of using micro level data in the econometric analysis of consumer demand. To do this we utilize a time series of cross sections covering some 4000 households in each of 15 years. We estimate price and income coefficients from a general demand system and find higher order income terms as well as interactions with demographics and household characteristics to be extremely important. Given these results we are able to draw implications for estimates of consumer preference parameters derived from models using aggregate data. Employing a number of different aggregation procedures we conclude that aggregate data alone are unlikely to produce reliable estimates of price and income coefficients.

PD December 1989. **TI** Unemployment, Discouraged Workers and Female Labour Supply. **AU** Blundell, Richard; Ham, John; Meghir, Costas. **AA** Blundell and Meghir: University College London. Ham: University of Pittsburgh. **SR** University College London Discussion Paper: 90-02; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 48. **PR** 2.00 pounds. **JE** 824, 821. **KW** Labor Supply. Unemployment. Search Models. Discouraged Workers.

AB We develop and implement a model of female labor supply which incorporates both search unemployment and discouraged workers. We show that in an environment with

fixed costs, search costs, permanent lay-offs and a non-zero probability of a job not being available, the standard (two stage budgeting) approach to modelling hours for the employed is appropriate. Moreover, analysis of a simplified model indicates a clear-cut role for demand variables in a participation equation. We derive the likelihood and diagnostics for an empirical model which is a discrete/continuous one along the lines of a multivariate sample selection model. Our approach provides a straightforward means of calculating the separate effect of fixed costs and search costs on the participation decision.

Boadway, Robin

PD January 1990. **TI** Optimal Linear Taxation in Models with Occupational Choice. **AU** Boadway, Robin; Marchand, Maurice; Pestieau, Pierre. **AA** Boadway: Queen's University, Marchand: Universite Catholique de Louvain. Pestieau: Universite de Liege and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9004; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 29. **PR** not available. **JE** 812, 323, 022. **KW** Income Taxes. Taxation. Occupation. Taxes.

AB The purpose of this paper is to investigate the implication of occupational choice for linear income taxation. Occupational choice is restricted to entrepreneurship versus wage earning. Different settings are considered, concerning the introduction of uncertainty and that of individuals' heterogeneity as to ability or risk aversion. For each setting, an optimal tax formula is derived and shown to be made up of various components pertaining to insurance, redistribution and efficiency effects.

Boersch-Supan, Axel

PD April 1990. **TI** Health, Children, and Elderly Living Arrangements: A Multiperiod-Multi-Nomial Probit Model with Unobserved Heterogeneity and Autocorrelated Errors. **AU** Boersch-Supan, Axel; Hajivassiliou, Vassilis; Kotlikoff, Laurence J.; Morris, John N. **AA** Boersch-Supan: University of Mannheim. Hajivassiliou: Yale University. Kotlikoff: Boston University and NBER. Morris: Hebrew Rehabilitation Center for the Aged. **SR** National Bureau of Economic Research Working Paper: 3343; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** \$2.00. **JE** 918, 932, 931, 921. **KW** Elderly. Housing. Aging. Urban Economics. Consumer Economics.

AB This paper develops a general multiperiod-multinomial probit model for panel data to estimate the living arrangements of the elderly. The model has the following features: (a) In each period choices do not necessarily obey the assumption of independence of irrelevant alternatives. (b) Unobserved person-specific attributes are treated as random effects. These random effects may also be correlated across alternatives. (c) In addition, unobserved choice-specific utility components may persist over some time, creating an autoregressive and/or heteroskedastic error structure. The model is estimated by simulating the choice probabilities in the likelihood function. We examine several variants of the specification of the correlation structure and investigate the extent of the biases created by ignoring intertemporal correlations.

Borensztein, Eduardo

PD March 1990. **TI** Valuing Interest Payment Guarantees

on Developing Country Debt. **AU** Borensztein, Eduardo; Pennacchi, George. **AA** Borensztein: International Monetary Fund. Pennacchi: University of Pennsylvania. **SR** International Monetary Fund Working Paper: WP/90/18; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** 441, 121, 433. **KW** Developing Countries. Private Debt. Debt Default. Financial Markets.

AB This paper develops a technique to value guarantees on interest payments on developing country debt, and provides some preliminary estimates of the cost of such guarantees. The cost of interest payment guarantees is not directly observable because a guarantee is a contingent obligation that becomes effective only if the debtor fails to make a certain payment. The strategy adopted in this paper is to estimate the market price that an interest payment guarantee would have if such a contract existed and were traded in financial markets. Using results from option pricing theory it is possible to calculate the price that an "interest guarantee contract" would carry in financial markets on the basis of the price of developing country debt in secondary markets.

Bos, Dieter

PD 1990. **TI** A Principal-Agent Approach on Manager Effort and Control in Privatized and Public Firms. **AU** Bos, Dieter; Peters, Wolfgang. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-252; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 21. **PR** no charge. **JE** 022, 614. **KW** Principal-Agent Model. Public Firms. Firm Theory. Privatization.

AB In Chapter 2, a three-dimensional framework for the treatment of privatized versus public firms was suggested: (a) multiple goals versus one goal; (b) total control versus minimal control; and (c) competition versus monopoly. This chapter addresses the first two questions, comparing a price-setting public and a privatized firm in a principal-agent approach with observable costs. A price-setting public firm and a price-setting private firm are perceived as the starting point and the end point of a privatization activity: the government has sold the firm to the public. Privatization of price-setting firms is the most interesting case for theoretical studies. Privatization of price-setting firms implies a transition from some sort of welfare maximization (low prices) to profit maximization (high prices). To achieve a clear modelling we disregard potential competition and assume that the privatized firm is not regulated. More sophisticated models could allow for both market entry and regulation.

Boughton, James M.

PD June 1990. **TI** Long-Run Money Demand in Large Industrial Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/53; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** not available. **JE** 133, 131, 122, 311, 132. **KW** Money Demand. Demand Function. Economic Fluctuations. Developed Countries. Prices.

AB The reputation of the aggregate demand function for money balances has plummeted since the mid-1970s, owing to the destabilizing effects of financial innovation and deregulation. There is, nonetheless, a renewed effort among economists to uncover stable relationships, a revival that

reflects in part the development of new econometric approaches, especially those related to cointegration and error correction models. This paper examines the long-run properties of money demand functions in the large industrial countries, under the hypothesis that the long-run functions have been stable but that the dynamic adjustment processes are more complex than those represented in most earlier models.

Bovenberg, A. Lans

TI Is There a Need for Harmonizing Capital Income Taxes Within EC Countries. **AU** Tanzi, Vito; Bovenberg, A. Lans.

PD April 1990. **TI** The Integration of Macro and Microeconomic Relations in Dynamic Policy Models: The Case of Saving and Investment Behavior. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/34; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** not available. **JE** 321, 111, 021. **KW** Fiscal Policy. Intertemporal Models. Saving. Investment.

AB This paper examines how two types of fiscal policy models, namely, dynamic macroeconomic models and applied general equilibrium models, have integrated macro- and microeconomic relationships within a framework of intertemporal equilibrium. After emphasizing the potential advantages of integrating macro- and microeconomic relations, the study discusses the limitations of intertemporal equilibrium models -- in particular the weaknesses of saving and investment theories incorporated in the models. It concludes that, despite recent important advances, policymakers need to exercise caution when they interpret results derived from these models.

TI Public Policy and the Environment: A Survey of the Literature. **AU** Muzondo, Timothy R.; Miranda, Kenneth M.; Bovenberg, A. Lans.

PD July 1990. **TI** Economic and Monetary Union in Europe and Constraints on National Budgetary Policies. **AU** Bovenberg, A. Lans; Kremers, Jeroen J. M.; Masson, Paul R. **AA** Bovenberg: Ministry of Economic Affairs, Netherlands. Kremers: Ministry of Finance, Netherlands. Masson: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/60; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** 432, 423, 322, 311. **KW** Monetary Policy. Economic Integration. Federal Budget. Stabilization Program. Europe.

AB This paper reviews the pros and cons of institutionalized constraints limiting the freedom of national budgetary policies within an Economic and Monetary Union (EMU) in Europe. The issue is approached from three angles: the influence of EMU on (i) budget discipline; (ii) intergenerational equity and intertemporal efficiency; and (iii) macroeconomic stabilization. The desirability of constraints on budgetary policy is related to the arrangements for EMU-wide monetary policy, the credibility of a no-bailout clause among member states, and progress in the area of supply side policies.

Bradford, David F.

PD April 1990. **TI** What is National Saving?: Alternative Measures in Historical and International Context. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 3341; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 56. **PR** \$2.00. **JE** 221, 224.

KW National Saving. National Income Accounting. National Wealth.

AB Most discussion of national saving behavior is based on national income account data. This paper lays out some of the main alternative concepts of saving and presents data comparing recent U.S. saving behavior with its own past and with that of other nations. I argue, in particular, that more attention should be paid to measures of national wealth at asset market values. The main empirical contribution is to pull together data from the national balance sheets on wealth at market value compiled for the United States by the Flow of Funds Division of the Board of Governors of the Federal Reserve System (1989) and by various agency sources in three other countries for which market value figures could be found: Japan, and Sweden, and the United Kingdom.

Brams, Steven J.

PD July 1990. **TI** The Box Problem: To Switch or Not to Switch. **AU** Brams, Steven J.; Kilgour, D. Marc. **AA** Brams: New York University. Kilgour: Wilfrid Laurier University. **SR** New York University Economic Research Reports: 90-26; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 15. **PR** no charge. **JE** 026. **KW** Game Theory. Box Problem. Trading.

AB A person P is shown two identical boxes, one of which contains twice as much money as the other. P must choose one box and, after opening it, decide whether to keep this box or exchange it for the other one. The box problem is that a switch would appear always to be profitable, no matter what the box initially chosen contains. However, when a priori probability distributions over the amounts in the two boxes are specified, this is not always the case. Nevertheless, there are both discrete and continuous probability distributions in which a switch is always rational.

PD July 1990. **TI** Unraveling in Exchange Games. **AU** Brams, Steven J.; Kilgour, D. Marc; Davis, Morton D. **AA** Brams: New York University. Kilgour: Wilfrid Laurier University. Davis: City College of New York. **SR** New York University Economic Research Reports: 90-27; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 29. **PR** no charge. **JE** 026. **KW** Game Theory. Exchange Games.

AB Each of two players independently draws a number at random from (0,1). After observing its number, each player can then choose to offer or not offer to exchange its number for the other player's number. A player's payoff is the number it holds after the players have made their choices and a possible exchange has occurred. Four different games, which assume different conditions for an exchange, are analyzed: 1. Both players must offer to exchange for a trade to occur. 2. One player's offer is sufficient for a trade to occur. 3. Both players must offer for a trade to occur with certainty; if only one player offers, a trade occurs with probability p. 4. Same as 1, except the payoff to the loser if a trade occurs is a number between the lower and the higher numbers drawn.

PD July 1990. **TI** Constrained Approval Voting: A Voting System to Elect a Governing Board. **AA** New York University. **SR** New York University Economic Research Reports: 90-28; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New

York, N.Y. 10003. **PG** 26. **PR** no charge. **JE** 025. **KW** Approval Voting. Voting. Social Choice.

AB A voting system is described that was designed for a professional association to ensure the equitable representation of different interests on its governing board. Approval voting, whereby voters can vote for as many candidates as they approve of, or find acceptable, was combined with constraints on the numbers that can be elected from different categories of members. These categories were defined by region and specialty and are illustrated by a 2x3 matrix. The representation problem is how to assign representatives, each with one vote, to the different categories so as to approximate as closely as possible target election figures (TEFs), which give the precise numbers of seats to which each category is entitled.

PD July 1990. **TI** Approval Voting in Practice. **AU** Brams, Steven J.; Nagel, Jack H. **AA** Brams: New York University. Nagel: University of Pennsylvania. **SR** New York University Economic Research Reports: 90-29; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 38. **PR** no charge. **JE** 025, 225. **KW** Approval Voting. Voting Social Choice. Elections.

AB Several leading professional associations have recently decided to use approval voting (AV). The largest of them, The Institute of Electrical and Electronics Engineers, Inc. (IEEE), with more than 300,000 members, adopted AV in response to practical political problems with conventional plurality elections of precisely the sort that AV was designed to solve. This paper analyzes results of the first three multicandidate elections conducted by the IEEE using the new system. Issues examined include participation rates, use of multiple votes, patterns of shared support, majority rule, AV-dominance, effects on outcomes, and encouragement of candidate entry. In general, AV appears to have had a successful test.

TI Arms-Control Inspection Strategies That Induce Compliance: A Game-Theoretic Analysis. **AU** Kilgour, D. Marc; Brams, Steven J.

Brazelon, Coleman

TI LDC Debt and Policy Linkages in the Determination of World Commodity Prices. **AU** Rausser, Gordon C.; Brazelon, Coleman.

Brito, Dagobert L.

PD March 1990. **TI** Pareto Efficient Tax Structures. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E. **AA** Brito: Rice University. Hamilton and Slutsky: University of Florida. Stiglitz: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3288; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** \$2.00. **JE** 323, 022. **KW** Taxation. Income Taxes.

AB Most analyses of optimal income taxation make restrictive technical assumptions on preferences (such as single-crossing) and only derive properties of welfare-maximizing tax schedules. Here, for an economy with any finite numbers of groups and commodities, Pareto efficient tax structures are described assuming only continuity and monotonicity of preferences. Most results follow directly from a property of self-selection: at an optimum, one group will never envy the bundle of another group which pays a larger total tax. The bundle of a group paying the largest total tax is

undistorted. Assuming normality, undistorted outcomes for a group form a connected segment on the constrained utility possibility frontier. The tax structure at distorted outcomes is also described.

PD March 1990. **TI** Randomization in Optimal Income Tax Schedules. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E. **AA** Brito: Rice University. Hamilton and Slutsky: University of Florida. Stiglitz: Stanford University. **SR** National Bureau of Economic Research Working Paper: 3289; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** \$2.00. **JE** 323, 022. **KW** Income Taxes. Taxation.

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

Brown, Charles

PD April 1990. **TI** Wage Levels and Method of Pay. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3336; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** \$2.00. **JE** 824, 821. **KW** Merit Pay. Wages. Labor Market. Piece Rates. Employee Compensation.

AB The traditional research on method of pay and wages compares those paid piece rates with those paid by the hour, and finds (as predicted by the theory) that those paid piece rates earn more. In this paper, those paid by the hour are divided into those paid standard rates (wage does not vary with performance) and those paid by merit pay plans. An extension of the standard theory predicts that those paid piece rates would have the highest earnings, and those paid standard rates the lowest, with merit pay an "in between" status. The evidence, however, from the Industry Wage Surveys is that those under merit pay receive lower wages than those in the other two groups.

PD April 1990. **TI** The Quality Dimension in Army Retention. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3337; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** \$2.00. **JE** 822, 851. **KW** Human Capital. Military. Government Employees. Public Sector. Military Enlistment. Armed Forces.

AB While there has been a great deal of research on the characteristics of those who enter the U.S. Armed Forces, there has been little work which asks whether those who re-enlist are those who were above- or below-average performers. Despite the relatively "egalitarian" (little pay for performance) structure of military compensation, I find that those who do better on tests of proficiency in their military occupation are more likely to re-enlist than those who do worse, and this difference is not primarily due to the Army's unwillingness to allow its worse

performers to re-enlist. In contrast, those with the best scores on the general ability test given prior to enlistment are less likely to re-enlist.

Brown, Scott J.

PD March 1990. **TI** Non-Cointegration and Econometric Evaluation of Models of Regional Shift and Share. **AU** Brown, Scott J.; Coulson, N. Edward; Engle, Robert F. **AA** Brown: San Diego Gas and Electric. Coulson: Pennsylvania State University. Engle: University of California, San Diego. **SR** National Bureau of Economic Research Working Paper: 3291; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** \$2.00. **JE** 611, 132, 941. **KW** Industrial Output. Forecasting. Regional Economics.

AB This paper tests for cointegration between regional output of an industry and national output of the same industry. An equilibrium economic theory is presented to argue for the plausibility of cointegration, however, regional economic forecasting using the shift and share framework often acts as if cointegration does not exist. Data analysis on broad industrial sectors for 20 states finds very little evidence for cointegration. Forecasting models with and without imposing cointegration are than constructed and used to forecast out of sample. The simplest, non-cointegrating models are the best.

Brown, William

PD March 1990. **TI** The Economic Effects of Industrial Relations Legislation Since 1979. **AU** Brown, William; Wadhvani, Sushil. **AA** Brown: University of Cambridge. Wadhvani: London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 376; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 44. **PR** no charge. **JE** 831, 824, 825, 822. **KW** Unions. Industrial Legislation. Labor Productivity. Wages. Public Policy.

AB The industrial relations legislation of the 1980s has been widely credited with having made a major contribution to Britain's economic performance. This study evaluates its actual impact. The costs to trade unions of strike action have increased, but the legislation has had some perverse effects, not least in encouraging unions to tighten up their own organization. Policymakers believed that the legislation would reduce the union wage mark-up, and stimulate employment and productivity in the unionized sector. The evidence suggests that the mark-up remained constant while relative union employment actually fell.

Butier, Willem H.

PD March 1990. **TI** Debt, Deficits and Inflation: An Application to the Public Finances of India. **AU** Butier, Willem H.; Patel, Urjit R. **AA** Yale University. **SR** National Bureau of Economic Research Working Paper: 3287; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 48. **PR** \$2.00. **JE** 121, 133, 134, 321. **KW** Developing Countries. Public Debt. India. Inflation. Seigniorage. Stabilization Policy.

AB The paper studies the solvency of the Indian public sector and the eventual monetization and inflation implied by stabilization of the debt-GNP ratio without any changes in the primary deficit. The non-stationarity of the discounted public

debt suggests that indefinite continuation of the pattern of behavior reflected in the historical discounted debt process is inconsistent with the maintenance of solvency. This message is reinforced by the recent behavior of the debt-GNP ratio and the ratio of primary surplus plus seigniorage to GNP. Our estimates of the base money demand function suggest that even maximal use of seigniorage will not be sufficient to restore solvency.

PD April 1990. **TI** The Welfare Economics of Cooperative and Noncooperative Fiscal Policy. **AU** Butier, Willem H.; Kletzer, Kenneth M. **AA** Yale University. **SR** National Bureau of Economic Research Working Paper: 3329; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** \$2.00. **JE** 321, 024, 443. **KW** Fiscal Policy. Social Welfare Function. Taxes. Public Debt.

AB In a competitive two-country overlapping generations model with perfect capital mobility, a plan that is individually Pareto optimal (that is Pareto optimal with respect to individual preferences) can be sustained without coordination of national fiscal policies when the fiscal arsenal is restricted to lump-sum taxes and government borrowing. Cooperation is required to achieve a Pareto optimum with respect to the two utilitarian national social welfare functions. Cooperation and international side payments are required to achieve an optimum with respect to a utilitarian global social welfare function.

PD April 1990. **TI** Fiscal Policy Interdependence and Efficiency. **AU** Butier, Willem H.; Kletzer, Kenneth M. **AA** Yale University. **SR** National Bureau of Economic Research Working Paper: 3328; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** \$2.00. **JE** 321, 423, 441, 411. **KW** Fiscal Policy. Capital Mobility. International Markets. Economic Integration.

AB This paper uses a two-country overlapping generations model to study the international transmission of fiscal policy among open interdependent economies under free international capital mobility. With only lump-sum taxes and transfers, international transmission involves only pecuniary externalities: barring dynamic inefficiency, only distributional issues (intergenerational and international) are involved. With age-specific taxes and transfers, the ability to run deficits and issue debt does not enhance the choice set of the governments. Source-based taxes on the rentals from capital and residence-based taxes on all property income are also studied.

PD May 1990. **TI** Fiscal Policy Interdependence and Efficiency. **AU** Butier, Willem H.; Kletzer, Kenneth M. **AA** Yale University. **SR** Centre for Economic Policy Research Discussion Paper: 419; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 50. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 441, 411, 024, 111. **KW** Fiscal Policy. Policy Coordination. Capital Mobility.

AB This paper uses a two-country overlapping generations model to study the international transmission of fiscal policy among open interdependent economies under free international capital mobility. With only lump-sum taxes and transfers, international transmission involves only pecuniary externalities: barring dynamic inefficiency, only distributional issues (intergenerational and international) are involved. With age-specific taxes and transfers, the ability to run deficits and

issue debt does not enhance the choice set of the governments. Source-based taxes on the rentals from capital and residence-based taxes on all property income are also studied.

PD May 1990. **TI** Reflections on the Fiscal Implications of a Common Currency. **AU** Buitier, Willem H.; Kletzer, Kenneth M. **AA** Yale University. **SR** Centre for Economic Policy Research Discussion Paper: 418; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 34. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 423, 432, 321, 431. **KW** Exchange Rates. Economic Integration. Policy Coordination.

AB This paper studies the likely consequences of monetary unification among the EC members for the conduct of fiscal policy in the EC countries (and by an emerging Federal European Fiscal Authority). Among the conclusions are the following. If the Eurofed is to be independent, the external exchange rate policy of the EC should be assigned to the Eurofed and not to the fiscal authorities. Effective (as opposed to formal) independence of the Eurofed is going to be very difficult to achieve. Coordinated upper ceilings on national public sector financial deficits are unnecessary and probably undesirable. Coordination of national public expenditure policies, tax policies and borrowing policies is in principle desirable for both efficiency and distributional reasons. The empirical models required for a serious welfare analysis of fiscal policy coordination do not yet exist.

PD June 1990. **TI** The Welfare Economics of Cooperative and Non-cooperative Fiscal Policy. **AU** Buitier, Willem H.; Kletzer, Kenneth M. **AA** Yale University. **SR** Centre for Economic Policy Research Discussion Paper: 420; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 50. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 441, 411, 024, 111. **KW** Policy Coordination. Fiscal Policy. Social Welfare.

AB In a competitive two-country overlapping generations model with perfect capital mobility, a plan that is individually Pareto optimal (that is Pareto optimal with respect to individual preferences) can be sustained without coordination of national fiscal policies where the fiscal arsenal is restricted to lump-sum taxes and government borrowing. Cooperation is required to achieve a Pareto optimum with respect to the two utilitarian national social welfare functions. Cooperation and international side payments are required to achieve an optimum with respect to a utilitarian global social welfare function.

Burton, David

PD April 1990. **TI** Economic Reform and the Demand for Money in China. **AU** Burton, David; Ha, Jiming. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/42; International Monetary Fund, Washington, DC 20431. **PG** 21. **PR** not available. **JE** 223, 131, 134, 227. **KW** Inflation. Money Demand. Expectations. Economic Fluctuations.

AB Error correction models of the demand for a range of monetary aggregates in China are estimated with quarterly data for the period 1983-88. The estimated models fit the data reasonably well and appear to be relatively stable. Money demand is found to be sensitive to changes in expected inflation. In the case of currency, demand increases in the short term in response to an increase in expected inflation even

though there is a fall in demand in the long run. A "cash-in-advance" explanation for this response pattern is suggested. It is also argued that the estimation results taken as a whole provide indirect evidence against the existence of substantial repressed inflation in China during the sample period.

Butcher, Kristin F.

PD August 1990. **TI** Black Immigrants to the United States: A Comparison with Native Blacks and Other Immigrants. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 268; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 38. **PR** \$1.50. **JE** 823, 917, 821. **KW** Blacks. Immigration. Labor Mobility. Discrimination. Minorities. Migration.

AB Immigrant blacks have largely been ignored, both in discussions about racial discrimination and about the assimilation of immigrants. In analyzing immigrant blacks, Sowell (1978) claims to have evidence that it is not discrimination that is responsible for the poor labor market success of native blacks, but rather their "cultural traditions". Using the 1980 Census, I find that while immigrant blacks are more likely to be employed, their wages are not different conditional on employment. To the extent that there are differences, further investigation reveals that it is the selection processes associated with migration, and not cultural traditions which account for the differences between natives and immigrants. Finally, I find that black immigrants do not have similar "assimilation" patterns to white immigrants, and there is evidence that there has been a recent decline in the quality of the immigrant cohorts.

Caballero, Ricardo J.

TI Kinked Adjustment Costs and Aggregate Dynamics. **AU** Bertola, Giuseppe; Caballero, Ricardo J.

PD February 1990. **TI** Externalities and Cyclical Factor Productivity. **AU** Caballero, Ricardo J.; Lyons, Richard K. **AA** Caballero: Columbia University. Lyons: Columbia University and National Bureau of Economic Research. **SR** Columbia Department of Economics Working Paper: 467; Department of Economics, Columbia University, New York, New York 10027. **PG** 19. **PR** \$5.00. **JE** 226, 631, 133. **KW** Productivity. Procyclical. Manufacturing. External Economies.

AB This paper presents evidence that external effects play a key role in accounting for the procyclicality of the "Solow residual". According to our estimates, if all manufacturing industries simultaneously raise their inputs by 10% (given the relative price of oil), aggregate manufacturing value added rises by 13%, of which about 3% is due to external economies.

PD April 1990. **TI** Earnings Uncertainty, Precautionary Savings and Aggregate Wealth Accumulation. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 472; Department of Economics, Columbia University, New York, New York 10027. **PG** 21. **PR** \$5.00. **JE** 224, 921, 023. **KW** Savings. Wealth. Life Cycle Theory. Consumer Theory.

AB This paper argues that precautionary savings due to earnings (uninsurable) uncertainty could be an important source of aggregate wealth accumulation. Indeed, levels of wealth above sixty percent of the observed net wealth in the U.S. are easily generated by the stylized model presented in this

paper. These results are net of conventional life cycle savings.

PD May 1990. **TI** Dynamic (S, s) Economies: Aggregation, Heterogeneity and Coordination. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A. **AA** Caballero: Columbia University. Engel: CIEPLAN and Universidad de Chile. **SR** Columbia Department of Economics Working Paper: 476; Department of Economics, Columbia University, New York, New York 10027. **PG** 21. **PR** \$5.00. **JE** 021, 022. **KW** Aggregate Shocks. Technology. Returns to Scale. Microeconomics.

AB Infrequent one sided action is a common feature of many realistic models of microeconomic behavior in the presence of lumpiness or increasing returns to the adjustment technology. Examples include deciding when to adjust the inventory stock, when to change prices or when to use a new technology. Up to now, research on the aggregate consequences of such behavior has been limited to the case in which all units are similar, the cross section distribution is at the steady state, and only one source of shocks is present. In this paper we extend these models to a dynamic (out of steady state) framework. Units are affected by structural and stochastic idiosyncrasies and face small (continuous) and large (finite) aggregate shocks. We study the relation between the response of the economy to aggregate stimuli and the degree of endogenous coordination of units' actions. We determine necessary and sufficient conditions for the existence of a steady state and study the speed at which this steady state is achieved.

PD May 1990. **TI** A Fallacy of Composition. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 479; Department of Economics, Columbia University, New York, New York 10027. **PG** 20. **PR** \$5.00. **JE** 036, 023. **KW** Heterogeneity. Representative Agent. Macroeconomics. Aggregation.

AB The representative agent framework has endowed macroeconomists with powerful; microeconomic tools. Unfortunately, it has also blurred the distinction between statements that are valid at the individual level from those that apply to the aggregate. Probability theory puts strong restrictions on the joint behavior of a large number of units that are less than fully synchronized; many fallacies arise from disregarding these restrictions.

PD June 1990. **TI** External Effects and Europe's Integration. **AU** Caballero, Ricardo J.; Lyons, Richard K. **AA** Caballero: Columbia University. Lyons: Columbia University and National Bureau of Economic Research. **SR** Columbia Department of Economics Working Paper: 486; Department of Economics, Columbia University, New York, New York 10027. **PG** 20. **PR** \$5.00. **JE** 423, 411. **KW** Economic Integration. External Economies. Europe.

AB The objective of this paper is to bring greater relevance vis-a-vis the issue of European economic integration to our previous work on external economies [Caballero and Lyons (1989, 1990a, 1990b)]. These papers present strong evidence of external economies in both the US and Europe. The external effect estimated in those papers is a country-specific, inter-industry external effect: an industry is able to generate more real output for a given level of inputs when other industries within that country are at higher production levels. Here we extend the previous approach to study whether cross-country intra-industry externalities, which are clearly crucial in assessing the gains expected from 1992, are present. Based on preliminary evidence, our answer to this question is mildly

affirmative.

TI Irreversibility and Aggregate Investment. **AU** Bertola, Giuseppe; Caballero, Ricardo J.

TI Reserves and Realignments in a Target Zone. **AU** Bertola, Giuseppe; Caballero, Ricardo J.

Calvo, Guillermo A.

PD March 1990. **TI** The Perils of Sterilization. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/13; International Monetary Fund, Washington, DC 20431. **PG** 5. **PR** not available. **JE** 431, 441, 411. **KW** Stabilization Policy. Capital Flows. Prices.

AB The paper argues that the sterilization of capital inflows at the start of a price stabilization program may give rise to future pressures to discontinue the program as a result of the unduly high debt service burden that the sterilization policy may generate.

PD March 1990. **TI** Interest Rate Targeting in a Small Open Economy: The Predetermined Exchange Rates Case. **AU** Calvo, Guillermo A.; Vegh, Carlos A. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/21; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** 411, 431. **KW** Interest Rates. Exchange Rates. Open Economy. International Trade Theory.

AB An important hurdle in analyzing interest rate targeting is that standard models usually lead to price level or inflation rate indeterminacy. This paper develops a simple framework in which such problems do not arise because the bonds whose interest rate is controlled provide liquidity services. This framework is used to examine interest rate targeting in a small open economy under predetermined exchange rates. A permanent increase in the interest rate has no real effects. In contrast, a temporary increase in the interest rate leads to higher consumption and to a current account deficit that worsens over time.

Campbell, John Y.

PD March 1990. **TI** Measuring the Persistence of Expected Returns. **AA** London School of Economics. **SR** National Bureau of Economic Research Working Paper: 3305; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 12. **PR** \$2.00. **JE** 131, 313, 132. **KW** Stock Returns. Dividends. Stock Market.

AB This paper summarizes earlier research on the sources of variation in monthly U.S. stock returns in the period 1927-88. A log-linear model is used to break unexpected returns into changing expectations about future dividends and changing expectations about future returns. Even though stock returns are not highly forecastable, the model attributes one-third of the variation in returns to changing expected returns, one-third to changing future dividends, and one-third to the covariance between these components. Changing expected returns have a large effect on the stock market because their movements are persistent and negatively correlated with changing expected dividends.

PD August 1990. **TI** No News is Good News: An Asymmetric Model of Changing Volatility in Stock Returns. **AU** Campbell, John Y.; Hentschel, Ludger. **AA** Princeton

University. **SR** Princeton Financial Research Center Memorandum: 118; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 51. **PR** \$3.00 domestic; \$6.00 foreign. **JE** 313, 311. **KW** Stock Returns. Volatility. Stock Market. GARCH Model.

AB It is sometimes argued that an increase in stock market volatility raises required stock returns, and thus lowers stock prices. This paper modifies the generalized autoregressive conditionally heteroscedastic (GARCH) model of returns to allow for this volatility feedback effect. The resulting model is asymmetric, because volatility feedback amplifies large negative stock returns and dampens large positive returns, making stock returns negatively skewed and increasing the potential for large crashes. The model also implies that volatility feedback is more important when volatility is high. In U.S. monthly and daily data in the period 1926-88, the asymmetric model fits the data better than the standard GARCH model, accounting for almost half the skewness and excess kurtosis of standard monthly GARCH residuals.

Card, David

PD April 1990. **TI** Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States. **AU** Card, David; Krueger, Alan B. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 265; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 68. **PR** \$2.00. **JE** 851, 824. **KW** Education. School Quality. Human Capital.

AB This paper estimates the effects of school quality -- measured by the pupil-teacher ratio, the average term length, and the relative pay of teachers -- on the rate of return to education for men born between 1920 and 1949. Using earnings data from the 1980 Census, we find that men who were educated in states with higher quality schools have a higher return to additional years of schooling, holding constant their current state of residence, their state of birth, the average return to education in the region where they currently reside, and other factors. A decrease in the pupil-teacher ratio from 30 to 25, for example, is associated with a 0.4 percentage point increase in the rate of return to education.

PD September 1990. **TI** School Quality and Black/White Relative Earnings: A Direct Assessment. **AU** Card, David; Krueger, Alan B. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 272; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 75. **PR** \$2.00. **JE** 824, 851, 917. **KW** Education. Wage Differential. Segregation. Discrimination.

AB Between 1960 and 1980 the gap in earnings between black and white males narrowed by 15 percent. A detailed analysis of 1960, 1970 and 1980 Census data indicates that increases in the relative return to education were largely responsible for black workers' relative earnings gains. One explanation for these higher returns is that they reflect the market valuation of higher-quality schooling available to later cohorts of black students. To investigate the role of school quality in the convergence of black and white earnings, we have assembled data on three aspects of school quality -- pupil/teacher ratios, annual teacher pay, and term length -- for black and white schools in 18 segregated states from 1915 to 1966. The school quality data are then linked to estimated rates

of return to education for men from different cohorts and states.

PD September 1990. **TI** Intertemporal Labor Supply: An Assessment. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 269; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 50. **PR** \$1.50. **JE** 821, 023. **KW** Labor Supply. Intertemporal Substitution. Panel Data. Life Cycle Model.

AB The lifecycle supply model has been proposed as an explanation for various dimensions of labor supply, including movements over the business cycle, changes with age, and within person variation over time. According to the model, all of these elements are tied together by a combination of intertemporal substitution effects and wealth effects. This paper offers an assessment of the model's ability to explain the main components of labor supply, focusing on microeconomic evidence for men.

Cass, David

PD February 1990. **TI** Convexity and Sunspots: A Remark. **AU** Cass, David; Polemarchakis, Heraklis M. **AA** Cass: University of Pennsylvania. Polemarchakis: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9017; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 9. **PR** not available. **JE** 021, 022. **KW** Competitive Equilibrium. Equilibrium Allocation. Sunspots.

AB Economies in which competitive equilibrium allocations are optimal and individual preferences are strictly convex are immune to sunspots: this is so even in the presence of non-convexities in production.

PD May 1990. **TI** Real Indeterminacy from Imperfect Financial Markets: Two Addenda. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and Social Sciences (CARESS) Working Paper: 90-11; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 25. **PR** no charge. **JE** 021. **KW** Financial Markets. Competitive Equilibrium. Walrasian Model.

AB Recently there has been a great deal of interest in examining the properties of competitive equilibrium with incomplete -- or, more generally, imperfect -- financial markets. An important branch of this research has focused on the fact that, in such economies, there is typically a large degree of price or nominal indeterminacy -- over and above that essentially analogous to choosing a numeraire in the standard Walrasian model -- which also translates into allocation or real indeterminacy. The purpose of this paper is to present two distinct analyses that are basically responses to criticism of this latter development.

Chadha, Bankim

PD May 1990. **TI** Wages, Profitability, and Growth in a Small Open Economy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/45; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** 226, 411, 121. **KW** Open Economy. Growth Model. Public Policy. Singapore.

AB This paper examines issues raised by the evolution of a rapidly growing small open economy--Singapore--from a labor intensive, low-technology production base to a capital-intensive, high-technology, knowledge-and-skill-intensive emphasis as it approached the limits of its resource constraints in the labor market. In order to analyze the process of restructuring a model of endogenous growth for a small open economy that is driven by increases in labor productivity from learning and that allows for the dynamic acquisition of comparative advantage is developed. In this framework the effects of various policies and exogenous shocks on the direction and pace of restructuring are investigated.

Chaloupka, Frank J.

PD February 1990. **TI** Men, Women, and Addiction: The Case of Cigarette Smoking. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3267; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 921. **KW** Cigarettes. Tobacco. Addiction. Consumer Economics. **AB** Cigarette demand equations, derived from the Becker-Murphy model of rational addictive behavior, are estimated separately for men and women. These demand equations account for the reinforcement, tolerance, and withdrawal factors characterizing addictive consumption. Results obtained from these demand equations support the hypothesis that cigarette smoking is an addictive behavior. Particularly interesting are the findings that men are responsive to changes in the price of cigarettes, with a long run price elasticity centered on -0.60, while women are virtually unresponsive to price changes. Men, however, are found to behave more myopically than women.

PD February 1990. **TI** Rational Addictive Behavior and Cigarette Smoking. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3268; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** \$2.00. **JE** 921. **KW** Tobacco. Cigarettes. Addiction. Consumption.

AB After a discussion of cigarette smoking in the context of the Becker-Murphy (1988) model of rational addictive behavior, demand equations are derived accounting for the tolerance, reinforcement, and withdrawal characteristic of addictive consumption. These are contrasted to equations developed under the competing hypotheses that smoking is not addictive or that cigarettes are addictive but individuals behave myopically. The demand equations are estimated using adults interviewed as part of the Second National Health and Nutrition Examination Survey. Estimates support the assumptions that cigarette smoking is an addictive behavior and that individuals do not behave myopically.

Chan, K. C.

PD March 1990. **TI** Risk and Return on Real Estate: Evidence from Equity REITs. **AU** Chan, K. C.; Hendershott, Patric H.; Sanders, Anthony B. **AA** Ohio State University. **SR** National Bureau of Economic Research Working Paper: 3311; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** \$2.00. **JE** 313, 931. **KW** Real Estate. Stock Market. Investment Trust. Arbitrage Pricing Model.

AB We analyze monthly returns on an equally-weighted

index of 18-23 equity (real property) real estate investment trusts (REITs) that were traded on major stock exchanges over the 1973-87 period. We employ a multifactor Arbitrage Pricing Model using prespecified macroeconomic factors. We also test whether equity REIT returns are related to changes in the discount on closed-end stock funds, which seems plausible given the closed-end nature of REITs. Three factors, and the percentage change in the discount on closed-end stock funds, consistently drive equity REIT returns: unexpected inflation and changes in the risk and term structures of interest rates.

Chander, Parkash

PD January 1990. **TI** Exchange Processes, the Core and Competitive Allocations. **AU** Chander, Parkash; Tulkens, Henry. **AA** Chander: Indian Statistical Institute, New Delhi. Tulkens: CORE and Facultes Universitaires Saint-Louis, Bruxelles. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9003; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 19. **PR** not available. **JE** 021, 213. **KW** Exchange Economy. Endowment. Core. Competitive Equilibrium.

AB The purpose of this paper is to discuss whether for a pure exchange economy some MDP-type process can be shown to converge from the initial endowments to an allocation in the core. Such a process is exhibited which has this property, at least in the case of economies with quasi-linear utilities. The process is also of the nature of a "non-tatonnement", in the sense that it involves prices. This recourse to prices is shown to be due to the "replicable" nature of the process. With those prices, the core allocation to which it converges is also a competitive equilibrium.

Chari, V. V.

TI Sustainable Plans and Mutual Default. **AU** Kehoe, Patrick J.; Chari, V. V.

Chichilinsky, Graciela

PD April 1990. **TI** The Mathematical Foundations of Political Economy. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 473; Department of Economics, Columbia University, New York, New York 10027. **PG** 12. **PR** \$5.00. **JE** 053, 021. **KW** Democracy. Political Systems. General Equilibrium Theory.

AB Political systems and disciplinary areas survive and prosper if they have strong theoretical foundations. This is true both for political systems in the real world, and for the theories which sustain them. Theory is essential to any discipline, and mathematics provides a solid foundation to build on, and a sound basis for debate. Mathematics need not impose artificial quantitative techniques: logics and qualitative mathematical tools have been shown to be well suited to qualitative issues in economics. The concepts of markets and democracy are being rapidly embraced throughout the world today. Political economists should set up the research agenda and methodology on these concepts. Among the main issues are; the relationship between democracy and markets; alternative models of markets, in which the hypothesis of perfect market behavior is preserved but the market environment is more general and flexible; and mixed economies, where voluntary policies interact with market responses.

PD May 1990. **TI** Recent Developments in Topological

Social Choice. AA Columbia University. SR Columbia Department of Economics Working Paper: 475; Department of Economics, Columbia University, New York, New York 10027. PG 20. PR \$5.00. JE 025. KW Social Choice. Topology. Calculus.

AB Recent papers by M. Le Breton, R. Uriarte, N. Baigent and P. Huang make interesting comments on some of my theorems in Social Choice and on other results following this approach. At issue is the formulation of Social Choice problems in a continuous fashion so that they are amenable to the use of calculus and of topology.

PD May 1990. TI Global Models and North-South Relations. AA Columbia University. SR Columbia Department of Economics Working Paper: 474; Department of Economics, Columbia University, New York, New York 10027. PG 15. PR \$5.00. JE 113, 112, 411, 422, 421. KW Resource Economics. Global Modeling. Trade Theory. Developing Countries. Public Policy. Economic Development.

AB Global modeling has evolved remarkably in the last two decades. Such evolution led global modeling to perform today's role as an experimental laboratory for the social sciences, and particularly for applications to policy planning. Two of the most interesting applications to policy are to resource economics and to economic models of North-South Relations, i.e., the relationships between industrial and developing countries. Examples of North-South Policy issues instigated by global modeling are developed in the third section. This is in the context of a United Nations model of technology and North-South relations which evolved from the Bariloche global model. Further applications of global modeling are outlined in the final section.

Chick, Victoria

PD November 1989. TI The Evolution of the Banking System and the Theory of Monetary Policy. AA University College London. SR University College London Discussion Paper: 89-03; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PG 18. PR 2.00 pounds. JE 312, 311, 431. KW Central Bank. Commercial Banks. Banking. Monetary Policy. Interest Rate. Exchange Rate.

AB The transmission mechanism of monetary policy is usually discussed as a purely theoretical matter, independently of institutional context. The present paper traces the co-evolution of monetary policy and banking practice in Britain. A long-term trend from concern for banks' liquidity to concern for their solvency is discerned, as banks have taken advantage of the results of central bank protection from liquidity crises. The Keynesian focus on a transmission of monetary policy through the interest rate to investment is seen to be, for Britain, an aberration: the chief objective of British monetary policy has more usually been to influence, through the interest rate, the exchange rate - as it is again, today.

Cho, Jong-Ok

PD May 1988. TI Employment and Hours Over the Business Cycle. AU Cho, Jong-Ok; Cooley, Thomas F. AA University of Rochester. SR University of Rochester Center for Research in Government Policy and Business Working Paper: BC 88-03; Graduate School of Management, University of Rochester, Rochester, NY 14627. PG 40. PR not available. JE 133, 824, 821. KW Business Cycle. Employment. Labor Supply.

AB Approximately one quarter of the adjustment in total hours of employment over the business cycle represents adjustments in hours while the remainder is explained by changes in employment. Real Business Cycle theories based on representative agent models have abstracted from these facts by characterizing agents as either continuously adjusting their hours or making only labor force participation decisions about jobs with indivisible hours. In this paper we extend the representative agent framework in a way that is more in the spirit of the modern labor supply literature; workers decide on both participation and hours. The special feature of our model is that agents are assumed to have a fixed cost associated with labor supply that may depend on individual or aggregate variables, in our example the employment rate.

Choudhry, Nurun N.

PD May 1990. TI Fiscal Revenue and Inflationary Finance. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/48; International Monetary Fund, Washington, DC 20431. PG 29. PR not available. JE 134, 322, 323. KW Inflation. Government Revenue. Fiscal Deficit. Budget Deficit.

AB This paper analyzes the erosion of fiscal revenue by inflation resulting from the issuance of money. The empirical evidence for a number of developing countries supports the well-known hypothesis that an increase in inflation will result in a fall in real fiscal revenue because of collection lags, thereby possibly widening the fiscal deficit. As such, attempts to generate resources to finance government expenditures via the inflation tax will involve a loss in other revenues, making this form of taxation even less desirable.

Christ, Carl F.

PD July 1990. TI When is Free Banking More Stable Than Regulated Banking?. AA Johns Hopkins University. SR Johns Hopkins Department of Political Economy Working Paper: 250; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. PG 29. PR no charge. JE 312, 311, 131. KW Banking. Commercial Banks. Government Regulation. Central Bank. Economic Fluctuations. Bank Failures.

AB This paper presents a model of an open economy with free banking, and asks what features of free banking permit its advocates to say that it is more stable than regulated banking, both with respect to inflation and with respect to bank runs, failures, and panics. Free banking is defined as a system in which private banks can issue not only deposits but also paper bank notes convertible into gold or other high powered money. The model presented here shows how the price level, the money stock, and money income respond to changes in important factors such as the economy's productive capacity, banks' risk avoidance, private behavior with respect to the demand for money, and the determinants of the high powered money stock.

Christiano, Lawrence J.

TI The Output, Employment, and Interest Rate Effects of Government Consumption. AU Aiyagari, S. Rao; Christiano, Lawrence J.; Eichenbaum, Martin.

Chu, Ke-young

TI Fiscal Policy, Labor Markets, and the Poor. AU Blejer,

Mario I.; Chu, Ke-young.

Claessens, Stijn

PD April 1990. TI Secondary Market Prices Under Alternative Debt Reduction Strategies: An Option Pricing Approach with an Application to Mexico. AU Claessens, Stijn; van Wijnbergen, Sweder. AA The World Bank. SR Centre for Economic Policy Research Discussion Paper: 415; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 23. PR 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. JE 433, 121. KW Debt Market. Option Pricing. Debt Restructuring. Foreign Exchange.

AB We present a pricing model for secondary market debt designed to assess the impact of debt reduction on valuation of remaining claims and to value guarantees in various forms. The technique used, option pricing, accounts explicitly for the sources and natures of risks on secondary market pricing and of the market value of various forms of guarantees. The method can handle different maturity schedules, expectations regarding foreign exchange availability and willingness to pay, and differences in seniority. The method is applied to an analysis and evaluation of the recent Mexico debt restructuring package.

Clark, John

PD February 1990. TI The Evaluation of Debt Exchanges. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/9; International Monetary Fund, Washington, DC 20431. PG 43. PR not available. JE 313, 433. KW Private Debt. Debt Instruments.

AB An approach is presented for analyzing debt-for-debt exchanges from the perspective of the exchange's impact on the country's contractual obligations and from the perspective of the creditors whose participation is sought. A general model is developed for valuing partially guaranteed debt instruments and an intuitive motivation is suggested for upper and lower bounds on the valuation of instruments carrying specific as well as rolling guarantees. An appendix presents several easily employed rules of thumb which have been suggested in the literature for valuing collateralized instruments and for estimating the possible net debt reduction achievable through their issuance.

Coate, Stephen

TI The Economics of Rotating Savings and Credit Associations. AU Besley, Timothy; Coate, Stephen; Loury, Glenn C.

Collins, Scott C.

TI Entry, Contestability, and Deregulated Airline Markets: An Event Study Analysis of People Express. AU Whinston, Michael D.; Collins, Scott C.

Conyon, M.

PD October 1989. TI Profit Determination in UK Manufacturing. AU Conyon, M.; Machin, S. AA Conyon: University of Warwick. Machin: University College London. SR University College London Discussion Paper: 89-20; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PG 22. PR 2.00 pounds. JE 611, 824, 831, 631. KW Profitability. Labor Market. Manufacturing. Unemployment. Unions.

AB This paper examines the determinants of profitability in 90 U.K. manufacturing industries over the period 1983-86. It considers the importance of labor market characteristics in determining profits and how their inclusion in a profitability equation affects the concentration-margins relationship. The empirical work also pays detailed attention to the endogenous nature of variables derived from structural Industrial Organization models and we report instrumental variables estimates of profitability equations in which there is a significant role for labor market characteristics. Indeed, both unionization and unemployment are found to depress profit margins. The impact of concentration on profitability is seen to be biased downwards when these variables are not considered.

Cooley, Thomas F.

TI Employment and Hours Over the Business Cycle. AU Cho, Jong-Ok; Cooley, Thomas F.

Cornelius, Peter K.

PD March 1990. TI Monetary Indexation and Revenues from Money Creation: The Case of Iceland. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/20; International Monetary Fund, Washington, DC 20431. PG 27. PR not available. JE 311, 121, 322. KW Inflation. Government Revenue. Fiscal Deficits. Public Finance. Monetary Policy.

AB This paper discusses the effects of monetary indexation on revenues from monetization in Iceland. The paper starts by showing that monetization revenues fell sharply after indexation was introduced in 1979 and evaluates the different and partly ambiguous factors behind this development. The fiscal consequences are then examined in light of the fact that revenues from monetization have traditionally made up a substantial part of Government revenues in Iceland. Different policy options are simulated using the framework of the public finance approach to inflation. The simulations focus on the relation of fiscal deficits to inflation, output growth, and internal and external debt.

Cottarelli, Carlo

PD April 1990. TI The Risk Premium on Italian Government Debt, 1976-88. AU Cottarelli, Carlo; Mecagni, Mauro. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/38; International Monetary Fund, Washington, DC 20431. PG 32. PR not available. JE 311, 313, 321. KW Bonds. Italy. Public Finance. Yield Differential.

AB This paper considers the behavior of the yield differential between government and nongovernment bonds in Italy between 1976 and 1988. It is shown that the trend increase of the differential observed in this period was significantly influenced by the deterioration of public finances, as reflected both by an increase in the relative supply of government with respect to nongovernment paper and by a worsening of selected default risk indicators. In addition, the effect of relative supply factors was found to be statistically more robust and quantitatively more important than the effect of risk indicators in explaining the movements of the yield differential.

Coulson, N. Edward

TI Non-Cointegration and Econometric Evaluation of Models of Regional Shift and Share. AU Brown, Scott J.; Coulson, N. Edward; Engle, Robert F.

Cremer, Jacques

TI Incentives and the Existence of Pareto-Optimal Revelation Mechanisms. **AU** d'Aspremont, Claude; Cremer, Jacques; Gerard-Varet, Louis-Andre.

Currie, Janet

TI An Experimental Comparison of Dispute Rates in Alternative Arbitration Systems. **AU** Ashenfelter, Orley; Currie, Janet; Farber, Henry S.; Spiegel, Mathew.

Cutler, David M.

PD May 1990. **TI** An Aging Society: Opportunity or Challenge?. **AU** Cutler, David M.; Poterba James M.; Sheiner, Louise M.; Summers, Lawrence H. **AA** Cutler and Poterba: Massachusetts Institute of Technology. Sheiner and Summers: Harvard University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 553; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 54. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 918, 826, 841, 915. **KW** Labor Force. Demographics. Aging. Elderly. Savings. Capital. Social Security.

AB The American population and that of the industrialized world is aging rapidly. The suggestion is commonly made that increases in saving are necessary to prepare for increases in future dependency. This paper argues to the contrary that demographic change represents as much of a macroeconomic opportunity as a challenge, and that ceteris paribus, the appropriate policy response to recent and projected demographic change is a reduction in national saving. However, demographic changes are not nearly large enough to justify the sharp decline in U.S. national saving during the 1980s.

d'Aspremont, Claude

PD February 1990. **TI** Incentives and the Existence of Pareto-Optimal Revelation Mechanisms. **AU** d'Aspremont, Claude; Cremer, Jacques; Gerard-Varet, Louis-Andre. **AA** d'Aspremont: CORE. Cremer: Virginia Polytechnic Institute and State University. Gerard-Varet: GREQE, Ecole des Hautes Etudes en Sciences Sociales. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9015; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 23. **PR** not available. **JE** 022, 213. **KW** Incentive Compatible. Pareto Optimal. Bayesian Mechanism.

AB From the characterization of strongly and Bayesian incentive compatible Pareto optimal mechanisms with transferable utilities, we derive the following results. If there are only two types per individual then a strongly incentive compatible Pareto optimal mechanism exists. If there are only two individuals (with more than three types) then there are sets of beliefs (open in the class of all beliefs) for which no Bayesian incentive compatible Pareto optimal mechanism exists. If there are more than two individuals then the class of beliefs for which such mechanisms exist is open and dense in the class of all beliefs.

Davis, Lance E.

PD May 1990. **TI** Risk Sharing, Crew Quality, Labor Shares and Wages in the Nineteenth Century American Whaling Industry. **AU** Davis, Lance E.; Gallman, Robert E.; Hutchings, Teresa D. **AA** Davis: California Institute of

Technology. Gallman: University of North Carolina. Hutchings: Ramapo College of New Jersey. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 13; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 83. **PR** \$2.00. **JE** 042, 832, 824, 812. **KW** Wages. Contracts. Fringe Benefits. Whaling. Fisherman.

AB This paper examines 36,640 labor contracts signed between whalers and the agents who organized 1,258 whaling voyages that departed from New Bedford, Massachusetts between January 1, 1840 and December 31, 1858 and between January 1 and December 31, 1866. The contracts contain information on the whaler's station (occupation) and on his lay (the fraction of output of the voyage that he was entitled to receive upon completion). The paper investigates the benefits associated with this unique contract, examines the occupational and spatial distribution of lays, and compares wages in whaling with those available in the merchant marine and those earned in shore based pursuits. It also attempts to assess the efficiency of this early labor market and to explore the relationship between the labor contract, crew quality, technical change, and productivity.

Davis, Morton D.

TI Unraveling in Exchange Games. **AU** Brams, Steven J.; Kilgour, D. Marc; Davis, Morton D.

de Bartolome, Charles A. M.

PD July 1990. **TI** The Inequity of an Efficient Indirect Tax Structure. **AA** New York University. **SR** New York University Economic Research Reports: 90-32; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 24. **PR** no charge. **JE** 024, 022, 323, 921. **KW** Indirect Taxes. Households. Productivity. Social Welfare Function.

AB Households differ only in their productivities, and household demands may be exactly aggregated. The indirect tax structure which minimizes the aggregate excess burden (efficiency) is the same indirect tax structure which maximizes a Bergson-Samuelson social welfare function. I show that the implicit social weight of a household increases (decreases) as the productivity of the household increases, if leisure is a normal (inferior) good. I develop further necessary conditions on the social welfare function, if household demands may be linearly aggregated.

de Gorter, Harry

PD June 1990. **TI** Commodity Policy and Underinvestment in Agricultural Research. **AU** de Gorter, Harry; Nielson, David; Rausser, Gordon C. **AA** de Gorter: Cornell University. Nielson and Rausser: University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 539; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 14. **PR** \$5.00. **JE** 713, 715, 712. **KW** Agricultural Policy. Agricultural Subsidies. Agriculture.

AB This paper examines the joint determination of public policies which provide agricultural research and those which provide subsidies to farmers. The paper suggests that the puzzlingly consistent finding of "underinvestment" in

agricultural research may be related to the inseparability of these two types of policies in the policy choice problem.

de Melo, Jaime

PD June 1990. TI Industrial Organization and Trade Liberalization: Evidence from Korea. AU de Melo, Jaime; Roland-Holst, David. AA de Melo: The World Bank. Roland-Holst: Mills College. SR Centre for Economic Policy Research Discussion Paper: 399; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 29. PR 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. JE 421, 422, 616. KW Industrial Organization. Returns to Scale. Welfare Costs. Korea. Tariffs. Protectionism.

AB Based on evidence about industrial organization and market structure, this paper develops a CGE model with increasing returns to scale (IRTS) in selected industrial sectors in order to estimate the welfare gains Korea would achieve from abolishing the import restraints (tariffs and equivalent measures) prevailing in 1982. Under constant returns (CRTS) across the board, welfare gains are estimated at 1% of GDP. With IRTS in three industrial sectors, welfare gain estimates range from -0.5% to 10% of 1982 GDP, depending on the assumptions concerning price setting behavior and profit levels that existed under protection.

PD June 1990. TI Industrial Policy in the Presence of Wage Distortions: The Case of the US Auto and Steel Industries. AU de Melo, Jaime; Tarr, David. AA The World Bank. SR Centre for Economic Policy Research Discussion Paper: 435; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 30. PR 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. JE 824, 831, 422. KW Protectionism. Wage Premium. Unions. Trade Policy.

AB This paper examines the welfare effects of protection in two sectors characterized by high wage premia, autos and steel, to determine if protection is justified to correct for the labor misallocation due to wage premia. If wage premia are exogenous, under most product market structures, labor misallocation is too small to justify protection. More importantly, we argue that due to union influence in autos and steel, the wage premium is endogenous. If this is the case, then wage premia may even exacerbate the welfare costs of protection.

Del Boca, Daniela

PD April 1990. TI The Effect of Child Custody and Support Arrangements on the Welfare of Children and Parents. AU Del Boca, Daniela; Flinn, Christopher. AA Del Boca: Politecnico di Milano. Flinn: New York University. SR New York University Economic Research Reports: 90-16; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 54. PR no charge. JE 916, 921. KW Child Support. Child Custody. Divorce. Households. Consumer Economics.

AB Under functional form assumptions regarding the preferences of divorced parents, estimates of behavioral parameters are obtained from information on compliance with child support orders. The data utilized are from the Wisconsin Child Support Experiment, and are collected from administrative records containing information on the characteristics of parents at the time of divorce, settlements,

and subsequent compliance with orders. Our behavioral models perform relatively well in explaining observed compliance data. In the second part of the analysis, we investigate the correspondence between observed child custody and support orders and those which are optimal under maintained assumptions regarding the objectives of institutional actors who play a role in determining settlements.

Demekas, Dimitri G.

PD April 1990. TI Labor Market Segmentation in a Two-Sector Model of an Open Economy. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/33; International Monetary Fund, Washington, DC 20431. PG 15. PR not available. JE 411, 821, 431. KW Open Economy. Labor Market. Exchange Rates. Unemployment.

AB The paper examines formally the effects of labor market segmentation in a two sector open economy model. The model demonstrates how the structure of the labor market affects the real exchange rate, defined as the relative price of traded and home goods, and is then used to examine the effects of two common labor market policies: increasing the degree of primary market coverage, and implementing wage restraint in the primary market. It is shown that increasing the degree of primary market coverage increases unemployment and leads to a real appreciation. Real wage restraint in the primary market, on the other hand, reduces unemployment, and has ambiguous but probably small effects on the real exchange rate.

PD April 1990. TI Equilibria with Unemployment in Segmented Labor Markets. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/32; International Monetary Fund, Washington, DC 20431. PG 16. PR not available. JE 824, 821. KW Labor Market. Reservation Wage. Unemployment.

AB The paper proves four theorems in an n-sector model of a segmented labor market, with search costs, and a continuum of workers with different reservation wages, who can apply to any number of sectors. The main conclusions are that: (i) an equilibrium with unemployment always exists; and (ii) some of the unemployment is involuntary, in the sense that it consists of workers with reservation wages below the equilibrium wage in the secondary market. These conclusions hold in the case of both separate and non-separate markets.

Detemple, J.

PD February 1990. TI The Relevance of Financial Policy. AU Detemple, J.; Gottardi, Pi; Polemarchakis, Heraklis M. AA Detemple: Columbia University. Gottardi: Trinity College, Cambridge. Polemarchakis: Universite Catholique de Louvain and Columbia University. SR Universite Catholique de Louvain CORE Discussion Paper: 9011; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 24. PR not available. JE 313, 311, 021. KW Asset Market. Financial Policy. Options. Monetary Policy. Equilibrium Allocation.

AB When the asset market is incomplete, equilibrium allocations are not invariant to changes in the financial policies of firms: in the presence of secondary assets, such as options, whose payoffs depend nonlinearly on the price of equity, the range of attainable reallocations of revenue varies as a firm alters its position in the asset market. Corporate financial policy is thus relevant. When assets are nominal, monetary policy

implemented through open market operations is effective.

Detragiache, Enrica

PD March 1989. **TI** Signaling Through Default in the Market for Sovereign Loans. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 225; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 48. **PR** no charge. **JE** 443, 411. **KW** Public Debt. Sovereign Debt. Debt Repayment. Debt Default.

AB The paper studies the effects of asymmetric information in the market for foreign borrowing by a sovereign country. It is shown that when lenders cannot determine how much a country is willing to repay, loans that are not expected to be fully serviced will generally be extended. Repayment decisions are affected both by the extent of available sanctions and by the effects of the information that they reveal on future borrowing terms. Equilibria in which lenders offer forgiveness in exchange for a partial repayment, and equilibria in which no concessions are made and some borrowers completely repudiate can both arise for different parameter values.

PD August 1989. **TI** Optimal Growth for a Credit Constrained Economy. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 231; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 36. **PR** no charge. **JE** 443, 431, 121, 111. **KW** Credit Constraints. Open Economy. Developing Countries. Public Debt. Debt Crisis.

AB The paper tries to explain why highly indebted LDCs are experiencing a reduction in investment and growth since the onset of the "Debt Crisis". To this end, a credit ceiling that prevents sovereign debt repudiation is introduced in the standard optimal growth problem for a small open economy. It is shown that if the rate of time preference exceeds the world interest rate there is a unique optimal path. This path converges to a steady-state in which the credit constraint is binding, so that the economy is in a regime of no capital mobility. At the time the ceiling becomes binding, there is a drop in the rate of investment. Convergence to the steady-state is achieved through a reduction in the capital/labor ratio and in output per capita.

Dhrymes, Phoebus J.

PD February 1990. **TI** Specification Tests in Simultaneous Equation Systems. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 468; Department of Economics, Columbia University, New York, New York 10027. **PG** 44. **PR** \$5.00. **JE** 211. **KW** Simultaneous Equations. Identification. Linear Model. Specification Tests. Least Squares. Lagrange Multiplier.

AB This paper discusses a new procedure for carrying out identifiability and specification tests in the context of 2SLS and 3SLS estimation. Such procedures become routinely possible by a reformulation of the theory of simultaneous equations estimation so that 2SLS and 3SLS are represented as restricted least squares and restricted generalized (Aitken) estimators, respectively. In the context thus created, specification tests are Lagrange Multiplier (LM) test on a subset of a priori restrictions, which can be falsified without violating the identifiability of the equation in question. Following the custom of the literature, we define identification tests to be Lagrange multiplier tests on the entire set of a priori restrictions.

Dick, Andrew R.

PD August 1990. **TI** Are Government or Private Enterprises More Likely to Engage in Predation? Some International Evidence From Dumping Cases. **AU** Dick, Andrew R.; Lott, John R., Jr. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 600; Department of Economics, University of California, Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 27. **PR** \$2.50. **JE** 614, 612, 124. **KW** Predation. Dumping. Public Enterprises. Centrally Planned Economies. Public Policy.

AB Our paper attempts to provide the first systematic evidence of predation by government enterprises. The empirical evidence confirms the theory that government enterprises face higher returns to engaging in predation than do private enterprises. The economic importance of the effect is quite large. Between 43 and 94 percent of the initiated dumping cases and 54 to 100 percent of the affirmative dumping cases against firms from nonmarket economies can be explained simply by those firms being from nonmarket countries. These results are strengthened when we control either for politically motivated investigations arising from military conflict, or for firms in nonmarket economies competing against domestic producers who were particularly well protected from competition.

PD September 1990. **TI** Are Export Cartels Efficiency-Enhancing or Monopoly-Promoting?. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 601; Department of Economics, University of California, Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 39. **PR** \$2.50. **JE** 422, 612, 631. **KW** Export Cartels. Trade Policy. Webb-Pomerene Act. Exports. Cartels. Commercial Policy.

AB This paper seeks to distinguish between monopoly and efficiency explanations for export cartels by studying the evidence on Webb-Pomerene associations in the United States between 1918 and 1970. I estimate reduced form export supply and world export demand equations for 16 commodities over this period. The regression results are used to determine whether industry prices and outputs during cartel episodes differed significantly from those when firms exported independently. Export cooperation is found to have lowered prices and increased export volumes for 6 of the 16 commodities. On average, these products' export prices were 9.8% lower during cartel episodes, and their export volumes were 106.4% larger.

Dickens, William T.

PD March 1990. **TI** Does it Matter What We Trade? Trade and Industrial Policies When Labor Markets Don't Clear. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3285; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 14. **PR** \$2.00. **JE** 823, 822, 824, 821. **KW** Labor Mobility. Public Policy. Employment. Industrial Policy. Trade Policy. Wages.

AB If the payment of efficiency wages results in inter-industry wage differences for comparable workers there exist welfare enhancing industrial and trade policies which shift employment from low to high wage industries. Previous attempts to measure the potential impact of such policies have assumed that wages equal the VMRPL, but not all explanations

for inter-industry wage differences have that property. This paper argues from the evidence on inter-industry wage differences that rent-sharing/extraction models should be preferred to other explanations. However, such models do not all have the property that wages equal the VMRPL. In the model presented VMRPL is set equal to the opportunity cost of labor, so policies to shift employment to high wage industries would be of no value.

Diebold, Francis X.

PD March 1990. **TI** On the Power of Dickey-Fuller Tests Against Fractional Alternatives. **AU** Diebold, Francis X.; Rudebusch, Glenn D. **AA** Diebold: University of Pennsylvania. Rudebusch: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 119; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 13. **PR** no charge. **JE** 211. **KW** Unit Roots. Dickey-Fuller Test. Time Series. **AB** Empirical studies have been generally unable to reject the null hypothesis of a single autoregressive unit root for a variety of macroeconomic time series. In contrast, recent work, such as Diebold and Rudebusch (1989), has provided empirical support for fractionally integrated representations without a unit root. To reconcile these two results, we examine the properties of a variety of unit root tests against fractionally integrated alternatives, and find, in particular, that the conventional Dickey-Fuller test has quite low power.

Dixon, Huw

PD July 1986. **TI** Unions, Oligopoly and Macroeconomic Policy: A Simple Two-Sector Model. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/5; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 39. **PR** not available. **JE** 023, 321. **KW** Macroeconomics. Imperfect Competition. Fiscal Policy. Unemployment. Oligopoly. **AB** A simple two-sector general equilibrium macromodel is presented with oligopolistic price determination in the product market, and a unionized labor market. Macroeconomic equilibrium is a two stage perfect equilibrium: in the first stage unions set the nominal wage, and in the second stage firms choose outputs given wages. By altering the balance of fiscal policy between the two sectors, the government can achieve a continuum of aggregate employment levels - the Natural Range of Employment. A unique Natural Rate will occur only if we require fiscal policy to be the same in both sectors. This indicates that the Natural Rate property of some single or representative sector macromodels (Dixon (1986), Nickell and Layard (1985)) is a special case.

PD April 1987. **TI** Imperfect Competition, the Multiplier, and the Non-Neutrality of Money: An Example in the Spirit of Hart. **AA** Birkbeck College and Essex University. **SR** Birkbeck College Discussion Papers in Economics: 87/13; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 17. **PR** not available. **JE** 824, 822, 821, 311, 023. **KW** Unemployment. Unemployment Benefits. Unions. Macroeconomic Model. Imperfect Competition.

AB This paper provides a simple example of a multi-sector unionized economy with equilibrium unemployment, and for which monetary policy has a standard Keynesian multiplier. In equilibrium, unions choose a wage which is a fixed markup

over the nominal unemployment benefit level, which can lead to unemployment even when benefits are below the market clearing wage, resulting in endogenously fixed nominal wages and prices. In the long-run the government can restore full employment by monetary expansion or a cut in benefits: in the short-run however, monetary expansion is a superior policy instrument for Rawlesian or Utilitarian Governments. There is a continuum of employment levels attainable by macroeconomic policy, and this Natural Range is larger when labor markets are less competitive.

PD August 1988. **TI** Competition and Efficiency: An Overview. **AU** Dixon, Huw; Manning, Alan. **AA** Dixon: Essex University. Manning: Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 89/1; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 39. **PR** not available. **JE** 612, 611, 022. **KW** Competition. Productive Efficiency. External Markets. Firm Theory. Efficiency.

AB This paper explores the linkages that exist between external markets and the productive efficiency of the firm. We look at a number of different models that have been used to examine this link: S-efficiency, principal-agent models, strategic investment models, models of delegation union bargaining models and models of strategic choice of organization. The main conclusion is that although it is likely that there is a link between competition and efficiency, it is unlikely to be simple, and there is no reason to believe that an increase in competition will necessarily increase efficiency.

Dominguez, Kathryn

PD March 1990. **TI** Does Foreign Exchange Intervention Matter? Disentangling the Portfolio and Expectations Effects for the Mark. **AU** Dominguez, Kathryn; Frankel, Jeffrey A. **AA** Dominguez: Harvard University. Frankel: University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3299; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** \$2.00. **JE** 431. **KW** Foreign Exchange. Exchange Rate. Portfolios.

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

Donaldson, R. Glen

PD May 1990. **TI** Psychological Barriers in Asset Prices, Rationality and the Efficient Market Hypothesis. **AA** Princeton University. **SR** Princeton Financial Research Center Memorandum: 114; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 33. **PR** \$3.00 domestic; \$6.00 foreign. **JE** 313, 311. **KW** Efficient Markets. Rational Expectations. Asset Pricing. Bubbles. Fads. Stock Market. Stock Prices.

AB This paper develops a model-free test of the popular hypothesis that "economic agents rationally select and process information" by searching to see if there is any rationally irrelevant information in asset prices themselves that helps to explain observed market behavior. Results produced reveal that stock prices generally rise and fall by less than an efficient market would rationally predict when the Dow Jones Industrial Average is expected to cross a 00 point 'resistance level' (e.g. 2100, 2200, 2300, etc.) and, in those cases when a 00 barrier is successfully broken, that the rate of change in all stock prices is usually greater than rationally expected. This discovery that a piece of rationally irrelevant information (i.e. proximity to a Dow 00 level) can reduce the rational forecast error calls into question the widely maintained Efficient Market Hypothesis.

PD June 1990. **TI** International Evidence on Psychological Barriers in Asset Prices and the Efficient Market Hypothesis. **AA** Princeton University. **SR** Princeton Financial Research Center Memorandum: 116; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 27. **PR** \$3.00 domestic; \$6.00 foreign. **JE** 313, 311. **KW** Efficient Markets. Rational Expectations. Asset Pricing. Stock Market. Stock Prices.

AB The Efficient Market Hypothesis states that only rationally relevant information can influence asset prices. International data reveal, however, that traders are hesitant to push popularly tracked stock indexes across a 00 "resistance level" (e.g. 2100, 2200, 2300, etc.) but then, in those cases when a 00 "psychological barrier" is successfully broken, that the rate of change in stock prices is usually greater than one would rationally expect in an efficient market. This suggests that rationally irrelevant information - proximity to an arbitrary "reference point" - is being incorporated into asset prices and thus implies a rejection of the Efficient Market Hypothesis.

Dongwook, Kim

TI Tenure Choice of American Youth. **AU** Haurin, Donald R.; Hendershott, Patric H.; Dongwook, Kim.

Dooley, Michael D.

PD April 1990. **TI** A Note on Debt Reduction and Economic Efficiency. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/36; International Monetary Fund, Washington, DC 20431. **PG** 6. **PR** not available. **JE** 441, 433. **KW** Government Investment. Debt.

AB This note examines the efficiency gains that might result from market-based debt reduction and alternative uses of resources. It is argued that when a country's expected output falls short of contractual claims on that output, private investment is drawn to activities that protect the investors' share of future output at the expense of activities that increase future output. Resources provided by a third party could reduce this gap through market-based debt reduction or by supporting government investment or consumption. Given considerable uncertainty about the efficiency returns of alternative uses of resources, it seems likely that an optimal strategy would include both debt reduction and government investment.

PD April 1990. **TI** Policy Inconsistency and External Debt Service. **AU** Dooley, Michael D.; Svensson, Lars E. O. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/35; International

Monetary Fund, Washington, DC 20431. **PG** 9. **PR** not available. **JE** 441, 433, 432. **KW** Debt Service. Debt. Investment.

AB In this paper it is argued that the willingness of debtors to make external debt service payments reflects, in part, their inability to credibly and permanently suspend debt service. The benefits of a credible debt service suspension would include increased private investment. But this would, in turn, tend to create conditions in which it would then be optimal for the government to resume payments. Thus, debt remains a threat even after the announcement of suspension of debt service. It follows that the expected benefits of such a suspension are limited and may be offset by penalties imposed by creditors.

Dornbusch, Rudiger

PD March 1990. **TI** From Stabilization to Growth. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3302; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** \$2.00. **JE** 121, 111, 133. **KW** Growth Model. Stabilization Policy. Latin America. Developing Countries.

AB The 1980s were a lost decade for Latin America; will the 1990s also be lost? For some countries stabilization has not even started. In other countries the stabilization accomplishments remain tentative and vulnerable. And even those countries that have established firmly a new path for their economic management are still waiting for economic growth to return. The hardest part of stabilization is the transition to growth. Even with major adjustment efforts in place, growth does not resume spontaneously. If the lack of recovery is due to a coordination failure then market forces cannot resolve the difficulty; a mechanism must be found to bring about the coordination.

Drees, Burkhard

PD April 1990. **TI** The Risk of Financial Assets and the Volatility of their Equilibrium Prices when Agents have Non-Time-Separable Preferences. **AU** Drees, Burkhard; Eckwert, Bernhard. **AA** Drees: Texas A&M University. Eckwert: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-285; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 17. **PR** no charge. **JE** 313, 311, 022. **KW** Asset Pricing Model. Financial Assets. Asset Prices. Preferences. Consumption.

AB The relationship between risk and asset price fluctuations is studied in a stochastic overlapping generations asset pricing model with i.i.d. production shocks. The non-separability of preferences is an important factor in explaining the time paths of asset prices and returns. We show that the impact of current consumption on the relative degree of risk aversion in the future period is crucial for the correlation between nominal share prices and output shocks, and for the way how in equilibrium the volatility of asset prices is related to risk. In particular, if higher current consumption makes the agent more risk averse in the future, then the market prices risk in such a way that a risky asset exhibits less price volatility than a relatively safe one.

Dreze, Jacques H.

PD March 1990. **TI** Stability of a Keynesian Adjustment

Process. AA Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9021; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 37. PR not available. JE 022, 023, 213. KW Prices. Price Adjustment. Factors of Production. Macroeconomic Model.

AB The paper studies the stability of an adjustment process on prices and quantities that converges in finitely many steps to an equilibrium admitting excess supply of (some) factors of production. The finite convergence results from the fact that the leading adjustments are finite, and the equilibrium concept allows for epsilon discrepancies between transacted input levels and those required by technology. The excess supply of factors of production at the equilibrium is associated with downward rigidities of nominal factor prices. These rigidities are best understood as reflecting non-competitive supply behavior by owners of the production factors.

Duffee, Gregory R.

PD March 1990. TI The Importance of Market Psychology in the Determination of Stock Market Volatility. AA Board of Governors of the Federal Reserve System. SR Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 115; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. PG 27. PR no charge. JE 313, 311, 132. KW Stock Market. Volatility. Expectations. Stock Prices.

AB I model a stock market in which investors' beliefs about the volatility of the market are self-fulfilling. If today's investors believe the market will be stable in the future, they view stocks as a low risk investment. This belief results in a stable market today as investors willingly absorb today's supply shocks. Hence the confidence of today's investors depends on their expectations of the confidence of future investors. Exogenous shocks to investor confidence lead to time-varying stock market volatility. The distinction between this model and training coordination models (Pagano 1986, 1989, Admati and Pfleiderer 1988) is that this model focuses on investors' expectations of future stock market volatility rather than their expectations of current stock market volatility (when their initial trade is executed).

Duffie, Darrell

PD March 1990. TI Simulated Moments Estimation of Markov Models of Asset Prices. AU Duffie, Darrell; Singleton, Kenneth J. AA Stanford University. SR National Bureau of Economic Research Technical Paper: 87; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 42. PR \$2.00. JE 211, 212, 313. KW Markov Process. Asset Pricing Model. Method of Moments. Dynamic Model.

AB This paper provides a simulated moments estimator (SME) of the parameters of dynamic models in which the state vector follows a time-homogeneous Markov process. Conditions are provided for both weak and strong consistency as well as asymptotic normality. Various tradeoffs among the regularity conditions underlying the large sample properties of the SME are discussed in the context of an asset pricing model.

Durlauf, Steven N.

TI Testing the Positive Theory of Government Finance. AU Bizer, David S.; Durlauf, Steven N.

Dutta, Jayasri

PD January 1990. TI What Do Heteroskedasticity Tests Detect. AU Dutta, Jayasri; Zaman, Asad. AA Dutta: Columbia University and Katholieke Universiteit Leuven. Zaman: Columbia University. SR Universite Catholique de Louvain CORE Discussion Paper: 9022; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 40. PR not available. JE 211. KW Heteroskedasticity. Exact Tests.

AB A test can be said to "detect" an alternative hypothesis only if its power against this alternative 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: a class of exact tests, where the test statistic writes as a ratio of quadratic forms; and a class of tests based on projections, which are asymptotically distributed as chi-squared. We show that for each test, there exist many kinds of heteroskedasticity which the tests fails to detect. Using a technique due to Pitman, we construct a test which detects all kinds of heteroskedasticity in the normal model.

PD March 1990. TI Investment and the Aggregation of Risks. AU Dutta, Jayasri; Polemarchakis, Heraklis M. AA Dutta: Columbia University. Polemarchakis: Universite Catholique de Louvain. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-283; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 23. PR no charge. JE 021, 313, 522, 511. KW Assets. Investment Functions. Aggregate Risk. Competitive Equilibrium.

AB A competitive equilibrium may preserve, even magnify, firm-specific risks in the aggregate. This is the case if firms can anticipate their productivities when they make investment decisions or, alternatively, if capital can be reallocated once the productivities of firms are realized. In a large economy, output is serially correlated and the real rate of interest varies countercyclically. On the contrary, in a large economy without anticipation or shiftable investment, a competitive equilibrium is essentially riskless.

PD March 1990. TI Investment and the Aggregation of Risks. AU Dutta, Jayasri; Polemarchakis, Heraklis M. AA Dutta: Columbia University and Katholieke Universiteit Leuven. Polemarchakis: Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9020; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 23. PR not available. JE 021, 023, 026. KW Competitive Equilibrium. Investment. Capital. Output.

AB A competitive equilibrium may preserve, even magnify, firm-specific risks in the aggregate. This is the case if firms can anticipate their productivities when they make investment decisions, or, alternatively, if capital can be reallocated once the productivities of firms are realized. In a large economy, output is serially correlated and the real rate of interest varies countercyclically. On the contrary, in a large economy without anticipation or shiftable investment, a competitive equilibrium is essentially riskless.

Dutta, Jaysri

PD February 1990. TI Asset Pricing and Observability. AU Dutta, Jaysri; Polemarchakis, Heraklis M. AA Dutta:

Katholieke Universiteit Leuven, and Columbia University. Polemarchakis: Columbia University and Universit Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9010; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 32. **PR** not available. **JE** 021, 311, 313. **KW** Exchange Economy. Asset Prices. Asset Pricing Model. Portfolio.

AB We consider observable restrictions on asset prices in an exchange economy with general preferences and endowments and an asset structure that may be incomplete. Asset prices satisfy the martingale property with respect to a class of probability measures; however, generically, not with respect to the empirical measure. Attainable assets are priced at their expected payoffs with a correction for covariance with a benchmark return. This benchmark is a complete description of attitudes towards risk in the asset market. There is a unique portfolio of marketed assets that yields the benchmark return. For attainable assets, the Capital Asset Pricing Model holds with respect to the return of a portfolio of marketed assets that is essentially unique.

Dutta, Prajit K.

PD May 1990. **TI** Innovation and Product Differentiation. **AU** Dutta, Prajit K.; Lach, Saul; Rustichini, Aldo. **AA** Dutta: Columbia University. Lach: Hebrew University. Rustichini: Northwestern University. **SR** Columbia Department of Economics Working Paper: 484; Department of Economics, Columbia University, New York, New York 10027. **PG** 34. **PR** \$5.00. **JE** 621, 112, 611, 022. **KW** Innovation. Economic Development. Duopoly. Differentiated Products.

AB Economic theory has primarily viewed an innovation as a single, discontinuous change. Historical and empirical evidence, on the other hand, shows that a major part of economic development has come from an accumulation of small improvements to original technologies and quality additions to early products. We focus analysis on competition in the post-discovery phase, emphasizing in particular that a key dimension to this competition is the innovations that lead to product differentiation and quality improvement. In a duopoly model with a single adoption choice, we derive endogenously the level and diversity of product innovations. We demonstrate the existence of equilibria in which firms emerge at different points of the quality spectrum.

PD May 1990. **TI** Stochastic Games of Resource Allocation: Existence Theorems for Discounted and Undiscounted Models. **AU** Dutta, Prajit K.; Sundaram, Rangarajan K. **AA** Dutta: Columbia University. Sundaram: University of Rochester. **SR** Columbia Department of Economics Working Paper: 483; Department of Economics, Columbia University, New York, New York 10027. **PG** 34. **PR** \$5.00. **JE** 022, 021. **KW** Resource Allocation. Growth Model. Neoclassical Model.

AB The canonical paradigm for the study of dynamic resource allocation in economic theory, the neoclassical growth model under possible production uncertainty, is extended in this paper to a strategic framework by modelling it as a stochastic game. For a very general specification of the problem, we establish the existence of stationary Markov equilibria in pure (non-randomized) strategies for the discounted game. We then show that, under a boundedness condition, as the discount factor tends to unity, the limit of

discounted equilibrium strategies is a pure strategy stationary Markovian equilibrium of the undiscounted game with payoffs evaluated according to the long-run average criterion. The last result is of special interest as there are no available existence results for undiscounted stochastic games and in well-known examples, the limit discounting equilibria are not equilibria in the undiscounted game.

Ebrill, Liam P.

PD March 1990. **TI** Social Security, Demographic Trends, and the Federal Budget. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/14; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** not available. **JE** 915, 323. **KW** Social Security. Aging. Elderly. Government Spending. Federal Budget.

AB This paper considers the implications of the prospective aging of the U.S. population for the social security system and concludes that the large and growing cashflow surpluses of the social security trust funds should be saved to help insulate living standards against this change. A number of illustrative scenarios are presented in which the impact of pursuing this policy is analyzed within the context of a growth model incorporating the demographic projections of the Social Security Administration. If the current unified budget framework, which includes Social Security trust fund flows, is retained, the suggested policy would require that fiscal surpluses be achieved.

Eckaus, Richard S.

TI The Potential for Reducing Carbon Emission from Increased Efficiency: A General Equilibrium Methodology. **AU** Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander.

TI A General Equilibrium Analysis of the Effects of Carbon Emission Restrictions on Economic Growth in a Developing Country. **AU** Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander

Eckwert, Bernhard

TI The Risk of Financial Assets and the Volatility of their Equilibrium Prices when Agents have Non-Time-Separable Preferences. **AU** Drees, Burkhard; Eckwert, Bernhard.

Edison, Hali J.

PD May 1990. **TI** Foreign Currency Operations: An Annotated Bibliography. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 380; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 46. **PR** no charge. **JE** 431, 432. **KW** Foreign Currency. Foreign Exchange. Exchange Rates. Exchange Markets.

AB This paper is an annotated bibliography of recent research on foreign exchange market intervention. Most of the paper is devoted to empirical studies of the effectiveness of intervention. The paper describes the analytical framework within which most of this research has been conducted. Researchers have identified two principal channels through which sterilized intervention has its effects: the portfolio balance channel and the expectations or signalling channel.

Edwards, Alejandra Cox

TI Labor Market Distortions and Structural Adjustments in Developing Countries. **AU** Edwards, Sebastian; Edwards, Alejandra Cox.

Edwards, Sebastian

PD May 1990. **TI** Labor Market Distortions and Structural Adjustments in Developing Countries. **AU** Edwards, Sebastian; Edwards, Alejandra Cox. **AA** Edwards, S.: University of California, Los Angeles. Edwards, A.: California State University, Long Beach. **SR** National Bureau of Economic Research Working Paper: 3346; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 45. **PR** \$2.00. **JE** 821, 411, 023. **KW** Employment. Unemployment. Trade Policy. Capital Controls.

AB The purpose of this paper is to provide a typology of different labor market configurations and investigate how two major structural adjustment policies, namely a trade liberalization reform and the relaxation of capital controls, affect the level of aggregate employment and the rate of unemployment. We consider a number of models starting from the traditional Australian approach. We then analyze a multiple sectors intertemporal setting and a model with uncertainty and search. We identify situations under which structural adjustment results in unemployment.

PD May 1990. **TI** On Uniform Import Tariffs in Developing Countries. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 3347; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** \$2.00. **JE** 411. **KW** Tariffs. Commercial Policy. Trade Theory.

AB The purpose of this paper is to theoretically assess, from a welfare perspective, the desirability of uniform import tariffs. Since the eruption of the debt crisis, many proposals for structural reforms in the developing countries have contemplated a trade liberalization process that would create a low and uniform tariff structure. In this paper I review the literature on the subject and construct a general equilibrium model to evaluate the consequences of alternative structural adjustment policies. Throughout the analysis it is assumed that labor markets and nontradables markets are subject to some distortions.

Eichenbaum, Martin

TI The Output, Employment, and Interest Rate Effects of Government Consumption. **AU** Aiyagari, S. Rao; Christiano, Lawrence J.; Eichenbaum, Martin.

Eichengreen, Barry

PD June 1988. **TI** Settling Defaults in the Era of Bond Finance. **AU** Eichengreen, Barry; Portes, Richard. **AA** Eichengreen: University of California, Berkeley. Portes: Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/8; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 43. **PR** not available. **JE** 433, 441, 443, 411. **KW** International Debt. Sovereign Borrowing. Debt Default. Debt Crisis.

AB We scrutinize two strands of received wisdom about debt crises: that which draws a strong contrast between the 1930s

and 1980s in extent of default and ease of settlement, and that which attributes the difference to greater government involvement today. We consider a number of additional factors influencing the ease of settlement: (i) institutional features of the lending process, including the extent of overlap between creditors extending long-term loans and those responsible for export finance; (ii) institutional features of the settlement process, including bilateral negotiations between borrowing governments and bondholders' representative committees, as well as repurchases of existing liabilities by the debtor at market prices; and (iii) the role of national divisions within the creditor community, at both the bondholder and the government levels.

TI Foreign Lending in the Interwar Years: The Bondholders' Perspective. **AU** Portes, Richard; Eichengreen, Barry.

PD June 1990. **TI** Before Accord: U.S. Monetary-Financial Policy 1945-51. **AU** Eichengreen, Barry; Garber, Peter M. **AA** Eichengreen: University of California, Berkeley. Garber: Brown University. **SR** University of California at Berkeley Working Paper in Economics: 90-144; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 51. **PR** \$3.50. **JE** 311. **KW** Monetary Policy. Interest Rates. Target Zones.

AB The 1951 Treasury-Federal Reserve Accord brought to a close an extraordinary period in the monetary and financial history of the United States. This paper analyzes U.S. monetary-financial policy in the period leading up to the March 1951 Treasury-Fed Accord. Our point of departure is Friedman and Schwartz's notion that policy in this period was formulated with reference to a price-level target. As soon as the price level deviated sufficiently from its target range policymakers were expected to intervene to prevent it from straying further. We draw on the recent literature on exchange rate target zones and collapsing exchange rate regimes to formalize this notion and to show how its implications for interest rate behavior can be derived.

PD June 1990. **TI** The Financial System and the Economic Crisis of the Interwar Years. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-142; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 25. **PR** \$3.50. **JE** 041, 311, 432, 312. **KW** Great Depression. Banking. Financial Markets.

AB Never have events in financial markets had such profound implications for the course of economic events as during the interwar years. The 1920's was a decade of rapid change in the structure and conduct of domestic and international financial relations. The economic crisis of the 1930's then laid bare the connections between the financial system and the rest of the economy. It is hard to think of another period when financial innovation was so rapid yet so inadequately managed, when financial instability was so prevalent, and when financial crisis had such devastating macroeconomic effects. In this paper I describe the principal developments in financial markets between the wars and trace their links with the macroeconomic crisis of the 1930's.

PD June 1990. **TI** The Impact of Permanent and Temporary Import Surcharges on the U.S. Trade Deficit. **AU** Eichengreen, Barry; Goulder, Lawrence H. **AA** Eichengreen: University of California, Berkeley and NBER. Goulder: Stanford University and NBER. **SR** University of California at Berkeley Working Paper in

Economics: 90-145; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. PG 58. PR \$3.50. JE 422, 431, 411. KW Trade Deficit. Import Surcharges. Tariffs. Quotas. Trade Theory.

AB This paper uses analytical and simulation models to study the impact of temporary and permanent import surcharges on the U.S. balance of trade. The analytical model of a two country, two commodity, two period endowment economy brings out the intersectoral and intertemporal substitution effects generated by import surcharges. This model shows that the trade balance impact of these initiatives is ambiguous in sign even under restrictive assumptions. We therefore apply a simulation model to gauge the effects under realistic values for parameters. The simulation model differs from others that have analyzed import surcharges in combining sectoral disaggregation with an integrated treatment of current and capital account transactions. The combination is made possible by the model's attention to both intra and intertemporal aspects of household and producer decisions.

PD July 1990. **TI** Trends and Cycles in Foreign Lending. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-146; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. PG 43. PR \$3.50. JE 041, 441, 411. **KW** Foreign Lending. Capital Movements. Capital Flow. Capital Mobility.

AB Over the past century, the world economy has passed through a succession of phases characterized by very different levels of international capital flows. This paper asks what accounts for these dramatic shifts in the extent of capital movements across national borders. Three categories of explanation are considered. The first emphasizes the operation of the international gold standard. The second focuses on the stages-of-indebtedness sometimes thought to characterize the process of economic development. The third ascribes changes in the extent of capital flows to the boom-and-bust cycles through which international capital markets are thought to pass. Though each approach contributes something to our understanding of the phenomenon, none is totally satisfactory. I therefore suggest an alternative explanation, which lays stress on the increase in the magnitude of real interest rate and real exchange rate variability that has occurred over the last 100 years.

PD July 1990. **TI** Relaxing the External Constraint: Europe in the 1930's. **AA** University of California at Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-147; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. PG 46. PR \$3.50. JE 431, 311. **KW** Exchange Rates. Depreciation. Monetary Policy.

AB This paper documents the effects of exchange rates and the external constraint during the interwar years. In the absence of international policy coordination, exchange rate depreciation is shown to have been a necessary precondition for the adoption of policies promoting recovery from the Great Depression. But currency depreciation was not without cost. It increased the variability of nominal exchange rates and rendered them increasingly difficult to predict. Increased variability and uncertainty about nominal exchange rates carried over to short-term changes in real exchange rates as well. Thus, exchange rate variability appears to have introduced additional noise into the operation of the price mechanism.

PD August 1990. **TI** Trends and Cycles in Foreign Lending. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3411; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 29. PR \$2.00. JE 441, 431. **KW** Capital Flows. Capital Mobility. Capital Markets. Exchange Rates. International Investment.

AB Over the past century, the world economy has passed through a succession of phases characterized by very different levels of international capital flows. This paper asks what accounts for these dramatic shifts in the extent of capital movements across national borders. Three categories of explanation are considered. The first emphasizes the policy regime, attributing the unusual extent of capital flows prior to 1914 to the operation of the international gold standard. The second focuses on the stages-of-indebtedness sometimes thought to characterize the process of economic development. The third ascribes changes in the extent of capital flows to the boom-and-bust cycles through which international capital markets are thought to pass. I suggest an alternative explanation, which lays stress on the increase in the magnitude of real interest rate and real exchange rate variability that has occurred over the last 100 years.

PD August 1990. **TI** Relaxing the External Constraint: Europe in the 1930's. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 3410; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 34. PR \$2.00. JE 431, 044. **KW** Exchange Rates. Policy Coordination.

AB This paper documents the effects of exchange rates and the external constraint during the interwar years. In the absence of international policy coordination, exchange rate depreciation is shown to have been a necessary precondition for the adoption of policies promoting recovery from the Great Depression. But currency depreciation was not without costs. It increased the variability of nominal exchange rates and rendered them increasingly difficult to predict. Increased variability and uncertainty about nominal exchange rates carried over to short-term changes in real exchange rates as well. Thus, exchange rate variability appears to have introduced additional noise into the operation of the price mechanism.

El Barsiri, M.

PD April 1990. **TI** Approximation en Temps Continu d'un modele ARCH Seuil. **AU** El Barsiri, M.; Zakoian, J. M. **AA** CREST-ENSAE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9011; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. PG 48. PR no charge. JE 211. **KW** ARCH Model. Continuous Time. White noise. Asymptotic Theory. Stationarity.

AB In this paper we study the convergence of threshold ARCH models to continuous time processes. In these models, the conditional variances of the positive and negative values of the white noise are piecewise linear functions of its past values and of past values of the conditional variances. Weak stationarity properties of the processes are established. Finally, the convergence theorems are used to obtain asymptotic distributions of the various processes. Paper in French.

Engel, Eduardo M. R. A.

TI Dynamic (S, s) Economies: Aggregation, Heterogeneity and Coordination. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A.

Engelbrecht-Wiggans, Richard

PD July 1990. **TI** Protecting the Winner: Second-Price Versus Oral Auctions. **AU** Engelbrecht-Wiggans, Richard; Kahn, Charles M. **AA** University of Illinois, Urbana-Champaign. **SR** Economics Research Center/NORC Discussion Paper: 90-8; Economics Research Center/NORC, 6030 S. Ellis, Chicago, Illinois 60637. **PG** 18. **PR** \$2.00; send requests to Librarian, NORC. **JE** 022. **KW** Auctions. Auction Theory. Sealed Bid Auction.

AB An important difference between oral auctions and second-price sealed bid auctions is that in the oral auction the winner never reveals his reservation price to anyone. We model a situation in which outside parties can exploit information revealed in the auction, and we investigate the effect on bidders' strategies in the two auctions. We show that when this exploitation is a significant problem, the oral auction is more efficient than the sealed-bid second price auction, and preferred by all participants in the auction.

Engle, Robert F.

TI Non-Cointegration and Econometric Evaluation of Models of Regional Shift and Share. **AU** Brown, Scott J.; Coulson, N. Edward; Engle, Robert F.

Erdos, Peter L.

PD May 1990. **TI** Enumeration of Rooted Forests. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90631-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** no charge. **JE** 213. **KW** Mathematical Economics.

AB This paper generalizes the method due to L. A. Szekely and the author on the enumeration of trees to the enumeration of forests. This method yields new easy proofs for some well-known theorems as well as some new theorems.

Ericsson, Neil R.

TI Modeling the Demand for Narrow Money in the United Kingdom and the United States. **AU** Hendry, David F.; Ericsson, Neil R.

Ermisch, John F.

PD December 1988. **TI** Differential Returns to Human Capital in Full-Time and Part-Time Employment: The Case of British Women. **AU** Ermisch, John F.; Wright, Robert E. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/14; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 40. **PR** not available. **JE** 824, 851. **KW** Labor Supply. Human Capital. Employment.

AB An analysis of hourly pay that allows for the choice of whether to work full-time, part-time or not at all shows that part of the observed differential between the hourly pay of full-timers and part-timers arises because of self-selection of women who can command higher pay into full-time employment, but part also arises because work experience and education are remunerated at a lower rate in part-time

employment. Nevertheless, this difference in remuneration in conjunction with the larger proportion of women than men in part-time jobs only accounts for a small part of the difference between women's and men's pay, most of which arises because men's and women's education and work experience are rewarded differently.

PD January 1989. **TI** Adverse Selection Aspects of Poverty Amongst Lone Mothers. **AU** Ermisch, John F.; Jenkins, Stephen P.; Wright, Robert E. **AA** Ermisch and Wright : Birkbeck College, Jenkins: Centre for Fiscal Studies, University of Bath. **SR** Birkbeck College Discussion Papers in Economics: 89/2; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 28. **PR** not available. **JE** 921, 914, 851, 841. **KW** Divorce. Remarriage. Poverty. Single Mothers.

AB Current research argues that the high risk of poverty amongst lone mothers reflects the position of women in society generally. We consider whether this view ignores policy-relevant aspects of heterogeneity amongst women. More specifically we investigate whether turnover in the population of lone mothers is an adverse selection process: that is, whether those with relatively poor chances of economic success are selected into lone parenthood, and whether those with better prospects are selected out. We use theoretical models of divorce and remarriage, together with estimates derived using the ever-married mothers from the Women and Employment Survey. We find the empirical evidence for selection "out" of lone motherhood stronger than for selection "in".

Evans, Martin

PD December 1989. **TI** Inflation Rates and Inflation Uncertainty: Discovering the Link and Assessing the Implications. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: S-90-5; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 26. **PR** not available. **JE** 134, 132. **KW** Inflation. Uncertainty.

AB A new time series model is used to reassess the strength of the link between inflation uncertainty and the level of inflation in the U.S.. The model provides several statistical measures that can be used to examine different aspects of uncertainty. The main finding is that uncertainty about the long rather than short-term prospects for inflation moved strongly with the rate of inflation since the early 1970's. The paper also presents some new statistical evidence in support of the idea that uncertainty about the long-term prospects for inflation is costly.

Fair, Ray C.

TI Estimation of Polynomial Distributed Lags and Leads with End Point Constraints. **AU** Andrews, Donald W. K.; Fair, Ray C.

Falconi, Cesar

PD July 1990. **TI** Economics of Food Safety: Risk, Information, and the Demand and Supply of Health. **AU** Falconi, Cesar; Roe, Terry L. **AA** University of Minnesota. **SR** University of Minnesota Economic Development Center Bulletin: 90-1; Department of Agricultural and Applied Economics, 251 C.O.B., University of Minnesota, St. Paul, MN 55108. **PG** 21. **PR** free.

JE 913, 921, 613, 024. **KW** Competitive Markets. Government Regulation. Goods Market. Health.

AB A model of expected utility maximization and a stochastic health production function are used to show how consumer's beliefs, the certainty of beliefs, and the presence of information affects demand for goods as they are driven by the demand for health. Then, it is shown that competitive markets fail to account for the health implications of substances in the production of a commodity that affects health, nor are incentives provided to inform consumers of substance concentrations and its implications to health. This result is shown to not necessarily follow in concentrated industries. Finally, conditions are derived whereby a benevolent government, in the absence of rent seeking, chooses optimal levels of information and taxes to attain Pareto optimal outcomes.

Farber, Henry S.

PD April 1990. **TI** Product Market Competition, Union Organizing Activity, and Employer Resistance. **AU** Farber, Henry S.; Abowd, John M. **AA** Farber: Massachusetts Institute of Technology. Abowd: Cornell University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 551; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 30. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 831, 833. **KW** Unions. Labor-Management Relations.

AB We develop and estimate a model of the union's optimal extent of organizing activity that accounts for the decision of employers regarding resistance to union organizing. The central exogenous variable in the analysis is the quantity of quasi-rents per worker available to be split between unions and employers. We measure available quasi-rents per worker as the difference per worker between total industry revenues net of raw materials costs and labor costs evaluated at the opportunity cost of the workers. Using two-digit industry level data for thirty-five U.S. industries for the period 1955 through 1986, we find that both organizing activity and employer resistance to unionization are positively related to available quasi-rents per worker.

TI An Experimental Comparison of Dispute Rates in Alternative Arbitration Systems. **AU** Ashenfelter, Orley; Currie, Janet; Farber, Henry S.; Spiegel, Mathew.

Feenstra, Robert

PD March 1990. **TI** Distributing the Gains from Trade with Incomplete information. **AA** University of California, Davis. **SR** National Bureau of Economic Research Working Paper: 3277; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** \$2.00. **JE** 422, 411, 024. **KW** Commercial Policy. Tariffs. Government Policy. Trade Policy.

AB We argue that the incomplete information which the government has about domestic agents means that tariffs become an optimal instrument to protect them from import competition. We solve for the optimal government policies, subject to the political constraint and the government's budget constraint. We find that the optimal policies take the form of nonlinear tariffs, so that both buyers and sellers of the import face an effective price which exceeds its world level. We find that the tariffs are never complete, in the sense of bringing prices for all individuals back to their initial level. Rather, it will always be possible to make some individuals strictly better

off than at the initial prices, while ensuring that no persons are worse off.

PD March 1990. **TI** Trade and Uneven Growth. **AA** University of California, Davis. **SR** National Bureau of Economic Research Working Paper: 3276; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 411, 621. **KW** R&D. Trade Theory. International Trade. Product Innovation.

AB We consider trade between two countries of unequal size, where the creation of new intermediate inputs occurs in both. We assume that the knowledge gained from R&D in one country does not spillover to the other. Under autarky, the larger country would have a higher rate of product creation. When trade occurs in the final goods, we find that the smaller country has its rate of product creation slowed, even in the long run. In contrast, the larger country enjoys a temporary increase in its rate of R&D. We also examine the welfare consequences of trade in the final goods, which depend on whether the intermediate inputs are traded or not.

Fernandez, Raquel

PD February 1990. **TI** Why is Trade Reform so Unpopular? On Status Quo Bias in Policy Reforms. **AU** Fernandez, Raquel; Rodrik, Dani. **AA** Fernandez: Boston University. Rodrik: Harvard University. **SR** National Bureau of Economic Research Working Paper: 3269; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** \$2.00. **JE** 422, 411. **KW** Trade Reform. Trade Policy. Commercial Policy.

AB Despite the well-known gains from trade, trade liberalization is politically one of the most contentious actions that a government can take. We propose and formalize a new argument, having to do with uncertainty, which is complementary to the usual explanations for why that is the case: many individuals will simply not know how they will fare under trade reform, and this can reduce support for a reform which would have been otherwise popular, even in the absence of risk aversion. We show that reforms that would have received adequate popular support *ex post* (i.e., which once enacted will last) may fail to carry the day *ex ante*, because of uncertainty regarding the distribution of gains and losses.

Fforde, Adam

PD January 1986. **TI** Industrial Development in the Democratic Republic of Vietnam. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/2; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 32. **PR** not available. **JE** 124, 226, 112. **KW** Industrial Development. Vietnam. Socialism.

AB The paper examines various aspects of the industrial development of the Democratic Republic of Vietnam ("North Vietnam") prior to 1975. It discusses the pattern and structure of industrial growth sponsored by the Vietminh prior to 1954. It examines the consequences of the rather well-developed artisan that existed in the North prior to the Second World War and it considers the likely effects upon the post-1975 reunified Socialist Republic of the actual operating conditions faced by both state and collective industry in North Vietnam prior to that date. As an explanation of enterprise behavior, the paper stresses the role of "aggravated shortage", a term used to refer to

conditions where the chronic systemic shortage familiar from developed centrally planned economies co-exist with extensive unplanned and market oriented allocative relations.

Fine, Ben

PD July 1987. **TI** Segmented Labour Market Theory: A Critical Assessment. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/12; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 110. **PR** not available.

JE 821, 824. **KW** Labor Market. Marx. Value Theory.

AB A critical assessment is made of segmented labor market theory and the associated empirical literature. It is shown that the various different approaches are in a chronic state of "paradigm" crisis arising from reliance on a "middle-range" theory that too readily identifies abstract theoretical categories with immediate concrete evidence. Appendices consider the associated critique of Marx's value theory and the link with the recently emerging "flec-spec" school.

Fleming, David

PD April 1988. **TI** Positional Goods as a Factor in Demand Failure. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/4; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 26. **PR** not available.

JE 022, 023. **KW** Goods Market. Consumer Demand. Consumer Theory.

AB This paper develops the concept of chain goods, one subset of the broad category of "positional goods" described by Fred Hirsch in "Social Limits to Growth." It considers the extreme case of a sector of goods which are not produced, but are traded between consumers in the second-hand market. The paper contrasts chain goods with produced goods. It argues that, under certain conditions, contest for the allocation of chain goods may take place in a multi-person prisoner's dilemma, with the result that consumer demand for produced goods may fall. Since chain goods are non-produced, the contest for individually-maximized shares in this sector could have implications for employment.

Flinn, Christopher

TI The Effect of Child Custody and Support Arrangements on the Welfare of Children and Parents. **AU** Del Boca, Daniela; Flinn, Christopher.

Fogel, Robert W.

PD March 1990. **TI** Modeling Complex Dynamic Interactions: The Role of Intergenerational, Cohort, and Period Processes and of Conditional Events in the Political Realignment of the 1850's. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 12; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 63. **PR** \$2.00. **JE** 042, 025. **KW** Voting. National Elections. Politics.

AB The aim of this paper is to break open the stochastic component of a major political change and to show that what seems like the product of purely chance events is the particular conjunction of processes, each of which is definable in a systematic way, that provide collectively a favorable context in which purely chance events operate. It is only in a particular context that the purely chance events became decisive in

bringing about a particular political outcome. Section 1 emphasizes that Lincoln's margin of victory in 1860 was so small that any one of numerous chance events could have resulted in his defeat. Sections 2-4 outline the intergenerational, cohort, and period changes and events that created a context favorable for the political realignment of the 1850's.

Folkerts-Landau, David

PD July 1990. **TI** Systemic Financial Risk in Payment Systems. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/65; International Monetary Fund, Washington, DC 20431. **PG** 41. **PR** not available. **JE** 432, 441, 311.

KW International Monetary System. Capital Flows. International Markets. Financial Markets.

AB Efficient and stable payments systems are of fundamental importance in maintaining an orderly international monetary system. Major disruptions of national and international payments systems would have highly adverse effects on international trade, capital flows, and real activity. A key issue -- now being addressed by authorities in a number of major countries-- is whether existing institutional arrangements need to be modified in order to reduce the liquidity and credit risks that have arisen as a result of the expansion of international capital flows and the growing integration of major financial markets. This paper examines the nature of these risks and the policies that are being implemented to manage or curb them.

Forges, Françoise

PD March 1990. **TI** Sunspot Equilibrium as a Game-Theoretical Solution Concept. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9029; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 35. **PR** not available. **JE** 026.

KW Sunspots. Correlated Equilibrium. Market Games.

AB This paper investigate some relationship between sunspot and (extensive form) correlated equilibria in market games.

Frankel, Jeffrey A.

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

PD May 1990. **TI** Exchange Rate Forecasting Techniques, Survey Data, and Implications for the Foreign Exchange Market. **AU** Frankel, Jeffrey A.; Froot, Kenneth. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/43; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** 431. **KW** Foreign Exchange. Exchange Market. Speculation.

AB This paper examines the dynamics of the foreign exchange market. The first half addresses a number of key questions regarding the forecasts of future exchange rates made by market participants, by means of updated estimates using survey data. Here we follow most of the theoretical and empirical literature in acting as if all market participants share the same expectation. The second half then addresses the possibility of heterogeneous expectations, particularly the distinction between "chartists" and "fundamentalists," and the implications for trading in the foreign exchange market and for the formation of speculative bubbles.

Fratianni, Michele

TI Monetary and Fiscal Policy in a European Monetary Union Some Public Choice Considerations. **AU** von Hagen, Jurgen; Fratianni, Michele.

Freeman, Richard B.

TI The Internationalization of the U.S. Labor Market. **AU** Abowd, John M.; Freeman, Richard B.

TI Going Different Ways: Unionism in the U.S. and Other Advanced OECD Countries. **AU** Blanchflower, David G.; Freeman, Richard B.

French, Kenneth R.

PD March 1990. **TI** Are Japanese Stock Prices Too High. **AU** French, Kenneth R.; Poterba, James M. **AA** French: University of Chicago. Poterba: National Bureau of Economic Research and Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3290; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** \$2.00. **JE** 541, 441. **KW** Stock Market. Accounting. Corporations. Stock Prices.

AB The difference between reported price-earnings ratios in the United States and Japan is not as puzzling as it appears at first glance. Nearly half the disparity is caused by differences in accounting practices with respect to consolidation of earnings from subsidiaries and depreciation of fixed assets. If Japanese firms used U.S. accounting rules, we estimate that the P/E ratio for the Tokyo Stock Exchange would have been 32.1, not the reported 54.3, at the end of 1988. Accounting differences are unable, however, to explain the sharp rise in the Japanese stock market during the mid-1980s. Changes in required returns on equities, or in investor expectations of future growth for Japanese firms, must be invoked to explain this phenomenon.

Froot, Kenneth

TI Exchange Rate Forecasting Techniques, Survey Data, and Implications for the Foreign Exchange Market. **AU** Frankel, Jeffrey A.; Froot, Kenneth.

Frydman, Roman

PD May 1990. **TI** Stabilization in Poland: A Progress Report. **AU** Frydman, Roman; Wellisz, Stanislaw; Kolodko, Grzegorz W. **AA** Frydman: New York University. Wellisz: Columbia University. Kolodko: Central School of Finance and Statistics and Research Institute of Finance, Warsaw. **SR** Columbia Department of Economics Working Paper: 481; Department of Economics, Columbia University, New York, New York 10027. **PG** 39. **PR** \$5.00. **JE** 121, 226, 112, 133. **KW** Developing Countries. Economic Reform. Hyperinflation. Stabilization Policy. Market System.

AB This report is based on preliminary data pertaining to the first four months of Poland's stabilization program initiated on January 1, 1990. The Solidarity-led government which assumed office on Sept. 12, 1990 inherited a system molded by forty five years of Communist rule. It also had to face a massive government deficit and a rapidly accelerating inflation. It quickly became clear that a radical reform of the system is laden with technical and political difficulties. On the other hand, there was also great pressure, both from the Polish population and from the international bodies, including the IMF and the World Bank, for immediate control of hyperinflation

which was beginning to disorganize the economic life.

Fujita, Masahisa

TI On the Design of Noncooperative Games Supporting Optimal Spatial Allocations. **AU** Asami, Yasushi; Fujita, Masahisa; Thisse, Jacques-Francois.

Fulghieri, Paolo

TI Incentive Effects of Foreign Tax Credits on Multinationals. **AU** Altshuler, Rosanne; Fulghieri, Paolo.

Galeotti, Marzio

PD April 1990. **TI** Stock Market Volatility and Investment: Do Only Fundamentals Matter?. **AU** Galeotti, Marzio; Shiantarelli, Fabio. **AA** Galeotti: University of Brescia. Shiantarelli: Boston University. **SR** New York University Economic Research Reports: 90-15; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 28. **PR** no charge. **JE** 313, 522, 311. **KW** Investment. Stock Market. Volatility. Stock Prices.

AB The empirical evidence in the volatility tests literature suggests that movements in stock prices cannot be satisfactorily explained purely in terms of changes in fundamentals. This paper shows how to obtain proxies for the fundamental and fads components of changes in stock prices and asks the question: do only fundamentals matter for investment decisions? It is found that changes in real investment are significantly associated with movements in both components of stock prices. The point estimates suggest that changes in fundamentals have a greater effect. However the difference in response is not statistically significant.

Gallman, Robert E.

TI Risk Sharing, Crew Quality, Labor Shares and Wages in the Nineteenth Century American Whaling Industry. **AU** Davis, Lance E.; Gallman, Robert E.; Hutchings, Teresa D.

Garber, Peter M.

TI Before Accord: U.S. Monetary-Financial Policy 1945-51. **AU** Eichengreen, Barry; Garber, Peter M.

Gavin, Michael

PD February 1990. **TI** International Transmission of Macroeconomic Disturbances: The Role of Equity Markets. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 466; Department of Economics, Columbia University, New York, New York 10027. **PG** 35. **PR** \$5.00. **JE** 411, 023. **KW** Asset Market. Goods Market. World Economy. Open Economy.

AB Open economy macroeconomists have always been concerned with the interplay between asset markets and the goods market. Despite this, most macroeconomic analyses of the open economy take a fairly cavalier approach to modelling the impact of the asset markets on the goods markets. That is, most of the literature simply assumes some ad hoc relationship between the demand for goods and the money supply, "the" interest rate, the exchange rate, and perhaps income. The purpose of this paper is to extend the existing literature by examining more carefully the underlying relationships between asset markets and the goods market within the context of a simple model of the world economy.

PD March 1990. **TI** The Stability of the Trade Balance with Rational Consumers. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 470; Department of Economics, Columbia University, New York, New York 10027. **PG** 24. **PR** \$5.00. **JE** 431, 411. **KW** Trade Balance. Current Account. Exchange Rates. **AB** In this paper I explore the stability of the trade balance in an equilibrium model with fully rational consumers, who determine their savings with the object of maximizing lifetime welfare. I show that the equivalent in this model of the Marshall-Lerner condition is not necessary for stability of the trade balance, and in this sense I provide support for the idea that earlier analyses exaggerated the possibility of instability. On the other hand, I show that another condition, easily interpreted and considerably weaker than the Marshall-Lerner condition, is necessary for stability. In this sense the analysis demonstrates that the stability concerns raised by earlier authors remain valid in an equilibrium, intertemporal model with rational consumers.

Gaynor Martin

PD January 1990. **TI** Equilibrium Misperceptions. **AU** Gaynor Martin; Kleindopfer, Paul. **AA** Gaynor: Johns Hopkins University and National Bureau of Economic Research. Kleindopfer: University of Pennsylvania. **SR** Johns Hopkins Department of Political Economy Working Paper: 244; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 6. **PR** no charge. **JE** 022, 026. **KW** Misperception. Rationality. Consumer Behavior. **AB** There has been a growing interest among economists in behavior which appears to be anomalous with respect to the axioms of economic rationality. A number of recent papers have analyzed the effects of agents' misperceptions about the relationship between actions and outcomes. The "rationality" of these misperceptions has not been considered, however. In this paper we prove the existence of an equilibrium with misperceptions in which misperceptions are "rational" and can be sustained.

Gaynor, Martin

PD May 1990. **TI** Moral Hazard in Partnerships. **AU** Gaynor, Martin; Gertler, Paul. **AA** Gaynor: Johns Hopkins University and National Bureau of Economic Research. Gertler: RAND Corporation and National Bureau of Economic Research. **SR** Johns Hopkins Department of Political Economy Working Paper: 248; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 62. **PR** no charge. **JE** 913, 514, 022. **KW** Partnerships. Medical Group Practice. Health Economics. **AB** In this paper, we focus on the incentive structure within partnerships. Partnerships provide a classic example of the tradeoff between risk spreading and moral hazard. The degree to which firms choose to spread risk and sacrifice efficiency incentives depends upon risk preferences, for which data are typically unavailable. We are able to overcome this difficulty due to the existence of a unique data set on a prominent form of professional partnership: medical group practice. We consider a two-stage model in which agents choose effort in response to incentives and in which the firm can choose two different levers to affect incentives and to spread risk: the compensation method and the number of members.

PD July 1990. **TI** Measuring Ignorance in the Market: A

New Method with an Application to Physician Services. **AU** Gaynor, Martin; Polachek, Solomon. **AA** Gaynor: Johns Hopkins University and National Bureau of Economic Research. Polachek: SUNY Binghamton. **SR** Johns Hopkins Department of Political Economy Working Paper: 249; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 28. **PR** no charge. **JE** 913, 812. **KW** Medicine. Prices. Physician Services. **AB** Ever since Stigler's seminal piece on the economics of information, a great deal of research has been done investigating equilibrium in markets with imperfect information. While most of this research has been concerned with theoretically establishing the conditions under which there exists a distribution of prices in equilibrium, there is a small, but growing, body of empirical research in this area. In this paper we propose a method for measuring ignorance about price in a market which builds on Stigler's original suggestion to use dispersion as a measure of ignorance. The innovation is to use a new frontier estimation technique containing a three component error term to separate observed price dispersion into purely random variation, variation due to buyer ignorance, and variation due to seller ignorance. We apply the technique to the physicians' service market.

Gerard-Varet, Louis-Andre

TI Incentives and the Existence of Pareto-Optimal Revelation Mechanisms. **AU** d'Aspremont, Claude; Cremer, Jacques; Gerard-Varet, Louis-Andre.

Gertler, Paul

TI Moral Hazard in Partnerships. **AU** Gaynor, Martin; Gertler, Paul.

Gertner, Robert

TI The Informativeness of Prices: Search with Learning and Inflation Uncertainty. **AU** Benabou, Roland; Gertner, Robert.

Giavazzi, Francesco

PD May 1990. **TI** Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries. **AU** Giavazzi, Francesco; Pagano Marco. **AA** Giavazzi: Via Bigli 21, Italy. Pagano: Via Catullo 64, Italy. **SR** Centre for Economic Policy Research Discussion Paper: 417; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 41. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 321, 322, 133. **KW** Fiscal Policy. Denmark. Ireland. Aggregate Demand. Government Spending. **AB** According to conventional wisdom, a fiscal consolidation is likely to contract real aggregate demand. It has often been argued, however, that this conclusion is misleading as it neglects the role of expectations of future policy: if the fiscal consolidation is read by the private sector as a signal that the share of government spending in GDP is being permanently reduced, households will revise upwards their estimate of their permanent income, and will raise current and planned consumption. Only the empirical evidence can distinguish which view is the more appropriate, that is, how often the contractionary effect of a fiscal consolidation prevails over its expansionary expectational effect. This paper presents new evidence, drawing on the European exercise in fiscal rectitude of the 1980s and focusing on its two most extreme cases, Denmark and Ireland. We find that at least in the experience of

these two countries the "expectations" view has a serious claim to empirical relevance.

Giovannini, Alberto

PD April 1990. **TI** Capital Flight and Tax Competition: Are There Viable Solutions to Both Problems. **AU** Giovannini, Alberto; Hines, James R., Jr. **AA** Giovannini: Columbia University. Hines: Princeton University. **SR** National Bureau of Economic Research Working Paper: 3333; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 42. **PR** \$2.00. **JE** 323, 441, 122. **KW** Corporate Taxes. Capital Mobility. Developed Countries. Taxation.

AB This paper discusses a model corporate tax system based on the application of the residence principle. This tax system, while preserving national sovereignties, minimizes the distortions from international capital mobility. The paper is motivated by an analysis of European capital income tax systems, and of the distortions they might give rise to as obstacles to international capital flows diminish. The alternative system we analyze has two main properties: it exploits the territoriality of law enforcement and allows countries to set the corporate tax rate - and the extent of double taxation of corporate income - independently from their partners. The paper concludes with some suggestive evidence of the potential revenue effects among European countries of this tax system.

Goldberg, A. V.

PD 1988. **TI** Network Flow Algorithms. **AU** Goldberg, A. V.; Tardos, E.; Tarjan, R. E. **AA** Goldberg: Stanford University. Tardos: Cornell University. Tarjan: Princeton University and Bell Laboratories. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89567-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 65. **PR** no charge. **JE** 213. **KW** VLSI Layout. Network Flow Problems. Linear Programming.

AB Network flow problems are central problems in operations research, computer science, and engineering and they arise in many real world applications. Starting with early work in linear programming and spurred by the classic book of Ford and Fulkerson the study of such problems has led to continuing improvements in the efficiency of network flow algorithms. In spite of the long history of this study, many substantial results have been obtained within the last several years. In this survey we examine some of these recent developments and the ideas behind them.

Goldberg, Linda S.

PD April 1990. **TI** Predicting Exchange Rate Crises: Mexico Revisited. **AA** New York University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3320; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** \$2.00. **JE** 431, 132, 131, 311. **KW** Currency. Devaluation. Exchange Rates. Speculation. Currency Crisis. Monetary Policy.

AB This paper predicts ex-ante the probability of currency crises and size of expected devaluations month by month for Mexico between 1980 and 1986 using a heterodox linear discrete time model of exchange rate crises. The forces contributing to speculative attacks on the Mexican peso include

internal money creation, external credit shocks, and relative price shocks. The framework proves highly successful for generating forecasts of the probability of speculative attacks on the peso and for predicting lower bounds for post-collapse exchange rates using a range of assumptions about critical levels of central bank reserve floors. Simulation results suggest that reducing domestic credit growth, increasing the uncertainty surrounding this growth, and reducing the size and perhaps increasing the frequency of currency realignments might have greatly reduced the amount of currency speculation against the peso in some of the crisis periods between 1980 and 1986.

Goldman, George

TI The Use of Computable General Equilibrium Models to Assess Water Policies. **AU** Berck, Peter; Robinson, Sherman; Goldman, George.

Gonul, Fusun

PD July 1990. **TI** New Evidence on Whether Unemployment and Out of the Labor Force are Distinct States. **AA** Carnegie Mellon University and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 90-6; Economics Research Center/NORC, 6030 S. Ellis, Chicago, Illinois 60637. **PG** 56. **PR** \$2.00; send requests to Librarian, NORC. **JE** 824, 813, 821. **KW** Labor Force. Unemployment.

AB This paper focuses on the question of whether or not people who are out of the labor force (OLF) should be included in unemployment measures. If people who are OLF can obtain jobs as often as the people who are unemployed, then there is no real distinction between the two states of nonemployment. There have been two studies dealing with this issue in an empirical framework: Clark and Summers (1982) conclude that for teenagers unemployment and OLF are not distinct states while Flinn and Heckman (1982a) find the opposite for white male high school graduates. New evidence for high school graduates is presented by gender, and it is found that while for young women the two states are distinct, for young men they are not. The methodology adopted in this paper enables one to use the incomplete transition data in the National Longitudinal Surveys (NLS) on unemployment and OLF, and to obtain estimates of the full transition matrix between three labor force states.

Goodman, Allen C.

TI Buying the American Dream: Housing Demand in the United States in the Late Nineteenth Century. **AU** Haines, Michael R.; Goodman, Allen C.

Gordon, Roger H.

PD March 1990. **TI** Do Publicly Traded Corporations Act in the Public Interest. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3303; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** \$2.00. **JE** 511, 512, 514. **KW** Shareholders. Corporations.

AB Models of corporate behavior normally assume that a firm acts in the interest of shareholders, and that shareholders care only about the returns they receive on the shares they own in that firm. But shareholders should also care about the effects of a manager's decisions on the value of shares they own in

other firms, on the price they pay as consumers of the firm's output, on the value of the firm's bonds they own, on government tax revenue which finances public expenditures benefiting shareholders, etc. These effects are normally presumed to be of second order. This paper reexamines this presumption, argues that many of these effects are likely to be important, and examines how a variety of conventional conclusions about corporate behavior change as a result.

PD April 1990. **TI** Canada-U.S. Free Trade and Pressures for Tax Harmonization. **AA** University of Michigan. **SR** National Bureau of Economic Research Working Paper: 3327; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** \$2.00. **JE** 421, 422, 323. **KW** Free Trade. Trade Policy. Taxation.

AB To what degree will the recent free trade agreement create pressure on the U.S. and Canada to modify, and perhaps harmonize, their tax systems? What will be the implications of the more extensive policy changes now going on within the E.C.? This paper examines the types of pressures for reform created by recent agreements, focusing in turn on the pressures created by capital mobility, elimination to tariff and nontariff barriers, and mobility of individuals. As shown in the local public finance literature, unrestricted individuals and firms pay tax in accordance with the costs they impose on the community. More limited mobility should have more limited effects. Since existing national tax structures differ dramatically from those that have evolved to finance local governments, however, even limited mobility can force substantial changes in each country's fiscal structure.

Gottardi, Pl

TI The Relevance of Financial Policy. **AU** Detemple, J.; Gottardi, Pl; Polemarchakis, Heraklis M.

Goulder, Lawrence H.

TI The Impact of Permanent and Temporary Import Surcharges on the U.S. Trade Deficit. **AU** Eichengreen, Barry; Goulder, Lawrence H.

Gourieroux, C.

PD January 1990. **TI** Qualitative Threshold ARCH Models. **AU** Gourieroux, C.; Monfort, A. **AA** Gourieroux: CREST-ENSAE. Monfort: INSEE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9009; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 50. **PR** no charge. **JE** 211. **KW** ARCH Models. Markov Chain. Maximum Likelihood. Dynamic Models.

AB In this paper we consider a class of dynamic models in which both the conditional mean and the conditional variance are endogenous stepwise functions. We first consider the probabilistic properties of these models: stationarity conditions, leptokurtic effects, linear representation, optimal prediction; in this first part most results are based on Markov chain theory. Then we derive statistical properties of this class of models: pseudo-maximum likelihood estimators, conditional homoskedasticity tests, tests of weak or strong white noise, CAPM test, factors determination, ARCH-M effects. Finally we discuss the introduction of exogenous variables and the bias implied by suboptimal predictions.

Graham-Tomasi, Theodore

TI Competition Among Rent Seeking Groups in General Equilibrium. **AU** Roe, Terry L.; Graham-Tomasi, Theodore.

Grandmont, Jean-Michel

PD November 1989. **TI** Economic Dynamics with Learning: Some Instability Examples. **AU** Grandmont, Jean-Michel; Laroque, Guy. **AA** Grandmont: Yale University and CEPREMAP. Laroque: INSEE. **SR** CEPREMAP Discussion Paper: 9007; CEPREMAP, 142 rue du Chevaleret, 75013 Paris, FRANCE. **PG** 45. **PR** not available. **JE** 021, 022, 213. **KW** Learning. Rational Expectations. Equilibrium Model. Temporary Equilibrium. Dynamic Model.

AB We analyze in this paper the local stability of a stationary state in a simple nonlinear deterministic temporary equilibrium model with adaptive learning. We show that if the traders are prepared, when trying to learn the dynamic laws of their environment, to extrapolate a sufficiently large set of past growth rates of the state variable (a real number), including locally divergent ones, then the stationary state will be actually unstable. These findings suggest that local instability of rational expectations equilibria is a robust phenomenon, whenever the traders' learning processes are sophisticated enough.

Greene, Joshua

PD April 1990. **TI** Private Investment in Developing Countries: An Empirical Analysis. **AU** Greene, Joshua; Villanueva, Delano. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/40; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** not available. **JE** 121, 221, 131. **KW** Developing Countries. National Income Accounting. Growth Rates. Investment.

AB This paper analyzes the effects of several policy and other macroeconomic variables on the ratio of private investment to GDP in developing countries. Using data for a sample of 23 developing countries over the period 1975-87, the econometric evidence indicates that the rate of private investment is positively related to the real growth rate of GDP, public sector investment, and to a lesser extent the level of per capita GDP, while it is negatively related to domestic inflation, the debt-service ratio, the debt-to-GDP ratio, and high real interest rates. There is also some indication that all but the last of these variables had a greater impact before the onset of the debt crisis in 1982, while the debt-to-GDP ratio (a measure of a country's debt overhang) has become more important since then.

Greenwood, Daphne T.

PD August 1990. **TI** Changes in Age-Wealth Profiles: Savings, Revaluation and Inheritance. **AU** Greenwood, Daphne T.; Wolff, Edward N. **AA** Greenwood: University of Colorado, Colorado Springs. Wolff: New York University. **SR** New York University Economic Research Reports: 90-33; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 46. **PR** no charge. **JE** 841, 918, 921. **KW** Savings. Inheritance. Personal Wealth.

AB Changes in wealth appear to be caused as much by period and cohort specific effects as by age related or "life-cycle" effects. Capital appreciation accounted for 77% of the growth in aggregate real wealth between 1962 and 1983, compared to a 16% contribution from savings. On average, the net worth of

household increased by 49%, but increases in wealth were much more rapid during the second half of the period than the first, in contrast to the pattern in real income growth. While almost all age cohorts showed some increase over the period, the growth was spread quite unequally among them.

Griliches, Zvi

PD March 1990. **TI** Patent Statistics as Economic Indicators: A Survey Part I and Part II. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3301; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 61. **PR** \$2.00. **JE** 621, 916. **KW** Patents. R&D. Technology. **AB** This survey reviews the growing use of patent data in economic analysis. After describing some of the main characteristics of patents and patent data, it focuses on the use of patents as an indicator of technological change. Cross-sectional and time-series studies of the relationship of patents to R&D expenditures are reviewed, as well as scattered estimates of the distribution of patent values and the value of patent rights, the latter being based on recent analysis of European patent renewal data. Time-series trends of patents granted in the U.S. are examined and their decline in the 1970s is found to be an artifact of the budget stringencies at the Patent Office.

TI Price Indexes for Microcomputers: An Exploratory Study. **AU** Berndt, Ernst R.; Griliches, Zvi.

Grodal, Birgit

PD March 1987. **TI** Statistical Engel Curves, Income Distributions and the "Law of Demand". **AU** Grodal, Birgit; Hildenbrand, Werner. **AA** Grodal: University of Copenhagen. Hildenbrand: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-108; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** no charge. **JE** 022, 213. **KW** Engel Curves. Income Distribution. Consumption. **AB** Under suitable assumptions on the consumption sector one can show that the Jacobian matrix of the market demand function is the difference of a negative definite matrix and of a matrix A. The Matrix A looks formally like an average of Slutsky income effect matrices which are derived from the "demand function". Thus positive semi-definiteness of this matrix would enforce the "Law of Demand".

Gros, Daniel

PD May 1990. **TI** Stabilization Policy with Bands. **AA** Universite Catholique de Louvain. **SR** International Monetary Fund Working Paper: WP/90/49; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** 431, 432, 311, 133. **KW** Stabilization Policy. Exchange Rate. Monetary Policy.

AB This paper discusses stabilization policy in the presence of bands for the exchange rate. The bands are modelled in a probabilistic sense: monetary policy has to be such as to keep the probability, that the exchange rate stays within the bands, above a certain threshold. In contrast to other models of target zones, this formulation leads to a linear decision rule and implies sizeable intra-marginal interventions, which corresponds to the experience in the EMS. The extent to which short-run monetary policy is constrained by the bands depends

on its own long-run components and on fiscal policy.

Grossman, Gene M.

PD September 1990. **TI** Trade, Knowledge Spillovers, and Growth. **AU** Grossman, Gene M.; Helpman, Elhanan. **AA** Grossman: Princeton University. Helpman: Tel Aviv University. **SR** Princeton Woodrow Wilson School Discussion Paper in Economics: 156; Woodrow Wilson School, Princeton University, Princeton, NJ 08544. **PG** 14. **PR** no charge. **JE** 111, 411, 621. **KW** Endogenous Growth. Technological Progress. Innovation. Trade Policy. **AB** In this paper, we examine one channel through which the trade regime might affect growth in the long run. We model endogenous technological progress that results from profit maximizing investments by far-sighted entrepreneurs. Productivity in the research lab depends upon the "stock of knowledge capital", a variable reflecting the state of scientific, engineering and industrial know-how in the local economy. We argue that local knowledge capital is likely to vary positively with the extent of contact between domestic agents and their counterparts in the international research and business communities, and that the number of such contacts increases with the level of commercial exchange. We derive the implications of this for the relationship between trade and growth.

Grossman, Michael

TI An Empirical Analysis of Cigarette Addiction. **AU** Becker, Gary S.; Grossman, Michael; Murphy, Kevin M.

Gustman, Alan L.

PD April 1990. **TI** Pensions and Labor Market Activity: Behavior and Data Requirements. **AU** Gustman, Alan L.; Mitchell, Olivia S. **AA** Gustman: Dartmouth College. Mitchell: Cornell University. **SR** National Bureau of Economic Research Working Paper: 3331; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 45. **PR** \$2.00. **JE** 824, 825, 821. **KW** Pensions. Retirement. Labor Market. Labor Mobility. Productivity.

AB Pensions have played a key role in the transformation of the way workers are paid in the US labor market. This paper reviews and synthesizes what is known about the form and function of employer provided pensions, and identifies areas where further information is most needed, for increasing our understanding of behavior and for guiding the pension policies of the next decade. There are a number of studies which explore the tax advantages of pensions, the special value of pension annuities and related insurance, and the value of pensions to the firm in regulating retirement, mobility and productivity. This paper investigates whether available evidence is consistent with behavioral models, highlights remaining questions, and attempts to determine what types of data would be most helpful in furthering our understanding of pension plans in the labor market.

Ha, Jiming

TI Economic Reform and the Demand for Money in China. **AU** Burton, David; Ha, Jiming.

Haines, Michael R.

PD August 1989. **TI** Consumer Behavior and Immigrant Assimilation: A Comparison of the United States, Britain and

Germany, 1889/1890. **AA** National Bureau of Economic Research and Wayne State University. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 6; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 52. **PR** \$2.00. **JE** 042, 921, 841. **KW** Consumption. Consumer Economics. Immigration. Demographics.

AB This paper utilizes household level budget data from the 1889/90 United States Commissioner of Labor survey to estimate the full Almost Ideal Demand System with demographic and other covariates. Price data were obtained from the Aldrich Report of 1892. The purpose is to make better use of the entire data set by incorporating demographic variation and then to examine whether the consumption patterns of immigrants and the native born were significantly different once the effects of total expenditure, prices, family composition, region of residence, industry, occupation, and age of household head were taken into account. Comparisons of Engel curves are also made to households in the Great Britain and Germany.

PD August 1989. **TI** Buying the American Dream: Housing Demand in the United States in the Late Nineteenth Century. **AU** Haines, Michael R.; Goodman, Allen C. **AA** Wayne State University. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 5; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 25. **PR** \$2.00. **JE** 042, 932. **KW** Housing. Households. Homeownership.

AB This paper examines homeownership and housing demand for a sample of approximately 6,800 urban, industrial workers in the United States for the period 1889/90. Using data from the Sixth and Seventh Annual Reports of the U.S. Commissioner of Labor, housing demand is viewed as a two part process: first, the "tenure choice" decision whether to own or rent; and second, how much of either type of housing to purchase. Tenure choice and renter demand equations are estimated, using the concept of expected, rather than current income. Data limitations did not permit estimation of owner demand. The results indicated lower homeownership rates among American workers circa 1890 than later and significant effects on ownership of income, age of household head, region, industry, occupation, ethnicity, and family size and composition.

Hajivassiliou, Vassilis

TI Health, Children, and Elderly Living Arrangements: A Multiperiod-Multi-Nomial Probit Model with Unobserved Heterogeneity and Autocorrelated Errors. **AU** Boersch-Supan, Axel; Hajivassiliou, Vassilis; Kotlikoff, Laurence J.; Morris, John N.

Hall, P.

TI Regression Smoothing Parameters That are Not Far From Their Optimum. **AU** Hardle, Wolfgang; Hall, P.; Marron, J. S.

Haller, Hans

PD July 1990. **TI** Large Random Graphs in Pseudo-Metric Spaces. **AA** Virginia Polytechnic Institute and State University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-301; Sonderforschungsbereich 303

an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 20. **PR** no charge. **JE** 021, 022, 213. **KW** Random Graphs. Metric Space. Communication. Trading Groups.

AB This paper is motivated by a small economic literature modelling random trading groups or communication structures as random graphs. It relates this literature to recent work by the author which describes trade infrastructures by means of a "contacting cost-topology". Conditions are found under which a given, finite or infinite, countable subset of a pseudo-metric space is almost certainly contained in a connected component of a random graph. In general, the same conditions neither imply nor exclude that the entire pseudo-metric space is almost certainly a connected component of a random graph. Based on these results, the likelihood of core equivalence properties for continuum economies with random communication structures is discussed.

Hallett, A. J. Hughes

PD April 1990. **TI** Target Zones and International Policy Coordination: The Contrast Between the Necessary and Sufficient Conditions for Success. **AA** University of Strathclyde. **SR** Centre for Economic Policy Research Discussion Paper: 393; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 32. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 431, 311, 423, 133. **KW** Exchange Rates. Target Zones. Policy Coordination.

AB This paper distinguishes between some obvious necessary and sufficient conditions for adopting the target zone proposal as a means of improving macroeconomic performance. The necessary conditions may be satisfied fairly easily, but it is a good deal more difficult to design a targeting system that satisfies the sufficient conditions when the exchange rate is used as an intermediate target. On that criterion the gains may be smaller than previously estimated. Target Zones do, however, have important practical advantages. They are effective in promoting stability. They are also a simple but relatively uncontroversial way to secure the coordination necessary to stop policymakers from adopting inefficient or undesirably competitive policies.

Ham, John

TI Unemployment, Discouraged Workers and Female Labour Supply. **AU** Blundell, Richard; Ham, John; Meghir, Costas.

Hamilton, Jonathan H.

TI Pareto Efficient Tax Structures. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

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

Hammour, Mohamad

PD May 1990. **TI** Increasing Returns and Endogenous Business Cycles. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 477; Department of Economics, Columbia University, New York, New York 10027. **PG** 33. **PR** \$5.00. **JE** 023, 131, 133. **KW** Growth Model. Returns to Scale. Neoclassical Model. Savings. Investment. Business Cycle.

AB Models have recently been proposed where increasing returns make long-run growth endogenous. This paper argues that the idea that economic dynamics can become essentially endogenous in the presence of increasing returns also applies to short-run fluctuations. The argument is made in the context of the basic neoclassical models of savings and investment. Under constant returns to scale, the economy converges to a saddle-path stable equilibrium. But under either internal or external economies of scale, increasing returns destabilize the equilibrium. Moreover, if there are natural "expansion diseconomies," the economy may converge to a stable limit cycle around the steady state. Together with endogenous business cycles, increasing returns may also result in multiple equilibria of two sorts: indeterminacy, with a possible role for "animal spirits"; and multiple steady states, with the related "coordination failure" problems.

Hansen, Lars Peter

PD March 1990. **TI** Efficient Estimation of Linear Asset Pricing Models with Moving-Average Errors. **AU** Hansen, Lars Peter; Singleton, Kenneth J. **AA** Hansen: University of Chicago. Singleton: Stanford University. **SR** National Bureau of Economic Research Technical Paper: 86; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 53. **PR** \$2.00. **JE** 313, 212, 811. **KW** Instrumental Variables. Asset Pricing Model. CAPM. Securities.

AB This paper explores in depth the nature of the conditional moment restrictions implied by log-linear intertemporal capital asset pricing models (ICAPMs) and shows that the generalized instrumental variables (GMM) estimators of these models (as typically implemented in practice) are inefficient. The moment conditions in the presence of temporally aggregated consumption are derived for two log-linear ICAPMS. The first is a continuous time model in which agents maximize expected utility. In the context of this model, we show that there are important asymmetries between the implied moment conditions for infinitely and finitely-lived securities. The second model assumes that agents maximize non-expected utility, and leads to a very similar econometric relation for the return on the wealth portfolio.

PD May 1990. **TI** Implications of Security Market Data for Models of Dynamic Economies. **AU** Hansen, Lars Peter; Jagannathan, Ravi. **AA** Hansen: University of Chicago. Jagannathan: University of Minnesota. **SR** National Bureau of Economic Research Technical Paper: 89; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 48. **PR** \$2.00. **JE** 313, 921. **KW** Asset Market. Securities. Consumer Economics. Nonparametric Model.

AB We show how to use security market data to restrict the admissible region for means and standard deviations of intertemporal marginal rates of substitution (IMRS's) of consumers. Our approach is (i) nonparametric and applies to a rich class of models of dynamic economies; (ii) characterizes the duality between the mean-standard deviation frontier for IMRS's and the familiar mean-standard deviation frontier for asset returns; and (iii) exploits the restriction that IMRS's are positive random variables. The region provides a convenient summary of the sense in which asset market data are anomalous from the vantage point of intertemporal asset pricing theory.

Hanson, Kenneth A.

PD August 1990. **TI** Data, Linkages, and Models: U.S. National Income and Product Accounts in the Framework of a Social Accounting Matrix. **AU** Hanson, Kenneth A.; Robinson, Sherman. **AA** Hanson: U.S. Department of Agriculture. Robinson: University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 544; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 41. **PR** \$8.20. **JE** 221, 225, 222, 212. **KW** National Income. Social Accounting Matrix. Simulation Models.

AB In policy analysis, there is a continuing tension and interplay between issues, models, and data. Issues and models have changed in recent years and there is a need for evolution in the underlying economywide economic database. We discuss accounting frameworks for integrating micro survey data with macro data from the national economic accounts. We take a modeler's perspective, arguing that new accounts are needed to support policy modeling. We discuss in detail the use of a social accounting matrix (SAM). A SAM provides a data framework which reflects an actor/transaction view of the economy and supports disaggregated economywide modeling. We discuss the relationship between a SAM and the existing national economic accounts for the United States, including the national income and product accounts (NIPA) and the input-output accounts.

Haque, Nadeem U.

PD February 1990. **TI** An Econometric Rational-Expectations Macroeconomic Model for Developing Countries with Capital Controls. **AU** Haque, Nadeem U.; Lahiri, Kajal; Montiel, Peter. **AA** Haque and Montiel: International Monetary Fund. Lahiri: State University of New York, Albany. **SR** International Monetary Fund Working Paper: WP/90/11; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** 121, 441, 131. **KW** Developing Countries. Capital Mobility. Macroeconomic Model. Rational Expectations.

AB A small macroeconomic model based on familiar theoretical considerations is developed and estimated using data from 31 developing countries. Efficient estimation techniques are used to control for country heterogeneity under the assumption of rational expectations. The estimates and the test statistics suggest that the model could serve well as a framework for developing country macroeconomic analysis. An interesting feature of the specification of the model is that it allows the hypothesis of capital mobility to be explicitly tested. The empirical analysis suggests that on average developing countries tend to exhibit a high degree of capital mobility.

PD March 1990. **TI** Dynamic Responses to Policy and Exogenous Shocks in an Empirical Developing Country Model with Rational Expectations. **AU** Haque, Nadeem U.; Montiel, Peter. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/25; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** not available. **JE** 121, 131, 411. **KW** Developing Country. Macroeconomic Model. Economic Fluctuations.

AB The dynamic responses of a developing economy to a variety of policy and external shocks are studied using an empirical macroeconomic model which embodies rational expectations, perfect capital mobility, and import rationing.

These features, which are relatively new in developing country modelling, prove to be quite important in determining the model's dynamic properties. This suggests that macroeconomic management in developing countries, such as that involved in short-run stabilization, requires that such features be explicitly taken into account.

Hardle, Wolfgang

PD February 1990. **TI** Regression Smoothing Parameters That are Not Far From Their Optimum. **AU** Hardle, Wolfgang; Hall, P.; Marron, J. S. **AA** Hardle: Universite Catholique de Louvain. Hall: University of North Carolina, Chapel Hill. Marron: Australian National University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9009; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 18. **PR** not available. **JE** 211. **KW** Kernel Estimation. Nonparametric Regression. Squared Error. Smoothing Parameter.

AB It is well known that data driven regression smoothing parameters h based on cross-validation and related methods exhibit a slow rate of convergence to its optimum. In this paper we consider mean averaged squared error optimal bandwidths $h(0)$. This (non-random) smoothing parameter can be much faster approximated. We use the technique of double smoothing to show that there is an h such that under certain conditions (square root of n) times $(\hat{h} - h(0))/h(0)$ tends to an asymptotic normal distribution. The double smoothing technique is based on employing an oversmooth auxiliary kernel estimate for reflecting the correct bias behavior.

PD February 1990. **TI** Kernel Estimation: The Equivalent Spline Smoothing Method. **AU** Hardle, Wolfgang; Nussbaum, Michael. **AA** Hardle: Universite Catholique de Louvain. Nussbaum: Akademie der Wissenschaften der DDR, Berlin. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9013; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 18. **PR** not available. **JE** 211. **KW** Kernel Estimator. Spline Smoothing. Spline Estimator. Nonparametric Regression.

AB Among nonparametric smoothers, there is a well-known correspondence between kernel and Fourier series methods, pivoted by the Fourier transform of the kernel. This suggests a similar relationship between kernel and spline estimators. A known special case is the result of Silverman (1984) on the effective kernel for the classical Reinsch-Schoenberg smoothing spline in the nonparametric regression model. We present an extension by showing that a large class of kernel estimators have a spline equivalent, in the sense of identical asymptotic local behavior of the weighting coefficients.

PD February 1990. **TI** Cross Section Engel Curves over Time. **AU** Hardle, Wolfgang; Jerison, M. **AA** Hardle: CORE. Jerison: State University of New York, Albany. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9016; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 29. **PR** not available. **JE** 022, 921. **KW** Engel Curves. Nonparametric Smoothing. Nonparametric Estimation. Expenditures. Demand Function. Microeconomic Model.

AB Methods for nonparametric estimation and comparison of cross section Engel curves are presented and applied to U.K. expenditure data. Real Engel curves (with quantity demanded

and real total expenditure on the axes) vary over time, but their shapes are generally quite stable. Mean normalized Engel curves are defined and are found not to vary greatly over time. Consequences of such invariance for the testing of microeconomic demand models are investigated.

PD April 1990. **TI** Remarks on Sliced Inverse Regression. **AU** Hardle, Wolfgang; Tsybakov, Alexander B. **AA** Hardle: Universite Catholique de Louvain. Tsybakov: Academy of Sciences, USSR. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9027; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 6. **PR** not available. **JE** 213. **KW** Sliced Inverse Regression.

AB This is a discussion of sliced inverse regression.

PD April 1990. **TI** Robust Locally Adaptive Nonparametric Regression. **AU** Hardle, Wolfgang; Tsybakov, Alexander B. **AA** Hardle: Universite Catholique de Louvain. Tsybakov: Academy of Sciences, USSR. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9028; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 17. **PR** not available. **JE** 211. **KW** Curve Estimation. M-Estimation. Nonparametric Regression. Nonparametric Estimation.

AB The problem of robust nonparametric regression estimation is considered. We study pointwise asymptotic normality of variable bandwidth M -smoothers. A locally optimal bandwidth is derived, and the "plug-in" method is used for data-driven local bandwidth selection. Asymptotic optimality of local bandwidth selectors based on robust pilot estimators is proved. The work improves upon earlier contributions since we get estimates that have smaller mean squared error under weaker assumptions on the error distribution and on the ϕ -function of M -smoother.

Hars, Laszlo

PD February 1990. **TI** Automatic Multi-Chip Module Wiring. **AA** Universitat Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90628-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 37. **PR** no charge. **JE** 213, 214. **KW** Algorithms. Multi-Chip Module. Wiring Rule.

AB There are several objectives a wiring can aim at. The most important of all is minimizing the number of used planes. For technological reasons not all the planes can be saved if they do not have edges with both endpoints on them. What really matters is an even plane and the very next (odd) plane do not have horizontal edges at all, these planes may be excluded from the manufacturing of the corresponding electronic module. Less important is minimizing the total length of the wires, or minimizing the number of bends the wires make, i.e. to make them as straight as possible, or to minimize the number of via points. In the present work we concentrate mainly on reducing the number of used planes, and only after having a complete wiring on a small number of planes, we try to modify it improving on other objectives.

Hart, Oliver

PD April 1990. **TI** Vertical Integration and Market Foreclosure. **AU** Hart, Oliver; Tirole, Jean. **AA** Massachusetts Institute of Technology.

SR Massachusetts Institute of Technology Department of Economics Working Paper: 548; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 102. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 611, 514, 511, 022. **KW** Mergers. Vertical Integration. Competition. Foreclosure.

AB Few people would disagree with the proposition that horizontal mergers have the potential to restrict output and raise consumer prices. In contrast, there is much less agreement about the anti-competitive effects of vertical mergers. The purpose of this paper is to develop a theoretical model showing how vertical integration changes the nature of competition in upstream and downstream markets and identifying conditions under which market foreclosure will be a consequence or even a purpose of such integration. In contrast to much of the literature, we do not restrict upstream and downstream firms to particular contractual arrangements, but instead allow firms to choose from a full set of contractual arrangements both when integrated and when not.

Haurin, Donald R.

PD March 1990. **TI** Real Rents and Household Formation: The Effect of the 1986 Tax Reform Act. **AU** Haurin, Donald R.; Hendershott, Patric H.; Kim, Dongwook. **AA** Ohio State University. **SR** National Bureau of Economic Research Working Paper: 3309; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** \$2.00. **JE** 921, 841. **KW** Households. Demographics. Marriage. Families.

AB Although the economic literature has analyzed some components of the headship decision, study of household formation has been primarily in the realm of demography. We begin with a pure demographic model and expand it to include additional determinants of the decision to remain with parents or not, to marry or not, and to live with a group or separately. Our results, based on a sample of 2355 youths in their twenties, indicate that (1) rental costs, wealth, and the potential wage that a youth could earn are important variables in explaining the outcomes of these choices and (2) including the economic variables significantly changes the estimated impacts of the demographic variables.

PD March 1990. **TI** Tenure Choice of American Youth. **AU** Haurin, Donald R.; Hendershott, Patric H.; Dongwook, Kim. **AA** Ohio State University. **SR** National Bureau of Economic Research Working Paper: 3310; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** \$2.00. **JE** 932, 921. **KW** Urban Economics. Housing. Marriage. Households.

AB While there seems to be no end to estimates of housing tenure determinants, prior studies have not accounted for the simultaneity of tenure choice with household formation, labor supply or the marriage decision. Our estimates are superior to those in the literature both because we address these issues and because we better measure the cost of owning relative to renting. Accounting for simultaneity with the household formation and labor supply decisions matter. Using a household's predicted wage rate rather than its observed income doubles the response of tenure choice to the price of owning relative to renting. Including household formation selectivity correction variables cuts the response to tenure choice to the predicted wage by 25 percent. Moreover, the impact of variations in demographic variables on tenure choice is sharply reduced after correcting for selectivity bias.

Hayashi, Fumio

PD April 1990. **TI** The Relation Between Firm Growth and Q with Multiple Capital Goods: Theory and Evidence from Panel Data on Japanese Firms. **AU** Hayashi, Fumio; Inoue, Tohru. **AA** Hayashi: University of Pennsylvania. Inoue: Yokohama National University, Japan. **SR** National Bureau of Economic Research Working Paper: 3326; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** \$2.00. **JE** 226, 631, 522. **KW** Manufacturing. Investment. Growth Rates. Capital Stock.

AB We derive from a model of investment with multiple capital goods a one-to-one relation between the growth rate of the capital aggregate and the stock market-based Q. We estimate the growth-Q relation using a panel of Japanese manufacturing firms taking into account the endogeneity of Q. Identification is achieved by combining the theoretical structure of the Q model and an assumed serial correlation structure of the technology shock which is the error term in the growth-Q equation. For early years of our sample, cash flow has significant explanatory power over and above Q. The significance of cash flow disappears for more recent years for the heavy industry when Japanese capital markets were liberalized. The estimated Q coefficient implies that the adjustment cost is less than a half of gross profits net of the adjustment cost.

Heady, Christopher

TI The Working Behaviour of Young People in the Rural Cote D'Ivoire: Evidence from the LSMS Panel. **AU** Alessie, Rob; Baker, Paul; Blundell, Richard; Heady, Christopher; Meghir, Costas.

TI The Working Behaviour of Young People in the Rural Cote D'Ivoire: Evidence from the LSMS Panel. **AU** Alessie, Rob; Baker, Paul; Blundell, Richard; Heady, Christopher; Meghir, Costas.

Healy, Paul M

PD May 1990. **TI** Does Corporate Performance Improve After Mergers. **AU** Healy, Paul M; Palepu, Krishna G.; Rubak, Richard S. **AA** Healy: Massachusetts Institute of Technology. Palepu and Rubak: Harvard University. **SR** National Bureau of Economic Research Working Paper: 3348; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** \$2.00. **JE** 611, 522, 521. **KW** Mergers. Business Investment. Capital. Stock Returns. Industrial Organization.

AB We examine the post-acquisition operating performance of merged firms using a sample of the 50 largest mergers between U.S. public industrial firms completed in the period 1979 to 1983. The results indicate that merged firms have significant improvements in asset productivity relative to their industries after the merger, leading to higher post-merger operating cash flow returns. Sample firms maintain their capital expenditure and R&D rates relative to their industries after the merger, indicating that merged firms do not reduce their long-term investment. There is a strong positive relation between post-merger increases in operating cash flows and abnormal stock returns at merger announcements, indicating that expectations of economic improvements underlie the equity revaluations of the merging firms.

Helliwell, John F.

PD April 1990. **TI** Fiscal Policy and the External Deficit: Siblings, But Not Twins. **AA** University of British Columbia. **SR** National Bureau of Economic Research Working Paper: 3313; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** \$2.00. **JE** 322, 321, 431. **KW** Current Account. Government Spending. Fiscal Policy.

AB This paper first surveys a number of partial and macroeconomic approaches to the determination of the current account, and then summarizes the evidence from multicountry economic models about the linkages between U.S. government spending and the U.S. current account during the 1980s. The available evidence from a large number of multicountry models suggests that the U.S. fiscal policy of the first half of the 1980s was responsible for about half of the buildup in the external deficit, and that the accumulated net foreign debt is about 500 billion dollars higher than it would have been without the fiscal expansion.

Helpman, Elhanan

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

Hendershott, Patric H.

TI Real Rents and Household Formation: The Effect of the 1986 Tax Reform Act. **AU** Haurin, Donald R.; Hendershott, Patric H.; Kim, Dongwook.

TI Risk and Return on Real Estate: Evidence from Equity REITs. **AU** Chan, K. C.; Hendershott, Patric H.; Sanders, Anthony B.

TI Tenure Choice of American Youth. **AU** Haurin, Donald R.; Hendershott, Patric H.; Dongwook, Kim.

Hendry, David F.

PD July 1990. **TI** Modeling the Demand for Narrow Money in the United Kingdom and the United States. **AU** Hendry, David F.; Ericsson, Neil R. **AA** Hendry: Nuffield College. Ericsson: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 383; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 81. **PR** no charge. **JE** 311, 132, 122. **KW** Conditional Models. Lucas Critique. Money Demand. Exogeneity. Forecasting. Monetary Policy.

AB Despite the importance of well-specified empirical money demand functions for inference, forecasting, and policy, problems in modeling have arisen concerning the economic theories of money demand, the data, institutional frameworks, financial innovation, and econometric implementation. By developing constant, data-coherent M1 demand equations for the UK and US, we investigate these issues and explain such puzzles as "missing money", the great velocity decline, and the recent explosion in M1. The endogeneity of money, the Lucas Critique, and the non-invertibility of our M1 models are also discussed.

Hentschel, Ludger

TI No News is Good News: An Asymmetric Model of Changing Volatility in Stock Returns. **AU** Campbell, John Y.; Hentschel, Ludger.

Hermalin, Benjamin E.

PD February 1990. **TI** Adverse Selection, Short-Term Contracting, and the Underprovision of On-the-Job Training. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-139; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 27. **PR** \$3.50. **JE** 811, 851, 824, 821. **KW** Manpower Training. Employment Contracts.

AB This paper argues that the existence of adverse selection (worker heterogeneity) explains the underprovision of general training by employers. High-ability workers value the option to entertain outside wage offers once their ability becomes known to the market. Thus, offering short-term contracts is a way to screen high-ability types from low-ability types. A firm is not willing to train workers under short-term contracts. Hence, despite the positive returns to training may be underprovided in equilibrium. More generally, this paper offers an explanation for the puzzling economic phenomenon of short-term contracts governing long-term buyer-seller relationships.

TI Why Legal Restrictions on Private Contracts Can Enhance Efficiency. **AU** Aghion, Philippe; Hermalin, Benjamin E.

PD May 1990. **TI** Moral Hazard and Verifiability: The Effects of Renegotiation in Agency. **AU** Hermalin, Benjamin E.; Katz, Michael L. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-141; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 33. **PR** \$3.50. **JE** 026, 022. **KW** Renegotiation. Verifiability. Principal-Agent Model.

AB We examine the effects of the renegotiation in an agency relationship. We show how renegotiation affects: 1) the set of actions the principal can induce the agent to take; and 2) the cost of implementing a given action. We show that, when the principal receives an unverifiable signal of the agent's actions, renegotiation can improve welfare. This result stands in contrast to Fudenberg and Tirole's (1989) finding that renegotiation lowers welfare when the principal receives no signal about the agent's action prior to renegotiation.

Hewitt, Daniel P.

PD July 1990. **TI** Optimal Tax/Expenditure Competition Strategy of Governments in the Presence of Time Inconsistency: The Case for Investment Tax Abatements. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/59; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** 323, 324, 615, 522. **KW** Subsidies. Taxes. Government Services. Business Investment.

AB Businesses which seek the location that offers the highest profitability are likely to consider tax incentives and the level of government services available. However, once a business commits itself to a locality, high moving costs render it vulnerable to future tax increases or denial of government services. Fear of time inconsistency will lower expected business profitability in a region. This paper indicates that a developing country or locality can attract a higher level of capital with a tax abatement scheme which provides a subsidy (funded by a capital income tax) equivalent to moving/setup costs.

Hildenbrand, Werner

TI Statistical Engel Curves, Income Distributions and the "Law of Demand". AU Grodal, Birgit; Hildenbrand, Werner.

Hines, James R., Jr

TI Capital Flight and Tax Competition: Are There Viable Solutions to Both Problems. AU Giovannini, Alberto; Hines, James R., Jr.

Hoang, Chinh T.

PD March 1990. TI Recognition and Optimization Algorithms for Co-Triangulated Graphs. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90637-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 11. PR no charge. JE 213, 214. KW Graph Theory. Ordered Graphs. Greedy Algorithm. Linear Time Algorithm.

AB Perfectly orderable graphs are those graphs on which the greedy colouring algorithm produces an optimal colouring. The class of perfectly orderable graphs contain all triangulated (chordal) graphs and all co-triangulated graphs (complements of triangulated graphs). Recognizing perfectly orderable graphs is an NP-complete problem. However, it is well known that triangulated graphs can be recognized in linear time. In this paper, we design a linear time recognition algorithm for co-triangulated graphs. Our result implies that given a co-triangulated graph, a minimum colouring largest clique, minimum clique cover, and largest stable set of the graph can be found in linear time. We shall also design fast algorithms to solve the weighted versions of these for optimization problems.

PD April 1990. TI The Complexity of Recognizing Weakly Triangulated Graphs that are Perfectly Orderable. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90638-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 7. PR no charge. JE 213. KW Graph Theory. Orderable Graphs. Perfect Graphs.

AB We prove that it is NP-complete to determine whether a weakly triangulated graph is perfectly orderable.

PD May 1990. TI New Properties of Perfectly Orderable Graphs and Strongly Perfect Graphs. AU Hoang, Chinh T.; Maffray, Frederic; Preissmann, Myriam. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90641-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 16. PR no charge. JE 213. KW Graph Theory. Orderable Graphs. Perfect Graphs. Greedy Algorithm.

AB We establish a property of minimal non-perfectly orderable graphs, and use this property to generate a class of perfectly orderable graphs which strictly contains all brittle graphs. This class is characterized by the existence, in each induced subgraph, of a vertex which is either the endpoint of no $P(4)$, or the midpoint of no $P(4)$, or the mid-point of exactly one $P(4)$ and the endpoint of exactly one $P(4)$. As a consequence, we show that the number of $P(4)$'s in a minimal non-perfectly orderable graph is at least $(3/4)n$ where n is the number of vertices of the graph. Similar results are obtained for strongly perfect graphs.

Hollowell, Sheila

TI Provision of Child Care: Cost Functions for Profit-Making and Not-For-Profit Day Care Center. AU Mukerjee, Swati; Witte, Anne Dryden; Hollowell, Sheila.

Holly, Alberto

PD May 1990. TI A Random Linear Functional Approach to Efficiency Bounds. AA Universite de Lausanne. SR Universite de Lausanne Cahiers de Recherches Economiques: 9009; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 29. PR no charge. JE 211. KW Regression Model. Nonparametric Models. Efficiency Bounds.

AB This paper suggests a method for obtaining efficiency bounds in models containing either only infinite dimensional parameters or both finite and infinite dimensional parameters (semiparametric models). The method is based on a theory of random linear functionals applied to the gradient of the log-likelihood functional and is illustrated by computing the lower bound for Cox's regression model.

Horstmann, Ignatius J.

PD March 1990. TI Endogenous Market Structures in International Trade. AU Horstmann, Ignatius J.; Markusen, James J. AA University of Western Ontario. SR National Bureau of Economic Research Working Paper: 3283; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 32. PR \$2.00. JE 411, 442. KW International Trade. Duopoly. Multinationals.

AB Almost all of the large literature on international trade with imperfect competition assumes exogenous market structures. The purpose of this paper is to develop a simple model that generates alternative market structures as Nash equilibria for different parameterizations of the basic model. Familiar configurations such as a duopoly competing in exports or a single multinational producing in both markets arise as special cases. Small tax policy changes can produce large welfare effects as the equilibrium market structure shifts, implying discontinuous jumps in prices, quantities, and profits.

Howell, David R.

PD September 1990. TI Technical Change and the Demand for Skills by U.S. Industries. AU Howell, David R.; Wolff, Edward N. AA New York University. SR New York University Economic Research Report: 90-41; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 38. PR no charge. JE 851, 824, 621, 812, 226. KW Human Capital. Education. Occupation. Labor Market. Wages.

AB Previous studies have explained the demand for skills, usually measured by schooling attainment, by either factor price substitution, capital-skill complementarity, or technology-skill complementarity. We explore this demand with direct job-based measures of cognitive (CS), interactive (IS), and motor (MS) skills in a single model that includes all three sets of possible determinants. The results raise doubts about the adequacy of schooling as a measure of skill and TFP growth as an index of technical change. We find little support for capital-skill complementarity; capital-intensity and its growth are significantly inversely related to CS and MS levels and growth. Technical change is unambiguously linked to

increasing CS, rising professional/technical shares, and declining operative/laborer shares.

Hubbard, R. Glenn

PD April 1990. **TI** Internal Net Worth and the Investment Process: An Application to U.S. Agriculture. **AU** Hubbard, R. Glenn; Kashyap, Anil. **AA** Hubbard: Columbia University. Kashyap: Federal Reserve Board. **SR** National Bureau of Economic Research Working Paper: 3339; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** \$2.00. **JE** 715, 313, 522. **KW** Business Investment. Capital Markets. Agriculture. Capital.

AB Recent models of firm investment decisions stressing informational imperfections in capital markets provide a foundation for interpreting evidence that movements in internal finance can predict investment opportunities. While such evidence is suggestive, it is often open to other interpretations. We present new evidence in favor of these models that addresses this gap in two ways. First, we focus on the U.S. agricultural sector; the sector has experienced large fluctuations in net worth and the profitability of investment, and reasonable measures of net worth can be constructed. Second, rather than relying on investment function representations (e.g., the q -theory approach), we make use of predictions generated by firms' Euler equation for capital accumulation.

Hutchings, Teresa D.

TI Risk Sharing, Crew Quality, Labor Shares and Wages in the Nineteenth Century American Whaling Industry. **AU** Davis, Lance E.; Gallman, Robert E.; Hutchings, Teresa D.

Ingham, Alan

PD April 1990. **TI** Carbon Taxes and the UK Manufacturing Sector. **AU** Ingham, Alan; Ulph, Alistair. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9004; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 34. **PR** no charge. **JE** 722, 731, 631, 323. **KW** Externalities. Pollution. Taxation. Manufacturing. Weather. Global Warming. **AB** The Prime Minister's speech to the Royal Society on 27 September 1988 marked a distinct change in the attention given by politicians in the UK to the problems of global warming (see also the Report by the House of Commons Select Committee on Energy (1989)). At the same time, the concern of scientists is beginning to move from the issues of detailed climatological studies designed to understand the complex interactions between emissions of greenhouse gases related to human activities and changes in global weather patterns, to assessing the social and economic effects of both global warming and attempts that might be made to ameliorate it. It is with the latter question that this paper is concerned.

Inoue, Tohru

TI The Relation Between Firm Growth and Q with Multiple Capital Goods: Theory and Evidence from Panel Data on Japanese Firms. **AU** Hayashi, Fumio; Inoue, Tohru.

Irwin, Douglas A.

PD July 1990. **TI** Three-Factor General Equilibrium Models: A Dual, Geometric Approach. **AA** Board of

Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 384; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 23. **PR** no charge. **JE** 411, 112, 021. **KW** Trade Theory. Economic Development. International Trade.

AB This paper develops dual, geometric techniques for two popular three-factor general equilibrium models: the specific-factor model and the Krueger model of economic development. Several comparative static exercises from international trade theory illustrate how these models easily lend themselves to geometric exposition.

Isard, Peter

TI Externalities, Incentives, and Economic Reforms. **AU** Aizenman, Joshua; Isard, Peter.

Ito, Takatoshi

PD March 1990. **TI** Is the Japanese Distribution System Really Inefficient. **AU** Ito, Takatoshi; Maruyama, Masayoshi. **AA** Ito: Hitotsubashi University, Japan. Maruyama: Kobe University, Japan. **SR** National Bureau of Economic Research Working Paper: 3306; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 47. **PR** \$2.00. **JE** 633. **KW** Distribution. Market Structure. Industrial Organization.

AB This paper investigates the efficiency of the Japanese distribution system, measured by the distribution margin. Most of the discussions on the Japanese distribution system have so far relied on institutional descriptions and anecdotal evidence, failing to substantiate the case. The present paper will show that the Japanese and U.S. distribution sectors are about the same in terms of value added and distribution margins. Therefore, it is not true that the distribution sector adds up unnecessary distribution costs or earns monopolistic operating profits. This paper will not address a question whether the distribution system is acting as a non-tariff barrier.

Ize, Alain

PD March 1990. **TI** Trade Liberalization, Stabilization, and Growth: Some Notes on the Mexican Experience. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/15; International Monetary Fund, Washington, DC 20431. **PG** 28. **PR** not available. **JE** 121, 134, 133, 422. **KW** Mexico. Inflation. Developing Countries. Stabilization Policy. Trade Policy.

AB While inflation slowed sharply in Mexico during 1988, imports surged. Although the growth of domestic absorption could be attributed to a higher fiscal deficit, deriving from sharply higher domestic interest rates, this paper argues that the recovery of private investment was the main driving force, as the private sector saved most of its interest income on public debt. The paper also analyzes some of the costs and benefits associated with trade liberalization. While there is no evidence yet that trade liberalization contributed decisively to price stabilization, it may have played an important role in stimulating exports and investment.

Jaeger, Albert

PD July 1990. **TI** A Measure of Hysteresis in Unemployment Rates. **AU** Jaeger, Albert; Parkinson, Martin. **AA** Jaeger: Institute for Advanced Studies, Austria.

Parkinson: Princeton University and Australian Treasury. **SR** Princeton Financial Research Center Memorandum: 117; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. **PG** 41. **PR** \$3.00 domestic; \$6.00 foreign. **JE** 131, 824, 133, 122. **KW** Hysteresis. Unemployment. Developed Countries. **AB** We use an unobserved components model of the unemployment rate to define a measure of hysteresis. Unemployment is decomposed into a natural rate component, assumed to be nonstationary, and a cyclical component, assumed to be stationary. Hysteresis effects are modelled by allowing lagged cyclical shocks to affect the current natural rate. We find no hysteresis effects for the United States and Canada. Significant hysteresis is reported for Australia and France. There is weak evidence for hysteresis in German unemployment data.

Jagannathan, Ravi

TI Implications of Security Market Data for Models of Dynamic Economies. **AU** Hansen, Lars Peter; Jagannathan, Ravi.

Jenkins, Stephen P.

TI Adverse Selection Aspects of Poverty Amongst Lone Mothers. **AU** Ermisch, John F.; Jenkins, Stephen P.; Wright, Robert E.

Jenkinson, Tim

PD July 1990. **TI** Initial Public Offerings in the UK, USA, and Japan. **AA** Keble College. **SR** Centre for Economic Policy Research Discussion Paper: 427; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 26. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 313, 522, 521. **KW** Initial Public Offerings. Firm Equity. Business Finance.

AB When a firm makes an initial public offering (IPO) of its equity, the accuracy with which its shares are priced will be an important factor determining the cost of "going public". This paper compares the accuracy of IPO pricing in the United States, United Kingdom and Japan over the period 1985-88. It is found that IPOs are systematically priced at a discount relative to their subsequent trading price in each country.

Jerison, M.

TI Cross Section Engel Curves over Time. **AU** Hardle, Wolfgang; Jerison, M.

Joshi, Heather

PD September 1988. **TI** Changing Roles of Women in the British Labour Market and the Family. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/13; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 36. **PR** not available. **JE** 841, 921, 824, 813. **KW** Labor Force Participation. Sex Discrimination. Divorce. Fertility. Employment. Child Care.

AB Relationships between female force participation and changing demography of the British family are reviewed. Changes in both women's employment and the family fall short of revolutionary. Research findings confirm unequal treatment of men and women in the labor market, and marked effects of family responsibilities on women's experience of paid work.

Evidence of reverse causation from the labor market to family formation and dissolution suggest a modest contribution of economics to the explanation of demographic trends. It is anticipated that the labor shortage of the 1990's, consequent upon the drop in births during the 1970's, may bring about changes in employment and child care policy. This could reduce the compromises which have hitherto been necessary to combine motherhood and employment.

PD June 1989. **TI** Sex, Equality, and the State Pension. **AU** Joshi, Heather; Owen, Susan J. **AA** Joshi: Birkbeck College. Owen: Cardiff Business School. **SR** Birkbeck College Discussion Papers in Economics: 89/7; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 33. **PR** not available. **JE** 826, 915. **KW** Pensions. Sex Discrimination. Earnings Profile.

AB There are systematic inequalities in the lifetime earnings of women according to whether or not they have children, but even without children women earn less than men. These inequalities are modified but not eliminated after retirement by the British State Pension Scheme. The lifetime profiles of earnings, contributions and pension receipts are simulated for illustrative individuals. Pension streams are compared under the rules of both Castle and Fowler versions of SERPS. In both cases, women are better compensated for their domestic responsibilities and consequent low pay by the Basic Pension rather than the Earnings-Related component.

Jovanovic, Boyan

PD August 1990. **TI** The Diffusion of Technology and Inequality Among Nations. **AU** Jovanovic, Boyan; Lach, Saul. **AA** Jovanovic: New York University. Lach: Hebrew University. **SR** New York University Economic Research Reports: 90-34; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 50. **PR** no charge. **JE** 621, 123, 226. **KW** Technology. Diffusion. Gross National Product. Growth Rates. Developing Countries.

AB This paper accounts for the variation in GNP over countries by positing that they differ in how fast they implement new technology. The model implies that countries that are slow to adopt will end up with lower GNP and that their growth rates will be more persistent and less variable. It also implies that diffusion lags should not affect long-run growth. We lack the necessary comparable micro data on diffusion to make an extensive cross-country comparison of diffusion speeds with macro performance. Nevertheless, the data that we do look at suggest that differential rates of implementation are related to world inequality.

Juster, F. Thomas

PD March 1990. **TI** Differences in the Measurement of Wealth, Wealth Inequality, and Wealth Composition Obtained from Alternative U.S. Wealth Surveys. **AU** Juster, F. Thomas; Kuester, Kathleen A. **AA** Juster: University of Michigan. Kuester: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 116; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** 229, 224. **KW** Households. Wealth. Microdata. Income Distribution.

AB Because household wealth surveys have been widely

used to study saving and other issues, it is important to examine the reliability of the various survey estimates of wealth. This paper assesses the quality characteristics of the National Longitudinal Survey of Mature Men and the Retirement History Survey, as compared to the 1983 Survey of Consumer Finances. We find that the NLS and especially the RHS underreport wealth and wealth concentration. The underestimates of wealth held in the form of common stock, business equity, and investment real estate equity are substantial. The principal problem lies in underrepresentation of both tails of the wealth and income distributions, with the consequences of underrepresenting the upper tail being especially serious for wealth measurement. We examine several potential reasons for the underrepresentation.

Kahn, Charles M.

PD April 1990. **TI** Non-Existence and Inefficiency of Equilibria with American Options and Convertible Bonds. **AU** Kahn, Charles M.; Krasa, Stefan. **AA** Kahn: University of Illinois, Urbana-Champaign. Krasa: University of Illinois, Urbana-Champaign and University of Vienna. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-286; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 19. **PR** no charge. **JE** 313, 021, 311. **KW** European Options. Convertible Bonds. Asset Market. Financial Markets. American Options.

AB We analyze three different examples of economies with incomplete financial markets. In the first model we consider a bond and a convertible bond, and in the second model a stock and an American put option on the stock. Although there is only one commodity and asset payoffs therefore do not depend on spot prices, we derive robust non-existence of equilibria in both cases. In the last example we consider American call options with nominal striking prices. We show that in equilibrium the assets can never span. The Arrow-Debreu allocation cannot be implemented and the equilibrium is inefficient. This example is also robust.

TI Protecting the Winner: Second-Price Versus Oral Auctions. **AU** Engelbrecht-Wiggans, Richard; Kahn, Charles M.

Kane, Edward J.

PD March 1990. **TI** Incentive Conflict in the International Regulatory Agreement on Risk-Based Capital. **AA** Ohio State University. **SR** National Bureau of Economic Research Working Paper: 3308; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** \$2.00. **JE** 613, 312. **KW** Government Regulations. Commercial Banks. Regulation. Cartels. Capital Investment.

AB Intergovernmental regulatory cooperation is fundamentally cartel behavior and subject to principal-agent conflict. In negotiating the 1988 risk-based capital agreement, most Western officials' unstated goal may arguably be described as postponing the pain of adapting their domestic regulatory schemes to successor officials' watch. They hoped they could buy time by raising book-value capital requirements for Japanese Banks. Efficient-market theory indicates that the market value rather than the book value of a bank's capital impacts its funding cost. It also clarifies that restrictions on domestic and foreign bank competition for Japanese deposits unfairly enhance Japanese banks' ability to intermediate that

country's massive capital exports.

Kang, Bohyong

TI Risk Adjusted Deposit Insurance for Japanese Banks. **AU** Sato, Ryuzo; Ramachandran, Rama V.; Kang, Bohyong.

Karni, Edi

PD February 1990. **TI** Utility Theory With Uncertainty. **AU** Karni, Edi; Schmeidler, David. **AA** Karni: Johns Hopkins University. Schmeidler: Tel Aviv University and Ohio State University. **SR** Johns Hopkins Department of Political Economy Working Paper: 240; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 94. **PR** no charge. **JE** 026, 022. **KW** Expected Utility. Utility Theory. Uncertainty. Risk.

AB This is a survey of utility theory under uncertainty and under risk.

PD March 1990. **TI** Optimal Insurance: A Nonexpected Utility Analysis. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 242; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 33. **PR** no charge. **JE** 026, 022. **KW** Insurance. Nonexpected Utility. Decision Theory. Expected Utility. Utility Theory.

AB This paper reviews some of the recent developments in the theory of decision making under risk and apply them to selected problems in the theory of optimal insurance, namely, the choice of optimal insurance coverage, and the comparative statics analysis of the optimal insurance coverage with respect to the consumer's risk aversion. The analysis highlights the methodology of local expected utility analysis.

PD May 1990. **TI** Optimal Insurance: A Nonexpected Utility Analysis. **AA** Johns Hopkins University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-288; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 33. **PR** no charge. **JE** 022, 024. **KW** Insurance. Insurance Coverage. Decision Making. Risk. Expected Utility.

AB This paper reviews some of the recent developments in the theory of decision making under risk and applies them to selected problems in the theory of optimal insurance, namely, the choice of optimal insurance coverage with respect to the consumer's risk aversion. The analysis highlights the methodology of local expected utility analysis.

PD June 1990. **TI** A Definition of Subjective Probabilities With State-Dependent Preferences. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 247; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 17. **PR** no charge. **JE** 026. **KW** Expected Utility Theory. State Dependence. Preferences. Utility Function.

AB In this paper we generalize the definition of subjective probabilities of Anscombe and Aumann to include state-dependent preferences. In particular, we propose a new axiom, called state-invariance of transformed consequences that represents a weakening of the state-independence axiom. We obtain a subjective expected utility representation with unique probability measure on the set of states, and a state-dependent, real-valued utility function on the set of outcomes.

PD June 1990. **TI** Atemporal Dynamic Consistency and Expected Utility Theory. **AU** Kami, Edi; Schmeidler, David. **AA** Kami: Johns Hopkins University. Schmeidler: Tel Aviv University and Ohio State University. **SR** Johns Hopkins Department of Political Economy Working Paper: 246; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 8. **PR** no charge. **JE** 026, 022. **KW** Dynamic Consistency. Independence. Expected Utility Theory.

AB In the context of the atemporal dynamic framework we show that with consequentialism and reduction of compound lotteries axiom, the assumption of dynamic consistency is equivalent to the independence axiom of expected utility theory.

Karp, Larry S.

PD May 1990. **TI** Helping by Hurting: Industrial Policy as an Alternative to Trade Policy. **AU** Karp, Larry S.; Perloff, Jeffrey M. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 536; 207 Giannini Hall, University of California, Berkeley, Berkeley, CA 94720. **PG** 38. **PR** \$7.60. **JE** 616, 422, 323. **KW** Industrial Policy. Commercial Policy. Trade Policy. Adjustment Costs. Taxes.

AB Industrial policies that are essentially nonlinear taxes or subsidies on adjustment costs of domestic firms affect those firms' market power in oligopolistic international markets. These adjustment policies often can achieve a strategic purpose at lower cost to the government than linear trade or investment subsidies and are less likely to result in retaliation by other governments. Many governments, however, use adjustment policies for non-strategic purposes without recognizing that they are lowering their firms' market power by subsidizing adjustment costs rather than taxing them.

Karzanov, A. V.

PD July 1990. **TI** Polynomial Uncrossing Processes. **AA** Institute for System Studies, Moscow. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90647-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 11. **PR** no charge. **JE** 213. **KW** Combinatorial Optimization. Integer Programming.

AB Let F be a family of subsets of a set V , and f be a nonnegative integer-valued function on F . An uncrossing process is a procedure of reforming F and f to F' and f' such that F' is laminar by use of certain elementary operations ("uncrossing steps") with crossing sets in a current family. Uncrossing steps of two natural types are considered. For both types, we prove the existence of an uncrossing process consisting of a polynomial number of uncrossing steps.

Kashyap, Anil

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

Kaskarelis, Ioannis A.

PD May 1989. **TI** Output Fluctuations in the Group of Five Economies. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 89/6; Birkbeck College, Department of Economics, 7/15 Gresse St., London

WIP 1PA, ENGLAND. **PG** 42. **PR** not available. **JE** 131, 133, 122. **KW** Aggregate Fluctuations. Bargaining. Competitiveness. Fiscal Policy. Wage Adjustment. **AB** In this paper I investigate the relationships between wage adjustment, competitiveness, fiscal policy and aggregate fluctuations in the main industrial economies, during the period 1970a-85d. The model I use has two particular characteristics: i) the distinction between traded and non-traded good sector, and ii) the wage bargaining which takes place at the competitive traded good sector. The results reveal substantial differences between countries, not only in their equilibrium relationships, but also in their short-run adjustments.

Katz, Michael L.

TI Moral Hazard and Verifiability: The Effects of Renegotiation in Agency. **AU** Hermalin, Benjamin E.; Katz, Michael L.

Keeler, Theodore E.

PD April 1990. **TI** Government Policy, Individual Actions, and Safety: Some Evidence for Motor Vehicles. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 90-138; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 30. **PR** \$3.50. **JE** 615, 913, 916, 613. **KW** Transportation Safety. Highway Safety. Motor Vehicles. Automobiles.

AB This paper develops a statistical model analyzing the effects of regulatory and individual behavior on motor vehicle safety, using county-based cross-sectional data for the year 1970. The results indicate that in the more rural half of the counties, none of the regulatory variables (including the rural speed limit) have a meaningful effect on fatalities. In the higher-density half of the counties, the speed limit has a positive and significant effect. Some other regulatory and social variables also have a strong effect in the high-density sample, including education (increased levels of which reduce fatalities) and income per capita (higher levels of which also reduce fatalities significantly).

Kehoe, Patrick J.

PD March 1990. **TI** Sustainable Plans and Mutual Default. **AU** Kehoe, Patrick J.; Chari, V. V. **AA** Federal Reserve Bank of Minneapolis and University of Minnesota. **SR** International Monetary Fund Working Paper: WP/90/22; International Monetary Fund, Washington, DC 20431. **PG** 30. **PR** not available. **JE** 321, 433, 443, 023. **KW** Taxation. Government Debt. Debt Default.

AB This paper presents a model of optimal taxation in which both private agents and the government can default on their debt. We first consider Ramsey equilibria in which the government can precommit to its policies but in which private agents can default. We then consider sustainable equilibria in which both government and private agent decision rules are required to be sequentially rational. We show that when there is sufficiently little discounting and government consumption fluctuates enough, the Ramsey allocations and policies (in which the government never defaults) can be supported by a sustainable equilibrium.

Kennett, David

PD July 1989. **TI** The Determinants of European Direct Investment in the United States. **AA** University College

London. **SR** University College London Discussion Paper: 89-15; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 25. **PR** 2.00 pounds. **JE** 441, 431, 313. **KW** Stock Market. Foreign Investment. International Investment. Industrial Organization. Exchange Rates. Mergers.

AB In recent years the dominance of industrial organization theories of international direct investment flows has led to a neglect of macroeconomic variables in its analysis. This paper argues that exchange rates, the earnings of subsidiaries and aggregate stock prices have been significant in the determination of European direct investment flows into the United States. However, the significance of stock prices has been sharply altered during the 1980s and has become significantly positive whereas before 1980 it was negative in sign. One interpretation of this is that the merger wave in the United States stock market has prompted increased flows of incoming European capital into mergers and acquisitions despite their rising cost.

Key, Sydney J.

PD September 1990. **TI** Is National Treatment Still Viable? U.S. Policy in Theory and Practice. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 385; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 50. **PR** no charge. **JE** 421, 442, 422. **KW** International Trade. Financial Markets. Trade Relations. Banking. Trade Policy.

AB National treatment, which precludes the use of rules that discriminate between foreign and domestic firms, seeks to ensure equality of competitive opportunity for foreign firms entering or operating in a host country. National treatment is a generally accepted principle for international trade in financial services. It is the basis for commitments by the twenty-four countries belonging to the Organization for Economic Cooperation and Development (OECD) and for the current negotiations on trade in services in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). This paper provides an analysis of national treatment and alternative principles in the context of the banking sector, with the U.S. experience as an example.

Khan, B. Zorina

TI The Democratization of Invention During Early Industrialization: Evidence from the United States, 1790-1846. **AU** Sokoloff, Kenneth L.; Khan, B. Zorina.

Khan, M. Ali

PD March 1989. **TI** On the Interiors of Production Sets in Infinite Dimensional Spaces. **AU** Khan, M. Ali; Peck, N.T. **AA** Khan: Johns Hopkins University. Peck: University of Illinois. **SR** Johns Hopkins Department of Political Economy Working Paper: 223; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 16. **PR** no charge. **JE** 213, 022. **KW** Marginal Rates of Substitution. Production Sets. Convex Spaces.

AB We show that "bounded marginal rates of substitution" as formalized by Khan-Vohra imply that a closed, convex production set with "free disposal" has a nonempty interior. This result is true for Banach spaces but false for more general locally convex spaces.

PD March 1989. **TI** Development Policy in a Multi-Provincial Economy. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 226; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 21. **PR** no charge. **JE** 112, 121. **KW** Economic Development. Developing Country.

AB In this paper, we present a stylized model for the study of development policy in a less developed country with several (rural) provinces, each with its own local economy, and a federal (urban) sector with a relatively more developed economic structure. A distinguishing characteristic of the model is that labor from each province is easily distinguishable from that of any other on the basis of (say) language, race, ethnicity, caste, gender or simply, accent. Each province has economic ties to the federal sector and the world economy but no direct ties to any other province. Inter-provincial economic relations are a consequence of the relation which each province bears to the federal sector and the world economy.

PD April 1989. **TI** Lionel McKenzie on the Existence of Competitive Equilibrium. **AA** Johns Hopkins University. **SR** Johns Hopkins Department of Political Economy Working Paper: 227; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 45. **PR** no charge. **JE** 031, 021. **KW** Nonsmooth Analysis. Approximation Theory. Competitive Equilibrium.

AB In this expository paper we focus on McKenzie's four contributions to the subject of the existence of competitive equilibrium, and attempt to bring into somewhat bolder relief economic and mathematical ideas that were particularly original with him. Furthermore, by looking at all his contributions to this subject under one rubric and with a unified notation, we get a deeper understanding of the evolution of his ideas, and also gain insight into problems of current research interest, such as economies with increasing returns to scale, with an infinite number of commodities and/or with a continuum of traders. Finally, our examination also brings to light the powerful geometric emphasis in McKenzie's work. This leads us directly into mathematical subjects of current interest such as nonsmooth analysis and approximation theory.

PD July 1989. **TI** Cournot-Nash Equilibrium Distributions for Games with Differential Information. **AU** Khan, M. Ali; Rustichini, Aldo. **AA** Khan: Johns Hopkins University. Rustichini: AT&T Bell Labs and Northwestern University. **SR** Johns Hopkins Department of Political Economy Working Paper: 230; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 15. **PR** no charge. **JE** 026, 213. **KW** Nash Equilibrium. Expected Utility. Cournot Equilibrium. Borel Measure.

AB In this paper we report results on the existence and upper hemicontinuity of Cournot-Nash equilibrium distributions for large anonymous games with differential information.

Kilgour, D. Marc

TI The Box Problem: To Switch or Not to Switch. **AU** Brams, Steven J.; Kilgour, D. Marc.

TI Unraveling in Exchange Games. **AU** Brams, Steven J.; Kilgour, D. Marc; Davis, Morton D.

PD September 1990. **TI** Arms-Control Inspection Strategies That Induce Compliance: A Game-Theoretic

Analysis. AU Kilgour, D. Marc; Brams, Steven J. AA Kilgour: Wilfrid Laurier University. Brams: New York University. SR New York University Economic Research Report: 90-40; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 28. PR no charge. JE 114. KW Arms Control. Disarmament. Negotiation. Arms Treaty.

AB Arms control inspection is modeled by two game forms that subsume different games between a Detector (D) and an Evader (E). In each form, 1. E may choose to comply with or violate an arms-control agreement; 2. D may choose to inspect or not to inspect a possible violation by E. In the simultaneous form, D and E make simultaneous (or Independent) choices. Depending on the parameters, three inspection games, each with a uniquely determined equilibrium -- two in pure strategies and one in mixed strategies -- are possible. Because none of the equilibria involves certain compliance by E, D is not always able to deter E from violating an agreement.

Kim, Dongwook

TI Real Rents and Household Formation: The Effect of the 1986 Tax Reform Act. AU Haurin, Donald R.; Hendershott, Patric H.; Kim, Dongwook.

Kim, Myung Jig

TI Predictable Stock Returns: Reality or Statistical Illusion?. AU Nelson, Charles R.; Kim, Myung Jig.

King, Robert G.

PD April 1990. TI Public Policy and Economic Growth: Developing Neoclassical Implications. AU King, Robert G.; Rebelo, Sergio. AA King: University of Rochester. Rebelo: Northwestern University and Rochester Center for Economic Research. SR National Bureau of Economic Research Working Paper: 3338; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 35. PR \$2.00. JE 226, 113, 111. KW Public Policy. Capital. Growth Rates. Growth Model. Human Capital.

AB Why do the countries of the world display considerable disparity in long term growth rates? This paper examines the hypothesis that the answer lies in differences in national public policies which affect the incentives that individuals have to accumulate capital in both its physical and human forms. Our analysis shows that these incentive effects can induce large differences in long run growth rates. We work within a calibrated, two sector endogenous growth model, which has its origins in the microeconomic literature on human capital formation. We show that national taxation can substantially affect long run growth rates. In particular, for small open economies with substantial capital mobility, national taxation can readily lead to "development traps" (in which countries stagnate or regress) or to "growth miracles" (in which countries shift from little growth to rapid expansion).

Klein, Roger W.

PD February 1990. TI An Efficient Semiparametric Estimator for Discrete Choice Models. AU Klein, Roger W.; Spady, Richard H. AA Bellcore. SR Bellcore Economics Discussion Paper: 67; Room 2Q-338, Bellcore, 435 South Street, Morristown, N.J. 07960-1961. PG 76. PR no charge. JE 211. KW Semiparametric Estimation. Discrete Choice Models.

AB This paper proposes an estimator for discrete choice

models that makes no assumption concerning the functional form of the distribution of the disturbances, and which accommodates a variety of deviations from the assumption of identically distributed disturbances. The estimator is shown to be strongly consistent, asymptotically normally distributed, and to achieve the semiparametric efficiency bound. Monte Carlo evidence indicates that there may be only modest efficiency losses relative to maximum likelihood estimation when the distribution of the disturbances is known, and that the small sample behavior of the estimator in other cases is good.

Kleindopfer, Paul

TI Equilibrium Misperceptions. AU Gaynor Martin; Kleindopfer, Paul.

Kletzer, Kenneth M.

TI The Welfare Economics of Cooperative and Noncooperative Fiscal Policy. AU Buiters, Willem H.; Kletzer, Kenneth M.

TI Fiscal Policy Interdependence and Efficiency. AU Buiters, Willem H.; Kletzer, Kenneth M.

TI Fiscal Policy Interdependence and Efficiency. AU Buiters, Willem H.; Kletzer, Kenneth M.

TI Reflections on the Fiscal Implications of a Common Currency. AU Buiters, Willem H.; Kletzer, Kenneth M.

TI The Welfare Economics of Cooperative and Non-cooperative Fiscal Policy. AU Buiters, Willem H.; Kletzer, Kenneth M.

Kneip, Alois

PD May 1990. TI Ordered Linear Smoothers. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-298; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 35. PR no charge. JE 211. KW Nonparametric Regression. Finite Sample Theory.

AB Let Y be a random vector satisfying the model $Y = \mu + \epsilon$ for observations $i=1$ to n where ϵ is i.i.d. zero mean random variables with a finite variance. The following approach for estimating μ is considered: first, a family S of symmetric $n \times n$ matrices is specified. Then an element S is selected by Mallows's $C(L)$ and an estimator is defined as $(\hat{\mu}) = (S^{-1}Y)$. It is assumed that S is an "ordered linear smoother" according to some easily interpretable, qualitative conditions. Examples of this approach include an estimator closely related to the James-Stein estimator, as well as estimators corresponding to smoothing procedures in nonparametric regression (e.g. kernel estimators or smoothing splines). The results yield detailed qualitative insight into the properties of estimators constructed in this way. Implications for nonparametric regression are studied in detail, and it is shown that there is a rigid decision theoretic justification for the use of smoothing procedures.

Kolodko, Grzegorz W.

TI Stabilization in Poland: A Progress Report. AU Frydman, Roman; Wellisz, Stanislaw; Kolodko, Grzegorz W.

Kornhausser, Lewis A.

PD August 1990. **TI** Sequential Decisions by a Single Tortfeasor. **AU** Kornhausser, Lewis A.; Revesz, Richard L. **AA** New York University. **SR** New York University Economic Research Report: 90-38; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 40. **PR** no charge. **JE** 722, 916. **KW** Liability Rules. Tort Law. Environmental Law. Hazardous Waste.

AB This paper studies the incentives created by liability rules on an actor who chooses a care level in several periods. An accident may occur, and harm result, in any period. If an accident does not occur, the effects of prior actions on the risk in the current period are cumulative in the sense that expected harm increases over time. If an accident occurs, the actor starts fresh in the next period.

Kotlikoff, Laurence J.

TI Health, Children, and Elderly Living Arrangements: A Multiperiod-Multi-Nomial Probit Model with Unobserved Heterogeneity and Autocorrelated Errors. **AU** Boersch-Supan, Axel; Hajivassiliou, Vassilis; Kotlikoff, Laurence J.; Morris, John N.

TI Health, Children, and Elderly Living Arrangements: A Multiperiod-Multi-Nomial Probit Model with Unobserved Heterogeneity and Autocorrelated Errors. **AU** Boersch-Supan, Axel; Hajivassiliou, Vassilis; Kotlikoff, Laurence J.; Morris, John N.

Kovalev, Michail M.

PD May 1990. **TI** Greedy Algorithms on Convex-Ordered Sets. **AU** Kovalev, Michail M.; Pisaruk, N. N. **AA** University of Minsk, USSR. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90640-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 11. **PR** no charge. **JE** 213. **KW** Convex-Ordered Set. Convex-Ordered Function. Greedy Algorithm. Integer Programming.

AB In this paper we apply the theory of ordered convexity to convex integer programming. A general methodology is developed for worst case analysis of greedy algorithms.

Krasa, Stefan

TI Non-Existence and Inefficiency of Equilibria with American Options and Convertible Bonds. **AU** Kahn, Charles M.; Krasa, Stefan.

Kraus, Marvin

TI The Ramsey Problem for Congestible Facilities. **AU** Arnott, Richard; Kraus, Marvin.

Kravis, Irving B.

PD March 1990. **TI** The International Comparison Program: Current Status and Problems. **AU** Kravis, Irving B.; Lipsey, Robert E. **AA** Kravis: University of Pennsylvania and National Bureau of Economic Research. Lipsey: City University of New York and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3304; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 51. **PR** \$2.00. **JE** 224, 123, 431. **KW** Currency. Purchasing

Power Parity. Exchange Rates. Gross National Product.

AB This paper reviews the International Comparison Program (ICP), a worldwide effort to produce international comparisons of real GDP and its components and purchasing power parities of currencies (PPPs). The robustness of results and future work are considered. A generous estimate of margins of uncertainty in the benchmark estimates might be 20-25 per cent for low-income countries and 7 per cent for high-income countries. The errors in extrapolations to countries not covered by the surveys could go as high as 30-35 per cent. That is still a small range of error compared to that stemming from the use of exchange rates to convert own-currency to common currency measures of output. Furthermore, exchange rate conversions are even more sensitive to methodology than PPP conversions.

Kremers, Jeroen J. M.

PD March 1990. **TI** Economic and Monetary Integration and the Aggregate Demand for Money in the EMS. **AU** Kremers, Jeroen J. M.; Lane, Timothy D. **AA** Kremers: Ministry of Finance, Netherlands. Lane: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/23; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** 423, 432, 431, 311. **KW** Exchange Rate. European Monetary System. Monetary Policy. Central Bank. Economic Integration.

AB This study shows that the aggregate demand for M1 in the group of countries participating in the Exchange Rate Mechanism (ERM) of the European Monetary System can be expressed as a stable function of ERM-wide income, inflation, interest rates, and the exchange rate of the European Currency Unit (ECU) vis-a-vis the U.S. dollar. A notable feature of the model is the rapid elimination of monetary disequilibria, in contrast with most single-country estimates which tend to find implausibly slow adjustment. These results are suggestive: if robust, they would indicate that, even at the present stage of economic and monetary integration, a European central bank could, in principle, implement monetary control more effectively than the individual national central banks.

TI Economic and Monetary Union in Europe and Constraints on National Budgetary Policies. **AU** Bovenberg, A. Lans; Kremers, Jeroen J. M.; Masson, Paul R.

Krueger, Alan B.

PD April 1990. **TI** Ownership, Agency and Wages: An Examination of Franchising in the Fast Food Industry. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3334; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 824, 635. **KW** Service Sector. Employee Compensation.

AB This paper estimates the difference in compensation between company-owned and franchisee-owned fast food restaurants. The contrast is of interest because contractual arrangements give managers of company-owned outlets less of an incentive to monitor and supervise employees. Estimates based on two datasets suggest that employee compensation is slightly greater at company owned outlets than franchisee-owned outlets. The earnings gap is 9 percent for assistant and shift managers and 2 percent for full-time crew workers. Furthermore, the tenure-earnings profile is steeper at company-owned restaurants. These findings suggest that monitoring difficulties influence the timing and generosity of compensation.

TI Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States. **AU** Card, David; Krueger, Alan B.

TI Does Compulsory School Attendance Affect Schooling and Earnings? **AU** Angrist, Joshua D.; Krueger, Alan B.

TI School Quality and Black/White Relative Earnings: A Direct Assessment. **AU** Card, David; Krueger, Alan B.

Krueger, Anne O.

PD April 1990. **TI** Government Failures in Development. **AA** Duke University. **SR** National Bureau of Economic Research Working Paper: 3340; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** \$2.00. **JE** 121, 113. **KW** Developing Countries. Government Policy. Economic Policy. Economic Growth.

AB This paper takes as a given the proposition that, in many developing countries, governmental policies have been highly distortive and harmful to economic growth. These policies have included omissions, such as neglect of infrastructure, and commission, such as highly restrictive trade regimes and credit rationing. The issues arising from recognition that governments, like markets, are imperfect are discussed.

Kuester, Kathleen A.

TI Differences in the Measurement of Wealth, Wealth Inequality, and Wealth Composition Obtained from Alternative U.S. Wealth Surveys. **AU** Juster, F. Thomas; Kuester, Kathleen A.

Kupiec, Paul H.

PD July 1990. **TI** Financial Liberalization and International Trends in Stock, Corporate Bond and Foreign Exchange Market Volatilities. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 131; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 75. **PR** no charge. **JE** 313, 311, 521, 522. **KW** Volatility. Capital Market. Financial Markets. Exchange Rates. Stock Market.

AB This paper examines the historical volatilities of stock, bond and foreign currency markets over alternative periods which include fixed and floating exchange rate regimes and periods in the 1980's differing roughly by the degree of financial innovation and globalization. It characterizes trends in gross volatility, and the degree and manner in which volatility in financial markets has changed. It discusses the real economic consequences of transitory periods of excess volatility and considers some of the financial policies proposed to limit volatility. The results suggests that financial liberalization and the past two decades have coincided with a worldwide increase in the average levels of volatility in stock returns, corporate bond yields and exchange rates.

Lach, Saul

TI Innovation and Product Differentiation. **AU** Dutta, Prajit K.; Lach, Saul; Rustichini, Aldo.

TI The Diffusion of Technology and Inequality Among Nations. **AU** Jovanovic, Boyan; Lach, Saul.

Laffont, Jean-Jacques

PD January 1990. **TI** The Politics of Government Decision-Making: A Theory of Regulatory Capture. **AU** Laffont, Jean-Jacques; Tirole, Jean. **AA** Laffont: GREMAQ, Universite de Toulouse. Tirole: Massachusetts Institute of Technology. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 9004; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 52. **PR** no charge. **JE** 026, 613. **KW** Regulation. Asymmetric Information. Interest Groups.

AB The paper develops an agency-theoretic approach to interest group politics and shows that: (1) The organizational response to the possibility of regulatory agency politics is to reduce the stakes interest groups have in regulation. (2) The threat of producer protection leads to low-powered incentive schemes for regulated firms. (3) Consumer politics may induce uniform pricing by a multi-product firm. (4) An interest group has more power when its interest lies in inefficient rather than efficient regulation, where inefficiency is measured by the degree of informational asymmetry between the regulated industry and the political principal (Congress).

PD January 1990. **TI** Adverse Selection and Renegotiation in Procurement. **AU** Laffont, Jean-Jacques; Tirole, Jean. **AA** Laffont: California Institute of Technology and GREMAQ, Universite de Toulouse. Tirole: Massachusetts Institute of Technology. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 9005; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 55. **PR** no charge. **JE** 026, 613. **KW** Regulation. Asymmetric Information. Interest Groups. Contracts. Negotiation.

AB As was shown by Dewatripont, optimal long-term contracts under asymmetric information are generally not sequentially optimal. The parties ex post renegotiate them to their mutual advantage. This paper fully characterizes the equilibrium of a simple two-period procurement situation and studies the extent to which renegotiation reduces ex ante welfare: i) A central result is that, like in the non-commitment case, the second period allocation is optimal for the principal conditionally on his posterior beliefs about the agent. ii) The first period allocation exhibits an increasing amount of pooling when the discount factor grows. iii) With a continuum of types, it is never optimal to induce full separation. The paper also analyzes whether renegotiated long-term contracts yield outcomes resembling those under either unrenegotiated long-term contracts or a sequence of short-term contracts and it links the analysis with the multiple unit durable good monopoly problem.

Lahiri, Kajal

TI An Econometric Rational-Expectations Macroeconomic Model for Developing Countries with Capital Controls. **AU** Haque, Nadeem U.; Lahiri, Kajal; Montiel, Peter.

Lahiri, Supriya

TI The Potential for Reducing Carbon Emission from Increased Efficiency: A General Equilibrium Methodology. **AU** Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander.

TI The Potential for Reducing Carbon Emission from

Increased Efficiency: A General Equilibrium Methodology. AU Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander.

TI A General Equilibrium Analysis of the Effects of Carbon Emission Restrictions on Economic Growth in a Developing Country. AU Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander

TI A General Equilibrium Analysis of the Effects of Carbon Emission Restrictions on Economic Growth in a Developing Country. AU Blitzer, Charles R.; Eckaus, Richard S.; Lahiri, Supriya; Meeraus, Alexander

Lal, Deepak

PD October 1989. TI *The Limits of International Co-Operation*. AA University College London. SR University College London Discussion Paper: 89-21; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PG 46. PR 2.00 pounds. JE 722, 431, 113. KW Environment. Exchange Rates. Policy Coordination.

AB This paper critically examines two areas where international dirigisme is becoming fashionable: macroeconomic and exchange rate coordination and "environmentalism". It argues that the case for both is based on the logically flawed notion of pecuniary externalities. The paper underlines the uncertain scientific basis of environmentalism.

Lambelet, Jean-Christian

PD September 1988. TI The Swiss Labor Scene or Why Humans Sometimes Cooperate and Sometimes Don't. AA Universite de Lausanne. SR Universite de Lausanne Cahiers de Recherches Economiques: 8808; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 37. PR no charge. JE 833, 832, 831. KW Collective Bargaining. Labor-Management Relations. Unions.

AB Modern labor-management relations are demonstrably a great deal more "conflictual" in some countries--such as Italy and the United States--than in others--such as Germany, Sweden, Austria and especially Switzerland. This wasn't always so: in Switzerland, for example, labor relations were notoriously tense prior to the epochal "labor peace agreements" of 1937. Why do labor-management relations vary so much across economies as well as over time?--this is the question which is addressed here.

PD October 1988. TI Un Drame Economique Moderne ou Ces Suisses Qui Ont Peur de l'Economie de Marche. AA Universite de Lausanne. SR Universite de Lausanne Cahiers de Recherches Economiques: 8811; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 19. PR no charge. JE 514, 512, 511, 521. KW Switzerland. Managerial Economics. Takeover. Property Rights.

AB This paper explores the nexus between the poor performance of the Swiss stock exchange, the dividend policy of Swiss firms and their preference for the internal financing of investment, the lack of transparency of Swiss balance sheets and the existence of large hidden reserves, some peculiar Swiss laws which in fact allow management to keep stockholders

under strict control, the apparently low marginal productivity of capital in the Swiss economy, the threat of hostile takeover bids, the penalty for poor managerial performance in the Swiss economy. The resulting "Swiss System" is criticized on grounds of both efficiency and fairness. Paper in French.

PD July 1989. TI I. A Propos de l'oeuvre de Mancur Olson: Vision Globale ou "Big Think"? II. l'Economie Suisse: Un Modele Menace. AA Universite de Lausanne. SR Universite de Lausanne Cahiers de Recherches Economiques: 8901; Departement d' Econometrie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 11. PR no charge. JE 226, 122. KW Switzerland. Developed Countries.

AB The main theme of both papers is the future of the "Swiss economic model" in a rapidly changing world, with some sidelights on Olson's theory. Paper in French.

Lane, Timothy D.

TI Economic and Monetary Integration and the Aggregate Demand for Money in the EMS. AU Kremers, Jeroen J. M.; Lane, Timothy D.

Laroque, Guy

TI Economic Dynamics with Learning: Some Instability Examples. AU Grandmont, Jean-Michel; Laroque, Guy.

Le Grand, Julian

PD July 1990. TI Quasi-Markets and Social Policy. AA University of Bristol. SR University of Southampton Discussion Paper in Economics and Econometrics: 9006; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. PG 14. PR no charge. JE 911, 912, 913, 914, 921. KW Welfare State. Social Reform. England. Consumer Economics. Social Policy.

AB One of the more curious features of the first two Conservative administrations under Mrs. Thatcher was how little impact they had on the welfare state. A major offensive against the basic structures of welfare provision was launched in 1988 and 1989: years that in retrospect will be seen as critical in the history of British social policy. For it was then that the Conservative government began to apply a program of radical change to the welfare state. What are the likely consequences of these reforms? Will they bring about greater responsiveness to the needs and wants of users of welfare services, coupled with reduced costs of service delivery, as their proponents argue? We cannot properly answer these questions until the changes have fully worked their way through the system: and this is likely to be several years away. However, it is possible to make some theoretical speculations as to some of the likely consequences of the reforms, both desirable and undesirable, and this forms the basis for most of the rest of this paper.

Lebrun, Bernard

PD January 1990. TI Repeated Trade and Asymmetric Information: A Principal-Agent Analysis in the Auction Framework. AA Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9005; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 60. PR not available. JE 022, 026. KW Cartels.

Auctions. Principal-Agent Model. Trading. Repeated Games.

AB A purchaser (typically a governmental agency) awards projects to a cartel of bidders through repeated auctions. The bidders' costs of production are stochastic and their actual values at each period are unknown to the purchaser. Moreover this governmental agency (call it "the State") has imperfect information about the true cost structure and hesitates between two cost probability distributions. We study the equilibria of the repeated game with discounting. One of the main results is that the limit set of the equilibrium payoffs of the repeated auction for the discount factor tending towards one and the limit set of the pure completely revealing perfect Bayesian equilibrium payoffs are identical.

Lee, Lung-Fei

PD February 1990. **TI** Efficient Semiparametric Scoring Estimation of Sample Selection Models. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 255; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 65. **PR** free. **JE** 211, 212. **KW** Sample Selectivity. Discrete Choice. Semiparametric Model. Semiparametric Estimation. Kernel Estimation.

AB A semiparametric profile likelihood method is proposed for estimation of sample selection models. The method is a two step scoring semiparametric estimation procedure based on index formulation and kernel density estimation. Under some regularity conditions, the estimator is asymptotically normal. This method can be applied to estimation of general sample selection models with multiple regimes and sequential choice models with selectivity. For the binary choice sample selection model, the estimator is asymptotically efficient in the sense that its asymptotic variance matrix attains the asymptotic bound of G. Chamberlain.

PD February 1990. **TI** Semiparametric Nonlinear Least Square Estimation of Truncated Regression Models. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 254; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 53. **PR** free. **JE** 211. **KW** Truncated Regression. Semiparametric Estimation. Nonlinear Least Squares. Kernel Estimation. Semiparametric Model. Regression Model.

AB This article provides a semiparametric method for the estimation of truncated regression models where the disturbances are independent with the regressors before truncation. This independence property provides useful information on the identification and estimation of the model. Our estimate is shown to be (square root of n)-consistent and asymptotically normal. Consistent estimate of the asymptotic covariance matrix of the estimator is provided. Monte Carlo experiments are performed to investigate some finite sample properties of the estimator.

PD July 1990. **TI** Semiparametric Two Stage Estimation of Sample Selection Models Subject to Tobit-type Selection Rules. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 256; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 43. **PR** free. **JE** 211, 212. **KW** Sample Selection. Truncation. Censoring. Semiparametric Estimation. Kernel

Estimation. Regression Model.

AB A semiparametric two stage estimation method is proposed for the estimation of sample selection models which are subject to Tobit-type selection rules. With randomization restrictions on the disturbances of the model, all the regression coefficients in the model are in general identifiable without exclusion restrictions. The proposed estimator is shown to be (square root of n)-consistent and asymptotically normal. Some Monte Carlo results to demonstrate its finite sample performance are also provided.

Lefevre, Francoise

PD April 1990. **TI** The Estimation of the Multivariate Structural Errors-In-Variabes Model Without Any A Priori on the Covariance Matrix of the Errors. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9023; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 59. **PR** not available. **JE** 211. **KW** Covariance Matrix. Errors-in-Variabes. Multivariate Model.

AB The multivariate structural errors-in-variables model without any a priori on the covariance matrix of the errors is considered. Under the assumption necessary to get an identifiable model that the distribution of the true variables cannot be transformed by any non constant affine function on the true affine subspace to a normal distribution, we give a strongly consistent estimator of this subspace, that converges almost surely to the true affine subspace with a speed of the order $O(\text{square root of } n)$. The estimator and the result are invariant under the affine group on the space of the variables. The proof of the speed of convergence is given under the assumption that the true variables have finite moments of order alpha, the smallest multiple of 4 strictly larger then $2k(m-k)$, where m is the number of variables in the model and k is the number of equations.

Leite, Sergio Pereira

PD March 1990. **TI** Issues in Interest Rate Management and Liberalization. **AU** Leite, Sergio Pereira; Sundararajan, V. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/12; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** not available. **JE** 311. **KW** Interest Rates. Monetary Policy.

AB This paper discusses the transition strategy from administratively set interest rates to market rates. Despite worldwide trends toward financial liberalization, few monetary authorities are prepared to accept as reasonable any interest rate level that is market determined. The paper suggests some helpful indicators to assess the adequacy of interest rates. It discusses factors which contribute to a smooth liberalization process. The main conclusion is that interest rate liberalization is not synonymous with laissez-faire policies. It requires, however, the replacement of the administratively set interest rates by indirect monetary management techniques which operate through the market.

Levine, Ross

PD May 1990. **TI** Financial Structure and Economic Development. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 381; Division of International Finance, Board of Governors of the

Federal Reserve System. Washington, D.C. 20551. **PG** 41. **PR** no charge. **JE** 311, 226, 112, 111. **KW** Financial Markets. Banks. Endogenous Growth. Economic Development. **AB** An important challenge to economists is to explain how financial contracts and institutions affect economic growth while simultaneously explaining how economic development elicits the creation and modification of an economy's financial structure. This paper addresses one side of this inherently two-sided issue. The paper shows how risk, transactions costs, and economies of scale in information gathering and resource coordination create incentives for the emergence of commonly observed financial institutions and contracts and how the resulting financial structure influences the steady state growth rate of per capita output. Policy can affect growth directly by altering investment incentives and indirectly by changing the incentives underlying the creation of financial structures.

Levy, David T.

TI Mergers and Free Riders in Spatial Markets. **AU** Reitzes, James D.; Levy, David T.

Lewis, Karen K.

PD March 1990. **TI** Was There a "Peso Problem" in the U.S. Term Structure of Interest Rates: 1979-1982?. **AA** New York University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3282; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** \$2.00. **JE** 311, 131. **KW** Interest Rates. Monetary Policy. Term Structure.

AB During the period following October 1979 through 1982, the U.S. Federal Reserve allowed interest rates to fluctuate widely, in contrast to its previous policy of targeting these rates in the 1970s. The policy was abandoned in 1982 in favor of an operating procedure that reduced the variation in interest rates. This paper implements an estimation method to identify from the term structure of Eurodollar returns the market's beliefs that the Fed may revert to interest rate targeting. The model is not rejected and gives plausible estimates of the probability of a switch in monetary regimes.

Lipsey, Robert E.

TI The International Comparison Program: Current Status and Problems. **AU** Kravis, Irving B.; Lipsey, Robert E.

PD March 1990. **TI** American Firms Face Europe: 1992. **AA** Queens College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 3293; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** \$2.00. **JE** 441, 442, 423. **KW** Economic Integration. Multinationals. International Business. Europe.

AB The press and business magazines are filled with stories about a rush of American firms into the European Community to take advantage of, or avoid the adverse consequences of, the expected formation of a single market in 1992. Yet, it is hard to find evidence of a large shift in plant and equipment expenditures, employment, or financial investment toward the EC countries by American firms. The main reason seems to be that large American manufacturing firms are already well entrenched in the EC, and may even be better positioned to take advantage of the single market than most of their European rivals. The U.S. firms (unlike most Japanese companies) already supply almost all their share of the EC market from

operations within the EC and depend very little on importing from the U.S.

Liu, Guorn

TI Determinants of Saving and Labor Force Participation of the Elderly in Japan. **AU** Yamada, Tetsuji; Yamada, Tadashi; Liu, Guorn.

Lizondo, J. Saul

PD July 1990. **TI** Foreign Direct Investment. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/63; International Monetary Fund, Washington, DC 20431. **PG** 28. **PR** not available. **JE** 441. **KW** International Investment. Foreign Investment. Capital Markets.

AB This paper summarizes the theory and empirical evidence on the determinants of foreign direct investment. These determinants include expected relative rates of return, risk diversification, market size, technological advantage, market failure, oligopolistic rivalry, liquidity, currency strength, political instability, tax policy, and government regulations. While most explanations of foreign direct investment receive some empirical support, there is not sufficient favorable evidence on any one of them to merit rejection of all the others.

Lockwood, Ben

PD July 1988. **TI** Dynamic Wage-Employment Bargaining with Employment Adjustment Costs. **AU** Lockwood, Ben; Manning Alan. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/10; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 30. **PR** not available. **JE** 831, 824. **KW** Adjustment Costs. Trade Unions. Labor Demand. Employment.

AB This paper looks at the consequences of introducing employment adjustment costs into two standard models of trade unions, the right to manage model and the efficient bargain model. We look at how unions affect both the speed of adjustment to equilibrium and the long-run equilibrium. We examine the consequences of the model for the estimation of dynamic labor demand equations and for the testing of trade union models.

PD August 1988. **TI** A Note on Pricing in Search Equilibrium with Adverse Selection. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/9; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 20. **PR** not available. **JE** 021, 022, 026. **KW** Labor Market. Search Theory. Monopoly. Asymmetric Information.

AB Diamond's well known result that the search equilibrium price is the monopoly price is shown not to generalize to the case of asymmetric information, where the price-setting side of the market (buyers) cannot observe quality of the seller's goods. It is shown that asymptotically, as the friction in the matching process becomes important, the search equilibrium price converges to the monopoly price. Interpreting the model as a labor market, it is also shown that as the market becomes frictionless, the search equilibrium wage converges to the efficiency wage.

Loebl, M.

PD April 1990. **TI** Unprovable Combinatorial Statements. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90633-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** no charge. **JE** 213. **KW** Goodstein Sequences. Kruskal Theorem.

AB We present a unified approach to combinatorial proofs of unprovability of FRT*, Finite Miniaturizations of Kruskal Theorem, Hercules versus Hydra Game and Goodstein Sequences.

Loretan, Mico

TI Testing Covariance Stationarity under Moment Condition Failure with an Application to Common Stock Returns. **AU** Phillips, Peter C. B.; Loretan, Mico.

Lott, John R., Jr

TI Are Government or Private Enterprises More Likely to Engage in Predation? Some International Evidence From Dumping Cases. **AU** Dick, Andrew R.; Lott, John R., Jr.

Loury, Glenn C.

PD May 1990. **TI** Tacit Collusion in a Dynamic Duopoly with Indivisible Production and Cumulative Capacity Constraints. **AA** Harvard University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 557; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 43. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 022, 611, 721. **KW** Duopoly Theory. Dynamic Games. Exhaustible Resources. Oligopoly.

AB This paper studies a dynamic, quantity setting duopoly game characterized as follows: Each firm produces an indivisible output over a potentially infinite horizon, facing the constraint that its cumulative production cannot exceed an initially given bound. The environment is other wise stationary; the remaining productive capacities of the firms at any moment are common knowledge; the firms choose production plans contingent on these capacities which are mutual best responses in every contingency. The resulting Markov Perfect Equilibria are analyzed using a two dimensional backward induction, and compared with the equilibria which emerge when precommitment to time paths of output is possible. It is shown that the ability to precommit can be disadvantageous; that collusion in Markov Equilibrium is facilitated by the symmetrical placement of the firms; and that having greater capacity confers basic strategic advantage on a firm by enabling it to credibly threaten future production.

TI The Economics of Rotating Savings and Credit Associations. **AU** Besley, Timothy; Coate, Stephen; Loury, Glenn C.

Lyons, Richard K.

TI Externalities and Cyclical Factor Productivity. **AU** Caballero, Ricardo J.; Lyons, Richard K.

TI External Effects and Europe's Integration. **AU** Caballero, Ricardo J.; Lyons, Richard K.

Maccini, Louis J.

PD August 1989. **TI** The Resurgence of Inventory

Research: What Have We Learned?. **AU** Maccini, Louis J.; Blinder, Alan S. **AA** Maccini: Johns Hopkins University. Blinder: Princeton University. **SR** Johns Hopkins Department of Political Economy Working Paper: 229; Department of Economics, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 57. **PR** no charge. **JE** 131, 522, 022. **KW** Inventories. Production Smoothing. Buffer Stocks. Firm Theory.

AB Recent empirical and theoretical research on business inventories is surveyed and critically evaluated. While most inventory research had had macroeconomic motivations, we focus on its microtheoretic basis and on potential conflicts between theory and evidence. The paper asks two principal questions. First, how can inventories, which are allegedly used by firms to stabilize production, nonetheless be a destabilizing factor at the macroeconomic level? Second, why, if firms are following the production smoothing model, is production more variable than sales in many industries? We suggest that the so-called (S,s) model may help answer both questions.

Machin, S.

TI Profit Determination in UK Manufacturing. **AU** Conyon, M.; Machin, S.

TI Testing a Model of the Kinked Demand Curve. **AU** Bhaskar, V.; Machin, S.; Reid, G.

Maffray, Frederic

TI New Properties of Perfectly Orderable Graphs and Strongly Perfect Graphs. **AU** Hoang, Chinh T.; Maffray, Frederic; Preissmann, Myriam.

Mahler, Walter

PD June 1990. **TI** The Taxation of the Windfall from Internationalization of the Korean Capital Market. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/54; International Monetary Fund, Washington, DC 20431. **PG** 40. **PR** not available. **JE** 313, 323, 441. **KW** Income Taxes. Capital Market. Stock Market. Korea.

AB The paper describes the evolution of the corporate stock and bond markets in Korea and the Government's role in this evolution and its policy with regard to internationalization of the capital market. The paper analyzes problems encountered in gradually opening the Korean capital market to foreign participation and suggests alternative methods of taxing the windfall that will be generated. It also discusses the desirability of taxing the capital gains on financial assets as part of the global income tax in Korea.

Malcomson, James M.

PD May 1990. **TI** Unemployment: Too Many Patent Remedies, Too Little Understanding. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9005; Department of Economics, University of Southampton, Southampton SO9 5NH, ENGLAND. **PG** 27. **PR** no charge. **JE** 824, 821, 822. **KW** Unemployment. Public Policy. Labor Market.

AB My subject today is unemployment, what economists know about, why it occurs and what can be done about it.

Manning Alan

TI Dynamic Wage-Employment Bargaining with

Employment Adjustment Costs. AU Lockwood, Ben; Manning Alan.

Manning, Alan

TI Wage Setting and Labour Market Adjustment in the Main Industrial Economies. AU Alogoskoufis, George S.; Manning, Alan.

TI Price-Increasing Entry: Who's Afraid of the Channel Tunnel. AU Szymanski, Stefan; Manning, Alan.

TI Competition and Efficiency: An Overview. AU Dixon, Huw; Manning, Alan.

TI Tests of Alternative Wage Employment Bargaining Models with an Application to the UK Aggregate Labour Market. AU Alogoskoufis, George S.; Manning, Alan.

Marchand, Maurice

TI Optimal Linear Taxation in Models with Occupational Choice. AU Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

Margo, Robert A.

PD August 1990. TI The Competitive Dynamics of Racial Exclusion: Employment Segregation in the South, 1900-1950. AA Vanderbilt University. SR National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 14; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. PG 55. PR \$2.00. JE 042, 917. KW Segregation. Discrimination. Employment. Education.

AB Using data from the 1900, 1910, 1940, and 1950 census public use samples, this paper examines the determinants of racial differences in employment (occupation and industry) in the south during the first half of the twentieth century. Had racial differences in the quantity and quality of schooling been smaller, more blacks would have entered non-farm occupations and industries in the South, thereby reducing the extent of racial segregation in employment and resulting in higher black-to-white earnings ratios. But I also find that black men were underrepresented in the growth of non-farm employment in the South before World War Two and that this increase in employment segregation cannot be explained by racial differences in schooling.

Marin, Dalia

TI Long-Term Contracts in International Trade. AU Amann, Erwin; Marin, Dalia.

Markusen, James J.

TI Endogenous Market Structures in International Trade. AU Horstmann, Ignatius J.; Markusen, James J.

Markusen, James R.

PD March 1990. TI First Mover Advantage, Blocked Entry and the Economics of Uneven Development. AA University of Western Ontario. SR National Bureau of Economic Research Working Paper: 3284; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 29. PR \$2.00. JE 411, 112. KW Trade Model. International Trade. Economic Development.

AB A two-sector, two-period trade model is developed in

which one sector has increasing returns based on the creation of specialized intermediate inputs. One of the two (otherwise identical) countries is not able to enter the increasing returns sector in the first period through some "accident of history". A theoretical and numerical analysis solves for parameter regimes under which firms in the disadvantaged country are or are not able to enter the increasing returns sector in the second period. The welfare consequences of the two alternative second period outcomes are compared to one another and to an equilibrium with both countries entering in the first period. The disadvantaged country may fall further behind in the second period even when its firms are able to enter.

Marron, J. S.

TI Regression Smoothing Parameters That are Not Far From Their Optimum. AU Hardle, Wolfgang; Hall, P.; Marron, J. S.

Marston, Richard C.

PD April 1990. TI Systematic Movements in Real Exchange Rates in the G-5: Evidence on the Integration of Internal and External Markets. AA University of Pennsylvania. SR National Bureau of Economic Research Working Paper: 3332; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 35. PR \$2.00. JE 431. KW Exchange Rates. Productivity. Factor Mobility. Prices.

AB Many recent studies have documented the random behavior of real exchange rates. This paper shows that real exchange rates defined for different sectors of an economy move closely together with one another even though each of the sectoral real exchange rates taken alone has a large random component. The sectoral real exchange rates are tied together by internal price links due to factor mobility within each national economy. Any differences between real exchange rates which develop, moreover, can be explained almost entirely by productivity differentials, at least in the long run. This paper contrasts the strong ties that bind the prices of goods from the same sector internationally.

Martin, Christopher

PD December 1986. TI Disequilibrium Modelling Using Survey Data: Time-Series Estimates of the Demand for Corporate Borrowing in the UK. AA Birkbeck College. SR Birkbeck College Discussion Papers in Economics: 87/4; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 30. PR not available. JE 315, 611, 521. KW Rationing. Spillovers. Corporate Borrowing. Disequilibrium Model.

AB This paper develops and estimates a general disequilibrium model that uses business survey data to measure the strength of excess demand. Allowing for spillovers from rationing encountered on other markets, we derive equations that relate aggregate demand and aggregate supply to the amount that is actually traded. Using survey data allows us to estimate these equations by instrumental variables techniques. This framework is then used to model the demand for bank borrowing on the part of companies in the UK. Sensible estimates of the effective demand for borrowing function are obtained. Strong own-market rationing is identified as well as four spillover effects.

PD March 1987. TI Using Equilibrium Models on Disequilibrium Data: Some Monte-Carlo Evidence on

Estimation and Testing. AU Martin, Christopher; Weber, Guglielmo. AA Martin: Birkbeck College. Weber: University College London. SR Birkbeck College Discussion Papers in Economics: 87/8; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 33. PR not available. JE 132, 133, 131, 023. KW Misspecification Tests. Disequilibrium Model. Monte Carlo Model. Price Adjustment.

AB This paper considers the consequences of estimating a market clearing model when the data are generated by a disequilibrium process. It also derives a simple misspecification test of the LM type for the market clearing model against the alternative of disequilibrium. A Monte Carlo simulation is carried out to establish the size and direction of biases and the power of the test using several different hypotheses about price formation. We find that disequilibrium can induce substantial biases, becoming more severe as the sluggishness of price adjustment increases. The power of the test statistic appears reasonable, especially for plausible assumptions on the stochastic nature of the model.

PD September 1987. TI Effective Demands and Spillovers. AU Martin, Christopher; Portes, Richard. AA Martin: University of London. Portes: Birkbeck College. SR Birkbeck College Discussion Papers in Economics: 87/16; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 13. PR not available. JE 023, 021, 132. KW Disequilibrium Model. Rationing. Spillover. Demand Function.

AB This paper considers the specification of effective demands in empirical disequilibrium models. Effective demands arise when optimal behavior in one market is affected by rationing encountered on other markets. We examine the three main candidates in the literature and consider how they have been used in empirical work. We then consider the consequences for effective demands of modelling rationing as a stochastic process. Finally, the implications of allowing behavior on an aggregate market to differ across a number of dispersed submarkets are brought out.

Maruyama, Masayoshi

TI Is the Japanese Distribution System Really Inefficient. AU Ito, Takatoshi; Maruyama, Masayoshi.

Masson, Paul R.

PD March 1990. TI Fiscal Policy Independence in a European Monetary Union. AU Masson, Paul R.; Melitz, Jacques. AA Masson: International Monetary Fund. Melitz: INSEE, Paris. SR International Monetary Fund Working Paper: WP/90/24; International Monetary Fund, Washington, DC 20431. PG 21. PR not available. JE 321, 431, 432, 411. KW Fiscal Policy. European Monetary System. Policy Coordination. Stabilization Policy. Economic Fluctuations.

AB The issue of whether constraints should be placed on fiscal policies when moving to a European monetary union is examined in the context of the use of fiscal policy for macroeconomic stabilization purposes. Examples of shocks hitting French and German economies are considered: an appreciation of their joint exchange rate against other currencies, an inflation shock, and an oil price increase. Except in the third case, flexible use of fiscal policies in the two countries is likely to give better outcomes than a system with

constraints on their use. For the oil price shock, there seems to be a good case for policy coordination, not for ceilings on fiscal deficits.

PD April 1990. TI Fiscal Policy Independence in a European Monetary Union. AU Masson, Paul R.; Melitz, Jacques. AA Masson: International Monetary Fund. Melitz: INSEE, Paris. SR Centre for Economic Policy Research Discussion Paper: 414; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 32. PR 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. JE 432, 431, 423, 321. KW European Monetary Union. Terms of Trade. Current Account. Fiscal Policy.

AB Do plans for a monetary union in Europe call for limits on the freedom of the member countries to use fiscal policy? To provide a tentative answer, we simulate the IMF model MULTIMOD, given various shocks, in the case of a European Monetary Union consisting only of France and Germany. The results clearly indicate the possible value of allowing unfettered use of fiscal policy in both countries. The reasons lie partly in differences in the initial position of the two, partly in differences in their preferences. We also examine the change in the policy significance of the current account in the monetary union. Current account imbalances clearly cease to have the same significance in a monetary union; but they do not therefore become irrelevant.

TI Economic and Monetary Union in Europe and Constraints on National Budgetary Policies. AU Bovenberg, A. Lans; Kremers, Jeroen J. M.; Masson, Paul R.

Mayer, Colin

PD June 1990. TI Banks and Securities Markets: Corporate Financing in Germany and the UK. AU Mayer, Colin; Alexander, Ian. AA City University Business School, London. SR Centre for Economic Policy Research Discussion Paper: 433; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 36. PR 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. JE 521, 522. KW Corporate Finance. Investment. Dividends. Business Finance.

AB This paper compares corporate financing in the German bank-based and UK market-based systems. Large German firms pay out a lower proportion of their profits as dividends and finance a larger proportion of their investments from retentions. German banks extend more long-term finance to medium-sized firms but UK firms raise more new equity. The paper tests alternative theories of corporate finance. It finds no relation between finance and taxation, and information theories only receive limited support. Instead, it concludes that control models of corporate finance are consistent with observed patterns of finance.

McCallum, Bennett T.

PD April 1990. TI Targets, Indicators, and Instruments of Monetary Policy. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/41; International Monetary Fund, Washington, DC 20431. PG 36. PR not available. JE 311. KW Monetary Policy. Federal Reserve. Monetary Targets. Interest Rates.

AB This paper seeks to advance the discussion of monetary policy strategies in several ways. One involves a comparison of

targets for nominal GNP and the price level, with emphasis on specification robustness and implications for output variability. A second pertains to various "indicator" variables recently suggested by Federal Reserve officials. In this regard, a careful review of the relevant conceptual distinctions, concerning instruments, targets, indicators, etc., is required. Finally the proposal that strategy should be conducted so as to place minimal reliance on quantity variables is given attention, in the context of evidence concerning the merits of an interest rate instrument.

McConnell, Sheena

PD January 1990. TI Mrs. Thatcher's Trade Union Legislation: Has it Reduced Strikes. AU McConnell, Sheena; Takla, Lina. AA London School of Economics. SR London School of Economics Centre for Labour Economics Discussion Paper: 374; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. PG 43. PR no charge. JE 822, 831, 833. KW Trade Unions. Government Legislation. Public Policy. Strikes. Manufacturing.

AB Trade Union legislation was introduced in the 1980s aimed at reducing strikes. Since then there has been a dramatic fall in all measures of strike activity. We show that much of this fall is a result of the changing industrial composition of the economy and the rise in unemployment. We find that, after controlling for these factors, there has been an increase in the number of stoppages since the legislation became effective. However, there has been a decrease in the length of strikes. Working days lost through strikes fell by about thirty percent in manufacturing industries.

McKay, Andrew

PD November 1989. TI The Consequences of Measurement Errors for Money GDP Targeting. AU McKay, Andrew; Blake, Andrew; Weale, Martin. AA McKay: University of Warwick and Clare College, Cambridge. Blake and Weale: University of Cambridge. SR University of Cambridge Department of Applied Economics Working Paper: 9003; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. PG 21. PR \$4.00 (2 pounds); checks payable to University of Cambridge. JE 311, 221, 132. KW Measurement Error. Monetary Policy. Monetary Targets. National Income Accounts. Accounting.

AB It is often suggested that a policy of Money GDP targeting will be frustrated by the problem of producing early estimates of Money GDP. In this paper we take "preliminary" estimates of Money GDP calculated on the basis of information available by the end of each quarter. These have a substantial margin of error. Nevertheless we demonstrate, both by means of Monte Carlo experiments and by means of a simulation exercise, that the measurement errors do not have any marked effect on the success of the policy. We conclude that data problems are not an impediment to Money GDP targeting.

Mecagni, Mauro

TI The Risk Premium on Italian Government Debt, 1976-88. AU Cottarelli, Carlo; Mecagni, Mauro.

Meghir, Costas

TI Unemployment, Discouraged Workers and Female

Labour Supply. AU Blundell, Richard; Ham, John; Meghir, Costas.

Melitz, Jacques

TI Fiscal Policy Independence in a European Monetary Union. AU Masson, Paul R.; Melitz, Jacques.

TI Fiscal Policy Independence in a European Monetary Union. AU Masson, Paul R.; Melitz, Jacques.

Mertens, Jean-Francois

PD January 1990. TI The "Small Worlds" Axiom for Stable Equilibria. AA Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9007; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 9. PR not available. JE 213. KW Payoff. P-Stable Sets. Stable Sets.

AB The "small worlds" axiom was introduced, with the meaning that if the payoffs to a subset of the player are unaffected by the actions of the outsiders (or if just their best reply correspondence is unaffected), the solutions (the stable sets) of the game between insiders are exactly the projections of the solutions of the larger game. We prove here this property for the p-stable sets, whatever be the characteristic p.

PD January 1990. TI Essential Maps, and Manifolds. AA Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9006; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 13. PR not available. JE 213. KW Mapping. Manifolds.

AB Let (M, dM) be a compact n -manifold with boundary, orientable over a field K with characteristic p . For $f: (Y, dY)$ to (M, dM) with Y compact, and (X, dX) a compact pair, $g: X$ to M , let $(P, dP) = \{(y, x) \text{ an element of } Y \times (X, dX) \text{ given } f(y)=g(x)\}$ denote the fibered product, with p as projection to (X, dX) . In Cech-cohomology with coefficients K , we show that if $H_n(f)$ is injective, so is $H^*(p)$ - and a number of strengthenings, which point to some concept of p -essential map from one compact pair to another.

Mirakhor, Abbas

TI Interest Rate Policies, Stabilization, and Bank Supervision in Developing Countries: Strategies for Financial Reforms. AU Villanueva, Delano; Mirakhor, Abbas.

Miranda, Kenneth M.

TI Public Policy and the Environment: A Survey of the Literature. AU Muzondo, Timothy R.; Miranda, Kenneth M.; Bovenberg, A. Lans.

Mischel, Kenneth

PD January 1990. TI Uninformative Rational Expectations Equilibria and the Modigliani-Miller Irrelevance Propositions. AA Columbia University. SR Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-90-05; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. PG 24. PR \$5.00 academics and non-profit institutions; \$6.00 corporations (add \$1.00 outside U.S., Canada and Puerto Rico). JE 022, 026, 521. KW Corporations. Financial Policy. Business Finance. Rational Expectations. Asymmetric Information.

AB This paper examines the viability and economic consequences of differential information in a Rational Expectations economy in which agents possess finite information partitions. The paper's main theorem demonstrates the robust existence of a Rational Expectations Equilibrium price process in which asymmetries in information survive after current prices are observed. This result contrasts with the generic full revelation result obtained in Radner (1979). The paper then demonstrates the generic relevance of a firm's corporate financial policy in the context of the economy.

PD February 1990. **TI** Noninformative Rational Expectations Equilibria When Assets are Nominal: An Example. **AU** Mischel, Kenneth; Polemarchakis, Heraklis M.; Siconolfi, P. **AA** Mischel and Siconolfi: Columbia University. Polemarchakis: Universite Catholique de Louvain and Columbia University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9012; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 15. **PR** not available. **JE** 021, 026. **KW** Assets. Rational Expectations.

AB When assets are nominal, noninformative rational expectation equilibria exist.

PD July 1990. **TI** A Note on Real Indeterminacy in a Pure Exchange Economy with Two Currencies. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-90-06; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 11. **PR** \$5.00 academics and non-profit institutions; \$6.00 corporations (add \$1.00 outside U.S., Canada and Puerto Rico). **JE** 313, 021. **KW** Competitive Allocations. Securities. Financial Markets. Exchange Economy.

AB This paper considers competitive equilibria in a pure exchange economy with an incomplete financial securities market and in which money serves as a required medium of exchange. We demonstrate in the two country (two currency) case that, generically, there exists an N-1 dimensional open set of competitive allocations. This contrasts with the claim that the explicit introduction of money causes equilibria generically to be finite in number and locally unique.

Mishkin, Frederic S.

PD April 1990. **TI** Financial Innovation and Current Trends in U.S. Financial Markets. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 3323; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** \$2.00. **JE** 314. **KW** Financial Markets. Financial System.

AB This paper discusses recent developments in U.S. financial markets and provides an economic analysis of why various recent financial innovations have occurred. This will not only provide us with a better understanding of existing financial markets in the United States and why they have been undergoing so much change in recent years, but it also may provide us with clues as to where our financial system may be heading.

PD May 1990. **TI** Does Correcting For Heteroskedasticity Help. **AA** Columbia University. **SR** National Bureau of Economic Research Technical Paper: 88; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 8.

PR \$2.00. **JE** 211, 132. **KW** Monte Carlo. Simulation Model. Heteroskedasticity.

AB This paper conducts Monte Carlo simulation experiments to evaluate how well the Hansen-Hodrick-Newey-West-White methodology performs for a particular example in the literature. The conclusion from this exercise is that although correcting for the overlapping data does help produce better statistical inference in finite samples, correcting for heteroskedasticity can substantially worsen statistical inference even when heteroskedasticity is present in the data. The answer to the question posed in the title of the paper is that correcting for heteroskedasticity may not help produce better statistical inference, but rather can do the opposite.

Mitchell, Olivia S.

TI Pensions and Labor Market Activity: Behavior and Data Requirements. **AU** Gustman, Alan L.; Mitchell, Olivia S.

Moffitt, Robert

PD March 1990. **TI** The Effect of the Medicaid Program on Welfare Participation and Labor Supply. **AU** Moffitt, Robert; Wolfe, Barbara. **AA** Moffitt: National Bureau of Economic Research. Wolfe: University of Wisconsin. **SR** National Bureau of Economic Research Working Paper: 3286; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** \$2.00. **JE** 911, 913, 824, 921. **KW** Medicaid. Government Transfers. Labor Supply. Health Insurance.

AB Although there is a large literature on the effect of AFDC and Food Stamps on labor supply and welfare participation, there has been little work on the effects of Medicaid, despite its importance in the U.S. transfer system. In this paper we use 1986 data from the Survey of Income and Program Participation to examine the effect of Medicaid on the labor supply and welfare participation decisions of female heads of family. A key contribution is the development of a family-specific proxy for the valuation of Medicaid benefits which depends upon the health and other characteristics of the family. We find that Medicaid has strong and significant effects on labor supply and welfare participation that are negative and positive in sign, respectively, but which are concentrated in the tail of the distribution with the highest expected medical expenditures.

Moghadam, Reza

PD January 1990. **TI** Are Wages Forward Looking. **AU** Moghadam, Reza; Wren-Lewis, Simon. **AA** Moghadam: Warwick University and Centre for Labour Economics. Wren-Lewis: National Institute for Economic and Social Research. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 375; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 39. **PR** no charge. **JE** 824, 132. **KW** Income Distribution.

AB In this paper we investigate the long-run determinants and the short-run dynamics of the UK average earnings over the last two and a half decades. Our cointegrating vector relates real earnings to productivity defined as output per man-hour, short-term unemployment, a mismatch variable, direct and indirect taxes. This vector is estimated using Johansen's maximum likelihood estimator as well as Ordinary Least Squares. We find no additional role for real import prices, house prices, replacement ratio, profits or employment taxes as long-

run determinants of earnings. Taking our best cointegrating vector, we estimate two dynamic versions: a forward looking model which assumes that agents form rational expectations about future price inflation and a backward looking data generated model depending on past price inflation.

Moldovanu, Beni

PD May 1990. **TI** Consistent Demands for Coalition Formation in NTU Games. **AU** Moldovanu, Beni; Winter, Eyal. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-147; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 14. **PR** no charge. **JE** 026. **KW** Bargaining Model. Game Theory. NTU Games. Coalitions.

AB In a sequential bargaining model of coalition formation and payoff division players form demands for their participation in a coalition. These demands have some appealing, intuitive features. We characterize the sets of semi-stable and stable demand vectors for general NTU games using consistency requirements which relate the demands formed in the initial game with demands formed by subgroups considering their outside options.

PD June 1990. **TI** Sequential Bargaining, Cooperative Games, and Coalition-Proofness. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-154; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 22. **PR** no charge. **JE** 026. **KW** Game Theory. Bargaining Game. Bargaining. Noncooperative Game. Coalitions.

AB The aim of this paper is to establish several links between two seemingly different game-theoretic approaches to the problem of coalition formation and payoff division. The two approaches are the so called "cooperative" and "noncooperative", and the links are created at the levels of the modelling, the solution concept and the results. We study a noncooperative, sequential bargaining game based on a game in characteristic function form without side payments, and relate payoffs in coalition-proof Nash equilibria of the extensive form game with special allocations which may be in the core of the underlying game or may display some consistency with regard to outside options. Balancedness (in the sense of Scarf) plays an important role. Three-person games are fully analyzed, and we discuss possible generalizations.

Molho, Lazaros

PD April 1990. **TI** The Current Account in Perspective: Lessons from the Italian Experience. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/37; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** not available. **JE** 431, 441. **KW** Current Account. Exchange Rates. Capital Flows. Balance of Payments. Saving. Investment.

AB This paper draws some lessons about policies toward the current account from Italy's balance of payments history between 1960 and 1988. The key role of speculative capital flows during every major episode of external imbalance brings out the limitations of exchange rate rules that focus exclusively on the current account. Simple saving-investment rules would also have failed to avert Italy's balance of payments crises. These arose in the context of widening current deficits due to a rising investment ratio and/or a widening private imbalance,

which should have been self-correcting according to the commonly proposed saving-investment rules.

PD April 1990. **TI** The Significance of the Current Account: Implications of European Financial Integration. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/30; International Monetary Fund, Washington, DC 20431. **PG** 33. **PR** not available. **JE** 431, 441, 422. **KW** Current Account. Deposit Insurance. Investment.

AB This paper reassesses the significance of persistent current imbalances as they become easier to finance in the process of European integration. After highlighting some limitations of simple saving-investment guidelines for policies toward the current account, the paper shows that an economy's current account position may be an indicator of its attitude toward risk. Externalities in the incidence of risk could warrant government concern over current imbalances, even if they are caused by privately motivated investment and saving decisions. Such externalities may arise from credit markets' conventional perceptions about country risk and from existing deposit insurance arrangements.

Monfort, A.

TI Qualitative Threshold ARCH Models. **AU** Gourieroux, C.; Monfort, A.

Montiel, Peter

TI An Econometric Rational-Expectations Macroeconomic Model for Developing Countries with Capital Controls. **AU** Haque, Nadeem U.; Lahiri, Kajal; Montiel, Peter.

TI Dynamic Responses to Policy and Exogenous Shocks in an Empirical Developing Country Model with Rational Expectations. **AU** Haque, Nadeem U.; Montiel, Peter.

PD May 1990. **TI** The Transmission Mechanism for Monetary Policy in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/47; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** 121, 311, 314, 313. **KW** Developing Countries. Financial System. Monetary Policy. Aggregate Demand.

AB In many developing countries the financial system is characterized by the absence of organized markets for securities and equities, by capital controls, and by legal ceilings on bank borrowing and lending rates, a situation which gives rise to parallel markets for foreign exchange and informal loan markets. This paper analyzes how changes in monetary policy instruments (bank credit, administered interest rates, required reserve ratios, and intervention in the parallel exchange market) are transmitted to domestic aggregate demand in a financially repressed economy. Such an analysis is necessary to understand how the move to a more market-oriented system would affect the economy in the short run.

Mukerjee, Swati

PD April 1990. **TI** Provision of Child Care: Cost Functions for Profit-Making and Not-For-Profit Day Care Center. **AU** Mukerjee, Swati; Witte, Anne Dryden; Hollowell, Sheila. **AA** Mukerjee: Bentley College. Witte and Hollowell: Wellesley College. **SR** National Bureau of Economic Research Working Paper: 3345; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** \$2.00. **JE** 824, 812, 635.

KW Child Care. Wages. Day Care Center.

AB This paper estimates cost functions for day care centers in Massachusetts. The production technology assumed is the generalized homothetic Cobb Douglas production function. The cost function dual to this production function is estimated separately for profit-making (PMOs) and not-for-profit (NPOs) organizations. The results are discussed in the context of current NPO literature. NPOs are found to be operating at higher average costs than the PMOs for most output levels as predicted by the literature. However, the provision of more staff per child hour, our measure of quality, increases costs by similar amounts in PMOs and NPOs. Further, present forms of subsidies do not help either PMOs or NPOs, and in fact promote "shirking" in NPOs.

Mullor-Sebastian, Alicia

PD May 1990. **TI** Export Instability and Policy Implications for Developing Countries as Residual Suppliers. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/44; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** 121, 431, 422, 411. **KW** Exports. Developing Countries.

AB A study by the author published in 1988 proposed the hypothesis that export instability depends upon the level of industrialization of the exporting country and the position of exports in the product cycle. This paper provides further empirical evidence in support of the hypothesis. The paper discusses the significance of the empirical findings, explains why diversification has increased export instability in many developing countries, and discusses the policy implications of the findings. The paper also analyzes the effects of data aggregation on empirical results and suggests topics for future research.

Murphy, Kevin M.

TI Human Capital, Fertility, and Economic Growth. **AU** Becker, Gary S.; Murphy, Kevin M.; Tamura, Robert.

TI An Empirical Analysis of Cigarette Addiction. **AU** Becker, Gary S.; Grossman, Michael; Murphy, Kevin M.

Muscattelli, Anton

PD July 1990. **TI** The Empirical Modeling of NIE Exports: An Evaluation of Different Approaches. **AU** Muscattelli, Anton; Srinivasan, T. G.; Vines, David. **AA** University of Glasgow. **SR** Centre for Economic Policy Research Discussion Paper: 426; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 31. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 422, 431, 133, 132, 112. **KW** Terms of Trade. Trade Policy. Exports.

AB This paper investigates the current debate regarding the robustness of estimates of export demand and supply elasticities for LDCs and NIEs obtained by recent empirical studies. The empirical findings reported in the paper suggest that price elasticities of demand are indeed low, and that there are strong and significant income effects on export demand. Furthermore, using a variety of modelling approaches, we demonstrate that the choice of estimation method and normalization need not lead to drastically different conclusions regarding the size of the price elasticity of demand for NIE exports. While this points against the "small-country assumption" usually made regarding LDC/NIE exports, we

argue that the preferred development strategy for LDCs need not necessarily be an inward-oriented one.

Muzondo, Timothy R.

PD June 1990. **TI** Public Policy and the Environment: A Survey of the Literature. **AU** Muzondo, Timothy R.; Miranda, Kenneth M.; Bovenberg, A. Lans. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/56; International Monetary Fund, Washington, DC 20431. **PG** 41. **PR** not available. **JE** 722, 721, 321. **KW** Environment. Pollution. Public Policy. Macroeconomic Policy.

AB This paper notes that market failure, policy failures, and population pressures are major sources of environmental degradation and that linkages between economic activities and the environment exist at the levels of macroeconomic objectives, macroeconomic policy instruments, implementation of environmental policies, and measurement of economic activity. This paper also points out that fiscal instruments can, and indeed do, play a significant role in resolving environmental problems. In addition, market-based solutions, including pollution permits, also have merit. This paper further points out that implementing environmental policies poses considerable challenges for public policymakers and concludes by suggesting areas for further research.

Nagel, Jack H.

TI Approval Voting in Practice. **AU** Brams, Steven J.; Nagel, Jack H.

Nascimento, Jean-Claude

PD March 1990. **TI** The Crisis in the Financial Sector and the Authorities' Reaction: The Case of the Philippines. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/26; International Monetary Fund, Washington, DC 20431. **PG** 53. **PR** not available. **JE** 121, 311, 314, 312. **KW** Financial System. Monetary Policy. Developing Countries. Banking.

AB The paper discusses the crisis in the Philippines financial sector that began on a limited scale in 1981 and culminated in a significant contraction of the financial system in 1986. The causes, manifestation and transmission mechanism of the crisis are analyzed and reactions of the authorities to the crisis are examined. The main conclusion is that weaknesses of the regulatory framework and loose banking practices provoked and exacerbated the crisis, while the political and economic climate during 1979-83 also played a key role. In the end, the authorities' interventions to contain the crisis was successful but costly.

Neftci, Salih N.

PD January 1990. **TI** Statistical Analysis of Shares in Macroeconomic Time Series: Is There a Business Cycle. **AA** City University of New York and visitor, Universite de Lausanne. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 9006; Departement d' Economie et d' Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 25. **PR** no charge. **JE** 131, 132, 133. **KW** Business Cycle. Unit Roots. Nonlinear Models. Random Walk.

AB This paper reconsiders the Business Cycle patterns of Burns and Mitchell and constructs geometric methods of pattern recognition. Empirical results using U.S. data on

Unemployment and Industrial Production indicate seven significant patterns in post-war data. Monte Carlo experiments show a 1 to 2% probability that this finding can be generated by a random walk model.

Nelson, Charles R.

PD March 1990. TI Predictable Stock Returns: Reality or Statistical Illusion?. AU Nelson, Charles R.; Kim, Myung Jig. AA Nelson: University of Washington. Kim: University of Alabama. SR National Bureau of Economic Research Working Paper: 3297; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 27. PR \$2.00. JE 313, 132. KW Stock Market. Stock Returns. Forecasting. Monte Carlo.

AB Recent research suggest that stock returns are predictable from fundamentals such as dividend yield, and that the degree of predictability rises with the length of the horizon over which return is measured. This paper investigates the magnitude of two sources of small sample bias in these results. A set of Monte Carlo experiments is presented in which data are generated by a version of the present value model in which the discount rate is constant so returns are not in fact predictable. We show that a number of the characteristics of the historical results can be replicated simply by the combined effects of the two small sample biases.

Neumann, Manfred J. M.

PD May 1990. TI Precommitment to Stability by Central Bank Independence. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-152; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 23. PR no charge. JE 432, 423, 311. KW Economic Integration. International Coordination. Central Bank. European Monetary Union.

AB Europe is on the verge of uniting forces and fundamentally reorganizing her economic and political relations, both internal as well as external. What this will eventually mean for the citizens of Europe, will clearly depend on which type of constitution will finally be adopted. Until 1989, the dominating vision was a strong economic and political union, based on the principles of centralized coordination and extensive harmonization of regulation across countries. But it seems that after the revolution in eastern Europe this vision has lost some of its appeal. If the countries like Czechoslovakia, Hungary or Poland are not to be shut out, the much larger diversity in economic and social development across Europe may force the European leaders to give the competing principles of decentralization, subsidiarity and competition of diversity much larger weight than hitherto.

TI Currency Substitution and the Demand for Money Further International Evidence. AU von Hagen, Jurgen; Neumann, Manfred J. M.

Neven, Damien

PD January 1990. TI Attitudes Towards Foreign Products and International Price Competition. AU Neven, Damien; Norman, George; Thisse, Jacques-Francois. AA Neven: INSEAD. Norman: University of Leicester. Thisse: Universite Catholique de Louvain. SR Universite Catholique de Louvain CORE Discussion Paper: 9008; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. PG 19. PR not available. JE 422,

411, 227. KW Prices. Competitive Markets. Commercial Policy. Tariffs. Protectionism.

AB In this paper we analyze price competition between firms established in different countries when demand is sensitive to national biases. The intensity of this bias varies across consumers. In this context, trade arises because of the dispersion of consumers' perception of the foreign good; when consumer attitudes are diverse enough, one firm concentrates on consumers with an intensive bias, leaving room for the other which will serve consumers with a low bias. Next, an increase in import tariff will unambiguously lead to a general increase in price since, in equilibrium, the domestic firms will decide to increase margins. Finally, we identify conditions under which "Buy Domestic" campaigns increase local welfare and output.

Newey, Whitney K.

PD March 1990. TI Efficient Estimation of Semiparametric Models via Moment Restrictions. AA Bellcore. SR Bellcore Economics Discussion Paper: 65; Room 2Q-338, Bellcore, 435 South Street, Morristown, N.J. 07960-1961. PG 64. PR not available. JE 211. KW Method of Moments. Semiparametric Estimation. Spanning Condition. Simultaneous Equations. Regression Models.

AB A semiparametric model often implies an infinite variety of restrictions that one could use to estimate parameters of interest. The purpose of this paper is to study efficient semiparametric estimation via linear combinations of moment restrictions. The motivation is the parsimonious and flexible form of these estimators. The estimators are constructed from a linear combination of moment restrictions that is chosen to approximate the efficient score. The necessary spanning condition for efficiency of these estimators is discussed, and regularity conditions for asymptotic efficiency are given. Throughout the paper a number of examples are considered, including nonlinear simultaneous equations models (which include some transformation models) and a conditional distribution regression model.

Nielson, David

TI Commodity Policy and Underinvestment in Agricultural Research. AU de Gorter, Harry; Nielson, David; Rausser, Gordon C.

Nilles, Delia

PD April 1990. TI Racine Unitaire ou Non? Application de l'Approche de P. Perron a des Series Longues Pour les USA. AA Universite de Lausanne. SR Universite de Lausanne Cahiers de Recherches Economiques: 9007; Departement d'Econometrie et d'Economie Politique, Universite de Lausanne BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 31. PR no charge. JE 211, 131. KW Unit Root. Trend Stationarity. Time Series. Macroeconomic Variables.

AB This paper applies the models proposed by P. Perron to several US long term macroeconomic series so as to test the unit root hypothesis against that of trend stationary processes. Whereas Perron concludes that for most series the unit root hypothesis can be rejected at a high level of significance, this paper shows that such a conclusion lacks generality and that much depends on the sample period, on the number of lags in the regressions and on the particular series.

Nishimura, Kazuo

TI Endogenous Fertility and Growth. **AU** Benhabib, Jess; Nishimura, Kazuo.

Norman, George

TI Attitudes Towards Foreign Products and International Price Competition. **AU** Neven, Damien; Norman, George; Thisse, Jacques-Francois.

Nussbaum, Michael

TI Kernel Estimation: The Equivalent Spline Smoothing Method. **AU** Hardle, Wolfgang; Nussbaum, Michael.

O'Flaherty, Brendon

PD April 1990. **TI** Desire Behind the Veil: When is Ricardian Equivalence Relevant. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 471; Department of Economics, Columbia University, New York, New York 10027. **PG** 10. **PR** \$5.00. **JE** 322, 323, 321, 023. **KW** Government Spending. Fiscal Policy. Taxes. Macroeconomics.

AB When the public believes that the government can and will, to some extent, pursue its own goals, they cannot also believe that government spending is unaffected by whether the government borrows or taxes. In this case, government borrowing will not be exactly offset by citizens' saving.

PD May 1990. **TI** Contracts are Different from Repeated Games. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 482; Department of Economics, Columbia University, New York, New York 10027. **PG** 11. **PR** \$5.00. **JE** 026. **KW** Folk Theorem. Repeated Games. Commitments. Contracts.

AB One way to get people to cooperate is to repeat a game infinitely often. Another way is to permit them to enter into binding contracts. The repeated game folk theorem states that if discount rates are sufficiently low, any individually rational payoff vector can be attained as the average discounted payoff vector in a subgame perfect equilibrium of practically any infinitely repeated game. I ask whether a similar folk theorem holds for games in which players can make binding commitments. The answer is no, for games with more than two players. I provide a counterexample with an individually rational (in fact Pareto optimal) outcome that can never result from an equilibrium contract. The answer is yes for games with two players.

Olech, C.

PD February 1990. **TI** Almost N-Matrices and its Applications to Linear Complementarity Problem and Global Univalence. **AU** Olech, C.; Parthasarathy, T.; Ravindran, G. **AA** Olech: Institute of Mathematics, Polish Academy of Sciences. Parthasarathy: Indian Statistical Institute, New Delhi. Ravindran: CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9014; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 19. **PR** not available. **JE** 213. **KW** N-Matrices. Linear Complementarity Problems. Q-Matrices. Global Univalence. Jacobian Matrix.

AB An almost N-matrix A is one with real entries whose determinant is positive and proper principal minors are negative. In this paper we obtain some characterization results for almost N-matrices that are similar to N-matrices. Among

other things we show that an almost N-matrix of first category with n greater than or equal to 4 belongs to the class of Q-matrices. As an application we derive a new univalence result.

Osiewalski, Jacek

PD February 1990. **TI** Semi-Conjugate Prior Densities in Multivariate t Regression Models. **AU** Osiewalski, Jacek; Steel, Mark. **AA** Osiewalski: CORE and Academy of Economics, Krakow. Steel: Tilburg University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9018; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 22. **PR** not available. **JE** 211. **KW** Bayesian Econometrics. Linear Regression. Prior Densities.

AB The meaning of conjugate prior densities for a linear regression model is examined when we venture outside the usual realm of exponential models. For a non-Norman elliptical family of data densities, we introduce a class of so-called semi-conjugate prior densities, fully coherent with the uncontroversial conjugate prior in a Normal framework. We discuss results from the literature on the particular case of Student t errors, and derive a semi-conjugate prior for such models. Since the transformation used to obtain this prior does not affect the regression coefficient vector, any semi-conjugate prior leads to exactly the same marginal Student t prior and posterior densities for this vector as in the reference case of a Normal regression model with conjugate prior.

Overgaard, Per Baltzer

PD April 1990. **TI** On the Nature of Advertising and Its Role as a Signal of Quality. **AA** Universite Catholique de Louvain and University of Aarhus. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9026; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 35. **PR** not available. **JE** 531, 022. **KW** Advertising. Business Finance.

AB The paper explores a firm's use of advertising expenditures as a transmitter of information to uninformed consumers. Featuring a refined (noncooperative) equilibrium notion, we show that the role of advertising as a signal of quality depends critically on its nature. If advertising has a direct information content it will be used as a complement to prices to signal quality. If advertising is purely dissipative, it is an inefficient signal and will not be used to signal quality. The unique self-enforcing equilibrium is fully revealing (i.e. separating), and the price of a high quality firm is distorted upwards and informative advertising expenditures downwards relative to the full-information optimum. Hence, a high quality firm sacrifices potential customers to allow the remaining consumers to infer quality correctly. Contrary to most of the literature, we show that "best buys" are not advertised most heavily.

Owen, Susan J.

TI Sex, Equality, and the State Pension. **AU** Joshi, Heather; Owen, Susan J.

Pagano Marco

TI Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries. **AU** Giavazzi, Francesco; Pagano Marco.

Palepu, Krishna G.

TI Does Corporate Performance Improve After Mergers.
AU Healy, Paul M.; Palepu, Krishna G.; Rubak, Richard S.

Palfrey, Thomas R.

PD April 1990. **TI** Testing Game-Theoretic Models of Free Riding: New Evidence on Probability Bias and Learning. **AU** Palfrey, Thomas R.; Rosenthal, Howard. **AA** Palfrey: California Institute of Technology. Rosenthal: Massachusetts Institute of Technology and Carnegie-Mellon University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 549; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 41. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 025, 024. **KW** Incomplete Information. Elections. Public Goods. Free Rider.

AB The free rider problem is endemic to political processes. Political activists bear organizational costs for the benefit of a large (free-riding) membership. Nonvoters can avoid bearing informational costs and transactions costs with little risk of affecting the outcome of an election. These problems have in common the following features. There is a group, all of whose members stand to benefit from the generous contributions of some subset of the group. They are all examples of public good problems. In this paper, we present both theory and experiments about a particularly simple class of public good problems: voluntary contribution threshold games. In these games, a group benefit is produced if at least w of N players "contribute" their endowments. An individual obtains the highest possible payoff (when w doesn't equal N) as a successful free rider -- the good is produced without the individual having contributed.

Panic, M.

PD January 1990. **TI** Are Disparities in National Efficiency Levels a Threat to European Monetary Union. **AA** University of Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 9004; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 13. **PR** \$4.00 (2 pounds); checks payable to University of Cambridge. **JE** 432, 423. **KW** Monetary Union. Gold Standard. European Community.

AB The decision to create a single European market leaves EEC governments little alternative but to start working towards the creation of a monetary union. The important question is: How viable would such a union be, given the existing disparities in efficiency and income levels within the Community? To provide some indication of this, the paper compares levels of per capita income and industrialization within the EEC with those of countries that were on the classical gold standard throughout its existence (1880-1914). The comparison suggests that a monetary union of EEC countries is feasible, provided that the Community can agree on a much greater transfer of resources to its less advanced members than it has managed to achieve so far.

Parkinson, Martin

TI A Measure of Hysteresis in Unemployment Rates.
AU Jaeger, Albert; Parkinson, Martin.

Parthasarathy, T.

TI Almost N-Matrices and its Applications to Linear

Complementarity Problem and Global Univalence.
AU Olech, C.; Parthasarathy, T.; Ravindran, G.

Pashardes, Panos

TI What do We Learn About Consumer Demand Patterns from Micro-Data. **AU** Blundell, Richard; Pashardes, Panos; Weber, Guglielmo.

Patel, Urjit R.

TI Debt, Deficits and Inflation: An Application to the Public Finances of India. **AU** Buiter, Willem H.; Patel, Urjit R.

Paxson, Christina H.

TI Labor Supply, Hours Constraints and Job Mobility.
AU Altonji, Joseph G.; Paxson, Christina H.

Peck, N.T

TI On the Interiors of Production Sets in Infinite Dimensional Spaces. **AU** Khan, M. Ali; Peck, N.T.

Pennacchi, George

TI Valuing Interest Payment Guarantees on Developing Country Debt. **AU** Borensztein, Eduardo; Pennacchi, George.

Peracchi, Franco

PD June 1990. **TI** Robust M-Tests. **AA** New York University. **SR** New York University Economic Research Reports: 90-25; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 22. **PR** no charge. **JE** 211. **KW** M-Tests. Robust Tests. M-Estimators. Asymptotic Theory.

AB This paper investigates the local robustness properties of a general class of multi-dimensional tests based on M-estimators. These tests are shown to inherit the efficiency and robustness properties of the estimators on which they are based. In particular, it is shown that small perturbations of the distribution of the observations can have arbitrarily large effects on the asymptotic level and power of tests based on estimators that do not possess a bounded influence function. An asymptotic "admissibility" result is also presented, that provides a justification for tests based on optimal bounded-influence estimators.

Perloff, Jeffrey M.

TI Helping by Hurting: Industrial Policy as an Alternative to Trade Policy. **AU** Karp, Larry S.; Perloff, Jeffrey M.

Pesaran, M. Hashem

PD October 1989. **TI** Estimation of a Simple Class of Multivariate Rational Expectations Models: A Test of the New Classical Model at a Sectoral Level. **AA** University of California, Los Angeles and Trinity College, Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 9005; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 27. **PR** \$4.00 (2 pounds); checks payable to University of Cambridge. **JE** 211, 212. **KW** Rational Expectations. Multivariate Models. Aggregation. Errors in Variables. Likelihood Function.

AB This paper extends the results obtained by Pagan (1984) and Turkington (1985) for single equation rational expectations (RE) models to multivariate RE models and shows that the errors-in-variables method and the substitution method discussed in Wickens (1982) lead to exactly the same likelihood function. The paper also considers multivariate RE models with unanticipated variables and includes an empirical application to the problem of testing the natural rate rational expectations (NR-RE) hypothesis at a disaggregate level using U.S. data over the period 1955-1985.

PD October 1989. **TI** Costly Adjustment Under Rational Expectations: A Generalization. **AA** University of California, Los Angeles and Trinity College, Cambridge. **SR** University of Cambridge Department of Applied Economics Working Paper: 9002; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. **PG** 13. **PR** \$4.00 (2 pounds); checks payable to University of Cambridge. **JE** 632, 824, 813, 023. **KW** Adjustment Costs. Rational Expectations. Employment. Coal Industry.

AB This note provides a generalization of the standard adjustment cost rational expectations model due to Sargent (1978), which, in addition to the cost of changing the level of the decision variable, also allows for the cost of altering the speed with which decisions are changed. It establishes the existence of a unique stable solution for this more general model, derives an explicit solution for the underlying decision problem, and provides a necessary order condition for identification of the structural parameters. The note also contains an application of the model to the determination of the employment in the U.K. coal industry over the 1956-83 period.

Pessach, Shula

PD July 1990. **TI** Targeting the Exchange Rate: An Empirical Investigation. **AU** Pessach, Shula; Razin, Assaf. **AA** Pessach: Bank of Israel. Razin: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/61; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** 431, 132. **KW** Exchange Rates. Open Economy. Israel.

AB The purpose of this paper is to implement empirically the new theory of exchange rate targeting. The theory formulates an expectations induced relationship between the exchange rate and the fundamental subject to random shocks and target zone constraints. By using monthly data for a representative small open economy (Israel in the 1980s) the empirical analysis identifies the special role played by policy and market fundamentals in the behavior of the exchange rate.

Pestieau, Pierre

TI Optimal Linear Taxation in Models with Occupational Choice. **AU** Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

Peters, Wolfgang

TI A Principal-Agent Approach on Manager Effort and Control in Privatized and Public Firms. **AU** Bos, Dieter; Peters, Wolfgang.

Phillips, Peter C. B.

PD July 1990. **TI** Testing Covariance Stationarity under Moment Condition Failure with an Application to Common

Stock Returns. **AU** Phillips, Peter C. B.; Loretan, Mico. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 947; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 77. **PR** \$2.00. **JE** 211, 212. **KW** Asymptotic Theory. Covariance Stationarity. Econometric Models.

AB This paper studies tests for covariance stationarity under conditions which permit failure in the existence of fourth order moments. The problem is important because many econometric diagnostics such as tests for parameter constancy, constant variance and ARCH and GARCH effects routinely rely on fourth moment conditions. Moreover, such tests have recently been extensively employed with financial and commodity market data, where fourth moment conditions may well be quite tenuous and are usually untested. This paper considers several tests for covariance stationarity including sample split prediction tests, cumulative sum of squares tests and modified scaled range tests. When fourth moment conditions fail we show how the asymptotic theory for these tests involves functionals of an asymmetric stable Levy process, in place of conventional standard normal or Brownian bridge asymptotics.

PD July 1990. **TI** Operational Algebra and Regression T-tests. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 948; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 18. **PR** \$2.00. **JE** 211. **KW** Asymptotic Theory. Regression Model. Test Statistic. Linear Model.

AB Data reduction involves a physical transition from sample data to econometric estimator and test statistic. This transition induces a mapping on the probability law of the sample, whose image is the distribution of the statistic of interest. At a general level, the mapping can often be captured by means of an operational algebra. Some methods that employ nonlinear functions of differential operators are suggested which can perform this task. The methods are related to pseudodifferential operator techniques that are used in abstract mathematics to solve systems of partial differential equations. They also generalize the fractional calculus methods developed by the author in earlier work (1984, 1985).

PD July 1990. **TI** A Shortcut to LAD Estimator Asymptotics. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 949; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 20. **PR** \$2.00. **JE** 211. **KW** Taylor Series. Asymptotic Theory. Autoregression. Regression Model.

AB Using generalized functions of random variables and generalized Taylor series expansions, we provide almost trivial demonstrations of the asymptotic theory for the LAD estimator in a regression model setting. The approach is justified by the smoothing that is delivered in the limit by the asymptotics, whereby the generalized functions are forced to appear as linear functionals wherein they become real valued. Models with fixed and random regressors, autoregressions and autoregressions with infinite variance errors are studied. Some new analytic results are obtained including an asymptotic expansion of the distribution of the LAD estimator and the results of some earlier simulation studies are explained.

PD July 1990. **TI** To Criticize the Critics: An Objective Bayesian Analysis of Stochastic Trends. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 950; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven, CT 06520. **PG** 43. **PR** \$2.00. **JE** 211.

KW Bayesian Analysis. Hypergeometric Function. Stochastic Trends. Unit Roots.

AB In two recent articles, Sims (1988) and Sims and Uhlig (1988) question the value of much of the ongoing literature on unit roots and stochastic trends. They advocate in place of classical methods an explicit Bayesian approach to inference that utilizes a flat prior on the autoregressive coefficient. DeJong and Whiteman adopt a related Bayesian approach in a group of papers (1989a, b, c). Their results appear to be conclusive in turning around the earlier, influential conclusions of Nelson and Plosser (1982) that most aggregate economic time series have stochastic trends. So far, these criticisms of unit root econometrics have gone unanswered; the assertions about the impropriety of classical methods and the superiority of flat prior Bayesian methods have been unchallenged; and the empirical re-evaluation of evidence in support of stochastic trends has been left without comment. This paper breaks that silence and offers a new perspective.

Pindyck, Robert S.

PD March 1990. **TI** Irreversibility, Uncertainty, and Investment. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3307; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 67. **PR** \$2.00. **JE** 522, 521, 514. **KW** Business Investment. Corporate Strategy. Corporations. Investment.

AB Most investment expenditures have two important characteristics: First, they are largely irreversible; the firm cannot disinvest, so the expenditures are sunk costs. Second, they can be delayed, allowing the firm to wait for new information about prices, costs, and other market conditions before committing resources. An emerging literature is shown that this has important implications for investment decisions, and for the determinants of investment spending. This paper presents some simple models of irreversible investment, and shows how optimal investment rules and the valuation of projects and firms can be obtained from contingent claims analysis, or alternatively from dynamic programming.

PD March 1990. **TI** Inventories and the Short-run Dynamics of Commodity Prices. **AA** Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3295; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 522, 521, 514. **KW** Inventories. Production. Prices.

AB I examine the behavior of inventories and their role in the short-run dynamics of commodity production and price. Competitive producers of a storable commodity react to price changes by balancing costs of changing production with costs of changing inventory holdings. To determine these costs, I estimate a structural model of production, sales, and storage for copper, heating oil, and lumber. I then examine the implications of these costs for inventory behavior, and for the behavior of spot and futures prices. I find that inventories may serve to smooth production during periods of low or normal process, but during periods of temporarily high prices inventories have a more important role in facilitating production and delivery scheduling and avoiding stockouts.

PD April 1990. **TI** Do Stock Prices Move Together Too Much. **AU** Pindyck, Robert S.; Rotemberg, Julio J. **AA** Massachusetts Institute of Technology. **SR** National

Bureau of Economic Research Working Paper: 3324; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** \$2.00. **JE** 313. **KW** Stock Market. Securities. Asset Prices.

AB We show that comovements of individual stock prices cannot be justified by economic fundamentals. This finding is a rejection of the present value model of security valuation. Unlike other tests of this model, ours is robust in that it allows for volatility in ex ante rates of return. The only constraint we impose is that investors' utilities are functions of a single consumption index. This implies that changes in discount rates must be related to changes in macroeconomic variables, and hence stock prices of companies in unrelated lines of business should move together only in response to changes in current or expected future macroeconomic conditions. We also show that this constraint implies that any priced factors in the APT model must be related to macroeconomic variables.

Pisaruk, N. N.

TI Greedy Algorithms on Convex-Ordered Sets. **AU** Kovalev, Michail M.; Pisaruk, N. N.

Pissarides, Christopher A.

PD March 1990. **TI** Unemployment and the Persistence of Employment Shocks. **AA** London School of Economics. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 377; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 35. **PR** no charge. **JE** 824, 851, 821, 023. **KW** Unemployment. Human Capital. Search Model.

AB This paper shows that when the probability of leaving unemployment declines with duration the effects of a temporary shock to employment can be present long after those who were unemployed at the end of the shock have left unemployment. The mechanism that causes this persistence is a thin market externality that operates when workers lose some of their skills during unemployment. The paper develops an overlapping generations model of search equilibrium and shows by example that different patterns of persistence and multiplicity of equilibrium are possible even with constant returns production and matching technologies.

Plehn, Jurgen

PD February 1989. **TI** Finding Minimally Weighted Subgraphs. **AU** Plehn, Jurgen; Voigt Bernd. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90635-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 12. **PR** no charge. **JE** 213. **KW** Graph Theory. Subgraph Problem. Algorithm.

AB Let H be a fixed graph of tree-width w . We study the problems of finding a minimally weighted weak H -subgraph, resp., a minimally weighted induced H -subgraph in an edge-weighted graph G on n nodes. We present an $O(n(w+1))$ -algorithm for the weak subgraph problem. If the maximal degree of G is bounded, the algorithm above can be modified to an $O(n(w+1))$ -algorithm for the induced subgraph problem.

Polachek, Solomon

TI Measuring Ignorance in the Market: A New Method with an Application to Physician Services. **AU** Gaynor, Martin;

Polachek, Solomon.

Polemarchakis, Heraklis M.

PD January 1990. **TI** The Existence of Competitive Equilibria When the Asset Market is Incomplete: A Short Proof and Further Results. **AU** Polemarchakis, Heraklis M.; Siconolfi, P. **AA** Polemarchakis: Columbia University and Universite Catholique de Louvain. Siconolfi: Columbia University. **SR** Universite Catholique de Louvain **CORE** Discussion Paper: 9001; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve **BELGIUM**. **PG** 23. **PR** not available. **JE** 313, 311, 021. **KW** Asset Market. Competitive Equilibrium. Portfolio. Budget Constraint. Consumption.

AB The asset market is incomplete and assets traded at an initial period. Competitive equilibria may fail to exist. This may occur in a robust economy with strictly monotonically increasing individual preferences over consumption bundles and with only one commodity if the individual budget constraints in the asset market are stated with weak inequality. It is due to the satiation that induced individual preferences over portfolios display when asset payoffs are positive for some realizations of uncertainty and negative for others. Stating the individual budget constraints in the asset market with equality suffices to restore the existence of competitive equilibria. Pseudo-equilibria, a weaker notion, exist and competitive equilibria exist generically when asset payoffs are denominated in multiple commodities.

PD January 1990. **TI** The Economic Implications of an Incomplete Asset Market. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain **CORE** Discussion Paper: 9002; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve **BELGIUM**. **PG** 11. **PR** not available. **JE** 021, 313, 311. **KW** Asset Market. Competitive Equilibrium. Macroeconomics. Aggregation.

AB The incompleteness of the asset market affects nontrivially the existence, the optimality and the determinacy of competitive equilibria. Also the revelation of information by prices and the serial properties of macroeconomic aggregates.

TI Asset Pricing and Observability. **AU** Dutta, Jaysri; Polemarchakis, Heraklis M.

TI The Relevance of Financial Policy. **AU** Detemple, J.; Gottardi, P.; Polemarchakis, Heraklis M.

TI Noninformative Rational Expectations Equilibria When Assets are Nominal: An Example. **AU** Mischel, Kenneth; Polemarchakis, Heraklis M.; Siconolfi, P.

TI Convexity and Sunspots: A Remark. **AU** Cass, David; Polemarchakis, Heraklis M.

TI Investment and the Aggregation of Risks. **AU** Dutta, Jaysri; Polemarchakis, Heraklis M.

TI Investment and the Aggregation of Risks. **AU** Dutta, Jaysri; Polemarchakis, Heraklis M.

Popper, Helen

PD June 1990. **TI** The Term Structure of Interest Rates in the Onshore Markets of the United States, Germany, and Japan. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System **International Finance** Discussion Paper: 382; Division of

International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 29. **PR** no charge. **JE** 441. **KW** Term Structure. Capital Mobility. International Markets.

AB This paper investigates term premia behavior in U.S., German, and Japanese markets. Onshore returns are evaluated in order to focus on the co-movement of the term premia across a set of potentially heterogeneous markets. The paper extends the work of Campbell and Clarida [1987], who find that the term premia within the Euromarket appear to move together. In keeping with their approach, Hansen and Hodrick's [1983] latent variable model is used. The model constrains expected returns, conditional on an information set, to be proportional to one another. These restrictions are not rejected for the markets examined here, implying that the term premia behave as if in a single market.

Portes, Richard

PD March 1987. **TI** Money and the Consumption Goods Market in China. **AU** Portes, Richard; Santorum, Anita. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/1; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 26. **PR** not available. **JE** 124, 131, 311, 023. **KW** Money. China. Goods Market. Consumption. Disequilibrium Model. Excess Demand.

AB This paper studies the relations between money and other macroeconomic variables as well as excess demand in the consumption goods market for the case of China, 1954-83. We explicitly recognize the endogeneity of money in the CPE and do not impose (but instead test) some common restrictive assumptions; we assess the extent of aggregate excess demand (supply) in a macroeconomic disequilibrium model; and we allow at the macro level for the possible coexistence of micro markets in different states of excess demand or supply (shortages or slacks). We find bidirectional causality between money and income; that $M(0)$ behaves in a manner more suited to building simple, conventional models than does $M(2)$; and that there has been a mixed pattern of excess supplies and demands over the three decades.

TI Effective Demands and Spillovers. **AU** Martin, Christopher; Portes, Richard.

PD October 1987. **TI** Tests of the Chronic Shortage Hypothesis: The Case in Poland. **AU** Portes, Richard; Quandt, Richard; Yeo, Stephen. **AA** Portes: Birkbeck College and Centre for Economic Policy Research. Quandt: Princeton University. Yeo: Centre for Economic Policy Research. **SR** Birkbeck College Discussion Papers in Economics: 87/14; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 23. **PR** not available. **JE** 124, 133, 132. **KW** Excess Demand. Poland. Disequilibrium Models.

AB In the analysis of econometric disequilibrium models it is common to test the null hypothesis of "equilibrium" against the "disequilibrium" alternative. This paper tests the null hypothesis of "all-excess-demand", that all observations correspond to (positive) excess demand, against the alternative that permits excess demand of either sign. We use a test due to Rogers (1984), which our Monte Carlo Experiments suggest performs well in small samples, as well as a "quasi-likelihood ratio test", which is a suggestive heuristic procedure. The data are from the aggregate consumption goods market in Poland 1955-80, and

the paper is thus a test of Kornai's assertion that "chronic shortage" characterizes such CPEs. The results conclusively reject the "all-excess-demand" hypothesis for the Polish case, and the Rogers test promises to be of considerable practical use.

TI Settling Defaults in the Era of Bond Finance. **AU** Eichengreen, Barry; Portes, Richard.

PD June 1988. **TI** Foreign Lending in the Interwar Years: The Bondholders' Perspective. **AU** Portes, Richard; Eichengreen, Barry. **AA** Portes: Birkbeck College. Eichengreen: University of California, Berkeley. **SR** Birkbeck College Discussion Papers in Economics: 88/11; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 46. **PR** not available. **JE** 433, 441, 443, 411. **KW** International Debt. Sovereign Borrowing. Debt Default. Foreign Bonds. International Markets.

AB This paper revises and extends our previous (1986) analysis of rates of return on sterling and dollar foreign loans of the 1920's. It analyzes a larger sample of 250 dollar bonds and 125 sterling issues, covering the years 1920-29. Internal rates of return are adjusted for repurchases of discounted foreign bonds. The larger sample confirms the main conclusions of our original study and enables us to paint a richer picture of interwar experience with foreign loans. We also analyze determinants of ex ante spreads on foreign loans relative to risk-free returns, and assess the sophistication of investors.

TI International Costs and Benefits From EMU. **AU** Alogoskoufis, George S.; Portes, Richard.

Poterba James M.

TI An Aging Society: Opportunity or Challenge?. **AU** Cutler, David M.; Poterba James M.; Sheiner, Louise M.; Summers, Lawrence H.

Poterba, James M.

PD February 1990. **TI** Taxation and Housing Markets: Preliminary Evidence on the Effects of Recent Tax Reform. **AA** National Bureau of Economic Research and Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 3270; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** \$2.00. **JE** 932, 931, 921. **KW** Housing Economics. Tax Policy. Taxes.

AB The tax changes of the 1980s altered the incentives for housing consumption. Marginal tax rate reductions in both the Economic Recovery Tax Act (1981) and the Tax Reform Act (1986) reduced the attraction of homeownership, particularly at high income levels. The Tax Reform Act, by lowering depreciation allowances and implementing anti-tax shelter provisions, also reduced the net tax subsidy to rental housing. In the long run these changes will raise real rents and reduce the fraction of national income that is allocated to housing. Preliminary evidence shows a pronounced decline in rental housing construction since the 1986 Tax bill, as well as a decline in the real price of owner-occupied homes which may be partly attributable to the tax change.

TI Are Japanese Stock Prices Too High. **AU** French, Kenneth R.; Poterba, James M.

Potscher, Benedikt M.

PD February 1990. **TI** On the Formulation of Uniform Laws of Large Numbers: A Truncation Approach. **AU** Potscher, Benedikt M.; Prucha, Ingmar R. **AA** Potscher: University of Maryland and Technische Universität Wien. Prucha: University of Maryland. **SR** National Bureau of Economic Research Technical Paper: 85; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 211. **KW** Law of Large Numbers. Truncation.

AB The paper develops a general framework for the formulation of generic uniform laws of large numbers. In particular, we introduce a basic generic uniform law of large numbers that contains recent uniform laws of large numbers by Andrews and Hoadley as special cases. We also develop a truncation approach that makes it possible to obtain uniform laws of large numbers for the functions under consideration from uniform laws of large numbers for truncated versions of those functions. The point of the truncation approach is that uniform laws of large numbers for the truncated versions are typically easier to obtain. By combining the basic uniform law of large numbers and the truncation approach we also derive generalizations of recent uniform laws of large numbers introduced by Potscher and Prucha.

Preissmann, Myriam

TI New Properties of Perfectly Orderable Graphs and Strongly Perfect Graphs. **AU** Hoang, Chinh T.; Maffray, Frederic; Preissmann, Myriam.

Promel, Hans Jurgen

PD November 1989. **TI** A Sparse Gallai-Witt Theorem. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: 89612-OR; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 9. **PR** no charge. **JE** 213. **KW** Gallai-Witt Theorem.

AB Generalizing a result of the authors (Trans. Am. Math. Soc. 309, 113-137, 1988) and simplifying the proof thereof a sparse Gallai-Witt theorem is proved.

PD December 1989. **TI** From WQO to BQO, via Ellentuck's Theorem. **AU** Promel, Hans Jurgen; Voigt, Bernd. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: 89613-OR; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 25. **PR** no charge. **JE** 213. **KW** Ramsey Theory. Ellentuck's Theorem. Topology. Ordered Sets.

AB We show how topological Ramsey theory may help to appreciate the step from well-quasi-ordered sets to better-quasi-ordered sets.

PD December 1989. **TI** Excluding Induced Subgraphs Quadrilaterals. **AU** Promel, Hans Jurgen; Steger, Angelika. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: 89607-OR; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 18. **PR** no charge. **JE** 213. **KW** Graph Theory. Subgraphs. Bipartite Graphs.

AB In this note we determine the structure of "almost all"

graphs not containing a quadrilateral (i.e., a cycle of length four) as an induced subgraph. In particular it turns out that there are asymptotically twice as many graphs not containing an induced quadrilateral than there are bipartite graphs.

Prucha, Ingmar R.

TI On the Formulation of Uniform Laws of Large Numbers: A Truncation Approach. **AU** Potscher, Benedikt M.; Prucha, Ingmar R.

Quah, Danny

PD May 1990. **TI** Galton's Fallacy and Tests of the Convergence Hypothesis. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 552; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 9. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 226, 111, 211. **KW** Convergence Hypothesis. Growth Rates. Income Distribution.

AB Recent tests for the convergence hypothesis derive from regressing average growth rates on initial levels: a negative initial level coefficient is interpreted as convergence. These tests turn out to be plagued by Francis Galton's classical fallacy of regression towards the mean. Using a dynamic version of Galton's fallacy, we establish that, in fact, coefficients of arbitrary signs in such regressions are consistent with an unchanging cross-section distribution of incomes.

Quandt, Richard; Yeo, Stephen

TI Tests of the Chronic Shortage Hypothesis: The Case in Poland. **AU** Portes, Richard; Quandt, Richard; Yeo, Stephen.

Radner, Roy

PD January 1990. **TI** Hierarchy: The Economics of Managing. **AA** AT&T Bell Laboratories and New York University. **SR** New York University Economic Research Reports: 90-26; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 29. **PR** no charge. **JE** 511, 512. **KW** Corporations. Managerial Economics. Decentralization. Hierarchy. Industrial Organization.

AB In today's industrialized nations, a significant fraction of economic activity takes place in large firms, many of them with thousands or even hundreds of thousands of employees. Given the large size of these firms, and given the limitations on individuals' capacities for information-processing and decision-making, it is obvious that the labor of managing must be divided among many persons in the firm. In the U.S., more than a third of all employees may be working full-time in activities that are part of -- or in support of -- the management process. By the "economics of managing" I mean the consideration of the resources that go into the activities of managing, and the ways in which different organizations of managing do a better or worse job of economizing those resources and produce better or worse results.

Ramachandran, Rama V.

TI Risk Adjusted Deposit Insurance for Japanese Banks. **AU** Sato, Ryuzo; Ramachandran, Rama V.; Kang, Bohyong.

Rardin, Ronald R.

PD April 1990. **TI** Valid Inequalities and Projecting the Multicommodity Extended Formulation for Uncapacitated

Fixed Charge Network Flow Problems. **AU** Rardin, Ronald R.; Wolsey, Laurence A. **AA** Rardin: School of Industrial Engineering, Purdue University. Wolsey: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9024; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 22. **PR** not available. **JE** 213. **KW** Network Flow Problem. Linear Programming. Commodities.

AB Multicommodity extended formulations of single source uncapacitated fixed charge network flow problems have significantly sharper linear programming relaxations than the standard flow formulations. However the tradeoff is the introduction of many new constraints and variables to accommodate a sink-oriented flow disaggregation. In this paper we introduce a new family of dicit collection inequalities and show that they completely describe the projection of the multicommodity formulation onto the original variables. A simple subclass is seen to include a variety of known inequalities for particular models, and combinatorial separation is examined for some special cases.

Rausser, Gordon C.

PD June 1990. **TI** LDC Debt and Policy Linkages in the Determination of World Commodity Prices. **AU** Rausser, Gordon C.; Brazelon, Coleman. **AA** University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 538; 207 Giannini Hall, University of California, Berkeley, Berkeley CA 94720. **PG** 17. **PR** \$5.00. **JE** 713, 441, 121, 113. **KW** External Debt. Commodity Prices. Macroeconomic Policy. Agricultural Policy. Developing Countries.

AB The effects of industrial country commodity policies and macroeconomic policies and of LDC external debt on world commodity prices are investigated. A theoretical framework is developed to provide the foundation for an empirical model that is estimated, assessed and then simulated to isolate the effect of debt relief on commodity prices.

TI Commodity Policy and Underinvestment in Agricultural Research. **AU** de Gorter, Harry; Nielson, David; Rausser, Gordon C.

Ravindran, G.

TI Almost N-Matrices and its Applications to Linear Complementarity Problem and Global Univalence. **AU** Olech, C.; Parthasarathy, T.; Ravindran, G.

Ravn, Morten Overgaard

PD March 1990. **TI** Real Business Cycles in a Two Country Two Sector World. **AA** University of Southampton and University of Aarhus. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9003; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 28. **PR** no charge. **JE** 133, 411, 023. **KW** Business Cycle. Open Economy. Consumption. Technology Shocks.

AB This paper constructs a two country-two sector Real Business Cycle (RBC) model incorporating both traded and non-traded goods. In contrast to other RBC models of open economies the specification used here does not imply very high correlation between consumption levels in different countries. A closed form solution is obtained, and is used to analyze the

effects of internal and external technology shocks on the state variables. Implications are drawn for the connection between business cycles across countries.

Razin, Assaf

PD March 1990. **TI** Capital Market Integration: Issues of International Taxation. **AU** Razin, Assaf; Sadka, Efraim. **AA** Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 3281; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** \$2.00. **JE** 441, 323, 321. **KW** Capital Mobility. Taxes. International Markets. Fiscal Policy.

AB The paper analyzes three issues in international taxation: (a) How the opening of the economy to international capital movements affects the size and structure of the fiscal branch of government; (b) Optimal restrictions on capital exports in the face of capital flight; and (c) The structure of taxes on mobile factors which emerges from international tax competitions and the gains from international tax harmonization.

TI Targeting the Exchange Rate: An Empirical Investigation. **AU** Pessach, Shula; Razin, Assaf.

Rebelo, Sergio

TI Public Policy and Economic Growth: Developing Neoclassical Implications. **AU** King, Robert G.; Rebelo, Sergio.

PD April 1990. **TI** Long Run Policy Analysis and Long Run Growth. **AA** Portuguese Catholic University, Rochester Center for Economic Research and Northwestern University. **SR** National Bureau of Economic Research Working Paper: 3325; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** \$2.00. **JE** 112, 111. **KW** Economic Growth. Economic Development. Government Policy. Labor Mobility.

AB The wide cross-country disparity in rates of economic growth is the most puzzling feature of the development process. This paper describes a class of models in which this type of heterogeneity in growth experiences can arise as a result of cross-country differences in government policy. These differences in policy regimes can also create incentives for labor migration from slow growing to fast growing countries. In the class of models that we study growth is endogenous but the technology exhibits constant returns to scale and there is a steady state path that accords with Kaldor's stylized facts of economic development.

Reid, G.

TI Testing a Model of the Kinked Demand Curve. **AU** Bhaskar, V.; Machin, S.; Reid, G.

Reitzes, James D.

PD May 1990. **TI** Mergers and Free Riders in Spatial Markets. **AU** Reitzes, James D.; Levy, David T. **AA** Reitzes: Federal Trade Commission. Levy: University of Baltimore. **SR** Federal Trade Commission Bureau of Economics Working Paper: 178; Bureau of Economics, Federal Trade Commission, 6th and Pennsylvania Ave. NW, Washington, D.C. 20580. **PG** 32. **PR** no charge. **JE** 611, 612, 511. **KW** Mergers. Spatial Markets. Price Discrimination. Prices. Competition.

AB Prior analyses found little incentive for mergers in the

absence of efficiency gains. Either the merger is unprofitable, or outside firms earn higher profits than the merged parties. We examine mergers in a model with differentiated consumers, and find that mergers are profitable. Moreover, the free rider problem is largely eliminated under uniform pricing; it is completely eliminated under discriminatory pricing.

Revesz, Richard L.

TI Sequential Decisions by a Single Tortfeasor. **AU** Kornhauser, Lewis A.; Revesz, Richard L.

Richardson, Matthew

PD April 1990. **TI** Drawing Inferences From Statistics Based on Multi-Year Asset Returns. **AU** Richardson, Matthew; Stock, James H. **AA** Richardson: University of Pennsylvania. Stock: Harvard University. **SR** National Bureau of Economic Research Working Paper: 3335; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** \$2.00. **JE** 313, 132. **KW** Stock Prices. Stock Market. Mean Reversion.

AB The possibility of mean reversion in stock prices recently has been examined using statistics based on multi-year returns. Previous researchers have noted difficulties in drawing inferences about these statistics because of poor performance of the usual approximating asymptotic distributions. We therefore develop an alternative asymptotic distribution theory for statistics involving multi-year returns. These distributions differ markedly from those implied by the conventional theory. This alternative theory provides substantially better approximations to the relevant finite sample distributions. It also leads to empirical inferences much less at odds with the hypothesis of no mean reversion.

Robertson, N.

PD 1988. **TI** An Outline of a Disjoint Path Algorithm. **AU** Robertson, N.; Seymour, P. D. **AA** Robertson: Ohio State University, Seymour: Bellcore. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 88523-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 27. **PR** no charge. **JE** 213, 214. **KW** VLSI Layout. Disjoint Paths Problem. Graph Minors.

AB For several years now we have been working on what we call the "Graph Minors" project. This is turning into a long series of papers, of which currently sixteen have been written (we shall refer to these as I,II,...,XVI) and about eight more planned. The original goal of the series was Wagner's conjecture that for every infinite set of graphs one is a minor of another; but it turns out that the theory we developed to prove this conjecture has other applications. One of these (in XIII) is to the disjoint paths problem, and we shall summarize that here, together with the necessary background from other papers of the series.

Robinson, Sherman

TI The Use of Computable General Equilibrium Models to Assess Water Policies. **AU** Berck, Peter; Robinson, Sherman; Goldman, George.

TI Data, Linkages, and Models: U.S. National Income and Product Accounts in the Framework of a Social Accounting Matrix. **AU** Hanson, Kenneth A.; Robinson, Sherman.

Rockoff, Hugh

PD December 1989. **TI** Lessons from the American Experience with Free Banking. **AA** Rutgers University. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 9; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 54. **PR** \$2.00. **JE** 042, 312, 311. **KW** Banking. Monetary Policy. Commercial Banks. National Currency.

AB There has been considerable interest in recent years in historical experiments with "free banking." This paper examines once again the American experiments in the decades before the Civil War, and the recent literature on them. The lessons of this experience for four issues are considered: (1) the appropriate mechanism for controlling the monetary base, (2) the need for a lender of last resort, (3) the costs and benefits of a bank issued currency, and (4) the potential under a regime of free banking for wildcat banking.

Rodrik, Dani

TI Why is Trade Reform so Unpopular? On Status Quo Bias in Policy Reforms. **AU** Fernandez, Raquel; Rodrik, Dani.

PD March 1990. **TI** Premature Liberalization, Incomplete Stabilization: The Ozal Decade in Turkey. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3300; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 45. **PR** \$2.00. **JE** 113, 112, 311, 121. **KW** Turkey. Public Policy. Monetary Policy. Developing Countries. Growth Rates. Inflation.

AB In late 1979, Turkey stood in the throes of a foreign exchange crisis, with widespread shortages, negative growth, and inflation into triple digits. A decade later, Turkey has a comfortable balance-of-payments situation, and sits atop considerable foreign exchange reserves. The economy has achieved a remarkable transformation from an inward-oriented outlook to an outward-oriented one. Yet, after some success in the early 1980s, inflation remains unconquered and the public sector budget is out of control. This paper provides an interpretation of the Turkish experience in the 1980s. It is argued that foreign capital inflows in the early 1980s cushioned the fiscal squeeze, and allowed a relatively painless reduction in inflation alongside a process of export-oriented growth.

PD August 1990. **TI** Trade Policies and Development: Some New Issues. **AA** Harvard University. **SR** Centre for Economic Policy Research Discussion Paper: 447; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 30. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 112, 422, 121. **KW** Trade Policy. Trade Reform. Economic Development. Developing Countries.

AB The 1980s have seen the beginnings of a change of heart among developing country policymakers, as the import-substitution consensus of the previous decade has all but evaporated. It is paradoxical that the 1980s should have become the decade of trade liberalization in LDCs, since this has also been a decade of macroeconomic instability. The benefits of liberalization become muted under conditions of macro instability. This paper discusses three questions that arise with this experience. First, how can the credibility and sustainability of the reforms be enhanced? Second, what role should trade reform play when it is implemented in the context

of macroeconomic instability? Third, should we worry about the consequences of trade reform in the imperfectly competitive environments that characterize the developing economies?.

Roe, Terry L.

TI Economics of Food Safety: Risk, Information, and the Demand and Supply of Health. **AU** Falconi, Cesar; Roe, Terry L.

PD October 1990. **TI** Competition Among Rent Seeking Groups in General Equilibrium. **AU** Roe, Terry L.; Graham-Tomasi, Theodore. **AA** University of Minnesota. **SR** University of Minnesota Economic Development Center Bulletin: 90-2; Dept. of Agricultural and Applied Economics, University of Minnesota, 231 Classroom Office Bldg, St. Paul, MN 55108. **PG** 33. **PR** free. **JE** 021, 024, 022. **KW** Lobbying. Political Economy. Public Goods.

AB A two sector general equilibrium model is developed in which households can influence the government's choice of the relative price of traded goods and the level of public goods supplied to each sector. The model is used to illustrate key problems addressed by the political economy literature, modeling issues that arise, and the nature of insights that can be obtained that traditional approaches cannot discern.

Rogerson, Richard

TI Homework in Macroeconomics I: Basic Theory. **AU** Benhabib, Jess; Rogerson, Richard; Wright, Randall.

TI Homework in Macroeconomics II: Aggregate Fluctuations. **AU** Benhabib, Jess; Rogerson, Richard; Wright, Randall.

Rojas-Suarez, Liliana

PD July 1990. **TI** Risk and Capital Flight in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/64; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** 433, 441, 121. **KW** Developing Countries. Capital Flows. Foreign Loans. Debt Crisis.

AB The risks of large capital losses on the domestic assets of developing countries resulting from expropriation, inflation, or devaluations are identified as the major causes of capital flight. The combination of large foreign loans and capital flight from developing countries during the 1970s and early 1980s reflected different perceptions of domestic residents and foreign lenders regarding the risks of holding domestic assets. However, the debt crisis reduced these differences in perceived risks, and resulted in a decline of foreign loans coupled with continuation of capital flight. If sound macroeconomic and structural policies can reduce those risks, they can also stem capital flight.

Roland-Holst, David

TI Industrial Organization and Trade Liberalization: Evidence from Korea. **AU** de Melo, Jaime; Roland-Holst, David.

Romer, David

PD July 1989. **TI** Staggered Price Setting with Endogenous Frequency of Adjustment. **AA** University of California at Berkeley. **SR** University of California at

Berkeley Institute of Business and Economic Research, Research Paper in Economics: 89-115; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. PG 9. PR \$3.00. JE 023. KW Price Setting. Staggered Adjustment. Prices.

AB A model of staggered price setting in which the frequency of price changes is endogenous is presented.

Romer, Paul M.

PD February 1990. TI Are Nonconvexities Important for Understanding Growth?. AA University of Chicago. SR National Bureau of Economic Research Working Paper: 3271; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 12. PR \$2.00. JE 111, 022, 621. KW Public Goods. Growth Theory. Innovations Technology.

AB Everyday experience and a simple logical argument show that nonconvexities are essential for understanding growth. Compared to previous statements of this well known argument, the presentation here places more emphasis on the distinction between two of the fundamental attributes of any economic good: rivalry and excludability. It also emphasizes the difference between public goods and the technological advances that are fundamental to economic growth. Like public goods, technological advances are nonrival goods. Hence, they are inextricably linked to nonconvexities. But in contrast to public goods, which are nonexcludable, technological advances generate benefits that are at least partially excludable. Hence innovations in the technology are for the most part privately provided. This means that nonconvexities are relevant for goods that trade in private markets. Consequently, an equilibrium with price-taking in all markets cannot be sustained.

Rose, Marjorie B.

PD June 1990. TI Capital Controls and International Portfolio Theory: A Microeconomic Approach. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/51; International Monetary Fund, Washington, DC 20431. PG 19. PR not available. JE 441. KW Capital Controls. Asset Prices. International Investment. Portfolios. Foreign Securities.

AB This paper examines the effects of capital controls on asset prices. A closed-form valuation model by Eun and Janakiraman (1986) is extended to analyze the impact of three restrictions on international portfolio investment: a percentage quantity constraint on the amount of foreign securities a domestic resident may hold in her portfolio; and a percentage tax on the domestic purchase price of a foreign security. Comparative statics and numerical analysis are used to reveal the effects of these distortions on domestic and world equilibrium prices.

Rosen, Sherwin

TI The Learning Effect of Assessment and Evaluation in High School. AU Becker, William; Rosen, Sherwin.

Rosenthal, Howard

TI Testing Game-Theoretic Models of Free Riding: New Evidence on Probability Bias and Learning. AU Palfrey, Thomas R.; Rosenthal, Howard.

Rotemberg, Julio J.

TI Do Stock Prices Move Together Too Much. AU Pindyck, Robert S.; Rotemberg, Julio J.

Rowthorn, Bob

PD January 1990. TI Wage Dispersion and Employment: Theories and Evidence. AA University of Cambridge. SR University of Cambridge Department of Applied Economics Working Paper: 9001; Department of Applied Economics, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DE, UNITED KINGDOM. PG 66. PR \$4.00 (2 pounds); checks payable to University of Cambridge. JE 824, 831, 832, 122. KW Wage Dispersion. Employment. Bargaining. Developed Countries. Labor Market. AB This paper is about bargaining institutions and their influence on wage dispersion and employment. Using novel statistical measures, it compares labor market performance in 17 OECD countries since 1973. It concludes that countries with highly centralized wage bargaining have generally achieved the best performance, combining high employment with low wage dispersion, thereby avoiding certain major inequalities prevalent elsewhere. The paper also presents a formal model of bargaining based on the work of Calmfors and Driffill. Simulations are used to illustrate how this model generates the kind of outcomes described in the empirical part of the paper.

Rubak, Richard S.

TI Does Corporate Performance Improve After Mergers. AU Healy, Paul M.; Palepu, Krishna G.; Rubak, Richard S.

Rubinstein, A.

PD August 1990. TI On the Economies of the Performing Arts in the USSR and the USA: A Preliminary Comparison of the Data. AU Rubinstein, A.; Baumol, William J.; Baumol, H. AA New York University. SR New York University Economic Research Report: 90-36; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. PG 43. PR no charge. JE 636. KW Arts. Performing Arts. Nonprofit Industry.

AB For the first time, roughly comparable data on the finances of the performing arts in the USSR and the U.S.A. have become available. The paper provides the data, offers some analysis and provides some background material on the economic organization of the art forms in the two countries. It is shown that, calculated at purchasing power parity exchange rates, the real costs of the activities are considerably lower in the USSR than the U.S.A., and while costs in both countries are rising in real terms, those in the USSR are increasing far more slowly. In the USSR administrative costs are a much smaller proportion of total expenditure and, until recently, musical performance has received a far smaller share of its income from government subsidy. It is also reported that in recent years more of these activities in the Soviet Union are provided on a profit-making basis, and that some of them are even financed with the aid of profits from investment in unrelated enterprises.

Rudebusch, Glenn D.

TI On the Power of Dickey-Fuller Tests Against Fractional Alternatives. AU Diebold, Francis X.; Rudebusch, Glenn D.

Rustichini, Aldo

TI Cournot-Nash Equilibrium Distributions for Games with

Differential Information. AU Khan, M. Ali; Rustichini, Aldo.

TI Innovation and Product Differentiation. AU Dutta, Prajit K.; Lach, Saul; Rustichini, Aldo.

TI Vintage Capital, Investment and Growth. AU Benhabib, Jess; Rustichini, Aldo.

Sadka, Efraim

TI Capital Market Integration: Issues of International Taxation. AU Razin, Assaf; Sadka, Efraim.

PD May 1990. TI An Inflation-Proof Tax System? Some Lessons from Israel. AA Tel Aviv University. SR International Monetary Fund Working Paper: WP/90/46; International Monetary Fund, Washington, DC 20431. PG 23. PR not available. JE 323, 134. KW Inflation. Tax System. Taxation. Israel.

AB This paper strengthens the claim made by Vito Tanzi that when the effect of high inflation on the tax system is taken into account, then the overall revenues from inflationary finance may well be negative. The paper analyzes some genuine and neat measures taken in Israel in an attempt to construct an inflation-proof tax system. Despite these very elegant measures, the paper concludes that the Israeli experience suggests that it is more appropriate to talk about the "inflation subsidy" rather than the "inflation tax".

Sala i Martin, Xavier

TI World Real Interest Rates. AU Barro, Robert J.; Sala i Martin, Xavier.

Sanders, Anthony B.

TI Risk and Return on Real Estate: Evidence from Equity REITs. AU Chan, K. C.; Hendershott, Patric H.; Sanders, Anthony B.

Santorum, Anita

TI Money and the Consumption Goods Market in China. AU Portes, Richard; Santorum, Anita.

Sato, Ryuzo

PD April 1990. TI Risk Adjusted Deposit Insurance for Japanese Banks. AU Sato, Ryuzo; Ramachandran, Rama V.; Kang, Bohyong. AA New York University. SR National Bureau of Economic Research Working Paper: 3314; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 30. PR \$2.00. JE 312. KW Deposit Insurance. Japan. Banking. Commercial Banks.

AB The purpose of this paper is to evaluate the Japanese deposit insurance scheme by contrasting the flat insurance rate with a market-determined risk-adjusted rate. The model used to calculate the risk-adjusted rate is that of Ronn and Verma (1986). It utilizes the notion of Merton (1977) that the deposit insurance can be based on a one-to-one relation between it and the put option; this permits the application of Black and Scholes (1973) model for the calculation of the insurance rate. The risk adjusted premiums are calculated for the thirteen city banks and twenty-two regional banks. The inter-bank spread in risk-adjusted rates in Japan is found to be as wide as in the United States.

Scaramozzino, Pasquale

PD February 1990. TI Bargaining with Outside Options:

Wages and Employment in UK Manufacturing 1974-1982. AA University College London. SR University College London Discussion Paper: 90-04; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PG 29. PR 2.00 pounds. JE 824, 831, 832, 821, 631. KW Labor Market. Wage Determination. Employment. Wages. Manufacturing. Collective Bargaining. Unions.

AB This paper develops a model of labor bargaining in which insider and outsider factors play a different role across firms and over time. Three different bargaining regimes are identified: in two of them the outcome is dictated by outside market conditions, whilst in the third there is scope for insider factors. The observations are allocated to the different regimes consistently with the notion that the opportunity cost of investing in capital stock and inventories depends on the bargaining outcome. Empirical findings on UK manufacturing firms from 1974 until 1982 show evidence of such structural breaks in the rent sharing behavior. They also support the view that, in the sample period, wage determination at the firm level has largely been driven by factors external to the firms.

Schmeidler, David

TI Utility Theory With Uncertainty. AU Kami, Edi; Schmeidler, David.

TI Atemporal Dynamic Consistency and Expected Utility Theory. AU Kami, Edi; Schmeidler, David.

Schmidt, Christoph M.

PD May 1990. TI Work Characteristics, Firm Size and Wages. AU Schmidt, Christoph M.; Zimmermann, Klaus F. AA Schmidt: Princeton University. Zimmerman: University of Munich. SR Princeton Industrial Relations Section Working Paper: 264; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. PG 20. PR \$1.00. JE 824, 821. KW Wage Differentials. Wages. Firm Size.

AB A positive wage-firm size relationship is well documented in the empirical literature in industrial organization and labor size economics. Firm size seems to proxy various unobserved determinants such as job satisfaction, monitoring costs, more complex technologies and worker participation in monopoly profits. It is generally argued that, the greater the possibility of controlling for these latent factors, the less likely that a significant size effect will appear. This paper attempts to distinguish firm size from other wage determinants for a rich data source for West Germany and demonstrates the persistence of the size premium.

PD June 1990. TI Testing the Stationary Search Model. AA Princeton University. SR Princeton Industrial Relations Section Working Paper: 266; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. PG 34. PR \$1.50. JE 824, 821. KW Employment. Duration Analysis. Reservation Wages. Unemployment.

AB This paper uses tight parametric assumptions to model individual unemployment histories in a structural form. Starting from a simple search model it is shown that individual spells are distributed exponentially with different hazard rates for different individuals. In contrast to the usual reduced form approach, the choice of the reservation wage is directly incorporated into the analysis. In effect, a log-linear

simultaneous equations system is derived that explains both reservation wages and elapsed spell durations of currently unemployed individuals in terms of exogenous variables. Moreover, it is demonstrated that apart from constant terms an identical structural form should be valid for accepted wages and completed spell durations for individuals who are re-employed at the time of the survey.

Schmidt, Klaus M.

PD May 1990. **TI** The Costs and Benefits of Privatization. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: A-287; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 31. **PR** no charge. **JE** 026, 027, 024, 053. **KW** Privatization. Incomplete Contracts. Renegotiation. Mechanism Design. Ownership Rights.

AB The paper argues that the allocation of ownership rights affects the distribution of information. This can explain some differences in efficiency between a nationalized and a privatized firm. Suppose the government wants to commit to a subsidy scheme which gives some cost-saving incentives to the management but which is inefficient *ex post*. However, under privatization the government is less informed about the costs of the firm. Therefore an *ex post* inefficient subsidy scheme becomes optimal to limit the informational rent of the private owner. Although the production level is distorted *ex post* this may be desirable *ex ante* to give better incentives to the management. The tradeoff between allocative and productive efficiency determines the costs and benefits of privatization.

PD July 1990. **TI** Commitment Through Incomplete Information in a Simple Repeated Bargaining Model. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: A-303; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 35. **PR** no charge. **JE** 026, 022. **KW** Bargaining. Commitment. Repeated Games. Reputation. Asymmetric Information.

AB The paper analyzes a finitely repeated bargaining game with asymmetric information. It gives a precise characterization of the equilibrium path and the equilibrium payoffs of all sequential equilibria satisfying a weak Markov property. The method used allows for arbitrarily many different types and provides an intuitive understanding of how "reputation" works. It is shown that the seller can use the incomplete information about his costs to credibly threaten never to accept a price lower than his highest possible costs before the very end of the game. This result is independent of the discount factors of the two players.

Schmidt, Roland

PD May 1990. **TI** The Unique Rule in the Barro-Gordon Framework. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: B-148; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 9. **PR** no charge. **JE** 023, 311. **KW** Monetary Policy. Inflation. Unemployment. Incomplete Information.

AB This paper investigates the importance of monetary rules in the multiperiod setting of Barro and Gordon (1983). If the policymaker wants to reduce unemployment under the natural rate and this objective is common knowledge, inflation results

but no employment gain. Unlike Barro and Gordon noted, no monetary rule can bring the inflation rate under the discretionary one. Finally, we generalize this result to a situation of incomplete information.

PD June 1990. **TI** Cointegration and the Demand for Money - An Empirical Evaluation for West Germany. **AA** University of Bonn. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: B-153; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 20. **PR** no charge. **JE** 311, 133, 212. **KW** Money Market. Money Demand. Germany.

AB This paper discusses the theory of testing for co-integration within a money market model. In the theoretical part we explain why the testing procedure recommended by Engle and Granger (1987) too often accepts co-integration and we give an alternative. We apply the co-integration theory to the German money demand and show that i) the nominal money stock and the price level are co-integrated, ii) money is neutral only in the long run and iii) no co-integration is detected between the real money stock, income and the interest rate. We interpret the results with respect to stochastic and deterministic trend specifications and find the latter more appropriate.

Schnitzer, Monika

PD May 1990. **TI** Hostile Versus Friendly Takeovers. **AA** University of Bonn and University of Cologne. **SR** Universität Bonn Sonderforschungsbereich 303 - Discussion Paper: A-299; Sonderforschungsbereich 303 an der Universität Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 33. **PR** no charge. **JE** 511, 611, 512, 514, 022. **KW** Firm Takeover. Shareholder. Decision Theory.

AB The paper analyzes the optimal decision of a raider who can choose between a hostile and a friendly takeover. Empirical evidence shows that the transaction costs of a hostile takeover are much higher than those of a friendly one. The question therefore arises why a raider should ever wish to engage in a hostile takeover. The central argument of the paper rests on the assumption that shareholders have less information about the true value of their firm than the incumbent management. A raider might prefer to make a hostile tender management even if the transaction costs are higher. The analysis shows furthermore how shareholders can use golden parachutes and poison pills to improve their expected payoffs in case of a takeover.

Schotter, Andrew

PD June 1990. **TI** A Laboratory Investigation of Multi-Person Rationality and Presentation Effects. **AU** Schotter, Andrew; Weigelt, Keith; Wilson, Charles. **AA** Schotter and Wilson: New York University. Weigelt: University of Pennsylvania. **SR** New York University Economic Research Reports: 90-24; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 38. **PR** no charge. **JE** 026, 215. **KW** Experimental Economics: Game Theory. Decision Theory.

AB This paper reports the results of a series of laboratory experiments in which different groups of subjects were presented with a series of 2-person decision problems all of which generate the same equilibrium outcomes. Each problem

was presented to different groups of subjects in at least two ways. In some cases, it was explicitly represented as a multistage game while in others it was represented as a one stage game in which both subjects choose their strategies simultaneously. Although the games varied in their complexity, in no case did a subject have more than three strategies from which to choose, and, in each case, one of the players could guarantee a secure outcome while the other player possessed a self-defeating (incredible) threat. In some cases, the form in which the decision problem is presented significantly affects the outcome.

Schwert, G. William

PD October 1988. **TI** Business Cycles, Financial Crises and Stock Volatility. **AA** University of Rochester.

SR University of Rochester Center for Research in Government Policy and Business Working Paper: BC 88-06; Graduate School of Management, University of Rochester, Rochester, NY 14627. **PG** 32. **PR** not available.

JE 313, 133, 311. **KW** Recession. Stock Market. Business Cycle. Financial Crisis. Stock Prices. Monetary Policy.

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.

PD March 1990. **TI** Stock Returns and Real Activity: A Century of Evidence. **AA** University of Rochester. **SR** National Bureau of Economic Research Working Paper: 3296; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 12. **PR** \$2.00. **JE** 313,226. **KW** Stock Returns. Industrial Production. Growth Rates.

AB This paper analyzes the relation between real stock returns and real activity from 1889-1988. It replicates Fama's (1990) results for the 1953-87 period using an additional 65 years of data. It also compares two measures of industrial production in the tests: (1) the series produced by Babson for 1889-1918, spliced with the Federal Reserve Board index of industrial production for 1919-1988; and (2) the new Miron and Romer (1989) index spliced with the Fed index in 1941. Fama's findings are robust for a much longer period -- future production growth rates explain a large fraction of the variation in stock returns. The new Miron-Romer measure of industrial production is very closely related to stock price movements than the older Babson and Federal Reserve Board measures.

Sebo, Andras

PD July 1989. **TI** Packing Odd Cuts and Multicommodity Flows. **AA** University of Grenoble. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89576-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 17. **PR** no charge. **JE** 213. **KW** Multicommodity Flows. Graph Theory. Planar Graph.

AB In an earlier paper (1987c) we have shown the relation of undirected distances to the matching-structure, and to its generalizations including planar multicommodity flows. In this

paper we wish to deduce some algorithmic consequences of those results. In particular, we show how some "magic numbers" associated to the faces of a planar graph can contain various relevant information about a multicommodity flow problem defined on this graph. A first consequence is that using a processor for each face, the planar multicommodity flow problem has the same complexity as the matching problem sharpening Matsumoto, Nishizeki, Saito's result (1986). The "magic numbers" are weighted generalizations of the potentials defined in (1987c). The task of this paper is actually to work out the details and the use of weighted undirected potentials. It will finally turn out that the "magic numbers" provide an elegant way of finding (integral) odd cut packings or integer multicommodity flows in some cases.

Selten, Reinhard

PD April 1990. **TI** A Game Equilibrium Model of Thin Markets **AU** Selten, Reinhard; Wooders, Myrna Holtz. **AA** Selten: University of Bonn. Wooders: University of Toronto. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-144; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 51. **PR** no charge. **JE** 026. **KW** Subgame Perfect Equilibrium. Bargaining Games. Nontransferable Utility. Coalitions.

AB We consider games of group, or coalition, formation occurring over infinite, discrete time, with new participants becoming active in the game in each period, and with participants that have successfully formed groups leaving the game each period. Markets may be "thin", in the sense that the number of participants active in the game in any time period is finite and may be small. We construct a subgame perfect equilibrium for an example and show some additional properties of equilibrium. One property is that, even though markets are thin, the "first mover" within a time period has an advantage (and realizes more than a competitive payoff) only in special circumstances, and, along the equilibrium path, he is the only mover who can have such an advantage.

Sen, Partha

PD March 1990. **TI** Investment Tax Credit in an Open Economy. **AU** Sen, Partha; Turnovsky, Stephen J. **AA** Sen: London School of Economics. Turnovsky: University of Washington. **SR** National Bureau of Economic Research Working Paper: 3298; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** \$2.00. **JE** 323, 522, 226, 133. **KW** Investment Tax Credit. Taxes. Investment. Open Economy. Capital Stock.

AB This paper contrasts the effects of a permanent and temporary investment tax credit in an open economy. In both cases an ITC will initially stimulate investment, while reducing employment and output, and generating a current account deficit. If the ITC is permanent, the accumulation of capital leads to a higher equilibrium capital stock, higher employment and output, and a reduction in the economy's stock of net credit. If the ITC is temporary, after its removal, the economy eventually moves to a steady-state equilibrium having a lower permanent capital stock and employment, together with a higher stock of net credit.

Seymour, P. D.

TI An Outline of a Disjoint Path Algorithm.

AU Robertson, N.; Seymour, P. D.

Sharkey, William W.

PD April 1990. **TI** Regulatory Preference over Customer Types: The Case of Optional Two Part Tariffs. **AU** Sharkey, William W.; Sibley, David S. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 64; Room 2Q-338, Bellcore, 435 South Street, Morristown, N.J. 07960-1961. **PG** 29. **PR** not available. **JE** 613, 022, 024. **KW** Regulation. Consumer Surplus. Tariffs.

AB We consider the problem of a regulator whose preferences over the set of customers served by the regulated firm are defined by nonnegative welfare weights. We assume that the regulator is interested in finding an optimal set of self-selecting two part tariffs which maximize aggregate weighted consumer surplus, summed over consumer types. If small customers are weakly preferred to large users, the usage charge selected by the largest customer type is equal to marginal cost. If large users are favored over small, then the tariffs preferred by the regulator may require that the usage charge faced by the largest user is less than marginal cost. When large users are favored, and economies of scale are sufficiently great that a uniform Coase two part tariff is not viable, then the optimal set of tariffs forces the smallest consumer to earn zero consumer surplus.

Sheiner, Louise M.

TI An Aging Society: Opportunity or Challenge?. **AU** Cutler, David M.; Poterba James M.; Sheiner, Louise M.; Summers, Lawrence H.

Shiantarelli, Fabio

TI Stock Market Volatility and Investment: Do Only Fundamentals Matter?. **AU** Galeotti, Marzio; Shiantarelli, Fabio.

Sibley, David S.

TI Regulatory Preference over Customer Types: The Case of Optional Two Part Tariffs. **AU** Sharkey, William W.; Sibley, David S.

Sickles, Robin C.

PD April 1989. **TI** Technical Inefficiency and Productive Decline in the U.S. Interstate Natural Gas Pipeline Industry Under the Natural Gas Policy Act. **AU** Sickles, Robin C.; Streitwieser, Mary L. **AA** Rice University. **SR** New York University Economic Research Reports: 89-20; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 30. **PR** no charge. **JE** 632, 613, 226. **KW** Government Natural Gas. Regulation. Productivity. Firm Size.

AB The purpose of this paper is to examine the primal production technology of the interstate natural gas pipeline industry during a period (1977-85) in which the industry faced severe changes in the regulatory environment. We utilize a newly constructed panel data set of firms that comprise almost 90% of the industry. We find that during the first six years of partial price deregulation, there was a marked decline in productivity. The only firms which maintained positive productivity rates were those with relatively large and growing transport services for others. We also find that firm-specific average efficiency rankings were strongly and negatively

correlated with firm size.

Siconolfi, P.

TI The Existence of Competitive Equilibria When the Asset Market is Incomplete: A Short Proof and Further Results. **AU** Polemarchakis, Heraklis M.; Siconolfi, P.

TI Noninformative Rational Expectations Equilibria When Assets are Nominal: An Example. **AU** Mischel, Kenneth; Polemarchakis, Heraklis M.; Siconolfi, P.

Siebe, Wilfrid

PD May 1990. **TI** General Equilibrium with a Continuum of Oligopolies. **AA** Universitat Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-146; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 176. **PR** no charge. **JE** 021, 022, 213. **KW** General Equilibrium Theory. Goods Market. Oligopoly.

AB Leon Walras (1874) told us a fundamental message in his "Elements d'economie politique pure," the demand of a good is dependent on the prices of all the goods in the economy - the equilibrium prices of the goods are mutually determined by all the economic interrelations. But the markets Walras had in mind are competitive markets, a characteristic of which is the absence of strategic elements. However, almost all work on oligopoly theory does not follow the lesson by Walras - it is done assuming a partial equilibrium context. The present treatise aims at a reconciliation of general equilibrium and static oligopoly theory as Martin Shubik (1985) formulates one of his nine topics for investigation.

Singleton, Kenneth J.

TI Efficient Estimation of Linear Asset Pricing Models with Moving-Average Errors. **AU** Hansen, Lars Peter; Singleton, Kenneth J.

TI Simulated Moments Estimation of Markov Models of Asset Prices. **AU** Duffie, Darrell; Singleton, Kenneth J.

Sklivas, Steven

PD June 1990. **TI** Potential Entry and Collusion: My Enemy's Enemy is My Friend. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 485; Department of Economics, Columbia University, New York, New York 10027. **PG** 19. **PR** \$5.00. **JE** 611, 022. **KW** Collusion. Competition. Technology. Competitive Equilibrium. Industrial Organization.

AB A model is presented where the threat of entry rather than causing more competitive behavior actually results in a more collusive outcome. The reasoning is that the potential entrant possesses a superior technology, hence an incumbent firm prefers to compete against the other incumbent rather than the potential entrant. This creates an incentive to raise his rival incumbent's profits by behaving more passively in its quality competition and thereby lower the probability of entry. Behavior more collusive than Cournot is supported in a two stage model without arguments based on punishment as in the repeated game literature. Secondly, we see that collusive behavior by incumbents can act to delay entry by a technologically superior firm.

Slutsky, Steven M.

TI Pareto Efficient Tax Structures. **AU** Brito, Dagobert L.;

Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

TI Pareto Efficient Tax Structures. **AU** Brito, Dagobert L.; Hamilton, Jonathan H.; Slutsky, Steven M.; Stiglitz, Joseph E.

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

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

Smith, Ronald P.

PD December 1987. **TI** Alternative Models of Military Expenditure. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/17; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 32. **PR** not available. **JE** 114. **KW** Military Expenditures. Defense Spending. National Defense.

AB A brief review of the extensive empirical literature devoted to explaining levels of military expenditure, indicates a wide variety of unreconciled results. However, comparing the alternative models is not straightforward. This paper uses British post-war military expenditures to illustrate some of the methodological issues involved in model comparison, evaluation and selection. Starting from two published models, a systematic specification search leads to a different model, which dominates the alternatives, passes a wide range of misspecification tests, and also fits well to French data.

PD May 1988. **TI** Buying Weapons: Defence Procurement in the UK. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/6; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 28. **PR** not available. **JE** 114, 612. **KW** Military Expenditures. Defense Spending. Military. National Defense.

AB Defense procurement in the UK has been the center of a series of policy disputes in recent years and, partly in consequence, a new more competitive approach has been adopted. This paper provides a review of the issues and evidence involved. The first section examines the analytical issues that arise in the design of an efficient procurement process. The second section discusses the available evidence on the procurement practices in the UK. The paper concludes with an assessment of the prospects for the competitive approach to procurement.

TI The Phillips Curve and the Lucas Critique: Some Historical Evidence. **AU** Alogoskoufis, George S.; Smith, Ronald P.

Sokoloff, Kenneth L.

PD December 1989. **TI** The Democratization of Invention During Early Industrialization: Evidence from the United States, 1790-1846. **AU** Sokoloff, Kenneth L.; Khan, B. Zorina. **AA** University of California at Los Angeles. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 10; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 22. **PR** \$2.00. **JE** 042, 621. **KW** Industrialization. Patents. Inventions.

AB We argue that the rapid growth in inventive activity during early American industrialization was characterized by a

disproportionate increase in invention by segments of the population with relatively common skills and knowledge. Rather than being accounted for by an elite who possessed rare skills or commanded large amounts of financial resources, the rise in patenting coincided with a broadening of the ranks of patentees to encompass many individuals, occupations, and geographic districts which had been only modest participants beforehand. This conclusion is based on findings of: (1) major shifts in the occupational and geographic distributions of patentees; and (2) a growing share of patents being awarded to patentees with few career patents.

Spady, Richard H.

TI An Efficient Semiparametric Estimator for Discrete Choice Models. **AU** Klein, Roger W.; Spady, Richard H.

Spanos, Aris

PD January 1987. **TI** Instrumental Variables Revisited: A Finite Sample Interpretation. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/6; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 36. **PR** not available. **JE** 211. **KW** Instrumental Variables. Exogeneity. Linear Regression Model. Finite Sample Properties.

AB The main aim of the paper is to propose a finite sample interpretation of the instrumental variables method in an attempt to enhance our understanding of the method and gain some additional insight into a number of issues like the nature and choice of instruments, the derivation of the IV estimator, its finite sample properties (including the nature of the bias), as well as the interpretation of exogeneity and instrument validity tests. It is shown that the IV specification can be profitably viewed as a restricted form of the extended stochastic regression model. This interpretation enables us to throw some light on the assumed orthogonality in the induced parameterization.

PD February 1987. **TI** Early Empirical Findings on the Consumption Function, Stylized Facts or Fiction: A Retrospective View. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 87/10; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 30. **PR** not available. **JE** 212, 921, 022. **KW** Consumption Function. Permanent Income Hypothesis. Econometric Modelling.

AB The time series consumption function is undoubtedly one of the most intensively researched topics in applied econometrics. Despite this very little agreement exists on what has been learned from four decades of empirical findings. A plethora of disparate and often contradictory empirical results seem to coexist with very few (if any) being superseded or discarded. A retrospective view of the early empirical literature is considered in an attempt to show that the current state of affairs is mainly due to the inadequacy of the "textbook" approach to econometric modelling and not to the state of econometric theory as such. The aim of the paper is to show that by implementing the principle of statistical adequacy, which has always been implicitly accepted but not fully integrated within the "textbook" methodology, a sizeable part of this literature related to the absolute income hypothesis can be discarded.

PD May 1987. **TI** On the Statistical Implications of Modelling the Error Term: Common Factors, Granger-Causality

and Unit Roots. AA Birkbeck College. SR Birkbeck College Discussion Papers in Economics: 87/9; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 39. PR not available. JE 211. KW Common Factor. Linear Regression Model. Error Term. Dynamic Models.

AB The aim of the paper is to consider the statistical implications of modelling the error term for the observable random variables involved in the context of the linear regression and related models. A general specification approach to dynamic models is proposed which enables one to relate their parameters to those of the AR and VAR representations and the original primary parameters of the observables. This perspective is primarily used to throw some light on the implications. It is shown that the common factor restrictions implicitly imposed when modelling the error term amount to imposing a largely identical temporal structure for all the variables involved in the specification.

Spiegel, Matthew

TI An Experimental Comparison of Dispute Rates in Alternative Arbitration Systems. AU Ashenfelter, Orley; Currie, Janet; Farber, Henry S.; Spiegel, Matthew.

Srinivasan, T. G.

TI The Empirical Modeling of NIE Exports: An Evaluation of Different Approaches. AU Muscatelli, Anton; Srinivasan, T. G.; Vines, David.

Stark, Oded

PD April 1990. TI On the Economics of Nonmarket Transfers: The Role of Altruism. AA Harvard University. SR Universite de Lausanne Cahiers de Recherches Economiques: 9008; Departement d'Econometrie et d'Economie Politique. Universite de Lausanne, BFSH-Dorigny, CH-1015 Lausanne, SWITZERLAND. PG 14. PR no charge. JE 022, 921, 024. KW Nonmarket Transfers. Altruism. Consumption.

AB We examine altruistically motivated consumption transfers in an effort to account for nonmarket transfers. We find that altruistic linkages lead to autonomous, negotiation-free transfers, and that such transfers positively respond to stronger altruism. We also find that given fairly natural assumptions concerning the altruism parameters, mutual altruism does not necessarily result in group (social) harmony, even though its rise narrows the conflict range. In spite of enhanced transfers prompted by such a rise, both parties may end up worse off. These results help explain why in some social environments a shift toward market-oriented transfers and exchanges may be quicker than in others, as the disadvantages (decline in utility) associated with intragroup altruistic linkages outweigh the advantages.

Steckel, Richard H.

PD December 1989. TI Poverty and Prosperity: A Longitudinal Study of Wealth Accumulation, 1850-1860. AA Ohio State University. SR National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 8; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. PG 30. PR \$2.00. JE 042, 051, 921. KW Wealth Distribution. Capitalism. Mobility.

AB This paper depicts and analyzes the wealth distribution

and wealth mobility in a national sample of nearly 1,600 households matched in the 1850 and 1860 manuscript schedules of the census. Gini coefficients, a transition matrix, the Shorrocks measure, and a regression model of wealth accumulation are estimated from these data. The findings shed light on theories of the wealth distribution, life-cycle behavior, regional economic performance, and the empirical basis for critiques of capitalism.

Steel, Mark

TI Semi-Conjugate Prior Densities in Multivariate t Regression Models. AU Osiewalski, Jacek; Steel, Mark.

Steger, Angelika

TI Excluding Induced Subgraphs Quadrilaterals. AU Promel, Hans Jurgen; Steger, Angelika.

PD May 1990. TI Die Kleitman-Rothschild Methode. AA University of Bonn. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90639-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 113. PR no charge. JE 213. KW Kleitman-Rothschild Method. Graph Theory. Colouring Problem. Induced Subgraphs. Hypergraph. AB Paper in German.

Stiglitz, Joseph

TI The Welfare Economics of Moral Hazard. AU Arnott, Richard; Stiglitz, Joseph.

Stock, James H.

PD December 1989. TI A Simple MLE of Cointegrating Vectors in Higher Order Integrated Systems. AU Stock, James H.; Watson, Mark W. AA Stock: Harvard University. Watson: Northwestern University. SR National Bureau of Economic Research Technical Paper: 83; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. PG 26. PR \$2.00. JE 211. KW Co-Integration. Asymptotic Theory. Generalized Least Squares.

AB An MLE of the unknown parameters of co-integrating vectors is presented for systems in which some variables exhibit higher orders of integration, in which there might be deterministic components, and in which the co-integrating vector itself might involve variables of differing orders of integration. The estimator is simple to compute: it can be calculated by running GLS for standard regression equations with serially correlated errors. Alternatively, an asymptotically equivalent estimator can be computed using OLS. Usual Wald test statistics based on these MLE's (constructed using an autocorrelation-robust covariance matrix in the case of the OLS estimator) have asymptotic Chi squared distributions.

TI Drawing Inferences From Statistics Based on Multi-Year Asset Returns. AU Richardson, Matthew; Stock, James H.

Stokey, Nancy L.

PD August 1990. TI Human Capital, Product Quality, and Growth. AA Northwestern University. SR National Bureau of Economic Research Working Paper: 3413; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 40. PR \$2.00. JE 111, 851, 023. KW Growth Model. Human Capital.

AB A growth model is developed in which finite-lived

individuals invest in human capital, and investments have a positive external effect on the human capital of later cohorts. Heterogeneous labor is the only factor of production, and higher-quality labor produces higher-quality goods. Stationary growth paths, along which human capital and the quality of consumption goods grow at a common, constant rate, are studied. It is also shown that if a small economy is very advanced or very backward relative to the rest of the world, then its rate of investment in human capital is lower under free trade than under autarky.

Stone Mark

PD June 1990. TI The Sensitivity of Secondary Sovereign Loan Market Returns to Macroeconomic Fundamentals. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/55; International Monetary Fund, Washington, DC 20431. PG 28. PR not available. JE 313, 433, 443, 441. KW Loan Markets. Sovereign Debt. Asset Pricing. Securities. Capital Markets.

AB The sensitivity of secondary sovereign loan market returns to three classes of economic news is estimated in the arbitrage pricing theory framework. Returns are characterized by a limited response to unexpected changes in procyclical U.S. aggregates. Shocks to country specific balance of payment indicators do not impact debt prices. Announcements of policy changes by creditors and third parties that presage changes in future lending induce large debt price changes. The failure of the data to meet the empirical arbitrage pricing theory restrictions and the large proportion of return variance unexplained by macroeconomic fundamentals highlight the differences between corporate and sovereign securities.

Streitwieser, Mary L.

TI Technical Inefficiency and Productive Decline in the U.S. Interstate Natural Gas Pipeline Industry Under the Natural Gas Policy Act. AU Sickles, Robin C.; Streitwieser, Mary L.

Summers, Lawrence H.

TI An Aging Society: Opportunity or Challenge?. AU Cutler, David M.; Poterba James M.; Sheiner, Louise M.; Summers, Lawrence H.

Sundaram, Rangarajan K.

TI Stochastic Games of Resource Allocation: Existence Theorems for Discounted and Undiscounted Models. AU Dutta, Prajit K.; Sundaram, Rangarajan K.

Sundararajan, V.

TI Issues in Interest Rate Management and Liberalization. AU Leite, Sergio Pereira; Sundararajan, V.

PD March 1990. TI Issues in Recent Banking Crises. AU Sundararajan, V.; Balino, Tomas J. T. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/19; International Monetary Fund, Washington, DC 20431. PG 52. PR not available. JE 121, 311, 314, 312. KW Banking Crisis. Developing Countries. Deregulation. Financial System. Banking. Financial Markets.

AB This paper compares experiences with banking crises in seven countries in order to analyze the factors governing the crises and the effectiveness of measures to deal with the problems. The linkages between deregulation of the financial

sector, and financial crises are examined. The portfolio shifts during crisis periods are studied. The major lesson from these experiences is that the regulatory and portfolio weaknesses in the financial sector have strong effects on the macroeconomy and can exacerbate the costs of macroeconomic adjustment. Structural measures to correct these weaknesses are important for the effectiveness of adjustment policies.

Svensson, Lars E. O.

TI Policy Inconsistency and External Debt Service. AU Dooley, Michael D.; Svensson, Lars E. O.

PD April 1990. TI Target Zones and Interest Rate Variability. AA International Monetary Fund. SR International Monetary Fund Working Paper: WP/90/31; International Monetary Fund, Washington, DC 20431. PG 27. PR not available. JE 431, 432. KW Exchange Rate. Interest Rate.

AB The trade-off between interest rate variability and the width of an exchange rate target zone is examined, using the regulated Brownian motion model of target zones. The interest rate differential's asymptotic (unconditional) variability is increasing in the exchange rate band for narrow bands; whereas it is slowly decreasing for wide bands. The interest rate differential's instantaneous (conditional) variability is decreasing in the exchange rate band. The model is extended to include a realignment/devaluation risk, as well as an endogenous exchange rate risk premium. The risk premium is small for reasonable parameter values.

Swinkels, Jeroen

PD July 1990. TI Multi-Unit, Multi-Period Auctions, Supply Uncertainty, and the Efficiency of Symmetric Equilibria. AA Princeton University and Stanford University. SR Princeton Financial Research Center Memorandum: 115; Financial Research Center, Department of Economics, Princeton University, Princeton, NJ 08544. PG 40. PR \$3.00 domestic; \$6.00 foreign. JE 022, 026. KW Multiple Unit Auctions. Auction Theory. Dynamic Model. Symmetric Equilibrium.

AB This paper examines multi-unit auctions. It establishes that for a class of such auctions efficiency of the outcome and "near" symmetry of the equilibrium strategies are equivalent conditions. The results extend to auctions with uncertain supply. Applications to models of dynamic market price formation are discussed.

Szymanski, Stefan

PD October 1987. TI Moral Hazard, Internal Markets and Hierarchy. AA Birkbeck College. SR Birkbeck College Discussion Papers in Economics: 88/2; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 21. PR not available. JE 511, 514, 833, 821. KW Labor Markets. Promotions. Human Capital.

AB This article analyzes the role of hierarchy in internal labor markets. It shows that, contrary to much of the existing literature, differences in ability are not a necessary condition for the existence of hierarchy, and that hierarchies may emerge simply as a consequence of moral hazard on the part of workers. The idea that workers may extract rents as a consequence of imperfect information on their performance, and that firms may be able to reduce these rents through hierarchical promotions.

PD February 1988. **TI** Price-Increasing Entry: Who's Afraid of the Channel Tunnel. **AU** Szymanski, Stefan; Manning, Alan. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/3; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 40. **PR** not available. **JE** 611, 635. **KW** Capital Markets. Free Entry. Competition.

AB This article analyzes the nature of post-entry competition in the cross-channel market once the channel tunnel opens, under two possible scenarios, that proposed by Eurotunnel and the one proposed by Flexilink, the consortium of ferry owners opposed to the Tunnel. It concentrates on Flexilink scenario to show that even if the ferry owners had the ability to compete on price with the Tunnel, they would not choose to do so. This is due to the constraints imposed by Eurotunnel's loan agreements. In particular any default and bankruptcy of Eurotunnel could cause the ferries to face much stiffer competition in the future, a consequence which they will therefore seek to avoid.

PD March 1988. **TI** Wage Profiles, Commitment and Unions. **AA** Birkbeck College. **SR** Birkbeck College Discussion Papers in Economics: 88/5; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. **PG** 19. **PR** not available. **JE** 821, 833, 831, 824. **KW** Commitment. Unions. Wage Contracts.

AB This paper models the role of unions in enforcing contracts which are optimal for the firm. Wage contracts which allow for wages to rise with tenure may be desirable but typically firms will face a pre-commitment problem, since firms have incentives ex post to fire expensive "old" workers and replace them with cheap "young" workers. We argue that unions present one form of credible enforcement mechanism if they can impose a cost on firms which "cheat", by going on strike.

Tabellini, Guido

PD February 1990. **TI** A Positive Theory of Social Security. **AA** University of California, Los Angeles. **SR** National Bureau of Economic Research Working Paper: 3272; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 915, 322, 921. **KW** Social Security. Retirement. Elderly. Public Finance.

AB In many countries, social security is a large fraction of the government budget. Why is it, given that at any moment in time the number of recipients of social security benefits is smaller than the number of contributors? More generally, what determines the size of social security? To answer these questions, this paper studies an overlapping generations model in which all individuals currently alive vote on social security. There is no commitment to preserve the legislation inherited from the past. Voters are weakly altruistic and there is heterogeneity within each generation. The paper shows that in equilibrium the size of social security is larger the greater is the proportion of elderly people in the population, and the greater is the inequality of pre-tax income.

Takagi, Shinji

PD June 1990. **TI** Exchange Rate Expectations: A Survey of Survey Studies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/52; International Monetary Fund, Washington, DC 20431.

PG 26. **PR** not available. **JE** 431. **KW** Exchange Rates. Rational Expectations.

AB This paper presents a brief survey of the empirical literature on survey-based exchange rate expectations. The literature in general supports the presence of a non-zero risk premium and rejects the hypothesis of rational expectations. The crucial result is that, while short-run expectations tend to move away from some long-run "normal" values, long-run expectations tend to regress toward them. If this nature of short-run expectations increases the volatility of exchange rate movements, there may be a basis for some official measure to minimize short-run exchange rate movements.

Takla, Lina

TI Mrs. Thatcher's Trade Union Legislation: Has it Reduced Strikes. **AU** McConnell, Sheena; Takla, Lina.

Tamura, Robert

TI Human Capital, Fertility, and Economic Growth. **AU** Becker, Gary S.; Murphy, Kevin M.; Tamura, Robert.

Tanzi, Vito

PD March 1990. **TI** Is There a Need for Harmonizing Capital Income Taxes Within EC Countries. **AU** Tanzi, Vito; Bovenberg, A. Lans. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/17; International Monetary Fund, Washington, DC 20431. **PG** 31. **PR** not available. **JE** 122, 423, 432, 323. **KW** Economic Integration. Income Taxes. European Monetary System.

AB This paper describes how growing economic integration within the European Community increases the scope for any one EC country to impose adverse externalities on other member countries by manipulating its capital income taxes. After examining several alternatives to concerted tax harmonization, the paper concludes that there is a need to harmonize capital income taxes within the EC as the Community moves toward a unified market with free capital movements and fixed nominal exchange rates. The harmonization process could start by agreeing on the tax base, followed by setting minimum statutory rates.

PD April 1990. **TI** The IMF and Tax Reform. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/39; International Monetary Fund, Washington, DC 20431. **PG** 22. **PR** not available. **JE** 432, 323. **KW** Monetary Fund. Taxation. Tax Systems.

AB The paper deals with the activities of Fund staff with taxation. It is made up of four parts. Part I outlines the connection between Fund major activities and taxation. Part II surveys general influences on Fund staff with implications for tax work. Part III outlines the relationship between Fund-supported programs and changes in tax systems. Part IV focuses on the structure, rather than the level, of taxation. It outlines in broad terms the prevalent thinking of Fund staff on the structure of taxation.

Tardos, E.

TI Network Flow Algorithms. **AU** Goldberg, A. V.; Tardos, E.; Tarjan, R. E.

Tarjan, R. E.

TI Network Flow Algorithms. **AU** Goldberg, A. V.; Tardos, E.; Tarjan, R. E.

Tarr, David

TI Industrial Policy in the Presence of Wage Distortions: The Case of the US Auto and Steel Industries. **AU** de Melo, Jaime; Tarr, David.

Temin, Peter

PD May 1990. **TI** Soviet and Nazi Economic Planning in the 1930's. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 554; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 42. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 052, 044, 113. **KW** Socialism. Germany. Resource Allocation. Consumption.

AB This paper argues that economic planning under Stalin and Hitler in the 1930s was essentially similar, both in process and outcome. Both economies had fixed prices and used coercion as part of a rather chaotic process of resource allocation; consumption in both countries was sacrificed to investment in heavy industry. Both economies can be thought of as socialist, and socialism in the 1930s was hardly more than military mobilization.

Thisse, Jacques-Francois

TI Attitudes Towards Foreign Products and International Price Competition. **AU** Neven, Damien; Norman, George; Thisse, Jacques-Francois.

TI On the Design of Noncooperative Games Supporting Optimal Spatial Allocations. **AU** Asami, Yasushi; Fujita, Masahisa; Thisse, Jacques-Francois.

PD March 1990. **TI** Public Facility Location and Urban Spatial Structure: Equilibrium and Welfare Analysis. **AU** Thisse, Jacques-Francois; Wildasin, David E. **AA** Thisse: Universite Catholique de Louvain. Wildasin: Indiana University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9025; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve BELGIUM. **PG** 35. **PR** not available. **JE** 931, 614, 615. **KW** Location. Household. Urban Economics. Land. Spatial Equilibrium.

AB We consider a model in which the location of a single public facility is fixed somewhere in an urban area. There are two firms that then choose locations; the locations of households, competing for space in the land market, are also endogenous. The analysis examines the nature of the spatial equilibrium and its dependence on the presence of the public facility. The firms may be agglomerated at the public facility or dispersed around it, depending on the parameters of the model. The welfare implications of changes in income, transportation cost, and the location of the facility are also studied.

Thomas, Lacy Glenn

PD December 1989. **TI** Spare the Rod and Spoil the Industry: Vigorous Competition and Vigorous Regulation Promote Global Competitive Advantage. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-90-03; First Boston Series, Graduate School of Business, Columbia

University, New York, NY 10027. **PG** 37. **PR** \$5.00 academics and non-profit institutions; \$6.00 corporations (add \$1.00 outside U.S., Canada and Puerto Rico). **JE** 631, 616, 613. **KW** Competition. International Trade. Pharmaceuticals. Comparative Advantage. Industrial Policy. Manufacturing.

AB This study examines the determinants of national competitive advantage in the global pharmaceutical industry. The sample is comprised of ten nations (U.S., U.K., F.R. Germany, France, Italy, Japan, Switzerland, Netherlands, Sweden, and Canada) for the two decades 1965-1985. The three key findings are: 1) Competitive advantage in pharmaceuticals rests on the discovery of global products, innovative new drugs that diffuse widely throughout major markets; 2) The ability of multinational drug firms to discover global products is predominantly determined by the nature of competition in their home market. Successful firms are based in tough environments where the vast majority of new drugs are global products; and 3) Tough domestic competitive environments are produced by national industrial policies with high domestic prices, high levels of publicly funded biomedical research, and vigorous quality restrictions on market access.

Tirole, Jean

TI The Politics of Government Decision-Making: A Theory of Regulatory Capture. **AU** Laffont, Jean-Jacques; Tirole, Jean.

TI Adverse Selection and Renegotiation in Procurement. **AU** Laffont, Jean-Jacques; Tirole, Jean.

TI Vertical Integration and Market Foreclosure. **AU** Hart, Oliver; Tirole, Jean.

Topel, Robert

PD March 1990. **TI** Specific Capital, Mobility, and Wages: Wages Rise With Job Seniority. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 3294; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** \$2.00. **JE** 824, 823, 851. **KW** Human Capital. Wages. Labor Mobility.

AB The idea that wages rise relative to alternatives as job seniority accumulates is the foundation of the theory of specific human capital, as well as other widely accepted theories of compensation. The fact that persons with longer job tenures typically earn higher wages tends to support these views, yet this evidence ignores the decisions that brought individuals to the combination of wages, job tenure, and experience that are observed in survey data. Allowing for sources of bias generated by these decisions, this paper uses longitudinal data to estimate a lower bound on the average return to job seniority among adult men. I find that 10 years of current job seniority raises the wage of the typical male worker in the U.S. by over 25 percent. This is an estimate of what the typical worker would lose if his job were to end exogenously.

Tornell, Aaron

PD May 1990. **TI** Wages, Profits and Capital Flight. **AU** Tornell, Aaron; Velasco, Andres. **AA** Tornell: Columbia University. Velasco: New York University. **SR** Columbia Department of Economics Working Paper: 480; Department of Economics, Columbia University, New York, New York 10027. **PG** 28. **PR** \$5.00. **JE** 441, 411. **KW** Capital Flight. Capital Flows. Developing

Countries.

AB We model capital flight as the outcome of a noncooperative differential game between workers (who control the wage share) and capitalists (who control investment at home and abroad). There are three equilibria for such a game. Along the interior equilibrium, the domestic economy becomes "decapitalized" as investors build up their holdings of foreign assets, in a situation reminiscent of the experience of several developing countries.

TI Wages, Profits and Capital Flight. **AU** Velasco, Andres; Tornell, Aaron.

Towe, Christopher M.

PD June 1990. **TI** Government Contingent Liabilities and the Measurement of Fiscal Impact. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/57; International Monetary Fund, Washington, DC 20431. **PG** 33. **PR** not available. **JE** 322, 321, 223, 221. **KW** Contingent Liabilities. Accounting. Government Spending. Federal Budget.

AB Conventional fiscal accounting methodologies do not appropriately account for governments' noncash policies, such as their contingent liabilities. When these liabilities are called, budget costs can be large, as evidenced by the United States' saving and loan crisis. In general, deficit measures may underestimate the macroeconomic impact of government policies, promoting the substitution of noncash for cash expenditure and increasing future financing requirements. The paper describes extended deficit measures to address the problem, but notes their limited practical value. Nonetheless, some alternative methods of valuing contingent liabilities are proposed to gauge fiscal impact and facilitate budgetary control.

Tsybakov, Alexander B.

TI Remarks on Sliced Inverse Regression. **AU** Hardle, Wolfgang; Tsybakov, Alexander B.

TI Robust Locally Adaptive Nonparametric Regression. **AU** Hardle, Wolfgang; Tsybakov, Alexander B.

Tulkens, Henry

TI Exchange Processes, the Core and Competitive Allocations. **AU** Chander, Parkash; Tulkens, Henry.

Turnovsky, Stephen J.

TI Investment Tax Credit in an Open Economy. **AU** Sen, Partha; Turnovsky, Stephen J.

PD April 1990. **TI** Tariffs and Sectoral Adjustments in an Open Economy. **AA** University of Washington. **SR** National Bureau of Economic Research Working Paper: 3315; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** \$2.00. **JE** 441, 422, 411. **KW** Tariffs. Capital. Open Economy. International Trade Theory.

AB This paper analyzes the impact of a tariff on sectoral adjustments in an economy which produces two traded consumption goods, one of which is exported and a non-traded investment good. The importance of sectoral capital intensities is emphasized. In particular, the qualitative dynamic adjustment depends upon the relative capital intensities of the import-competing consumption good sector and the non-traded

investment good sector. Sectoral capital accumulation is shown to depend upon the relative capital intensities of the import and export sectors. Temporary as well as permanent tariffs are discussed.

Udell, Gregory F.

TI Some Evidence on the Empirical Significance of Credit Rationing. **AU** Berger, Allen N.; Udell, Gregory F.

Ulph, Alistair

TI Carbon Taxes and the UK Manufacturing Sector. **AU** Ingham, Alan; Ulph, Alistair.

van den Boogaerde, Pierre

PD July 1990. **TI** The Composition and Distribution of Financial Assistance from Arab Countries and Arab Regional Institutions. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/67; International Monetary Fund, Washington, DC 20431. **PG** 118. **PR** not available. **JE** 121, 443. **KW** Developing Countries. Economic Development. Arab Countries.

AB This paper examines the volume and distribution of concessional and nonconcessional financial flows from Arab countries, and aid agencies, and regional institutions to developing countries. Arab financial assistance increased very rapidly from 1973 to 1980 in line with the rapid growth in oil revenues. Essentially because of the softer oil market, this trend was reversed in the 1980's. Nonetheless, the Arab contributions as a share of GNPs remain by far the most generous among the major donor groups. Arab recipient countries received nearly 62 percent of total Arab financial assistance. Together with large flows of workers' remittances, this assistance accelerated their economic development beyond what would have been otherwise possible.

van Wijnbergen, Sweder

TI Secondary Market Prices Under Alternative Debt Reduction Strategies: An Option Pricing Approach with an Application to Mexico. **AU** Claessens, Stijn; van Wijnbergen, Sweder.

Vegh, Carlos A.

TI Interest Rate Targeting in a Small Open Economy: The Predetermined Exchange Rates Case. **AU** Calvo, Guillermo A.; Vegh, Carlos A.

Velasco, Andres

TI Wages, Profits and Capital Flight. **AU** Tornell, Aaron; Velasco, Andres.

PD May 1990. **TI** Wages, Profits and Capital Flight. **AU** Velasco, Andres; Tornell, Aaron. **AA** Velasco: New York University. Tornell: Columbia University. **SR** New York University Economic Research Reports: 90-21; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 28. **PR** no charge. **JE** 441, 433, 111, 112. **KW** Capital Flight. Investment. Growth Theory. Developing Countries.

AB We model capital flight as the outcome of a noncooperative differential game between workers (who control the wage share) and capitalists (who control investment

at home and abroad). There are three equilibria for such a game. Along the interior equilibrium, the domestic economy becomes "decapitalized" as investors build up their holdings of foreign assets, in a situation reminiscent of the experience of several developing countries.

Venables, Anthony J.

PD April 1990. **TI** Trade Policy Under Imperfect Competition: A Numerical Assessment. **AA** University of Southampton. **SR** Centre for Economic Policy Research Discussion Paper: 412; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 30. **PR** 1 pound (\$2) individuals; 1.50 pounds (\$3) companies, libraries, institutions. **JE** 422, 421, 611. **KW** Trade Policy. Imperfect Competition. Tariffs. Export Subsidies.

AB This paper uses simulation techniques to investigate the effects of import tariffs and export subsidies on imperfectly competitive industries. A wide range of industries are studied and for each industry eight different types of firm and industry equilibrium concept are employed, so that the sensitivity of results with respect to equilibrium concept can be investigated. We find that results are relatively insensitive to the equilibrium concept used. Welfare gains from tariffs are robust to changes in the specification of equilibrium, although the size of these gains are small. Moving between types of equilibrium changes the magnitude of the gains from export subsidies, although only in a few cases does the sign of this effect change; the gains from export subsidies are, however, small in all cases.

Vickrey, William

PD March 1990. **TI** Rationalizing Transnational Income Taxation: Checking Tax Imperialism. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 469; Department of Economics, Columbia University, New York, New York 10027. **PG** 12. **PR** \$5.00. **JE** 323, 442. **KW** Taxes. Corporations. Corporate Tax. Tax System.

AB Ever since the development of personal income taxes, problems have arisen with respect to the treatment of income deemed to be generated in one jurisdiction and received in another. Frequently a jurisdiction will assert a right to tax both income arising within it and all income paid to its residents regardless of source, usually as part of the same income tax. Universally applied, such taxation would involve a severe discrimination against interjurisdictional income, and various methods have been used to avoid or at least abate this discrimination.

Villanueva, Delano

PD February 1990. **TI** Interest Rate Policies, Stabilization, and Bank Supervision in Developing Countries: Strategies for Financial Reforms. **AU** Villanueva, Delano; Mirakhor, Abbas. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/8; International Monetary Fund, Washington, DC 20431. **PG** 29. **PR** not available. **JE** 121, 311, 613, 312. **KW** Interest Rates. Banking. Regulation. Developing Countries.

AB This paper identifies macroeconomic stability, effective bank supervision, and an appropriate sequencing of stabilization, banking regulations, and interest rate policies as common characteristics of the relatively successful experiments

in financial sector liberalization. Recent theoretical developments help to explain why interest rates in free markets for bank credit may fall short of market-clearing levels, or may rise to risky levels with adverse consequences for financial institutions and the economy at large. To prevent such outcomes, macroeconomic stabilization and improved bank supervision should generally precede complete removal of control on bank interest rates.

TI Private Investment in Developing Countries: An Empirical Analysis. **AU** Greene, Joshua; Villanueva, Delano.

Vines, David

TI The Empirical Modeling of NIE Exports: An Evaluation of Different Approaches. **AU** Muscatelli, Anton; Srinivasan, T. G.; Vines, David.

Voigt Bernd

TI Finding Minimally Weighted Subgraphs. **AU** Plehn, Jurgen; Voigt Bernd.

Voigt, Bernd

PD October 1989. **TI** A Covering Problem for Finite Boolean Lattices. **AU** Voigt, Bernd; Wegener, Ingo. **AA** Voigt: University of Bonn. Wegener: University of Dortmund. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 89614-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 7. **PR** no charge. **JE** 213. **KW** Covering Problem. Boolean Functions. Combinatorial Algorithms.

AB We consider the problem to cover all subsets of $\{0, \dots, n-1\}$ which have cardinality between k and l with as few as possible intervals. We show that $\max\{\text{of } n \text{ choose } k \text{ and } n \text{ choose } l\}$ many intervals suffice and that there exists a linear time algorithm to produce an optimal covering. We also exhibit the connection between this covering problem and the problem of finding minimal polynomials for symmetric Boolean Functions.

TI A Sparse Gallai-Witt Theorem. **AU** Promel, Hans Jurgen; Voigt, Bernd.

TI From WQO to BQO, via Ellentuck's Theorem. **AU** Promel, Hans Jurgen; Voigt, Bernd.

von Hagen, Jurgen

PD May 1990. **TI** Currency Substitution and the Demand for Money Further International Evidence. **AU** von Hagen, Jurgen; Neumann, Manfred J. M. **AA** von Hagen: Indiana University. Neumann: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-150; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 30. **PR** no charge. **JE** 441, 431, 432, 311, 023. **KW** Currency Substitution. International Coordination. Monetary Policy. Bonds. Money Demand. Portfolios.

AB In this paper, we present a formulation of the money demand function which separates currency substitution and bond substitution. It is based on the familiar notion that money is a more liquid asset than bonds. Specifically, we assume that agents can adjust the currency composition of their portfolios at negligible transaction cost while transactions with bonds carry a fixed cost. Consequently, agents never plan to sell bonds prior

to maturity. Our model implies that the choice between domestic and foreign money depends on expected rates of currency depreciation over a shorter time horizon than the choice between money and bonds. This gives rise to a sharper empirical distinction between the two types of asset substitution.

PD June 1990. **TI** A Note on the Empirical Effectiveness of Formal Fiscal Restraints. **AA** Indiana University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-155; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 20. **PR** no charge. **JE** 321, 324, 023. **KW** European Monetary Integration. Fiscal Policy. Economic Integration. Government Finance.

AB An important argument in the current debate over European monetary integration is that a monetary union requires formal fiscal restraints limiting individual member states budgetary powers to reduce the common monetary authority's risk of having to bail out insolvent member governments. This note presents empirical evidence on the effectiveness of fiscal restraints on state budgets in the US. Nonparametric tests reveal that fiscal restraints significantly affect the probability of fiscal choices. Fiscal restraints induce substitution of non-restricted for restricted debt instruments.

PD June 1990. **TI** Monetary and Fiscal Policy in a European Monetary Union Some Public Choice Considerations. **AU** von Hagen, Jurgen; Fratianni, Michele. **AA** Indiana University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-156; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 37. **PR** no charge. **JE** 432, 311, 423. **KW** Seignorage. Monetary Policy. International Coordination.

AB In this paper, we review and discuss some of the main policy issues facing a future EMU. We do not dwell on the process of achieving EMU, but take it as the starting point: The Community has adopted a common currency or irrevocably fixed exchange rates. In Section 2, we discuss the determinants of EMU inflation. Building on a public choice approach, we interpret monetary union as a form of collusion among national central banks. In contrast to the standard economic argument about collusion, however, we argue that such collusion can improve or diminish the quality of monetary policy, depending on the institutional design of EMU.

PD August 1990. **TI** Monetary Policy Coordination in the European Monetary System. **AA** Indiana University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-159; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 75. **PR** no charge. **JE** 432, 431, 423, 311. **KW** Monetary Policy. International Coordination. European Monetary System. Exchange Rates.

AB Today, the EMS is generally regarded as a successful institution. What is more, the EC is now about to use the EMS as the launching pad for a future monetary union in Europe. The literature has developed two main interpretations of the EMS. One views the EMS as a cooperative device: exchange rate management serves to improve the group's response to aggregate economic fluctuations. The other interprets the EMS as a disciplinary device allowing traditional high-inflation central banks a credible commitment to price stability. Since the first view focuses on short-run stabilization properties of the

EMS, the second on its long-run inflation trend, the two views are not mutually exclusive. However, they lead to rather different assessments of the EMS and its achievements.

von zur Muehlen, Peter

PD March 1990. **TI** Predicting Inflation with Commodity Prices. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 118; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** 227, 132, 134. **KW** Inflation. Commodity Prices. Forecasting.

AB This paper presents estimates of reduced-form regressions to forecast inertial inflation with commodity prices. There is mild, out-of-sample forecast simulation support that one can predict future inflation with the help of commodity prices, but since the parameters in the estimating relationships are unlikely to be policy-invariant, it is doubtful that the results described here have much potential usefulness for a policymaker.

PD March 1990. **TI** Sticky Inflation and Interest Rate Rules with Auction Prices. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 117; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** 311, 134. **KW** Central Bank. Inflation. Monetary Policy. Auction Prices. Interest Bank.

AB This paper considers the "Lucas"-critique issue of how the indicator role of auction prices is affected when the central bank attempts to exploit the correlation between auction prices and inflation. This question is examined using a simple macroeconomic model with rational expectations (perfect foresight). The policy instrument is the short-term interest rate, a jump variable. An important effect of policy is on the dynamics of outcomes. But policy also affects equilibrium and the path of variables to the new steady state. The full implications of changes in policy regimes can therefore be determined only by examining the consequences of external shocks on the economy under different policy assumptions.

PD April 1990. **TI** Optimal Interest Rate Rules with Information from Money and Auction Markets. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 120; C/O Jeffrey C. Fuhrer, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** 311, 134, 313. **KW** Monetary Policy. Asset Prices. Inflation. Interest Rates.

AB Recent literature exploring alternative monetary policy guides has demonstrated theoretical grounds for asset prices as potential inflation indicators. Without direct focus on aggregate inflation, policies guided by asset prices alone may not be stabilizing. This presents a dilemma, since current aggregate inflation cannot be observed. Monetary policy aimed at controlling prices must be based on statistical predictions of a target variable that is currently unobservable. The traditional approach has been to filter information using an estimated money demand function linking interest rates, money, and prices; but econometric descriptions of money demand have not always been reliable. This paper shows that an optimal interest rate feedback rule responds to asset prices, if aggregate demand

and/or the demand or supply of assets are sensitive to relative asset prices.

Wadhvani, Sushil

TI The Economic Effects of Industrial Relations Legislation Since 1979. AU Brown, William; Wadhvani, Sushil.

Waldman, Michael

PD September 1990. TI A Signalling Explanation for Seniority Based Promotions and Other Labor Market Puzzles. AA University of California, Los Angeles. SR University of California at Los Angeles Department of Economics Working Paper: 599; Department of Economics, University of California, Los Angeles, 2263 Bunche, Los Angeles, CA 90024. PG 32. PR \$2.50. JE 825, 824, 821. KW Signalling Seniority. Promotions. Wages. Productivity. AB A worker's current employer will typically possess information concerning that worker's productivity which is not directly available to other potential employers. Recent papers have considered this problem and argued that in such a setting these other firms will utilize the actions of the current employer as signals of productivity. In this paper I demonstrate how this perspective can explain the existence of a number of labor market puzzles including: (i) why seniority is a factor in the promotion decision even after controlling for the effect seniority may have on productivity; (ii) why within a job category wages may rise with seniority even when productivity does not; and (iii) why within a job category wages may rise with education even when productivity does not.

Warga, Arthur

PD May 1990. TI Bondholder Losses in Leveraged Buyouts. AU Warga, Arthur; Welch, Ivo. AA Warga: Columbia University. Welch: University of California, Los Angeles. SR Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-90-04; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. PG 23. PR \$5.00 academics and non-profit institutions; \$6.00 corporations (add \$1.00 outside U.S., Canada and Puerto Rico). JE 313, 611. KW Bonds, Buyouts. AB Announcements of successful leveraged-buyouts (LBOs) in the 1985-1988 period were associated with a significantly negative average return on outstanding publicly-traded non-convertible bonds. Our results suggest that risk-adjusted debtholder losses are an order of magnitude less than risk-adjusted equityholder gains. LBO debtholder losses are related to a bond's time to maturity and pre-LBO rating, but they are not significantly related to equity-holder gains. Moreover, we find significant differences between trader-quoted and both matrix- and exchange-based bond price data. The most notable difference is a lagged response to the LBO announcement in matrix- and exchange-based prices.

Watson, Mark W.

TI A Simple MLE of Cointegrating Vectors in Higher Order Integrated Systems. AU Stock, James H.; Watson, Mark W.

Watteyne, Patrick

TI A Family of Search Directions for Kamarkar's Algorithm. AU Anstreicher, Kurt M.; Watteyne, Patrick.

Weale, Martin

TI The Consequences of Measurement Errors for Money GDP Targeting. AU McKay, Andrew; Blake, Andrew; Weale, Martin.

Weber, Guglielmo

TI Using Equilibrium Models on Disequilibrium Data: Some Monte-Carlo Evidence on Estimation and Testing. AU Martin, Christopher; Weber, Guglielmo.

TI What do We Learn About Consumer Demand Patterns from Micro-Data. AU Blundell, Richard; Pashardes, Panos; Weber, Guglielmo.

TI Credit, Money and Consumption: Time Series Evidence for Italy. AU Attanasio, Orazio P.; Weber, Guglielmo.

Wegener, Ingo

TI A Covering Problem for Finite Boolean Lattices. AU Voigt, Bernd; Wegener, Ingo.

Weigelt, Keith

TI A Laboratory Investigation of Multi-Person Rationality and Presentation Effects. AU Schotter, Andrew; Weigelt, Keith; Wilson, Charles.

Weiner, Robert J.

TI Have Multinationals Overchanged Canada for Oil Imports. AU Bernard, Jean-Thomas; Weiner, Robert J.

Weiss, Thomas

PD October 1989. TI Economic Growth Before 1860: Revised Conjectures. AA University of Kansas. SR National Bureau of Economic Research Working Paper Series on Historical Factors and Long Run Growth: 7; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. PG 34. PR \$2.00. JE 042, 226, 715. KW Economic Growth. Productivity. Agriculture. AB The current view of U.S. economic growth before 1860 is based on the conjectural estimates of output made by Paul David (1967). This paper sets forth new estimates of the farm labor force for the period 1800 to 1860 and uses them to revise those conjectures about growth of per capita output. An additional conjectural estimate is produced based on recent evidence about manufacturing productivity. The new estimates lower the farm labor force in the years before 1830 by 10 to 15 percent, while raising the figures for 1840, 1850 and 1860 by 5 to 9 percent. As a consequence the farm work force grew more rapidly than was previously believed, and farm productivity grew more slowly.

Weiss, Yoram

PD April 1990. TI Transfers Among Divorced Couples: Evidence and Interpretation. AU Weiss, Yoram; Willis, Robert J. AA Weiss: Tel Aviv University. University of Chicago and Economics Research Center /NORC. Willis: University of Chicago and Economics Research Center/NORC. SR Economics Research Center/NORC Discussion Paper: 90-4; Economics Research Center/NORC, 1155 E. 60th St., Chicago, IL 60637. PG 67. PR \$2.00: Send requests to Librarian, Economics Research Center. JE 921. KW Consumer Economics. Divorce Settlement. Family Transfers.

AB This paper analyzes divorce settlements made by a cohort of white individuals as reported in the National Longitudinal Study of High School Class of 1972. This data contains information on individuals from the time they graduated from high school in 1972 until 1985, at which time they were about 32 years of age. We find that the transfer from the husband to the wife upon divorce, which includes child support payments, alimony payments and transfer of property, is quite sensitive to the economic circumstances of the two spouses at the time of divorce. Higher levels of family income and a smaller share of the total owned by the wife induce higher transfers to her. However, in comparison with the needs of children and accounting for the share of the husband's contribution to total family income, husbands underpay their ex-wives by about 10 percent for the first child and about 63 percent for the second.

Welch, Ivo

TI Bondholder Losses in Leveraged Buyouts. **AU** Warga, Arthur; Welch, Ivo.

Wellisz, Stanislaw

TI Stabilization in Poland: A Progress Report. **AU** Frydman, Roman; Wellisz, Stanislaw; Kolodko, Grzegorz W.

Whinston, Michael D.

PD April 1990. **TI** Entry, Contestability, and Deregulated Airline Markets: An Event Study Analysis of People Express. **AU** Whinston, Michael D.; Collins, Scott C. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 3318; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** \$2.00. **JE** 635, 612. **KW** Airlines. Airline Industry. Prices. Deregulation. Competition.

AB A number of recent papers have studied the relationship between price and market structure in the deregulated airline industry through a cross sectional analysis of city-pair markets. Yet, while interesting, several potential difficulties underlie the inferences drawn in these analyses. In this paper, we consider an alternative approach that uses stock price reactions to entry announcements to shed light on the nature of competitive behavior in this industry. The analysis sheds light on three issues. First, it offers a clean test of contestable market theory. Second, it provides evidence on the level of profits or sunk costs present in these markets. Third, it sheds light on the degree of competitive "localization" existing in the industry.

Wildasin, David E.

TI Public Facility Location and Urban Spatial Structure: Equilibrium and Welfare Analysis. **AU** Thisse, Jacques-Francois; Wildasin, David E.

Wilkie, Simon

PD April 1990. **TI** Implementing Efficient and Individually Rational Solutions for Economies with Public Goods. **AA** Bellcore. **SR** Bellcore Economics Discussion Paper: 66; Room 2Q-338, Bellcore, 435 South Street, Morristown, N.J. 07960-1961. **PG** 42. **PR** not available. **JE** 021, 024. **KW** Returns to Scale. Public Goods. Efficient Allocations.

AB We are concerned with (Nash) implementing solutions that select efficient and individually rational allocations for public goods economies where agents have free access to the

technology. Hurwicz [1979a] proved, for the class of economies with constant returns to scale (CRS), that any solution that is implementable contains the Lindahl solution. Subsequently Walker [1981] and Corchon [1989] provided simple games that implement the Lindahl solution. We investigate the importance of the CRS assumption. Without CRS, there is a class of Lindahl solutions, parameterized by the profit share. We find that for any such share, the equilibrium allocations need not be individually rational, and the above games fail to implement any of the Lindahl solutions. We examine two alternative solutions proposed in the literature, the ratio solution of Kaneko [1977] and the balanced solution introduced by Mas-Colell and Silvestre [1989].

Willis, Robert J.

TI Transfers Among Divorced Couples: Evidence and Interpretation. **AU** Weiss, Yoram; Willis, Robert J.

Wilson, Charles

TI A Laboratory Investigation of Multi-Person Rationality and Presentation Effects. **AU** Schotter, Andrew; Weigelt, Keith; Wilson, Charles.

Winter, Eyal

TI Consistent Demands for Coalition Formation in NTU Games. **AU** Moldovanu, Beni; Winter, Eyal.

PD June 1990. **TI** An Axiomatization of the Core for Finite and Continuum Games. **AU** Winter, Eyal; Wooders, Myrna Holtz. **AA** Winter: University of Bonn. Wooders: University of Toronto. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-149; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 17. **PR** no charge. **JE** 026. **KW** Cooperative Games. Sidepayments. Game Theory.

AB There are now in the literature of cooperative game theory two separate and distinct approaches to the axiomatization of the core of a game; one for finite games (see Peleg (1985) and (1986)) and another for games with nonatomic player sets where only nonnegligible proportions of the total player set are permissible coalitions (Dubey-Neyman (1984)). Since a game with a continuum of players is meant to be a limit of large finite games, it seems natural, perhaps, to expect that some one set of axioms may characterize the core in both situations. In this paper, we provide an axiomatization of the core of a game, where the class of games considered includes both finite games and continuum games with finite coalitions.

Witte, Anne Dryden

TI Provision of Child Care: Cost Functions for Profit-Making and Not-For-Profit Day Care Center. **AU** Mukerjee, Swati; Witte, Anne Dryden; Hollowell, Sheila.

Wolf, Thomas A.

PD April 1990. **TI** Market Oriented Reform of Foreign Trade in Planned Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/28; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** not available. **JE** 027, 052, 431, 421, 422. **KW** Trade Reform. Planned Economies. Exchange Rates. Foreign Trade.

AB This paper reviews the main features of market-oriented foreign trade reforms in planned economies. It considers reform initiatives aimed at expanding enterprise autonomy and breaking up the state monopoly of foreign trade, modifying the exchange rate system, and reforming the domestic price structure and ultimately the price system. The study emphasizes that the success of foreign trade reform, and therefore of a trade policy aimed at fundamental integration of planned economies into the world economic system, ultimately depends as well on the successful implementation of compatible reforms in the domestic economy as a whole.

PD April 1990. **TI** Macroeconomic Adjustment and Reform in Planned Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/27; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** not available. **JE** 027, 052, 133. **KW** Stabilization Policy. Planned Economies. Socialism. Economic Reform.

AB This paper examines the relationship between macroeconomic stabilization and market-oriented reform in planned economies. It emphasizes that market-oriented reform should enhance the likelihood that adjustment to exogenous disturbances will involve genuine adjustment in the sense of actually eliminating or at least reducing both internal and external imbalances. Market-oriented reform should also increase the ability of the authorities to carry out stabilization policies relying on indirect rather than direct instruments. The paper argues that the sustainability of such reform may critically depend on the pursuit of policies that contain inflationary pressures, but that the environment for adoption of such policies will depend in turn on the appropriate sequencing of reform measures.

PD May 1990. **TI** The Exchange Rate and the Price Level in Socialist Economies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/90/50; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** 431, 227, 027, 052. **KW** Exchange Rate. Price Level. Socialism. Centrally Planned Economy.

AB The paper examines how the evolution from a classical centrally planned economy to a more market-oriented system will enhance the linkage between the exchange rate and the domestic price level. However, during the transition -- as the economy continues to be predominantly state-owned, the inherited production structure is only gradually modified, capital and labor mobility are still relatively low and financial discipline is less-than-complete -- the elasticity of the domestic price level with respect to a change in the exchange rate, or, to a change in world market prices, may still be lower than in an otherwise comparable market economy.

Wolfe, Barbara

TI The Effect of the Medicaid Program on Welfare Participation and Labor Supply. **AU** Moffitt, Robert; Wolfe, Barbara.

Wolff, Edward N.

TI Changes in Age-Wealth Profiles: Savings, Revaluation and Inheritance. **AU** Greenwood, Daphne T.; Wolff, Edward N.

TI Technical Change and the Demand for Skills by U.S. Industries. **AU** Howell, David R.; Wolff, Edward N.

Wolsey, Laurence A.

TI Valid Inequalities and Projecting the Multicommodity Extended Formulation for Uncapacitated Fixed Charge Network Flow Problems. **AU** Rardin, Ronald R.; Wolsey, Laurence A.

Wooders, Myrna Holtz

TI A Game Equilibrium Model of Thin Markets
AU Selten, Reinhard; Wooders, Myrna Holtz.

PD June 1990. **TI** Inessentiality of Large Coalitions and the Approximate Core Property: Two Equivalence Theorems
AA University of Toronto. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B-151; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. **PG** 40. **PR** no charge. **JE** 026. **KW** Coalitions. Core. Game Theory.

AB We show that large games, ones with many players, satisfy an economically intuitive condition that almost all gains to coalition formation can be realized by coalitions bounded in absolute size if and only if they have the approximate core property (all sufficiently large games have nonempty approximate cores) and satisfy boundedness of contributions to average payoffs. This extends some of the results in the literature on nonemptiness of approximate cores. The main point here is the equivalence of the inessentiality of large coalitions condition and the approximate core property.

TI An Axiomatization of the Core for Finite and Continuum Games. **AU** Winter, Eyal; Wooders, Myrna Holtz .

Woodridge, Jeffrey M.

PD April 1990. **TI** Regression-Based Inference in Linear Time Series Models with Incomplete Dynamics.
AA Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 550; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 53. **PR** \$6.00 Domestic, \$8.00 Overseas, \$2.00 Student. **JE** 211. **KW** Regression-Based Tests. Time Series. Serial Correlation. Common Factors. Heteroskedasticity.

AB Regression-based heteroskedasticity and serial correlation robust standard errors and specification tests are proposed for linear models that may not represent an expectation conditional on all past information. The statistics are computable via a sequence of linear regressions, and the procedures apply to models estimated by ordinary least squares or two stage least squares. Examples of the specification test include tests for nonlinearities in static models, exclusion restriction tests in finite distributed lag models, heteroskedasticity/serial correlation-robust Chow tests, tests for endogeneity, and tests of overidentifying restrictions. Some new tests of the assumptions underlying Cochrane-Orcutt estimation are also proposed, and some considerations when applying the various robust tests are discussed.

Wren-Lewis, Simon

TI Are Wages Forward Looking. **AU** Moghadam, Reza; Wren-Lewis, Simon.

Wright, Randall

TI Homework in Macroeconomics I: Basic Theory.

AU Benhabib, Jess; Rogerson, Richard; Wright, Randall.

TI Homework in Macroeconomics II: Aggregate Fluctuations. AU Benhabib, Jess; Rogerson, Richard; Wright, Randall.

Wright, Robert E.

TI Differential Returns to Human Capital in Full-Time and Part-Time Employment: The Case of British Women. AU Ermisch, John F.; Wright, Robert E.

TI Adverse Selection Aspects of Poverty Amongst Lone Mothers. AU Ermisch, John F.; Jenkins, Stephen P.; Wright, Robert E.

PD July 1989. TI Cohort Size and Earnings in Great Britain. AA Birkbeck College. SR Birkbeck College Discussion Papers in Economics: 89/8; Birkbeck College, Department of Economics, 7/15 Gresse St., London W1P 1PA, ENGLAND. PG 16. PR not available. JE 813, 824. KW England. Labor Force. Cohort Size. Wages.

AB Numerous studies in the United States have confirmed that individuals born into large cohorts, *ceteris paribus*, tend to have lower earnings entry into the labor force compared to individuals born into small cohorts. On the other hand, only limited attention has been directed towards exploring the relationship between cohort size and earnings in other nations. This paper examines empirically the relationship between cohort size and male earnings in Great Britain. The data used is a time-series of cross-sections (1973-1982) constructed from the General Household Survey. Some support for the hypothesis that large cohorts have depressed earnings is found.

Xafa, Miranda

PD July 1990. TI EMU and Greece: Issues and Prospects for Membership. AA International Monetary Fund and Princeton University. SR Princeton Woodrow Wilson School Discussion Paper in Economics: 155; Woodrow Wilson School, Princeton University, Princeton, NJ 08544. PG 35. PR no charge. JE 432, 433, 423, 323. KW European Monetary Union. Greece. Budget Deficits. Central Bank.

AB This paper examines the feasibility of Greece's membership in the European Monetary Union (EMU), given the size of the required adjustment to a sustainable fiscal position. The Delors Committee Report on the EMU proposed limits on budget deficits to ensure that the independence of the European Central Bank is preserved. Underlying this concern is the moral hazard issue that could arise if the European Central Bank were viewed by private creditors as a lender of last resort. The paper uses a simple analytical framework to compute the financeable deficit in Greece under alternative macro targets. It is argued that, from Greece's perspective, its early inclusion in the EMU and consequent loss of revenue from seigniorage and the inflation tax would increase considerably the deficit reduction required to reach a sustainable fiscal position.

Yamada, Tadashi

TI Determinants of Saving and Labor Force Participation of the Elderly in Japan. AU Yamada, Tetsuji; Yamada, Tadashi; Liu, Guorn.

Yamada, Tetsuji

PD March 1990. TI Determinants of Saving and Labor Force Participation of the Elderly in Japan. AU Yamada,

Tetsuji; Yamada, Tadashi; Liu, Guorn. AA Yamada, Tetsuji: Rutgers University and National Bureau of Economic Research. Yamada, Tadashi: University of Tsukuba. Liu: City University of New York. SR National Bureau of Economic Research Working Paper: 3292; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 29. PR \$2.00. JE 915, 921, 824, 821. KW Social Security. Retirement. Savings. Japan. Labor Supply.

AB Japanese annual time series data covering the period 1951 to 1982 reveal that changes in the program of social security retirement benefits have substantial influence on personal saving and retirement behavior. The empirical results show that social security retirement benefits depress personal saving by approximately 13.5 thousand yen per capita in real terms from 1951 to 1982. However, declining labor force participation of the elderly (i.e., earlier retirement), stimulates personal saving by an estimated .5 thousand yen over the same period. The study finds that the benefit effect dominates the retirement effect. The net effect is consequently a downward impact on personal saving.

Yamamoto, Yoshitsugu

PD March 1990. TI A Path-Following Procedure to Find a Proper Equilibrium of Finite Games. AA University of Tsukuba, Japan. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90636-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 8. PR no charge. JE 213, 026. KW Algorithm. Game Theory. Nash Equilibrium. Proper Equilibrium.

AB We propose a procedure to find a proper equilibrium of finite n -person games, which was introduced by Myerson as a refinement of perfect equilibrium. The procedure is a new variable dimension algorithm having product from $i=1$ to n of $m!$ directions in which it leaves the starting point, where $m(i)$ is the number of the i th player's pure strategies.

PD June 1990. TI Finding the Best Separating Hyperplane of Two Polytopes. AA University of Tsukuba, Japan. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 90643-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-590 Bonn 1, DEUTSCHLAND. PG 11. PR no charge. JE 213. KW Hyperplane. Polytopes. Algorithm. Real Analysis.

AB Given a pair of finite point-sets P and Q we propose an algorithm for finding a separating hyperplane of the convex hulls of P and Q which maximizes the measure $(\min \{d, p\})$ for p an element of P - $(\max \{d, q\})$ for q an element of Q , where d is the normal of the hyperplane.

Zakioan, J.M

PD January 1990. TI Modele Autoregressif a un Seuil. AA CREST-ENSAE. SR Unite de Recherche Document de Travail ENSAE/INSEE: 9010; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. PG 58. PR no charge. JE 211. KW Ergodicity. Autoregressive Models. Convergence Theorems.

AB In this paper, we consider threshold autoregressive models (TAR), introduced by Tong and Lim (1980). We study the TAR(1) with one threshold when the parameters are such that the model stands in the neighborhood of linearity. Convergence theorems in $L(p)$ are proved, and used to obtain approximations for the law of the process. Finally, we develop two methods for testing the presence of a threshold effect in the

AR(1). Paper in French.

Zakoian, J. M.

PD January 1990. **TI** Modeles Heteroscedastiques A Seuil. **AA** CREST-ENSAE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 9012; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 51. **PR** no charge. **JE** 211. **KW** Heteroskedasticity. ARCH Model. White Noise. Stationarity.

AB In this paper we consider a modification of the classical ARCH models introduced by Engle (1982). In this modified model the conditional variance is a piecewise linear function of past values of the white noise. This specific form allows different reactions of the volatility to different signs of the lagged errors. We exhibit the stationarity conditions of the process, we explain how to determine the moments and we study the leptokurticity of the marginal distribution. Finally we develop the statistical inference methods: maximum likelihood or least squares estimation methods, test of the homoscedasticity hypothesis. Paper in French.

TI Approximation en Temps Continu d'un modele ARCH Seuil. **AU** El Barsiri, M.; Zakoian, J. M.

Zaman, Asad

TI What Do Heteroskedasticity Tests Detect. **AU** Dutta, Jayasri; Zaman, Asad.

Zeckhauser, Richard

TI Fragile Commitments and the Regulatory Process. **AU** Blackmon, Glenn; Zeckhauser, Richard.

Zimmermann, Klaus F.

TI Work Characteristics, Firm Size and Wages. **AU** Schmidt, Christoph M.; Zimmermann, Klaus F.