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 online through BRS.
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Abel, Andrew

PD February 1988. **TI** The Implications of Insurance for the Efficacy of Fiscal Policy. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2517; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323, 921, 022, 024. **KW** Tax Policy. Insurance. Income Tax.

AB Various tax policies provide consumers with forms of insurance. Social security has the payoff characteristics of an annuity. The income tax provides consumers with a degree of income insurance because the government shares part of the individual's income risk. Redistributive taxes can be used to spread aggregate income risks across different generations. The effects of these and other tax policies are shown to depend crucially on the nature of existing private insurance arrangements.

Abouchar, Alan

PD January 1988. **TI** Duality, Decentralization, and Welfare: Some Reservations to the Conventional Interpretation of the Dual Solution. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8801; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 25. **PR** No Charge. **JE** 022. **KW** Dual Prices. Decentralization. Constraints. Resource. Prices.

AB The solution to the dual problem of mathematical programming has traditionally been interpreted as a set of valuations for the resources which serve as constraints in the maximizing problem. These valuations are treated as prices for the inputs under decentralized operation of the economy. But while the foundations underlying this interpretation are incontestable in mathematical terms, sufficient attention has not been given to the economic mise en scene required for this interpretation to be meaningful. We must know something about the nature of the constraints, knowledge of which leads to several different interpretations.

Acharya, Sankarshan

PD September 1987. **TI** Convertible Debt Issuance and Call Policy Before and After Conversion Value Exceeds Call Price. **AU** Acharya, Sankarshan; Handa, Puneet. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 439; New York University Salomon Brothers Center for the Study of Financial Institutions, 90 Trinity Place, New York, NY 10006. **PG** 36. **PR** $4.00. **JE** 313, 521. **KW** Convertible Debt. Stock Prices. Efficient Markets.

AB This paper attempts to explain why, contrary to the perfect market predictions, many corporations call outstanding convertible debts long before feasibility (the first time the conversion value exceeds or equals the call price) and why do corporations issue convertible debts. Our model has several testable implications. First, stock price response to issuance of a straight debt is higher than the price response to the issuance of a convertible debt. Second, conditional on feasibility, calling the convertible debt results in a lower stock price reaction than not calling. Third, conditional on infeasibility, calling results in a higher stock price response than not calling. The first and the second implications are consistent with the earlier theoretical and empirical literature. We present some indication of empirical support for the third empirical implication.

Acton, Jan Paul

PD August 1987. **TI** Response to Time-of-Day Electricity Rates by Large Business Customers: Reconciling Conflicting Evidence. **AU** Acton, Jan Paul; Park, Rolla Edward. **AA** The Rand Corporation. **SR** Rand Report: R-3477; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica CA 90406-2138. **PG** 54. **PR** No Charge. **JE** 723, 613. **KW** Energy. Prices. Regulation. Electricity. Natural Resource. Policy.

AB Time-of-day pricing is now an established feature of United States electricity ratemaking. This was not the case ten years ago when such rates were rare in the United States. For policy and analysis purposes, it is important to understand the amount of customer response to the introduction of time-of-day (TOD) rates. The information will help determine how regulators and utilities introduce or modify TOD rates, and it will assist in anticipating how much adjustment can be expected in utility loads and associated costs of supply. There have been widely different estimates of the effects of TOD rates on business customers, who represent the largest loads placed under TOD pricing. If one set of estimates is accurate, rapid extension of the rates to additional customers is justified; if different estimates are accurate, TOD rates may be introduced at a more modest pace, at least on efficiency grounds. In principle, the reasons for different estimates of response must be differences either in the population analyzed or in methods of analysis. We systematically examine several recent studies and original datasets to determine reasons for the apparent differences in reported response and to provide a current assessment of the likely adjustments for United States business customers.

Adelman, Irma

PD October 1987. **TI** Macroeconomic Shocks, Foreign Trade, and Structural Adjustment: A General Equilibrium

https://doi.org/10.1017/S0951007900001212 Published online by Cambridge University Press

Analysis of the U.S. Economy, 1982-1986. **AU** Adelman, Irma; Robinson, Sherman. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 453; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 26p. **PR** $5.20. **JE** 131, 134, 431, 132, 133. **KW** Macroeconomic Shocks. Foreign Trade. General Equilibrium. United States Economy. Structural Adjustments.

AB In this paper, we use a computable general equilibrium (CGE) model of the United States economy to analyze the impact of the swings in macro balances on the structure of relative prices, production, trade, income, and demand. The model is designed to focus on foreign trade issues, incorporating sectoral demand elasticities for imports and supply elasticities for exports. One issue we consider is the impact of different assumptions about these elasticities on the structural adjustments induced by the changes in macro balances. In the next section, we present a summary of the CGE model. We next discuss calibration of the model for 1982 and a base solution for 1986. We then analyze experiments in which we consider the impact of alternative macro policies designed to finance the increase in government expenditure observed during the period without recourse to increased foreign borrowing.

PD October 1987. **TI** Life in a Mexican Village: A SAM Perspective. **AU** Adelman, Irma; Taylor, J. Edward; Vogel, Stephen. **AA** Adelman and Vogel: University of California at Berkeley. Taylor: University of California, Davis. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 452; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 50p. **PR** $10.00. **JE** 121, 225, 133, 823. **KW** Villages. Social Accounting Matrix. Economic Development. Migration. Mexico. Rural Economy.

AB This paper employs the Social Accounting Matrix (SAM) to analyze the economic structure of a migrant-sending rural economy. A village SAM is constructed using 1982 household data from a major migrant-sending village in Central Mexico. The village matrix multiplier and its decompositions are derived from the SAM and are utilized in policy experiments on the production, value added, income, and investment flows of the village. The results highlight the central role of both internal and international migration in the village economy, as well as importance of targeting directly anti-poverty policies toward the landless.

Admati, Anat

PD December 1987. **TI** A Theory of Intraday Trading Patterns: Volume and Price Variability. **AU** Admati, Anat; Pfleiderer, Paul. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 927R; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 43. **PR** No Charge. **JE** 313, 311. **KW** Trading. Liquidity. Information. Trading Volume. Price.

AB This paper develops a theory in which concentrated trading patterns arise endogeneously, due to the strategic behavior of liquidity and informed traders. Our results provide a partial explanation for some of the recent empirical findings concerning the patterns of volume and price variability in intraday transaction data.

Aghion, Philippe

PD March 1988. **TI** An 'Incomplete Contract' Approach to Bankruptcy and the Financial Structure of the Firm. **AU** Aghion, Philippe; Bolton, Patrick. **AA** Aghion: Department of Economics, Massachusetts Institute of Technology. Bolton: Harvard University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 484; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 44. **PR** No Charge. **JE** 022, 026, 521. **KW** Bankruptcy. Control Allocation. Investors. Debt. Equity.

AB In contrast to Modigliani and Miller, who distinguish between debt and equity contracts only in terms of the return-streams of the two types of assets, we emphasize the differences between debt and equity in terms of the rights of control the two assets give investors. Our theory of the firm's financial structure is based on the following considerations: Suppose that the firm must raise external funds to finance an investment. Ideally, the owners of the firm would like to issue non-voting shares, but this is usually unacceptable to outside investors since this amounts to giving full control to the initial owners. Two options are then open: Either issue debt and face the risk of bankruptcy (this involves a transfer of control from the owners to the outside investors) or issue equity and dilute their ownership rights. Both types of assets involve different allocations of control among investors and owners. We argue that the choice of control allocation determines the financial structure of the firm.

Aizenman, Joshua

PD October 1987. **TI** Investment, Openness and Country Risk. **AA** The Hebrew University. **SR** National Bureau of Economic Research Working Paper: 2410; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 421, 422, 441, 431, 023. **KW** Country Risk. Open Economy. International Credit Markets. Default.

AB The purpose of this study is to draw attention to the linkages between country risk and the openness of an economy, and to demonstrate that in the long run the openness of an economy is endogenously determined by the interaction between endowments and policies. The presence of country risk poses a problem for the smooth operation of international credit markets: the ex-ante first best policy is for countries to pre-commit themselves to no-default policies. Such a commitment, however, may not be credible because it may not be the optimal ex-post policy. This suggests a special role for policies leading towards investment in openness - as a way to increase the credibility of a no-default commitment. The paper studies the optimal implementation of these policies.

Aksoy, Yasemin

TI An Interactive Efficient Point Algorithm for Multiple Objective Linear Programming. **AU** Benson, Harold P.; Aksoy, Yasemin.

Alexander, Arthur J.

TI Entry Restrictions and Japanese Lawyers' Incomes in International Legal Practice. **AU** Tan, Hong W.; Alexander, Arthur J.

Allen, Steven

PD February 1988. **TI** Why Do Pensions Reduce

Mobility? **AU** Allen, Steven; Clark, Robert L.; McDermed, Ann A. **AA** North Carolina State University. **SR** National Bureau of Economic Research Working Paper: 2509; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 918, 824, 823, 921. **KW** Pensions. Labor Turnover. Labor Mobility.

AB Previous studies have found that workers who are covered by pensions are much less likely than other workers to leave their jobs, but the evidence on how specific pension characteristics affect turnover is inconclusive. This paper examines how mobility is affected by vesting standards, the compensation level, and the capital loss of pension wealth for job changers. In two different data sets, we find that the capital loss is strongly associated with lower turnover rates, whereas vesting and the compensation level have relatively little impact. Large capital losses are mainly associated with lower layoff rates rather than lower quit rates.

Alogoskoufis, George

PD November 1987. **TI** On Optimal Stabilization Policy and Nominal Income Targets in an Open Economy. **AA** Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 220; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 20. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 133, 321, 311, 431. **KW** Stabilization Policy. Income Targets. Open Economies. Monetary Policy. Fiscal Policy. Exchange Rate. Supply Shocks.

AB This paper considers optimal stabilization policy and nominal income targets for an open economy where the authorities are concerned both with unemployment and monetary instability. To fully achieve these two objectives the authorities must use both monetary and "supply-side" fiscal policy. It is shown that there is an optimal assignment of monetary policy to the monetary stability objective, and supply-side fiscal policy to the unemployment objective. In a second-best world, where only monetary policy can be used in the short run, there is an optimal exchange rate rule, which balances the welfare cost of unemployment against that of monetary instability. This rule prescribes appreciations of the exchange rate following domestic supply shocks and external price and interest rate shocks. Domestic money demand shocks do not, however, necessitate a change in the exchange rate. The analysis suggests that nominal income targets are an optimal policy only if supply and world interest rate shocks do not occur. Alternatively, they are optimal if monetary stability carries no weight in the policy-makers' objective function and fiscal policy can be directed against supply shocks.

PD December 1987. **TI** Competitiveness, Wage Adjustment and Macroeconomic Policy in a Small Open Economy. **AA** Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 215; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 41. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 131, 431, 023. **KW** Competitiveness. Wages. Macroeconomic Policy. Open Economy. Greece.

AB In this paper I investigate the relationships between wage adjustment, competitiveness, macroeconomic policy and aggregate fluctuations in a small open economy. Based on a model of an economy producing both traded and non-traded goods, and assuming that the traded goods sector is competitive while the non-traded goods sector is oligopolistic, I show that real wages in the traded goods sector are negatively related with competitiveness. Wage setting is what determines competitiveness, output and inflation, and is pivotal for the effects of macroeconomic policies. The model is estimated and tested for the postwar period, and is used to assess the macroeconomic experience and policy options in Greece.

PD December 1987. **TI** On Optimal World Stabilization and the Target Zones Proposal. **AA** Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 214; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 36. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 432, 431, 133, 311, 321. **KW** Stabilization Policy. Monetary Policy. Exchange Rates. Target Zones. Fiscal Policy.

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 1985 target zones proposal of Williamson, according to which there should be a periodic fixing of exchange rates at levels consistent with equilibrium real rates. World monetary policy should be assigned to the objective of international monetary stability 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 country constrained in its use of fiscal policy is the Stackelberg leader, target zones might reproduce the optimal world monetary arrangement quite closely.

Alpern, Steve

PD March 1988. **TI** Production Decisions Under Demand Uncertainty: The High-Low Search Approach. **AU** Alpern, Steve; Snower, Dennis J. **AA** Alpern: London School of Economics. Snower: Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 223; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 27. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 022, 026, 511. **KW** Demand Uncertainty. Search. Inventories. Production Decisions.

AB The paper presents a model of 'high-low search' under uncertainty, in which a 'conservative' firm 'searches' for an unknown product demand by making a sequence of production decisions. After each production decision and the concomitant sales, the firm infers whether its supply is 'too high' or 'too low'. We show how the production decision reduces the firm's demand uncertainty interval and how this reduced uncertainty (in turn) affects its future production decisions.

PD March 1988. **TI** A Search Model of Optimal Pricing and Production. **AU** Alpern, Steve; Snower, Dennis J. **AA** Alpern: London School of Economics. Snower: Birkbeck College. **SR** Centre for Economic Policy Research Discussion Paper: 224; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 12. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 511, 022.

KW Search. Optimal Pricing. Decision Theory. Production. Inventory.

AB This paper presents an overview of the application of the mathematical theory of 'high-low' search to firms' pricing and production decisions. We show how this methodology can be used to determine an optimal sequence of price-quantity decisions by a firm through time. We suppose that the firm chooses a sequence of prices and quantities supplied over time not only with a view to earning current profit (given the current information about the demand curve) but also in order to acquire information about the demand curve by observing its inventory stocks as a result of these price and quantity decisions. We compare and contrast the high-low model with the conventional microeconomic model of pricing and production. We show how the firm uses its pricing and production decisions to partition the uncertainty interval it faces and thereby influence the value of the information which it receives.

Amihud, Yakov

PD October 1987. **TI** Liquidity and Asset Prices: Financial Management Implications. **AU** Amihud, Yakov; Mendelson, Haim. **AA** Amihud: Tel Aviv University. Mendelson: University of Rochester. **SR** New York University Salomon Brothers Center Working Paper: 444; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 31. **PR** $4.00. **JE** 313, 522. **KW** Liquidity. Asset. Traded Assets. Investments.

AB The liquidity of traded assets is an important attribute which is often ignored in financial management theory. Recent evidence suggests that there is a negative relationship between assets' liquidity and their expected returns, implying that firms can benefit from policies that increase the liquidity of the claims they issue. On the other hand, enhancing the liquidity of traded assets entails non-trivial costs. This paper examines the associated tradeoff and explains a number of observed corporate financial policies and institutional arrangements as liquidity-increasing investments.

Amir, R.

PD September 1987. **TI** A Strategic Marker Game with Complete Markets. **AU** Amir, R.; Sahi, S.; Shubik, M.; Yao, S. **AA** Amir: SUNY at Stony Brook. Sahi: Princeton. Shubik: Yale University. Yao: Cowles Foundation/Yale. **SR** Yale Cowles Foundation Discussion Paper: 814R; Cowles Foundation for Research in Economics, 30 Hillhouse Avenue, Box 2125 Yale Station, New Haven, CT 06520. **PG** 25. **PR** No Charge. **JE** 026, 021. **KW** Game Theory. General Equilibrium. Exchange Market. Complete Markets.

AB Existence of equilibrium is proved for an exchange strategic market game with complete markets. An example of equilibrium with inconsistent prices is given.

Anderson, Gordon

PD October 1987. **TI** What Can Statistics Contribute to the Analysis of Economic Structural Change? **AU** Anderson, Gordon J.; Mizon, Grayham E. **AA** Anderson: Toronto University. Mizon: Southampton University. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8802; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 22. **PR** No Charge. **JE** 211. **KW** Model Evaluation. Structural Model. Structural Constancy. Statistics.

AB The role of statistics in the detection and assimilation of structural change in econometric models is analyzed. The detection of structural change has been made much easier and more sophisticated by recent developments in graphical analysis and recursive estimation and testing techniques, particularly for use on micro computers. A typology of models incorporating structural change is presented, and methods for discriminating between these models are considered. It is also argued that statistical tests for the hypothesis of structural constancy have an important role in the evaluation of econometric models. In addition, it is noted that major changes in the sample correlations between variables, rather than being a nuisance for econometric model builders, is in fact an important stimulus to model evaluation and improvement.

PD January 1988. **TI** Alternative Error Covariance Assumptions in Dynamic Panel Data Models. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8804; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 22. **PR** No Charge. **JE** 211. **KW** Dynamic Models. Monte Carlo. Panel Data. Random Effects. Simulation. Specification Test.

AB Alternative error covariance assumptions are examined and compared with those usually employed in dynamic random effects models in the context of a Monte Carlo simulation exercise. These alternative assumptions do not present the usual inconsistency problems associated with the implementation of simple estimation techniques in the standard model. The efficacy of a specification test which discriminates between the assumptions is also examined.

Andoh, Samuel Kojo

PD August 1987. **TI** The U.S. Demand for Cocoa: Explaining the Apparent Insignificance of Income Growth. **AU** Andoh, Samuel Kojo; Gately, Dermot. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-29; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 15. **PR** No Charge. **JE** 711. **KW** Chocolate. Cocoa. Luxury Goods.

AB Previous econometric work on the United States demand for cocoa has yielded a puzzling result: that the income elasticity is either zero or negative. This is surprising because, across countries, per capita cocoa demand is highly correlated with per capita income. Cocoa is viewed by many as a luxury good, whose income elasticity would be expected to be positive and relatively high. Yet, if this econometric result is correct, it has discouraging implications for the cocoa-producing countries and for the growth of cocoa demand. Here we address this puzzle, using some previously omitted variables, such as the price of confectionery and the percentage of children in the population. When these additional variables are included in the equation for per capita cocoa demand, the puzzling result disappears: income is statistically significant and its elasticity is about 0.25. This means that per capita demand will grow over time, even though not as rapidly as income. In addition, the percentage of children will be increasing over the next decade, and this will have a further positive effect on per capita demand. And, due to population growth, total demand will grow more rapidly than per capita

demand.

Antel, John

PD June 1987. **TI** Military Enlistment and Attrition: An Analysis of Decision Reversal. **AU** Antel, John; Hosek, James R.; Peterson, Christine E. **AA** The Rand Corporation. **SR** Rand Report: R-3510; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica CA 90406-2138. **PG** 59. **PR** No Charge. **JE** 813. **KW** Enlistment. Attrition. Military.

AB This report presents a theoretical discussion and empirical analysis of enlistment and first-term attrition. The theoretical discussion gives rise to hypotheses about enlistment and attrition. The enlistment hypotheses take a supply view, treating military service as an alternative to further schooling or to work. The attrition hypotheses are inherently two-sided, considering first the value of enlistment to the individual and the likelihood that he is more prone to disappointment due to poor planning, and second, the value of the individual to the service and the chance that the service's eligibility screens were unable to identify low-productivity prospects. The empirical analysis is directed to the two prime recruiting markets from which the services draw high-quality male enlistees: high school seniors and nonstudent high school graduates. The study estimates sequential probit models for seniors and graduates separately, for both enlistment and six-month attrition and enlistment and 35-month attrition.

Aoki, Masanao

PD February 1988. **TI** A State Space Time Series Modeling Method without Prior Detrending. **AA** University of California at Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 465; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 16. **PR** $2.50; checks payable to University of California Regents. **JE** 211, 132, 214. **KW** Unit Root. Cointegration. Time Series Model. State Space Model.

AB A state space method for building time series models without detrending each component of data vectors is presented. The method uses the recent algorithm based on the singular value decomposition of the Hankel matrix and a two step sequential procedure suggested by the notion of dynamic aggregation.

Aragon, Y.

PD February 1988. **TI** Testing the Democratic Hypothesis in the Provision of Local Public Goods. **AU** Aragon, Y.; Laffont, J. J.; Le, Pottier J. **AA** Aragon and Laffont: Gremaq, Universite des Sciences Socailes Place Anatole. Le Pottier: California Institute of Technology and Gremaq. **SR** Caltech Social Science Working Paper: Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 18. **PR** No Charge. **JE** 025. **KW** Public Goods. Median Voter. Democratic Voting.

AB The financing of local public goods in French communities can be viewed, until 1980, as a one dimensional choice. We propose a model to formalize this choice which results in the best choice of the "median" agent in a population in which two types of citizens have been distinguished. Those who pay and those who do not pay the "taxe professionnelle". A translog specification of the model is estimated using data about 36 communities near the city of Toulouse, France. The democratic hypothesis according to which both types of agents mentioned above have the same weight in the decision process is rejected. Moreover, we do not reject the hypothesis that this non democratic bias decreases with the size of the city.

Arellano, M.

PD 1987. **TI** Labour Supply and Hours Constraints. **AU** Arellano, M.; Meghir, C. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-11; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 821, 824. **KW** Labor Supply. Hours. Switching Regressions.

AB Most labor supply studies assume that individuals can freely choose their hours of work at their (given) market wage rate. Yet such an assumption stands in contrast to individual responses found in certain surveys such as the United States Panel Study of Income Dynamics, or the United Kingdom General Household Survey. In this paper we present models that could be used to account for constraints among workers in the absence of sample separation information. We propose a switching regressions model that allows for a non zero probability that each individual in the sample is constrained. This turns out to be a useful way of incorporating demand side variables in a model for hours of work, while still identifying the underlying labor supply parameters. Furthermore we discuss appropriate diagnostic tests for the censored and truncated switching regressions model. Our present empirical results relate to a sample of working and non-working married women, drawn from the United Kingdom Family Expenditure Survey for 1981.

Arnott, Richard

PD February 1988. **TI** Randomization with Asymetric Information. **AU** Arnott, Richard; Stiglitz, Joseph. **AA** Arnott: Queen's University. Stiglitz: Princeton University. **SR** National Bureau of Economic Research Working Paper: 2507; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 024, 022. **KW** Moral Hazard. Adverse Selection. Insurance.

AB It is by now well-known that, in the presence of moral hazard or adverse selection, randomization of insurance premia and benefits may be Pareto efficient. This paper: i) provides a typology of the various forms that randomization may take; ii) derives necessary and/or sufficient conditions for the desirability of these various forms of randomization; iii) obtains some simple characterization theorems of the efficient random policies; iv) gives some intuition behind the results; and v) considers why randomization appears to occur less often in practice than the theory suggests it should.

Ashton, Paul

TI The Effects of Housing Distortions on Unemployment. **AU** Minford, Patrick; Ashton, Paul; Peel, Michael.

Auerbach, Alan J.

PD February 1988. **TI** The Deadweight Loss from "Nonneutral" Capital Income Taxation. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2510; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138.

PR $2.00. **JE** 323, 111, 024, 023. **KW** Overlapping Generations. Growth. Capital Goods. Income Tax. General Equilibrium.

AB This paper develops an overlapping generations general equilibrium growth model with an explicit characterization of the role of capital goods in the production process. The model is rich enough in structure to evaluate and measure simultaneously the different distortions associated with capital income taxation (across sectors, across assets and across time) yet simple enough to yield intuitive analytical results as well. The main result is that uniform capital income taxation is almost certainly suboptimal, theoretically, but that empirically, optimal deviations from uniform taxation are inconsequential. We also find that though the gains from a move to uniform taxation are not large in absolute magnitude these gains would be offset only by an overall rise in capital income tax rates of several percentage points. A separate contribution of the paper is the development of a technique for distinguishing intergenerational transfers from efficiency gains in analyzing the effects of policy changes on long-run welfare.

Bagnoli, Mark

PD January 1986. **TI** Non-Market Clearing Prices in a Dynamic Oligopoly with Incomplete Information. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-16; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 30. **PR** No Charge. **JE** 611, 026. **KW** Dynamic Oligopoly Pricing. Price Information. Game Theory.

AB The major criticisms of the work on disequilibrium macroeconomics are that (1) one is unable to explain why firms set non-market clearing prices and given that they have done so, (2) do the prices adjust through time to equilibrate the market and if so, how. In this paper, I provide a simple model which illustrates that the following intuition may provide a partial answer to both criticisms. The basic idea is that firms may learn about the market in which they compete by observing their own sales. If their own sales provide additional information and if that information is valuable, then the firm may use non-market clearing prices to acquire this information. This possibility may arise because the firm may be unable to infer whether demand was just sufficient to buy all that were for sale at the price he was charging or whether the firm could have raised its price and still sold every unit it had produced. If the demand states are correlated, then this information has value as the firm can make more informed choices in the future. The model provided shows that this intuition is supportable as an potential, partial explanation for non-market clearing pricing and provides a (potentially) over simple explanation of the adjustment process to equilibrating prices in the future.

PD March 1987. **TI** Provision of Public Goods: Fully Implementing the Core through Private Contributions. **AU** Bagnoli, Mark; Lipman, Barton L. **AA** Bagnoli: University of Michigan. Lipman: Carnegie-Mellon University. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-12; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 59. **PR** No Charge. **JE** 022, 026. **KW** Public Goods. Free Rider Problem.

AB The standard economic intuition regarding private provision of public goods has been largely verified by a series of recent papers on the subject. Warr '1983, Palfrey and Rosenthal '1984, 1985, Bergstrom, Blume, and Varian '1986, Andreoni '1985, and others have analyzed games in which citizens freely contribute towards the provision of a public good. Confirming the standard view of the free rider problem, the equilibria of these contributions games typically have inefficient outcomes -specifically, not enough of the public good is provided. By contrast, the literature on full implementation has demonstrated the existence of games for which all equilibria are efficient. Given this fact, why is it supposed that the agents in the economy play a game which has an inefficient equilibrium? Presumably, the games used to model private provision are taken to be "natural" representations of private provision, while the games used in the implementation literature are not viewed this way. The games used to prove existence of games with efficient outcomes generally seem to require a social planner to impose and to "mediate" them. That is, they do not seem to be reasonable descriptions of games which would arise "naturally." Contrary to this conclusion, we will provide an example of an efficient mechanism which appears to be a very natural contribution game. In the simplest version of this example, we consider a complete information economy with a single private good and a discrete public good. The simple game that we consider is to allow each agent to voluntarily contribute any non-negative amount of the private good he chooses. The public good is provided if contributions are sufficient to pay for it and the contributions are refunded otherwise.

PD May 1987. **TI** Controlling the Game: Political Sponsors and Bureaus. **AU** Bagnoli, Mark; McKee, Michael. **AA** Bagnoli: University of Michigan. McKee: University of Colorado-Boulder. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-14; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 24. **PR** No Charge. **JE** 026, 612, 513. **KW** Public Sector Bureaus. Bureaucracy. Political Control. Government.

AB The predominant view of public sector bureaus, as it appears in the folklore and in much of the economic literature, is that they possess monopoly power which they use to extract the taxpayers' surplus. Since bureaus are organizations that lack a residual claimant, bureaucrats are constrained to take these monopoly rents in the form of non-pecuniary benefits such as shirking on the job, sumptuous furnishings, or other "perks". In other words, public sector bureaus are expected to incur production costs which are above the minimum, technically efficient level. We will refer to the resulting surplus as "fat". In this paper, we intend to reexamine the foundations of the received theory of bureau behavior. We will provide arguments that suggest the political sponsor is not exploited by the bureau's application of its monopoly power. Instead, we argue that the sponsor may foster competition within or among the bureaus he controls thereby mitigating the bureau's monopoly power. We set our discussion of the sponsor's behavior in the context of a parliamentary system although the results will follow readily for a republican structure. The political sponsor of the bureaus is called a Minister and he is selected by the winning party's leader from the party's successful candidates. In this setting, the Niskanen '1971 thesis and its extensions is that the solution to the bilateral monopoly game played by a bureau and the Minister results in the bureau manipulating the agenda so as to capture all of the rents.

PD June 1987. **TI** Equilibrium with Debt and Equity Financing of New Projects: Why More Equity Financing

Occurs When Stock Prices are High. **AU** Bagnoli, Mark; Khanna, Naveen. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-11; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 34. **PR** No Charge. **JE** 521, 522, 512, 511, 611. **KW** Debt Financing. Equity Financing. Stock Prices. Decision Making.

AB In this paper, we analyze the manager's financing decision for a new project. We give the manager a choice between financing with debt or equity, or foregoing the project. Our purpose is to provide a signaling model in which debt, equity and foregoing are actually observed in the unique equilibrium and the financing mode provides information to the investors about the quality of the new project to be financed. We investigate how the financing decision is affected by the value of the existing assets of the firm or by the quality of the set of available projects. We show that the volume of equity financed projects increases as the opportunity set gets better and that more equity financing is observed for firms which have large assets in place. This enables us to provide an explanation for the existing paradox that more equity financing is observed when the firm's stock price is high. These results also suggest an explanation for why some researchers have found that the movement in stock prices due to equity financing is related to the size of the firm.

PD August 1987. **TI** Successful Takeovers without Exclusion. **AU** Bagnoli, Mark; Lipman, Barton L. **AA** Bagnoli: University of Michigan. Lipman: Carnegie-Mellon University. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-13; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 25. **PR** No Charge. **JE** 611, 521, 313, 026. **KW** Takeovers. Corporate Raiders. Free Rider Problem.

AB We noted at the outset that most of the literature on takeovers assumes atomistic stockholders. As we pointed out, however, there are many large firms for which this assumption is obviously inappropriate. This led us to consider the finite stockholder game. We showed that there are substantial differences between the finite game and the atomistic stockholder models. In particular, because some stockholders must be pivotal and hence cannot free ride, successful takeovers are possible without exclusion. Since the equilibrium outcome in the finite stockholder game is quite different from the atomistic stockholder outcome, the natural question to ask is under what conditions the atomistic stockholder outcome obtains for firms which are sufficiently widely held. We showed that the atomistic stockholder outcome does not obtain in the infinite stockholder game. We also showed that the difference between the finite and atomistic stockholder outcomes may not vanish in the limit. We argued that atomistic stockholder models may provide a reasonable approximation to the outcome for takeovers with any-and-all bids if the firm is not sufficiently valuable relative to the dispersion of stock ownership. Otherwise, the finite stockholder model is likely to provide a more accurate prediction, so that exclusion is not necessary for successful takeovers. Since, all else equal, stockholders generally benefit more from takeovers without exclusion, our analysis suggests that stockholders would prefer to invest in firms which are valuable relative to the dispersion of stock ownership. This, in turn, suggests that a given firm's stock will not be "too" widely held relative to its value. This seems like an interesting topic for future research.

Baker, P.

PD 1987. **TI** Fuel and the Family Expenditure Survey. **AU** Baker, P.; Micklewright, J. **AA** Baker: Department of Economics University College London. Micklewright: Department of Economics Queen Mary College, London. **SR** University College London Discussion Paper: 87-24; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 723. **KW** Fuel. Energy. Natural Gas. Demand. Welfare.

AB This working paper is one in a series reporting on work concerned with the analysis of individual household demand for fuels (see Baker and Micklewright (1987) and Baker, Blundell and Micklewright (1987a, 1987b)). The particular aim of the project is to assess the welfare implications of changes in fuel prices, and in this paper we discuss the data source which will be used, the annual Family Expenditure Survey (FES) of Great Britain. Our research will initially be based on data from the years 1970-1983 and we begin with a description of relevant information in the FES during this period. We then discuss some of the drawbacks - and merits - of this source.

PD 1987. **TI** Modelling Energy Demand in the UK Using Micro-Data. **AU** Baker, P.; Blundell, RW; Micklewright, J. **AA** Baker and Blundell: Department of Economics University College London. Micklewright: Department of Economics Queen Mary College, London. **SR** University College London Discussion Paper: 87-23; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 723. **KW** Energy. Demand. Natural Gas. Household. Budget Constraint.

AB The paper is concerned with the empirical modelling of domestic demand for energy in the United Kingdom at the level of the individual household. A two-stage budgeting model of household demand for energy conditional on durable ownership is developed. As the first stage income is allocated between energy and non-energy consumption while at the second stage energy expenditure is disaggregated. The second stage allocation is assumed to be between gas, electricity and a composite good "other fuels". Estimation takes place using a sample of some 50,000 households drawn from the annual Family Expenditure Survey (FES) for the years 1972-1983, a source that has not been fully exploited in the analysis of energy demand to date.

PD 1987. **TI** Modelling Energy Demand and Household Welfare Using Micro-Data. **AU** Baker, P.; Blundell, R. W.; Micklewright, J. **AA** Baker, Blundell: Department of Economics University College London. Micklewright: Department of Economics Queen Mary College. **SR** University College London Discussion Paper: 87-14; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 723. **KW** Energy Demand. Natural Gas. Households.

AB The paper is concerned with the empirical modelling of domestic demand for energy in the United Kingdom at the level of the individual household (most previous British work has used aggregate time-series data). A two-stage budgeting model of household demand for energy conditional on durable

ownership is developed. Preferences are described implicitly at both stages with the cost function, the Gorman Polar Form being assumed to apply at the second stage and the Almost Ideal form at the first. The second stage allocation is assumed to be between gas, electricity and a composite good "other fuels" which is subject to such measurement error in the data set concerned that it is treated as unobserved. Some simplifying assumptions lead to linear estimating equations for gas and electricity and it is shown how structural parameters can be identified for use in the calculation of welfare gains and losses of price changes.

Ball, Laurence

PD October 1987. **TI** The Equilibrium and Optimal Timing of Price Changes. **AU** Ball, Laurence; Romer, David. **AA** Ball: New York University. Romer: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2412; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 131, 134, 611. **KW** Prices. Price Setting. Fluctuations. Timing. Staggered Price Setting. Synchronized Price Setting.

AB This paper studies the welfare properties of the equilibrium timing of price changes. Staggered price-setting has the advantage that it permits rapid adjustment to firm-specific shocks but the disadvantage that it causes price level inertia and therefore increases aggregate fluctuations. Because each firm ignores its contribution to inertia, staggering can be a stable equilibrium even if it is highly inefficient. In addition, there can be multiple equilibria in the timing of price changes; indeed, whenever there is an inefficient staggered equilibrium, there is also an efficient equilibrium with synchronized price-setting.

Banerjee, Anindya

PD March 1988. **TI** Tests of the Life Cycle-Permanent Income Hypothesis in the Presence of Random Walks: Asymptotic Theory and Small Sample Interpretations. **AU** Banerjee, Anindya; Dolado, Juan. **AA** Banerjee: Jesus College, University of Oxford. Dolado: Research Department, Bank of Spain. **SR** Oxford Applied Economics Discussion Paper Series: 45; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 47. **PR** No Charge. **JE** 211, 921, 023. **KW** Consumption. Non-stationarity. Monte Carlo. Unit Roots. Rational Expectations. Simulation.

AB The recent literature on cointegration and unit roots has focused attention on the distribution of test statistics frequently used to test efficiency in rational expectations models. In this paper we concentrate on the permanent income hypothesis of real consumption. We illustrate, by using the proper asymptotic theory and small-sample approximations, the cases in which tests of such a hypothesis are biased towards rejection and cases where they have the correct sizes. Our results serve to interpret numerous Monte Carlo studies in the literature on this issue. Special emphasis is placed on the distinction between "weak" and "semi-strong" rationality tests.

Bar, Ilan Avner

PD February 1988. **TI** On the Real Effects of Fixed Costs. **AA** Tel-Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 8-88; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 32. **PR** No Charge. **JE** 022. **KW** Monopolistic Competition. Adjustment Costs. Business Cycles. Production.

AB Recent literature emphasizes the significance of monopolistic competition combined with (small) fixed "menu costs" of price changes to generate (large) real effects of nominal money. However, the asymetric assumption made in those papers is that output changes are costless. In this paper we allow for nonzero costs of adjusting prices or production levels. It is shown in a dynamic model that an optimizing monopoly will change both prices and production levels infrequently. The number of different output levels in each price cycle vary between one (fixed production) to infinite (the standard case with no cost of output changes), depending on costs parameters and demand elasticity. However, a level of fixed cost of output changes which is as large (or even smaller) as the fixed menu cost, is sufficient to guarantee a fixed production level. In this case the firm will adjust its price, and not its production, to nominal shocks. Hence a small menu cost can generate large business cycles, but smaller cost of output changes can eliminate these cycles altogether, depending on empirical parameters.

Baumol, William

TI Sources of Postwar Growth of Information Activity in the U.S. **AU** Wolff, Edward N.; Baumol, William J.

PD June 1987. **TI** Chaos: Significance, Mechanism, and Economic Applications. **AU** Baumol, William; Benhabib, Jess. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-16; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 82. **PR** No Charge. **JE** 213, 211, 212. **KW** Chaos Theory. Chaos Model.

AB Chaos theory has all the earmarks of yet another fad in economics. The scarcity of enduring research following up the early postwar spate of construction of dynamic models and more recent work on catastrophe theory may well feed skepticism about the prospects of chaos models, with their deterministic intertemporal structure. There may, however, be substance to the subject. We will show how wide a variety of important economic phenomena can "easily" fall within the domain of chaotic relationships. We will also describe the rich and surprising variety of the time paths that may consequently emerge. We will stress what may be considered the negative implications of the analysis -- that apparently random behavior patterns can in fact prove to be fully deterministic and that these may emerge in unexpected places, that forecasting of particular variables may face enormous difficulties and that such problems may arise in regimes that obey extremely simple relationships. We will also describe the mechanism that underlies chaotic regimes and the intriguing pattern of their structural response to changes in the parameter values of the generating models. In much of this we will rely on a compelling heuristic explanation that writers in other disciplines have provided for the chaos phenomenon.

TI Economists as Innovators: Practical Products of Theoretical Research. **AU** Faulhaber, Gerald R.; Baumol, William J.

Bauwens, Luc

TI Bayesian Specification Analysis and Estimation of

Simultaneous Equation Models Using Monte Carlo Methods. **AU** Zellner, Arnold; Bauwens, Luc; van Dijk, Herman.

Bebchuk, Lucian Arye

PD February 1988. **TI** Takeover Bids Below the Expected Value of Minority Shares. **AA** Harvard Law School. **SR** National Bureau of Economic Research Working Paper: 2524; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 511, 514, 512. **KW** Takeover Bids. Free-Rider Problem.

AB Focussing on takeover bids whose outcome can be predicted in advance with certainty, Grossman and Hart established the proposition, which subsequent work accepted, that successful bids must be made at or above the expected value of minority shares. This proposition provided the basis for Grossman and Hart's identification of a free-rider problem and became a major premise for the analysis of takeovers. This paper shows that this important proposition does not always hold once we drop the assumption that the only successful bids are those whose success could have been predicted with certainty.

Becker, Abraham

PD September 1987. **TI** Gorbachev's Program for Economic Modernization and Reform: Some Important Political-Military Implications. **AA** The Rand Corporation. **SR** Rand Paper: P-7384; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 12. **PR** No Charge. **JE** 113, 114, 052. **KW** Soviet Union. Economic Reform. Military Policy. Soviet Military.

AB This paper is the text of a presentation before the United States Congress Joint Economic Committee, Subcommittee on National Security, Economics and Trade, on September 19, 1987. It examines the interrelationship between the two aspects of Mikhail Gorbachev's domestic economic program: modernization and reform. The author argues, first, that economic reform and its social-political twin, democratization, are derivative values. While this does not diminish their potential significance for Soviet society, it does complicate any assessment of probable outcomes of high-level conflict over the restructuring. Second, the author suggests, the interrelationship between modernization and reform has profound implications for Soviet military and foreign policy.

Becker, Gary

PD November 1987. **TI** The Family and the State. **AU** Becker, Gary S.; Murphy, Kevin. **AA** University of Chicago and Economics research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 87-15; Economics Research Center/NORC, 6030 S. Ellis, Chicago, IL 60637. **PG** 28. **PR** $2.00; send requests to Librarian, NORC. **JE** 911, 931. **KW** Families. Regulation. Subsidy. Children. Government.

AB The immaturity of children sometimes precludes efficient arrangements between children and parents or others responsible for child care. The difficulty in establishing efficient relations within families provides the point of departure for our interpretation of the heavy State involvement in the family. We believe that a surprising number of State interventions mimic the agreements that would occur if children were capable of arranging for their care. Stated differently, our belief is that many regulations of the family improve the efficiency of family activities. Families that leave bequests can "force" children to repay parents for investments in human capital by reducing bequests. Therefore, these families do not underinvest in children's human capital. By contrast, families that do not leave bequests, often poorer families, do underinvest in children. The State may subsidize schools and other training facilities to raise investments in children by poorer families to efficient levels. We consider not only subsidies to education and training, but also social security and other old age support, subsidies to births, laws that limit access to divorce and the sale of children, and laws that require parents' permission for early marriage and other choices of children.

PD December 1987. **TI** Family Economics and Macro Behavior. **AA** University of Chicago and Economics Research Center/NORC. **SR** Economics Research Center/NORC Discussion Paper: 87-16; Economics Research Center/NORC, 6030 S. Ellis, Chicago, IL 60637. **PG** 30. **PR** $2.00; send requests to Librarian, NORC. **JE** 921, 841. **KW** Family. Family Economics.

AB Modern economists neglected the behavior of families until the 1950s. Since then economic analysis has been used to explain who marries whom and when (if ever) they divorce, the number of children and investments in each child's human capital, the extent and timing of labor force participation by married women, when elderly parents rely on children for support, and many other family choices. Perhaps because family economics is a new field, only a small literature considers the implications for other parts of economics. Most economists are not particularly concerned about family behavior. Their interest must be stimulated through a demonstration that its study helps in the analysis of other problems. In this Address I explore the contribution to macroeconomics from the progress in family economics. This is a challenge not only because macro behavior is a central part of economics but also because its link to the family may seem remote and unimportant. Much of the time is spent on long term economic growth, although I also discuss short and long cycles in economic activity, and the interaction between overlapping generations through social security, transmission of inequality, and in other ways.

Bell, Robert M.

TI Assessing the Outcome of Affirmative Action in Medical Schools: A Study of the Class of 1975. **AU** Keith, Steven; Bell, Robert M.; Williams, Albert P.

Ben, Porath Elchanan

PD August 1987. **TI** Repeated Games with Finite Automata. **AA** Stanford University. **SR** Stanford Institute for Mathematical Studies in the Social Sciences (Economics Series) Technical Report: 515; Institute for Mathematical Studies in the Social Sciences, Encina Hall, Fourth Floor, Stanford University, Stanford, CA 94305. **PG** 23. **PR** $4.00. **JE** 026. **KW** Automaton. Complexity. Repeated Games.

AB The paper examines the set of equilibrium payoffs in a repeated game when there are bounds on the complexity of the strategies players may select. The complexity of a strategy is measured by the size of the minimal automaton that can implement it. The main result is that in a zero-sum game, when the size of the automata of both players go together to infinity the sequence of values converges to the value of the one-shot

game. This is true even if the size of the automata of one player is a polynomial of the size of the automata of the other player. The result for the zero-sum games gives an estimation for the general case.

Benhabib, J.

PD February 1987. **TI** Global Equilibrium Dynamics with Stationary Recursive Preferences. **AU** Benhabib, J.; Majumdar, M.; Nishimura, K. **AA** Benhabib: New York University. Majumdar: Cornell University. Nishimura: University of Southern California. **SR** New York University Economic Research Reports: RR 87-05; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 36. **PR** No Charge. **JE** 111, 022, 024. **KW** Capital Accumulation. Technology. Two-Sector Model. Pure Exchange.
AB In this paper we will study the global dynamics of capital accumulation for a two-sector model of technology which is not necessarily convex and where the preferences of an infinitely-lived agent are stationary but not additively separable. In the last section of the paper, we will also study the global dynamics of efficient allocations over time in a pure exchange model of two agents that have additively non-separable preferences.

TI Chaos: Significance, Mechanism, and Economic Applications. **AU** Baumol, William; Benhabib, Jess.

Bennett, Neil G.

PD October 1987. **TI** Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E. **AA** Bennett: Yale University. Blanc: Institute for Resource Development. Bloom: Columbia University. **SR** National Bureau of Economic Research Working Paper: 2416; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 841, 921, 212. **KW** Cohabitation. Family. Marriage. Divorce. Hazards Model. Duration Model. Sweden.
AB In recent years, the incidence of premarital cohabitation has increased dramatically in many countries of Western Europe and in the United States. As cohabitation becomes a more common experience, it is increasingly important to understand the links between cohabitation and other steps in the process of family formation and dissolution. We focus on the relationship between premarital cohabitation and subsequent marital stability, and analyze data from the 1981 Women in Sweden survey using a hazards model approach. Our results indicate that women who premaritally cohabit have almost 80 percent higher marital dissolution rates than those who do not cohabit. Women who cohabit for over three years prior to marriage have over 50 percent higher dissolution rates than women who cohabit for shorter durations. Last, cohabitors and non-cohabitors whose marriages have remained intact for eight years appear to have identical dissolution rates after that time. In addition, we provide evidence that strongly suggests a weaker commitment, on the part of those who cohabit premaritally, to the institution of marriage.

PD October 1987. **TI** Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E. **AA** Bennett: Yale University. Blanc: Westinghouse. Bloom: Columbia University. **SR** Columbia Department of Economics Working Paper: 366; Department of Economics, Columbia University, New York, NY 10027. **PG** 37. **PR** $5.00. **JE** 921. **KW** Cohabitation. Marriage. Divorce.
AB In recent years, the incidence of premarital cohabitation has increased dramatically in many countries of Western Europe and in the United States. As cohabitation becomes a more common experience, it is increasingly important to understand the links between cohabitation and other steps in the process of family formation and dissolution. We focus on the relationship between pre-marital cohabitation and subsequent marital stability, and analyze data from the 1981 Women in Sweden survey using a hazards model approach. Our results indicate that women who premaritally cohabit have almost 80 percent higher marital dissolution rates than those who do not cohabit. Women who cohabit for over three years prior to marriage have over 50 percent higher dissolution rates than women who cohabit for shorter durations. Last, cohabitors and non-cohabitors whose marriages have remained intact for eight years appear to have identical dissolution rates after that time. In addition, we provide evidence that strongly suggests a weaker commitment, on the part of those who cohabit premaritally, to the institution of marriage.

Benoit, Jean Pierre

PD December 1987. **TI** Crime, Punishment and the Redistribution of Wealth. **AU** Benoit, Jean Pierre; Osborne, Martin J. **AA** Benoit: Columbia University, Graduate School of Business. Osborne: McMaster University, Department of Economics. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-09; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 38. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 025, 916. **KW** Crime. Punishment. Wealth-Redistribution. Criminals.
AB Criminal activity can be controlled through punishment, which reduces the expected reward to crime, and through redistributive subsidies, which increase the opportunity cost of crime. Individuals may differ in the punishment-redistribution policies they prefer. In a formal model we study the dependence of these preferences on the individuals' characteristics. A political mechanism determines the policy adopted by society. We study the nature of this policy, and the resulting crime rate. We explain differences in the policies adopted across societies by the initial distribution and level of incomes, and the nature of the political mechanism.

Benson, Harold P.

TI An Algorithm for Indefinite Integer Quadratic Programming. **AU** Erenguc, S. Selcuk; Benson, Harold P.

TI Concave Integer Minimization Over a Compact, Convex Set. **AU** Erenguc, S. Selcuk; Benson, Harold P.

PD June 1987. **TI** An Algorithm for Concave Integer Minimization Over A Polyhedron. **AU** Benson, Harold P.; Erenguc, S. Selcuk. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 137; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611.

PG 18. **PR** No Charge. **JE** 213. **KW** Algorithm. Compact Polyhedron. Minimization Problems.
AB We present an algorithm for solving the problem of globally minimizing a concave function over the integers contained in a compact polyhedron. The objective function of this problem need not be separable or even analytically defined. To our knowledge, the algorithm is the first ever proposed for this problem. Among the major advantages of the algorithm are that no nonlinear computations or optimizations are required, and that it allows one to exploit the polyhedral nature of X. We discuss these and other advantages and disadvantages of the algorithm. A small numerical example is also included. The algorithm and the techniques that it uses offer important promise for solving concave, integer minimization problems over compact polyhedra.

PD June 1987. **TI** An Interactive Efficient Point Algorithm for Multiple Objective Linear Programming. **AU** Benson, Harold P.; Aksoy, Yasemin. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 136; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611. **PG** 24. **PR** No Charge. **JE** 511, 213. **KW** Algorithm. Linear Programming. Decision Theory.
AB In this paper we present a new interactive algorithm for the multiple objective linear programming problem (MOLP). In practical multiple objective linear programming applications, there is usually no need for the decision maker to consider solutions which are not efficient. Therefore, the interactive algorithm presented here searches only among efficient solutions and terminates with a solution that is guaranteed to be efficient. It does not require the decision maker to have a mathematical knowledge of the nature of efficient points. Furthermore, the algorithm requires no more sophistication in the responses of the decision maker than do many other existing interactive algorithms applicable to problem (MOLP) which do not necessarily generate efficient solutions, such as the well-known algorithm of Geoffrion, Dyer, and Feinberg. The algorithm also automatically corrects for errors in judgement that the decision maker may inadvertently commit in giving some of his responses. For these reasons, we feel that the algorithm offers significant promise for solving problem (MOLP) rapidly and in a satisfying manner to the decision maker.

Bentley, William R.

TI Hotelling's Theory, Enhancement, and the Taking of the Redwood National Park. **AU** Berck, Peter; Bentley, William R.

Berck, Peter

PD November 1987. **TI** Hotelling's Theory, Enhancement, and the Taking of the Redwood National Park. **AU** Berck, Peter; Bentley, William R. **AA** Berck: Department of Agricultural and Resource Economics, University of California at Berkeley. Bentley: Winrock, International. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 456; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 26p. **PR** $5.20. **JE** 721, 722. **KW** Hotelling's Theory. Redwood National Park. Elasticity. Timber Industry. Expectations.
AB We estimate a reduced form model of the redwood timber industry that is consistent with Hotelling's exhaustible resource theory. The consequences for this theory of various assumptions about the elasticity of expectations are derived. The estimated equations are used to test the hypotheses about expectations. We also use these equations to find the amount that owners of redwood not taken for the Redwood National Park benefitted from the park's establishment.

PD January 1988. **TI** Reconciling the Von Liebig and Differentiable Crop Production Functions. **AU** Berck, Peter; Helfand, Gloria E. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 455; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 24p. **PR** $4.80. **JE** 711, 712, 715. **KW** Von Liebig Production Function. Crop Yields. Agricultural Inputs.
AB Although econometricians usually assume crop yields smoothly respond to variations in inputs, there is agronomic literature that assumes the relationship is of a linear-response-and-plateau nature. On homogeneous plots, some agronomic experiments show that a von Liebig (fixed-proportions) production function best predicts yields for many crops (Lanzar and Paris; Grim; and Grim, Paris, and Williams). This production function assumes that a plant needs fixed relative proportions of various inputs in order to grow; if even one input is below its required proportion, it acts as a limiting nutrient on the plant's growth. For instance, if a plant needs water and nitrogen in a ratio of 2:1 and is receiving exactly 2 units of nitrogen and 1 of water, then giving the plant 3 units of water but only 1 of nitrogen will not increase growth; neither will adding 1.5 units of nitrogen but only 2 of water. In contrast, econometricians usually estimate responses for whole fields or farms (or even larger aggregates) and use functions (such as translog) that have positive elasticities of substitution.

Berger, Allen N.

PD December 1987. **TI** Why Random Walk Models of the Term Structure Are Hard to Reject. **AU** Berger, Allen N.; Craine, Roger. **AA** Berger: Board of Governors of the Federal Reserve System. Craine: University of California, Berkeley. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 1; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 313, 211, 212. **KW** Efficient Markets. Rational Expectations. Asymptotic Power. Random Walk.
AB Tests of random walk models of the term structure generally fail to reject the null hypothesis, while "direct tests" of the fair game-efficient markets hypothesis (FG-EM) generally reject the null. Random walk tests can be interpreted as FG-EM tests that add measurement errors to the forward rate revisions used in direct tests. Our empirical application is consistent with the literature; direct tests strongly reject the null, while random walk tests do not, despite using the same data and numbers of observations. The random walk measurement error is shown to reduce local asymptotic test power, which may explain this empirical puzzle.

Berkowitz, M. K.

PD January 1988. **TI** Compensation Schemes with Bankruptcy Considerations. **AU** Berkowitz, M. K.; Kotowitz, Y. **AA** Department of Economics, University of

Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8802; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 27. **PR** No Charge. **JE** 022. **KW** Tournaments. Supervision. Bankruptcy. Promotion. Contest. Moral Hazard.

AB The main purpose of this paper is to explain the prevalence of contests for job promotions within organizations in spite of the restrictive structure of these mechanisms and the fact that they do not utilize all available information. In doing so, we compare four schemes (output based piece rates, relative input based piece rates, tournaments with monetary prizes, and tournaments with promotional prizes) within an environment characterized by group production, risk neutrality and possible wealth constraints on the part of workers and supervisors. Although each scheme yields the socially optimal results, each will also require very different amounts of wealth from workers and supervisors in order to avoid potential bankruptcy and its concomitant moral hazard problems. We find that supervisory tournaments can significantly reduce the capital requirements for supervisors. As the capital requirements are potentially large and restrictive with the alternative mechanisms, an important reason is suggested for the prevalence of supervisory tournaments in spite of their statistical inefficiency and relative rigidity.

Bernanke, Ben

PD March 1988. **TI** Credit, Money and Aggregate Demand. **AU** Bernanke, Ben; Blinder, Alan. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 2534; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 023. **KW** Demand. Bonds. Loans. Substitutes. Money. Credit.

AB Standard models of aggregate demand treat money and credit asymmetrically; money is given a special status, while loans, bonds, and other debt instruments are lumped together in a "bond market" and suppressed by Walras' Law. This makes bank liabilities central to the monetary transmission mechanism, while giving no role to bank assets. We show how to modify a textbook IS-LM model so as to permit a more balanced treatment. As in Tobin (1969) and Brunner-Meltzer (1972), the key assumption is that loans and bonds are imperfect substitutes. In the modified model, credit supply and demand shocks have independent effects on aggregate demand; the nature of the monetary transmission mechanism is also somewhat different. The main policy implication is that the relative value of money and credit as policy indicators depends on the variances of shocks to money and credit demand. We present some evidence that money-demand shocks have become more important relative to credit-demand shocks during the 1980s.

Bernstein, Jeffrey

PD March 1987. **TI** Investment, Depreciation and Capital Utilization. **AU** Bernstein, Jeffrey I.; Nadiri, M. Ishaq. **AA** Bernstein: Carleton University. Nadiri: New York University. **SR** New York University Economic Research Reports: RR 87-08; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 40. **PR** No Charge. **JE** 522, 521, 511. **KW** Investment. Utilization. Capital Depreciation.

AB The purpose of this paper is to analyze the determinants of capital depreciation and utilization and their interdependence with investment decisions.

PD July 1987. **TI** An Examination of the Equilibrium Specification and Structure of Production for Canadian Telecommunications. **AA** Carleton University. **SR** New York University Economic Research Reports: RR 87-24; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 38. **PR** No Charge. **JE** 635. **KW** Telecommunications. Canada. Telephone.

AB Multiple output models of Canadian telecommunications production are estimated under different equilibrium specifications. A specification test is conducted between the short and long-run equilibrium models and the long-run equilibrium is rejected. In order to capture the nature of the disequilibrium a dynamic cost of adjustment model is estimated for Bell Canada. There are significant adjustment costs and it is estimated that for $1.00 of capital expenditures it costs the carrier an additional $0.30 to install the new capital into the production process. Returns to scale, productivity growth and price elasticities are estimated from the dynamic cost of adjustment model. In this context there are significant economies of scale, with returns to scale estimated to be 1.50. Scale economies appear to be robust across equilibrium specifications. The average annual productivity growth rate is estimated to be 1.32, which is greater than the estimates from long-run equilibrium models, and consistent with estimates for total Canadian manufacturing.

PD April 1988. **TI** Interindustry R&D Spillovers, Rates of Return and Production in High-Tech Industries. **AU** Bernstein, Jeffrey; Nadiri, M. Ishaq. **AA** Bernstein: Carleton University. Nadiri: NBER. **SR** National Bureau of Economic Research Working Paper: 2554; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 621, 631, 025. **KW** R&D. Technology. High-Tech.

AB This paper presents estimates of the productivity and factor bias effects of interindustry R&D spillovers for five high-tech industries. Each industry is distinguished as a separate spillover source. The industries are each affected by R&D spillovers and are themselves spillover sources. Thus a spillover network between the industries is estimated. Private and social rates of return to R&D capital are calculated. The private rates of return are generally greater than the returns to physical capital. In addition, the social rates of return are greater than the private rates. The results show that there are significant differences between industries as to their importance as sources of R&D spillovers.

Beron, Kurt

PD April 1988. **TI** A Structural Equation Model for Tax Compliance and Auditing. **AU** Beron, Kurt; Tauchen, Helen V.; Witte, Ann Dryden. **AA** Beron: University of Texas. Tauchen: University of North Carolina Chapel Hill. Witte: Wellesley College and NBER. **SR** National Bureau of Economic Research Working Paper: 2556; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 916, 323. **KW** Taxes. Audit. Tax Evasion. IRS.

AB In this paper, we estimate a three equation model for taxpayers' reported income and tax liability and for the probability of an audit. Our work differs from previous studies in that our dependent variables in the compliance equations are

taxpayer reports rather than a variable related to auditor estimates of noncompliance and in that we estimate a structural equation for audits. We find that audits stimulate compliance although the effect is not large and is not statistically significant for all groups. Audits are more effective at inducing accurate reporting of subtractions from income than of income. Reduced-form results suggest that IRS activities other than audits have significant compliance effects. Results for the sociodemographic variables are interesting and help to explain some seemingly incongruous findings in the literature. We find compliance to be higher, if anything, in areas with less educated and older taxpayers, a large proportion of households headed by females, and a mostly native born population.

Bhattachary, A.

PD 1987. **TI** A Multi-Sector Model of Employment, Migration and Development. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-12; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 823, 122. **KW** LDCs. Migration.

AB This paper develops and analyzes a model of LDC which systematically incorporates an Informal sector. The paper also provides new migration functions - functions which explain the available empirical evidence convincingly and have policy implications radically different from those of the Harris-Todaro type models. More importantly, the implications of the model presented in this paper are also seen to be directly opposed to the fundamental implications of the Lewis-type models.

Bhattacharya, P.

PD 1987. **TI** Aspects of Employment and Unemployment in a Model of the Developed and the Less Developed Economies. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-10; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 123. **KW** Developing Country. LDCs. Unemployment. Industrialization.

AB This paper first presents and analyzes a model of a developed economy (DC) which exhibits dualistic features in its industrial structure, especially as these relate to the problems of unemployment in such an economy. It is then shown that this model of DC, with minor additions and adjustments, can be generalized to apply to the working of a less developed economy (LDC) as well. This then enables us to compare and contrast the effects of changes in the world economy on our DC and LDC respectively. In particular, the consequences of the emergence of the so-called newly industrialising countries are seen in a new light.

Bick, Avi

PD October 1987. **TI** On Viable Diffusion Price Processes. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 449; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 32. **PR** $4.00. **JE** 313, 213. **KW** Stock Market. Stock Prices. Diffusion Processes.

AB The assumption that a stock price follows a specified diffusion process implies, in a simple equilibrium framework, that the representative individual must have a certain utility function which is identified in the paper. Not every diffusion process is viable i.e. can be "endogenized" to be a price process in such an equilibrium model. The paper provides necessary conditions for viability which imply that viable diffusion processes constitute a rather restricted family.

Blackwell, Michael

PD February 1988. **TI** Debt/Equity Swaps. **AU** Blackwell, Michael; Nocera, Simon. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/15; International Monetary Fund, Washington D.C. 20431. **PG** 38. **PR** No Charge. **JE** 432, 431, 433, 441. **KW** Debt Crisis. Debtor Nation. Debt Burden.

AB This paper describes the development of debt/equity swaps in the years following the emergence of the international debt crisis. It discusses some of the possible advantages and disadvantages offered by such swaps to three groups of participants -- the commercial banks, the investing companies, and the indebted countries. It also provides an analysis of how these swaps are treated in the balance of payments accounts of an indebted country and discusses their possible effects on that country's money supply, foreign exchange rate and economic growth. The paper concludes that debt/equity swaps can help to make a country's debt burden more manageable and can contribute to economic growth, but only to a limited extent.

Blanc, Ann Klimas

TI Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E.

TI Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E.

Blank, Rebecca M.

PD October 1987. **TI** Disaggregating the Effect of the Business Cycle on the Distribution of Income. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 2397; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 131, 921, 841, 824, 111. **KW** Business Cycle. Income Distribution. Growth. Wages. Transfer Income.

AB This paper disaggregates total household income into a complete set of components and studies the comparative cyclicality of these components to economic growth. Comparisons of the relative responsiveness to GNP growth of wages, hours of work, and total labor market income of heads and wives, and transfer income sources of households are made across income, race, sex and age groups. This provides a picture of the channels by which economic growth produces income change. Significant differences in elasticities are found to exist both between different income components and between different population groups for the same components. The narrowing income distribution in times of high growth occurs primarily because of large elasticities on head's labor market income among the poor. Both wages and hours show evidence of cyclicality. The labor market earnings of women -- both wives and household heads -- are far less responsive to growth. Cyclicality in transfer income varies enormously between population groups and by type of transfer.

PD October 1987. **TI** Why are Wages Cyclical in the 1970's? **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 2396; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 131, 824, 821. **KW** Wages. Business Cycles. Labor Market. Cyclicality.

AB This paper investigates cyclicality in real wages between 1969 and 1982, using 14 years of data from the Panel Survey of Income Dynamics. First, it investigates the extent to which movements in and out of the labor market created apparent wage cyclicality. Second, it investigates whether cyclical movements of workers between heterogeneous wage sectors within the labor market created cyclicality. Little evidence of the first effect is found. The second effect is much more important, and cyclicality clearly occurs in the movement of workers between different labor market sectors. However, sector selection is not correlated with wage determination. Thus, individual wage change estimates of cyclicality need to control for sector location, but need not account for sector selection. The third conclusion of the paper is that cyclicality is present in real wages even within sectors over this time period, and is the result of both cyclicality in overall wage levels (cyclicality in the constant term in wage equations), as well as in the coefficients associated with particular worker characteristics.

Blinder, Alan

TI Credit, Money and Aggregate Demand. **AU** Bernanke, Ben; Blinder, Alan.

Bliss, Christopher

PD July 1987. **TI** Exchange Rate Protection and Exchange Rate Conflict. **AU** Bliss, Christopher; Joshi, Vijay. **AA** Bliss: Nuffield College, Oxford. Joshi: Merton College, Oxford. **SR** Centre for Economic Policy Research Discussion Paper: 195; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 432, 421. **KW** Exchange Rates. Policy Coordination. Protection. Saving Rate. Germany. Japan.

AB The paper investigates a model of "exchange rate protection" by two countries. Either or both countries may protect their tradable sectors by maintaining undervalued exchange rates. The mechanism of protection considered involves a country increasing its national saving rate and exporting capital. The resulting depreciation of the real exchange rate boosts the tradable sector. The world equilibrium that will result if both countries pursue this policy is shown to be inefficient. In a more general case countries may wish to adopt "negative exchange rate protection". The simple model may throw light on the experiences of Germany and Japan during periods when their exchange rates have apparently been undervalued and the more general model may be relevant to the United States which until recently has had an overvalued exchange rate.

Blomstrom, Magnus

PD January 1987. **TI** Efficiency Differences Between Foreign and Domestic Firms in Mexico. **AA** New York University and National Bureau of Economic Research. **SR** New York University Economic Research Reports: RR 87-01; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 12. **PR** No Charge. **JE** 631, 442. **KW** Efficiency. Manufacturing. Mexico.

AB This paper examines the efficiency differences between foreign and domestic firms in Mexican manufacturing industries. Controlling for differences in capital intensity, labor quality, scale and concentration, we find that foreign affiliates are significantly more efficient in their use of labor than are their Mexican counterparts.

Bloom, David

TI Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E.

TI Commitment and the Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability. **AU** Bennett, Neil G.; Blanc, Ann Klimas; Bloom, David E.

PD November 1987. **TI** Economic Development and the Timing and Components of Population Growth. **AU** Bloom, David; Freeman, Richard B. **AA** Freeman: Harvard University. Bloom: Columbia University. **SR** Columbia Department of Economics Working Paper: 371; Department of Economics, Columbia University, New York, NY 10027. **PG** 43. **PR** $5.00. **JE** 121, 111, 226. **KW** Developing Countries. Economic Development. Population Growth.

AB This paper examines the relationship between population growth and economic growth in developing countries from 1965 to 1985. Our results indicate that developing countries were able to shift their labor force from low-productivity agriculture to the higher-productivity industry and service sectors, and to increase productivity within those sectors, despite the rapid growth of their populations. We also find that at given rates of population growth, income growth is related to the time path of population growth and that population growth due to high birth and death rates is associated with slower income growth than population growth due to relatively low birth and death rates. Hence, the timing and components of population growth are important elements in the process of economic development.

PD November 1987. **TI** The Labor Market Consequences of Generational Crowding. **AU** Bloom, David; Freeman, Richard B.; Korenman, Sanders D. **AA** Freeman and Korenman: Harvard University. Bloom: Columbia University. **SR** Columbia Department of Economics Working Paper: 370; Department of Economics, Columbia University, New York, NY 10027. **PG** 47. **PR** $5.00. **JE** 824, 826, 813. **KW** Labor Market. Young Workers. Age Cohorts. Baby Boom.

AB This paper attempts to distinguish between two alternative views of the labor market problems faced by young workers in a number of industrialized countries in the 1970s and early 1980s. The first view is that the low relative earnings and high unemployment rates experienced by these workers were largely "age" related. Although this view carries the implication that the problems will disappear for recent youth cohorts as they grow older, it also implies that the problems will be "handed over" to successive waves of youth cohorts as they enter the labor market. The second view is that the labor market problems of recent youth cohorts are a consequence of their large size. This view has very different implications since

generational crowding can permanently or temporarily depress the economic position of large cohorts but need not have an adverse effect on later waves of smaller youth cohorts.

Blundell, R. W.

TI Modelling Energy Demand in the UK Using Micro-Data. **AU** Baker, P.; Blundell, RW; Micklewright, J.

TI Modelling Energy Demand and Household Welfare Using Micro-Data. **AU** Baker, P.; Blundell, R. W.; Micklewright, J.

Bohrer, Robert

TI Sampling Performance of Some Joint One-Sided Preliminary Test Estimators Under Squared Error Loss. **AU** Yancey, T. A.; Judge, G. G.; Bohrer, Robert.

Bolton, Patrick

TI An 'Incomplete Contract' Approach to Bankruptcy and the Financial Structure of the Firm. **AU** Aghion, Philippe; Bolton, Patrick.

Boothe, Paul

PD January 1988. **TI** Alternative Tests of International Asset Substitutability. **AU** Boothe, Paul; Glassman, Debra. **AA** Boothe: University of Alberta. Glassman: University of California at Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 463; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 34. **PR** $2.50; checks payable to University of California Regents. **JE** 431, 441. **KW** Asset Substitutability. Bond Markets. Principal Components Analysis.

AB In this paper we utilize recent advances in principal components analysis to examine the question of international asset substitutability for a small open economy. Specifically, we are interested in whether a small open economy can have independent interest rates all along the term structure. Based on Canadian and United States government bond yield data, we find strong evidence of high substitutability between the two countries' bonds of all maturities.

Bordo, Michael

PD April 1988. **TI** The Contribution of "A Monetary History of the United States: 1867 to 1960" to Monetary History. **AA** Carnegie-Mellon University. **SR** National Bureau of Economic Research Working Paper: 2549; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 042, 311. **KW** Monetary History. Monetary Policy.

AB This paper assesses the role of Friedman and Schwartz's A Monetary History of the United States: 1867 to 1960 as a progenitor of research in monetary history. The paper critically surveys the literature on three major themes in the book: monetary disturbances; the domestic monetary framework and monetary policy: and monetary standards. The book's unique portrayal of the historical circumstances of monetary disturbances and of alternative institutional arrangements serves as the closest thing to a laboratory experiment for the monetary economist. Historical study has become an important tool of modern macroeconomic research.

Bouter, Arie C.

PD January 1988. **TI** The Residents of an Economy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/9; International Monetary Fund, Washington D.C. 20431. **PG** 16. **PR** No Charge. **JE** 220. **KW** GNP. Residents. Territory. Demographics.

AB Based on jurisdictional grounds, this paper suggests that for statistical, analytical, and policy purposes, the residents of a given economy can best be defined in terms of their presence in the territory of that economy. The paper recommends that this concept, which is underlying the definitions of general government, individuals, and enterprises in the 1968 version of the United Nations' A System of National Accounts and the 1977 version of the International Monetary Fund's Balance of Payments Manual, should continue to be used for measuring gross domestic and gross national product as well as international transactions.

Braid, Ralph M.

PD September 1987. **TI** Efficiency-Enhancing Collusion in Spatial Product Differentiation. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 364; Department of Economics, Columbia University, New York, NY 10027. **PG** 12. **PR** $5.00. **JE** 022, 024. **KW** Collusion. Product Differentiation. Efficiency.

AB This paper shows that collusion between two firms that produce similar products can enhance efficiency, in a simple model of spatial product differentiation. This happens if the separation between the firms (the separation of their products in characteristics space) is small relative to the separations between other adjacent firms. The efficiency gain results because collusion decreases the unevenness of prices and the consequent distortion of consumer product choice.

Brams, Steven

PD January 1987. **TI** Is Nuclear Deterrence Rational, and Will Star Wars Help? **AU** Brams, Steven; Kilgour, D. Marc. **AA** Brams: New York University. Kilgour: Wilfrid Laurier University. **SR** New York University Economic Policy Papers: PP 46; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 18. **PR** No Charge. **JE** 114, 026. **KW** Nuclear War. Deterrance. Star Wars.

AB Nuclear deterrence is the cornerstone of the national-security policies of not only the superpowers but other nations as well. By threatening untoward action against an opponent who initiates conflict, even at great potential cost to oneself, one seeks to deter the opponent from committing aggression in the first place.

PD May 1987. **TI** Are the Two Houses of Congress Really Equal? **AA** New York University. **SR** New York University Economic Research Reports: RR 87-12; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 26. **PR** No Charge. **JE** 916, 025. **KW** Congress. Senate. House of Representatives. United States Government.

AB In Federalist Nos. 63 and 58, Madison argued that the House and Senate would be "co-equal branches" (Rossiter, 1961, p. 388; henceforth, only page references will be given to this edition of The Federalist Papers) but that the House would have "no small advantage" (p. 358); Hamilton echoed this sentiment in No. 66. In this paper I shall show that the

apparent premonitions of Madison and Hamilton about the greater power of the House are borne out by the application of the Banzhaf voting power index to the federal system comprising the House, Senate, and President in the passage of ordinary legislation, and the House and Senate in the proposal of constitutional amendments.

PD December 1987. **TI** Does Approval Voting Elect the Lowest Common Denominator? **AU** Brams, Steven; Fishburn, Peter C. **AA** Brams: New York University. Fishburn: AT&T Bell Laboratories. **SR** New York University Economic Research Reports: RR 87-45; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 19. **PR** No Charge. **JE** 025. **KW** Approval Voting. Voters. Voting. Candidates. Social Choice.

AB Under approval voting (AV), candidates may win not because they are the first choices of many voters but rather because they are lower-ranked choices who are still acceptable and thereby garner approval votes. To test whether such lowest common denominators are commonly elected, AV ballot data from ten recent elections of The Institute of Management Sciences (TIMS) and the American Statistical Association (ASA) were examined. In the three TIMS elections and six of the seven ASA elections, the winners were "AV-dominant" -- they won at least as many votes as losers both from voters who approved of relatively few candidates ("narrow" voters) and voters who approved of relatively many candidates ("wide" voters). Even in the one ASA election in which the winner was not AV-dominant, this person won principally because of overwhelming support from narrow voters, suggesting that AV tends not to elect bland candidates who benefit simply from the lukewarm support of wide voters.

Brandenburger, Adam

PD February 1988. **TI** Common Knowledge of Summary Statistics. **AU** Brandenburger, Adam; Geanakoplos, John. **AA** Brandenburger: Harvard Business School. Geanakoplos: Yale. **SR** Yale Cowles Foundation Discussion Paper: 864; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PR** $2.00. **JE** 213, 025. **KW** Common Knowledge. Public Opinion. Group Behavior.

AB Consider a group of people who are asked to offer their opinions on some issue. "Business confidence" surveys are an example: groups of businessmen are often asked for their predictions of economic indicators such as growth or inflation rates. Each member of the group makes a prediction based on his or her private information, and the average prediction is then publicly announced. If the members of the group are then allowed to revise their opinions, based on whatever information they glean from the public announcement, is there any tendency for the opinions in the group to converge on a common, consensus opinion? In this note we show that under certain conditions the answer to this question is yes.

Brenner, Menachem

PD October 1987. **TI** A Simple Formula to Compute the Implied Standard Deviation. **AU** Brenner, Menachem; Subrahmanyam, Marti G. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 446; New York University Salomon Brothers Center for the Study of Financial Institutions, 90 Trinity Place, New York, NY 10006. **PG** 9. **PR** $4.00. **JE** 213, 313. **KW** Option Pricing. Volatility. Asset Pricing.

AB One of the most widely used applications of the Black-Scholes (BS) option pricing model is the estimation of the volatility or standard deviation of the rate of return on the underlying asset using the market prices of the options and the asset. The first published paper dealing with these estimates, also called the implied standard deviation (ISD), was by Latane and Rendleman. The ISD is the estimate of the volatility which perfectly explains the option price, given all other variables, including the price of the underlying asset in the context of the BS model. To reduce sampling error in their estimates, Latane and Rendleman propose a weighting scheme that gives more weight to at-the-money, longer maturity options.

PD October 1987. **TI** Arbitrage Opportunities in the Nikkei Spot and Futures Markets. **AU** Brenner, Menachem; Subrahmanyam, Marti G. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 447; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 40. **PR** $4.00. **JE** 441, 313. **KW** Program Trading. Futures Market. Stock Market. Japan.

AB This study examines the relationship between the prices of Japanese stocks traded on the Tokyo Stock Exchange (TSE) as reflected in the Nikkei stock index and the prices of the Nikkei futures contract traded on the Singapore International Monetary Exchange (SIMEX). The important variables affecting this relationship are the dividend stream, the short term interest rate (the Gensaki rate) and transactions costs. It is observed that, in the one year since the Nikkei futures contract started trading in September 1986, there are several cases of mispricing, even after accounting for transactions costs. It is interesting to note that discounts rather than premia dominate the sample. These results are compared with those from the United States markets in the first year of trading to draw some general conclusions about the efficiency of stock index futures markets and the implications for program trading.

Brown, Stephen J.

PD January 1988. **TI** Eigenvalue Tests for the Number of Factors. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 453; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 23. **PR** $4.00. **JE** 313. **KW** Eigenvalues. Factors. Security Returns.

AB Recent empirical evidence based on the analysis of eigenvalues seems to indicate that only one factor is responsible for security returns. We find such evidence is consistent with an economy where there are in fact k "equally important" factors; eigenvalue analysis in the context of such an economy will lead an investigator to infer that the one "factor" is the return on an equally weighted market index. This false inference can lead to significant pricing errors for such an economy. These results question the utility of eigenvalue based procedures for determining the number of factors.

Bruno, Michael

PD October 1987. **TI** Israel's Stabilization: A Two-Year Review. **AU** Bruno, Michael; Piterman, Sylvia. **AA** Bruno: Bank of Israel. Piterman: Ramat Eshkol, ISRAEL. **SR** National Bureau of Economic Research Working Paper: 2398; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138.

PR $2.00. **JE** 133, 134, 321, 322, 323. **KW** Stabilization Program. Israel. Inflation. Unemployment Government Deficit. Wage Policy. Tax Reform. Budget Balance.

AB The comprehensive stabilization program that Israel launched in July 1985 has brought about a dramatic reduction in inflation at no visible unemployment cost while improving the external financial position of the country. The program's success lies in a drastic cut in the government deficit but was also due to the appropriate initial synchronization of the most important nominal variables. In spite of the continued success of the stabilization program over the last two years, many problems remain. Excessive wage demands and a private consumption boom, in part the result of relative stability, have so far prevented the reduction of inflation to OECD rates. The stabilization process has also unearthed many structural problems of which an oversize public sector stands out in particular. Further reduction of inflation depends on a flexible wage policy and continued budget balance. A further cut in government expenditure and abstention from debt finance are also the key to the success of the capital market and tax reforms. These and other structural reforms will determine whether the recent upsurge in economic activity can be turned into a sustained growth process.

PD October 1987. **TI** Seigniorage, Operating Rules and the High Inflation Trap. **AU** Bruno, Michael; Fischer, Stanley. **AA** Bruno: Bank of Israel. Fischer: Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2413; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 134, 023, 133, 321. **KW** Seigniorage. Money. Government Deficit. Inflation. Rational Expectations. Bond Financing. Stabilization. Monetary Policy. Fiscal Policy.

AB A given amount of seigniorage revenue can be collected at either a high or a low rate of inflation. Thus there may be two equilibria when a government finances its deficit by printing money -- implying that an economy may be stuck in a high inflation equilibrium when, with the same fiscal policy, it could be at a lower inflation rate. We show that under rational expectations the high inflation equilibrium is stable and the low inflation equilibrium unstable; under adaptive expectations or lagged adjustment of money balances with rational expectations, it may be the low inflation equilibrium that is stable. Extending the model to allow for bond as well as money financing of deficits, we show that one of the equilibria disappears if the government sets a nominal anchor for the economy, for instance by fixing the growth rate of money. The dual equilibria and their stability characteristics remain if the government fixes the real interest rate. The existence of dual equilibria is thus a result of the operating rules the government chooses for monetary and fiscal policy.

Buiter, Willem H.

PD March 1988. **TI** Can Public Spending Cuts Be Inflationary? **AA** London School of Economics. **SR** National Bureau of Economic Research Working Paper: 2528; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 134, 322. **KW** Seigniorage. Government Spending. Budget. Deficits. Inflation.

AB The paper uses a "demand for seigniorage revenue" and "supply of seigniorage revenue" approach to determine the consequences of cuts in public spending for the rate of inflation. Monetary financing is viewed as the residual financing mode, with tax rates and public debt-GDP ratios held constant. In a small open economy with an exogenous real interest rate, cuts in public consumption spending will lower the inflation rate in the revenue-efficient region of the seigniorage Laffer curve. When there are cuts in public sector capital formation, the inflation rate can rise even in the seigniorage-efficient region. This will be the case if the expenditure effect (which reduces the deficit one-for-one) is more than offset by direct and indirect revenue effects (which raise the deficit) and by an adverse money demand effect. When the real interest rate is endogenous, the scope for inflation-increasing public spending cuts is enhanced.

Bull, Clive

PD July 1987. **TI** Market Structure and Optimal Management Organizations. **AU** Bull, Clive; Ordover, Janusz. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-28; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 27. **PR** No Charge. **JE** 512, 511. **KW** Managers. Decision Theory. Management. Organization.

AB Managers essentially perform two conceptually distinct functions within a firm. Bureaucratic functions involve coordination and record keeping, e.g. ensuring that components arrive on-site at the right time, that the payroll is met on time, and that contracts with customers are recorded and monitored. Strategic functions involve making decisions such as whether to launch a new product, whether to invest in new plant, or whether to make an acquisition or undertake a divestiture. It is this latter function that is the subject of this paper. Thus, the management of the firm is modelled here as a decision-making organization. Given this view, one would like to know how the owner(s) of a firm would structure management; will the managers be organized hierarchically; what decision-making procedures and rules will be used for the purposes of reaching decisions; and how many managers will be hired to perform these decision-making tasks? Here we provide some answers to these questions, albeit in the context of a rather simple model.

PD September 1987. **TI** Asymmetric Tournaments, Equal Opportunity Laws and Affirmative Action: Some Experimental Results. **AU** Bull, Clive; Schotter, Andrew; Weigelt, Keith. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-33; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 54. **PR** No Charge. **JE** 215, 022, 024. **KW** Promotions. Hierarchy. Rank Order Tournament. Equal Opportunity Laws.

AB The results of our experiments, if replicable, hold significant import for the theory of tournaments and social policies based upon it. For instance, our results indicate that the imposition of equal opportunity laws (at least our laboratory version of them) significantly increases the effort levels of all types of agents in an economic tournament. It also increases the probability of advancement (i.e. "probability of winning") and equilibrium payoff of previously disadvantaged agents. In addition, if the imposition of the law leaves M and m unchanged, these laws increase the profit of tournament organizers (corporations) by causing all tournament participants to exert more effort. Our results are less clear concerning affirmative action programs.

Buser, Stephen A.

PD March 1988. **TI** On the Determinants of the Value of Call Options on Default-Free Bonds. **AU** Buser, Stephen A.; Hendershott, Patric H.; Sanders, Anthony B. **AA** The Ohio State University. **SR** National Bureau of Economic Research Working Paper: 2529; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 311. **KW** Bonds. Call Options. Term Structure.

AB Models of interest-dependent claims that imply similar term structures and levels of interest rate volatility also produce similar estimates of bond option values. This result is established for simple option forms with known closed-form solutions as well as for more complex options that require numerical methods for evaluation. The finding is confirmed for a wide range of economic conditions, and it is robust with respect to the number and nature of factors that generate interest-rate movements.

Cagan, Philip

PD January 1988. **TI** Money-Income Causality--A Critical Review of Literature Since the Monetary History. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 373; Department of Economics, Columbia University, New York, NY 10027. **PG** 48. **PR** $5.00. **JE** 311, 133, 023. **KW** Monetary Policy. Monetary Theory. Money.

AB In the past three decades monetary research established a greater understanding and recognition of the role of money -- a noteworthy achievement to which Anna Schwartz has been a major contributor. Earlier, in the 1930s, 40s, and 50s, the role of money had slipped far down the list of variables considered important in economic analysis and business commentary. Then in the 1960s opinion began to turn. With Friedman and Schwartz' Monetary History (1963) leading the way, an outpouring of studies put new life into the traditional view of money as paramount. With the turn of opinion and the experience of the inflationary 1970s, few today any longer doubt the primary importance of money. Monetary economics continues to thrive on controversy, to be sure, but the difference is unmistakable: now econometric models of the economy accord a central role to monetary variables, and business commentaries, far from ignoring monetary policy, focus on it. And the earlier barren disputes between Keynesians and quantity theorists graduated into more fruitful discussions about the proper conduct of monetary policy.

Caillaud, B.

PD December 4, 1987. **TI** Government Intervention in Production and Incentives Theory: A Review of Recent Contributions. **AU** Caillaud, B.; Guesnerie, R.; Rey, P.; Tirole, J. **AA** Caillaud and Tirole: Massachusetts Institute of Technology. Guesnerie: EHESS, Paris. Rey: ENSAE, Paris. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 472; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 59. **PR** No Charge. **JE** 026, 611, 612. **KW** Asymmetric Information. Regulation. Public Firms. Incentives. Auditing.

AB This paper reviews the recent literature on regulation under asymmetric information. If first develops the conceptual framework and offers a reminder of the techniques used in the field. It then applies the framework and techniques to a variety of situations, with or without the use of accounting data. Next, the analysis is extended to dynamics with or without commitment. The paper concludes with desirable directions for research.

PD January 1988. **TI** Noisy Observation in Adverse Selection Models. **AU** Caillaud, Bernard; Guesnerie, Ragu; Rey, Patrick. **AA** Caillaud: Massachusetts Institute of Technology. Guesnerie: EHESS. Rey: INSEE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 8802; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 53. **PR** No Charge. **JE** 022, 024. **KW** Adverse Selection. Moral Hazard. Noisy Observation. Principal-Agent Model.

AB In pure moral hazard problems, moral hazard is not really effective when agents are risk-neutral; this paper studies the generalization of this property to cases mixing adverse selection and moral hazard. It first provides conditions under which a single reward schedule, based on observable variables, implements (at least approximatively) the same outcomes (as a function of the agent's private characteristics) as in the case of perfectly observable agent's actions. It then analyzes the potential interest of families of simple schedules in the case where one of the agent's actions is observable and can thus serve as a natural index for such families.

Campbell, Donald E.

PD November 1987. **TI** Social Choice Theory and Welfare Economics: I. Quasitransitive Social Preference. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8722; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 54. **PR** No Charge. **JE** 024, 025, 021. **KW** Continuity. Pareto Principle. Quasitransitivity. Social Choice. Welfare. Oligarchy.

AB There are two papers herein: The first of these, "Generalized Oligarchies", examines the implications of Arrow's independent axiom, nonimposition, and quasitransitivity of social preference in the context of an unrestricted domain. The main result is employed as a lemma in the second paper, which assumes the classical restricted domain of welfare economics. It is shown that Pareto optimality is implied by Arrow's independence axiom, nonimposition, quasitransitivity and continuity of social preference, and an extremely mild equity criterion.

PD February 1988. **TI** Social Choice Theory and Welfare Economics: II. Continuity and the Independence Axiom. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8805; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 44. **PR** No Charge. **JE** 025, 024. **KW** Social Choice. Welfare. Continuity. Independence. Social Preference.

AB There are three papers herein. Each assumes an unrestricted domain and continuity of social preference; the first two papers employ completeness and transitivity of social preference and prove that Arrow's independence axiom holds if and only if the social welfare function is constant or completely dictatorial, first for finite and then for infinite societies. The third paper allows intransitive social indifference. It proves that the Pareto rule is the only social welfare function satisfying the independence axiom and a minimal responsiveness criterion,

and which also allows each person's preferences to have a nonperverse influence for at least one pair of alternatives in at least one situation.

Campbell, John Y.

PD February 1988. **TI** Stock Prices, Earnings and Expected Dividends. **AU** Campbell, John Y.; Shiller, Robert J. **AA** Campbell: Princeton University. Shiller: Yale University. **SR** National Bureau of Economic Research Working Paper: 2511; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313. **KW** Stock Market. Dividends. Earnings. Stock Prices. VAR. Returns. Vector Autoregression.

AB This paper presents estimates indicating that, for aggregate United States stock market data 1871-1986, a long historical average of real earnings is a good predictor of the present value of future real dividends. This is true even when the information contained in stock prices is taken into account. We estimate that for each year the optimal forecast of the present value of future real dividends is roughly a weighted average of moving average earnings and current real price, with between 2/3 and 3/4 of the weight on the earnings measure. This means that simple present value models of stock prices can be strongly rejected. We use a vector autoregressive approach which enables us to compute the implications of this for the behavior of stock prices and returns. We estimate that log dividend-price ratios are more variable than, and virtually uncorrelated with, their theoretical counterparts given the present value models. Annual returns on stocks are quite highly correlated with their theoretical counterparts, but are two to four times as variable.

Canzoneri, Matthew

TI Policy Interdependence: Does Strategic Behavior Pay? An Empirical Investigation Using the Liverpool World Model. **AU** Minford, Patrick; Canzoneri, Matthew.

Card, David

PD April 1988. **TI** Strikes and Wages: A Test of a Signalling Model. **AA** Princeton University. **SR** National Bureau of Economic Research Working Paper: 2550; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 833, 832, 831. **KW** Labor Dispute. Labor Strike. Unions. Unemployment.

AB This paper describes a simple model of labor disputes based on the hypothesis that unions use strikes to infer the level of profitability of the firm. The implications of the model are then tested using data on wage outcomes, strike probabilities, and strike durations for a large sample of collective bargaining agreements. Negotiated wages are found to depend negatively on regional unemployment rates and positively on industry-specific selling prices. Contrary to the basic premis of the model, however, there is no evidence of a systematic relation between wages and strike outcomes. Increases in unemployment are found to decrease the probability of strikes, while increases in industry selling prices increase the probability of disputes. Strike durations are only weakly related to unemployment and industry prices, but are negatively correlated with industry output.

Carlin, W.

PD 1987. **TI** The Policy Debate about Profitability in West Germany 1950-73. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-28; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 122. **KW** Profits. West Germany.

PD 1987. **TI** Economic Reconstruction in W. Germany 1945-55: The Displacement of "Vegetative Control". **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-09; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 122.

Carter, Grace M.

TI Managing for Survival: How Successful Academic Medical Centers Cope with Harsh Environments. **AU** Williams, Albert P.; Carter, Grace M.; Hammons, Glenn T.; Pointer, Dennis.

Case, Karl E.

PD September 1987. **TI** Prices of Single Family Homes Since 1970; New Indexes for Four Cities. **AU** Case, Karl E.; Shiller, Robert J. **AA** Case: Wellesley College. Shiller: Yale University. **SR** National Bureau of Economic Research Working Paper: 2393; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 932. **KW** Housing Prices. Home Prices. Real Estate. Weighted Repeat Sales Method.

AB This paper uses data on nearly a million homes sold in four metropolitan areas -- Atlanta, Chicago, Dallas and San Francisco -- to construct quarterly indexes of existing home prices between 1970 and 1986. We propose and apply a new method of constructing such indexes which we call the weighted repeat sales method (WRS). We believe the results give an accurate picture of the actual rate of appreciation in home prices in the four cities. The paper explains the construction of the index, discusses the results and compares them with the National Association of Realtors data on the median price of existing single family homes for the period 1981-1986.

Catephores, G.

PD 1987. **TI** Good Poetry, Bad Economics: Ezra Pound's Programmes. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-19; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 011.

Catsambas, Thanos

PD February 1988. **TI** Distributional Implications of Government Tax and Expenditure Policies: Issues Problems and Methodology. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/19; International Monetary Fund, Washington D.C. 20431. **PG** 23. **PR** No Charge. **JE** 322, 323, 911, 921. **KW** Tax. Public Expenditure. Poverty. Welfare. Benefits. Transfers.

AB This paper examines the methodological issues arising in the measurement of the distributional impact of tax and expenditure policies, with emphasis on the problems related to the measurement of the impact of adjustment programs on the

welfare of the poor. Both conceptual and empirical considerations suggest that public expenditures are a more potent instrument for distributional purposes than taxes but are also more difficult to analyze and evaluate. The paper concludes that more research is needed toward a better measurement of expenditure benefits.

Chalfant, James A.

PD November 1987. **TI** Estimation and Testing in Demand Systems with Concavity Constraints. **AU** Chalfant, James A.; White, Kenneth J. **AA** Chalfant: Department of Agricultural and Resource Economics, University of California at Berkeley. White: University of British Columbia. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 454; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 21p. **PR** $4.20. **JE** 211, 212. **KW** Demand Systems. Concavity Constraints. Monte Carlo Integration. Bayesian Inferences.

AB A method for imposing or testing curvature restrictions in demand systems is suggested using Bayesian inference and inequality constrained estimation. The approach makes use of Monte Carlo integration and the approach suggested by Geweke (1986). The result is an inequality constrained estimate of the parameter vector for a demand system, plus an estimate of the probability that the inequality restrictions hold. Application to the United States manufacturing data of Berndt and Wood using the translog cost function illustrates the method.

Chalkley, Martin

PD April 1987. **TI** Employment, Wage Choice and Job Search: A Model of Monopsony Wages. **AA** University of British Columbia. **SR** University of British Columbia Department of Economics Discussion Paper: 87-16; Department of Economics, University of British Columbia #997 - 1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 35. **PR** $0.20 per page Canadian to other than educational institutions. **JE** 821, 824. **KW** Wages. Job Search. Unemployment. Labor Market. Search Theory. Bootstraps Equilibria.

AB This paper considers the determination of wages in an environment of job search where firms employ numerous individuals and benefit from team production. It is argued that in these circumstances monopsonistic wage determination is reasonable. It is shown using theoretical and numerical analysis that monopsonistically determined wages may display perverse comparative statics properties. Given the renewed interest in search theory as a foundation to macroeconomic models these results suggest the possibility of explaining 'bootstraps' equilibria as the consequences of profit maximizing wage choices in environments with imperfectly coordinated trading.

PD May 1987. **TI** Job Search, Optimal Vacancy Announcements and the Relationship between Unemployment and Vacancies. **AA** University of British Columbia. **SR** University of British Columbia Department of Economics Discussion Paper: 87-15; Department of Economics, University of British Columbia #997 - 1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 33. **PR** $0.20 per page Canadian to other than educational institutions. **JE** 821, 824. **KW** Labor Market. Search Theory. Specialization. Employment.

AB This paper considers the nature of a firm's otimal vacancy announcements in an environment characterized by job search. In contrast to existing approaches to vacancies in a search environment the model developed considers firms employing numerous individuals and benefitting from gains to specialization. The model is applied to a consideration of the relationship between vacancies and unemployment with which it is shown to be consistent. The question of whether data on unemployment and vacancies can be used to distinguish between demand and supply shocks is then addressed and the value of a theoretical foundation to empirical analysis is demonstrated.

PD May 1987. **TI** Choice Under Endogeous Uncertainty: A Result and Applications. **AA** Department of Economics, University of British Columbia. **SR** University of British Columbia Department of Economics Discussion Paper: 87-17; Department of Economics, University of British Columbia #997 - 1873 East Mall, Vancouver, B.C. CANADA V6T 1W5. **PG** 20. **PR** $0.20 per page Canadian to other than educational institutions. **JE** 025, 026, 511. **KW** Choice. Uncertainty. Decision Making.

AB This paper considers the general problem of optimising behavior in an uncertain environment when the probability distribution of outcomes is partly determined by the decision variable. A set of sufficient conditions for the unambiguous signing of important comparative statics results is derived. These conditions are applied to two economic models. The first is drawn from the Industrial Organization literature and illustrates how our conditions may be satisfied when the interaction of choice and uncertainty is complex. The second example drawn from the analysis of human capital illustrates how the conditions may guide the modeling of the relationship between choice and uncertainty.

Champsaur, P.

PD January 1988. **TI** Existence of Price Equilibrium in a Differentiated Industry. **AU** Champsaur, P.; Rochet, J. C. **AA** Champsaur: Direction de la Prevision. Rochet: ENSAE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 8801; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 32. **PR** No Charge. **JE** 022, 611. **KW** Price Competition. Differentiated Products. Natural Oligopolies.

AB In horizontal differentiation models a la Hotelling, price equilibria often fail to exist. On the other hand, in vertical differentiation models a la Mussa-Rosen, the optimal strategy of a monopolist sometimes involves "bunching" different consumers on the same qualities. We bring to light an interesting relation between these apparently disconnected phenomena. In a unifying model that allows us to deal with both types of differentiation, we show that the very conditions that exclude bunching in the monopolist's optimal strategy, also give a sufficient condition for all firms to make a positive profit at equilibrium, thus excluding "natural oligopolies" a la Shaked-Sutton.

Chatila, Imad

PD November 1987. **TI** Exchange Rates, Reserves Held by Commercial Banks and the Internal Public Debt Lebanon: 1980-1985, The Time Series Evidence. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8741; Department of Economics, University of Southern California,

University Park, Los Angeles, CA 90089-0152. **PG** 13. **PR** No Charge. **JE** 322, 431, 312. **KW** Public Debt. Lebanon. Vector Autoregression. Causality.

AB In this paper we analyze the relationship among the internal public debt, the exchange rates, and the reserves held by the commercial banks in Lebanon for the period 1980-1985. The analysis is carried out by fitting a trivariate vector-autoregression to the data at hand and important causality results are obtained for the Lebanese case. The vector moving average representation and decompositions of the variances are also reported.

Cheng, Susan T.

PD November 1987. **TI** Pricing Multi-Asset Options with Stochastic Interest Rates. **AA** Columbia University. **SR** Columbia First Boston Series in Money Economics and Finance Working Paper: FB-88-10; 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 United States, Canada and Puerto Rico). **JE** 313, 311, 312, 022. **KW** Interest Rate. Contingent Claims. Bonds.

AB Stochastic interest rate regimes are essential to the understanding of contingent claims with payoffs in bonds or currencies. A framework for incorporating stochastic interest rates into options with several payoff choices is presented in this paper. Its properties are discussed and closed form solutions are presented for two applications, each with three possible payoff assets -- the multiple currency option bond and the delivery option in the United States Treasury bond futures contract.

Chick, Victoria

PD 1987. **TI** Source of Finance, Recent Changes in Bank Behaviour and the Theory Investment and Interest. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-22; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 312, 313. **KW** Interest Rate. Investment. Securities. Liquidity Preference.

AB The institutional background of accepted theory of investment and the rate of interest is rarely discussed. This is a pity, for it leaves us open to using outdated theory without realizing it. This paper first examines the institutional background of Keynesian investment and interest theory and then explores how it might be modified to take account of two important recent changes in banking behavior: liability management and 'securitization'. The first of these developments implies that bank liabilities now compete with securities over the whole spectrum of interest rates, rather than providing a safe haven from capital losses when rates are low, as in Keynes's theory. Thus bank behavior will affect and be affected by rates on company and government securities at all times, in contrast to the prediction of Keynes's theory, that investment is only adversely affected by liquidity preference when rates of interest are believed to be abnormally low. The phenomenon of securitization, if it affects banks' assets substantially, will blur the distinction between bank and security finance altogether.

Christensen, Michael

PD September 1987. **TI** Active Stabilization Policy and the Credibility of Policy Announcements Under Asymmetric Information. **AA** University of Southampton and University of Aarhus. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8720; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 20. **PR** No Charge. **JE** 133, 311, 321. **KW** Policy Credibility. Policymaker.

AB This paper deals with policy credibility related to announcements. It is shown that if the policymaker possesses superior information about an aggregate shock, an announcement of his superior information to the private sector will not necessarily substitute for an active stabilization policy. This result arises if the private sector is uncertain of the policymaker's true preferences and hence a credibility problem is present.

Christofides, Louis N.

PD November 1987. **TI** Efficient and Inefficient Employment Outcomes: A Study Based on Canadian Contract Data. **AU** Christofides, Louis N.; Oswald, Andrew J. **AA** Christofides: University of Guelph. Oswald: Centre for Labour Economics, London School of Economics and Institute of Economics and Statistics, Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 37; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 24. **PR** No Charge. **JE** 824, 831. **KW** Labor. Demand. Wage Contracts. Canada. Efficient Bargain Theory.

AB This paper tests the traditional labor demand model against modern efficient bargain theory using data drawn from wage contracts signed in the Canadian private unionized sector between 1978 and 1984. Though a credible labor demand model can be estimated, the results are sensitive to the introduction of alternative wage and unemployment insurance variables. Contrary to the labor demand model predictions, the alternative wage rate is consistently significant and has the negative coefficient predicted by efficient bargain theory.

Clark, Robert L.

TI Why Do Pensions Reduce Mobility? **AU** Allen, Steven; Clark, Robert L.; McDermed, Ann A.

Coles, M. G.

PD 1987. **TI** Neoclassical Stochastic Investment Rules. **AA** Southampton University and Princeton University. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8717; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 25. **PR** No Charge. **JE** 023. **KW** Optimal control. Uncertainty. Adjustment Costs.

AB This paper derives the optimal stochastic control for continuous time models with linear adjustment costs, and is applied to a neoclassical investment model with irreversible investment. The solution method is applicable for analyzing buying and selling of any durable assets with sunk costs, and provides an alternative stochastic model to the presently used quadratic cost model.

Conway, R. K.

TI The Stochastic Coefficients Approach to Econometric Modeling Part I: A Critique of Fixed Coefficient Models. **AU** Swamy, P. A. V. B.; Conway, R. K.; LeBlanc, M. R.

Corden, W. Max

PD February 1988. **TI** An International Debt Facility?. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/16; International Monetary Fund, Washington D.C. 20431. **PG** 19. **PR** No Charge. **JE** 433, 121. **KW** Debtor Nation. Developing Country. Debt Relief.

AB A common proposal designed to deal with the developing countries' debt problem is that there be set up some kind of "international debt facility" which would buy up debt at a discount and then write down its contractual value, hence providing debt relief. There are three main parties to the proposed transaction, namely the debtor governments, the creditor banks, and the owners of the facility. The paper analyzes the central question of how each of the parties would be affected and, specifically, to what extent there would be some redistribution between them as a result of the arrangement.

PD February 1988. **TI** Macroeconomic Adjustment in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/13; International Monetary Fund, Washington D.C. 20431. **PG** 25. **PR** No Charge. **JE** 431, 121, 133. **KW** Developing Countries. Current Account. Deficit. Adjustment Cost. Cost-Benefit Analysis.

AB The paper deals with the two parts of the short-run adjustment problem in developing countries: the improvement of the current account and the reduction of inflation, the main cause in both cases being usually a fiscal deficit. It is shown how the two parts are related. Distinctions are made between the primary adjustment cost, which is inevitable, and the secondary cost which results, for example, from failure to devalue or from real wage rigidity. A sectoral cost benefit analysis is suggested. Reducing inflation involves both an inflation tax replacement and a price adjustment problem, and "heterodox" policies designed to deal with the latter are analyzed.

Cornwell, Christopher

PD November 1987. **TI** Instrumental Variables Estimation of Production Functions with Cross-Sectional and Time-Series Variation in Productivity Levels. **AU** Cornwell, Christopher; Schmidt, Peter; Sickles, Robin C. **AA** Cornwell: West Virginia University. Schmidt: Michigan State University. Sickles: Rice University. **SR** Michigan State Econometrics and Economic Theory Workshop Paper: 8712; Department of Economics, Michigan State University, East Lansing, MI 48824. **PG** 36. **PR** No Charge. **JE** 621, 825, 212, 211. **KW** Panel Data. Instrumental Variables. Productivity. Efficiency Measurement.

AB In this paper we consider the efficient instrumental variables estimation of a panel data model in which coefficients in addition to the intercept vary over individuals, and we apply the methodology we develop to a model in which there is a cross-sectional and temporal variation in productivity levels (or, equivalently, in levels of technical efficiency), using data on United States airlines. We therefore extend the current literature on panel data, productivity measurement, and frontier production functions.

Craine, Roger

TI Why Random Walk Models of the Term Structure Are Hard to Reject. **AU** Berger, Allen N.; Craine, Roger.

Crane, Keith

PD September 1987. **TI** Military Spending in Czechoslovakia, Hungary and Poland. **AA** The Rand Corporation. **SR** Rand Paper: P-7361; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 35. **PR** No Charge. **JE** 114. **KW** Military Spending. Decisionmaking. Non-Soviet Warsaw Pact. Eastern Europe. Military Expenditures.

AB Western researchers who analyze Warsaw Pact military spending have concentrated on the Soviet Union; the non-Soviet Warsaw Pact (NSWP) has been relatively neglected. Yet the forces funded by the NSWP military budgets would be an essential component in most plausible scenarios for a Warsaw Pact attack on Western Europe. Using East European statistics, this paper aims to remove some of our present ignorance concerning the size and composition of NSWP military expenditures. The author constructs military expenditures estimates for personnel, procurement of military durables, operations and maintenance, and research and development costs. He concludes that the reported budgets of Czechoslovakia, Hungary, and Poland probably contain most of their military expenditures, although they omit military research and development expenditures, some personnel expenditures, and some direct subsidies for military producers.

PD September 1987. **TI** The Determinants of Military spending in the Non-Soviet Warsaw Pact. **AA** The Rand Corporation. **SR** Rand Paper: P-7362; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 22. **PR** No Charge. **JE** 114. **KW** Military Spending. Decisionmaking. Non-Soviet Warsaw Pact.

AB Aside from the reports of a few emigres, very little information is available on how military spending decisions are made in the non-Soviet Warsaw Pact (NSWP). This paper presents several hypotheses concerning the determinants of military spending in the NSWP. The author then develops a model of military spending decisionmaking to assess the relative validity of these hypotheses in explaining observed patterns of military spending. The analysis indicates that the primary determinant of military spending levels in the non-Soviet Warsaw Pact is utilized national income (UNI). Although increases in UNI appear to lead to increases in military spending, the percentage of military spending in UNI has fallen as these countries have become richer, with the exception of the German Democratic Republic.

Cremer, Jacques

PD October 1987. **TI** Manipulations by Coalitions Under Asymmetric Information: The Case of Groves Mechanisms. **AA** Virginia Polytechnic Institute and State University. **SR** Virginia Polytechnic Institute and State University Working Paper in Economics: E87-10-03; Working Paper Coordinator, Department of Economics Sandy Hall, Blacksburg, VA 24061. **PG** 41. **PR** Free by request. **JE** 026, 024. **KW** Groves Mechanism. Coalitions. Asymmetric Information. Adverse Selection.

AB The problem of coalition formation in Vickrey-Clark-Groves mechanisms has been treated by a number of authors (Bennett and Conn (1977), Green and Laffont (1979)), but they assume that the coalitions do not face any problem of asymmetric information when deciding upon a joint strategy. However, most members of the real world coalitions are uncertain about each other's preferences. In this paper, I

assume that they are completely ignorant of each other's preferences and that, in order to reach agreement, they must use a "coalitional mechanism", a Groves mechanism whose outcome is a set of announcements in the original mechanism and monetary transfers between themselves. We identify Groves mechanisms that are robust to cheating by coalitions under these conditions.

Currie, David

PD July 1987. **TI** International Cooperation and Reputation in an Empirical Two-Bloc Model. **AU** Currie, David; Levine, Paul; Vidalis, Nic. **AA** Currie and Vidalis: Queen Mary College. Levine: Centre for Economic Forecasting, London Business School. **SR** Centre for Economic Policy Research Discussion Paper: 198; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 423, 311, 321, 431, 432. **KW** International Cooperation. Macroeconomic Policy. Reputation. International Coordination. Monetary Policy. Interlink Model.

AB This paper examines three questions concerning the international coordination of macroeconomic policy. First it examines whether it is advantageous for governments to cooperate in the determination of monetary and fiscal policies. Second it asks whether it is helpful for governments to establish reputations vis-a-vis their private sectors. Finally it examines the sustainability of cooperative and reputational policies. These questions are addressed using Minilink, an empirical two-bloc model derived from the OECD interlink model. The main results of the analysis may be summarised as follows. To realize the gains from international cooperation requires reputation; and to realize the gains from reputation requires cooperation. Moreover, cooperative policies with reputation are found to be sustainable; and the joint gains from cooperation and reputation are found to be considerable.

PD January 1988. **TI** Evaluating the Extended Target Zone Proposal for the G3. **AU** Currie, David; Wren, Lewis Simon. **AA** Currie: Queen Mary College. Wren-Lewis: NIESR. **SR** Centre for Economic Policy Research Discussion Paper: 221; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 33. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 321, 133. **KW** Policy Coordination. Exchange Rate Targets. Fiscal Policy. Feedback Rule. Interest Rates.

AB This paper evaluates the extended target zone proposal of Williamson and Miller using the National Institute world economic model (GEM). Williamson and Miller's proposals envisage that real exchange rates will be controlled by movements in relative interest rates, that fiscal policy will be used to steer nominal demand towards a target which depends on capacity utilization, inflation and the current balance, and that the average level of world interest rates will be used to control global nominal demand. We evaluate the performance of these rules for the United States, Germany and Japan over the period 1975-84, using control methods to determine the best choice of parameters in the feedback rules. We then consider how history would have differed from actual events had such rules been in place. The results suggest that such rules would have led to a significant improvement in economic performance: exchange rate variability would have been reduced and the dramatic increase in United States interest rates which took place after 1980 would have been avoided.

Cutler, David M.

PD October 1987. **TI** The Costs of Conflict Resolution and Financial Distress: Evidence from the Texaco-Pennzoil Litigation. **AU** Cutler, David M.; Summers, Lawrence H. **AA** Cutler: National Bureau of Economic Research. Summers: Harvard. **SR** National Bureau of Economic Research Working Paper: 2418; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 611, 916, 723, 632, 633. **KW** Litigation. Civil Suit. Takeover. Shareholders. Corporations. Dispute. Debt Burden. Oil.

AB This paper demonstrates that the ongoing dispute between Texaco and Pennzoil over the Getty Oil takeover has reduced the combined wealth of the claimants on the two companies by about $2 billion. Pennzoil's shareholders have gained less than one-third as much as Texaco's shareholders have lost. This loss in the combined value of the two companies far exceeds estimates of the direct costs of carrying on the litigation. It may reflect the disruption in the operations of Texaco caused by the large and uncertain debt burden to Pennzoil.

PD March 1988. **TI** What Moves Stock Prices? **AU** Cutler, David M.; Poterba, James M.; Summers, Lawrence H. **AA** Cutler, Poterba: Massachusetts Institute of Technology. Summers: Harvard University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 487; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 16. **PR** No Charge. **JE** 313, 522, 511. **KW** Market Efficiency. Stock Market. Financial Economics. Event Studies. Stock Returns.

AB This paper estimates the fraction of the variance in aggregate stock returns that can be attributed to various kinds of news. First, we consider macroeconomic news and show that it is difficult to explain more than one third of the return variance from this source. Second, to explore the possibility that the stock market responds to information that is omitted from our specifications, we also examine market moves coincident with major political and world events. The relatively small market responses to such news, along with evidence that large market moves often occur on days without any identifiable major news releases, casts doubt on the view that stock price movements are fully explicable by news about future cash flows and discount rates.

De Cooman, Eric

PD January 1988. **TI** Econometric Modelling of the Birth Rate. **AU** De Cooman, Eric; Joshi, Heather. **AA** De Cooman: Universite Catholique de Louvain. Joshi: Centre for Population Studies, London School of Hygiene and Tropical Medicine. **SR** Centre for Economic Policy Research Discussion Paper: 213; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 42. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 841, 824, 826. **KW** Fertility. Forecasting. Panel Data. Birth Rates. Labor Market.

AB In this paper we explore two econometric approaches to data on parity-specific birth rates in England and Wales during the postwar period. Both approaches can accommodate complex dynamic adjustments within birth rates and focus on

adjustments of fertility behavior in response to changes in certain labor market variables: the ratio of women's to men's wages, a cohort's long-term level of female attachment to the labor market, the relative size of generations, price inflation, real earnings and unemployment. The first approach uses a panel data estimator, while the second divides the data into time-series for five-year age groups. The latter method appears more promising for short-run forecasting.

de Janvry, A.

PD November 1987. **TI** Toward a Rural Development Program for the United States: A Proposal. **AU** de Janvry, Alain; Runsten, David; Sadoulet, Elisabeth. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 463; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 40p. **PR** $8.00. **JE** 718, 914. **KW** Rural Development. United States. Rural Poverty. Structural Adjustments.

AB It is the purpose of this paper to bring a cautious note of optimism to an otherwise bleak perspective for the rural areas depicted in the Economic Research Service study. There are two theses that support this position. One is that the macrostructural adjustments through which the United States economy is going in response to a sharp depreciation of the real exchange rate can provide a unique opportunity to reactivate the rural economy through import substitution and linkage effects. The other is that, while the United States had an active and in many ways highly successful agricultural policy, it had the rhetoric but never the reality of an effective rural development policy. We argue that there are strong forces at work which will create a new political space to place rural development on the agenda again in the 1990s. By taking advantage of the context of structural adjustment, an effective rural development program could be developed following a four-pronged approach that clearly distinguishes between farm-oriented, household-oriented, community-oriented, and farm labor-oriented rural development. All four are presented not as welfare programs but as investments that create net social gains. And all require the activation of instruments that are highly differentiated across programs.

PD February 1988. **TI** Land-Labor Interlinkages in a Latin American Context. **AU** de Janvry, Alain; Sadoulet, Elisabeth. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 461; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 33p. **PR** $6.60. **JE** 717, 833, 121. **KW** Latin America. Agriculture. Dualism.

AB With dualism being one of the dominant structural features of Latin American agriculture, the causes and dynamics of this dualism have been a subject of intense debate in agrarian studies. Two competing interpretations have been provided. One looks at dualism as the outcome of a competitive relationship between landlords and peasants. The permanence of dualism and of peasants is thus explained by the competitive ability of peasants based, in particular, on a high degree of "self-exploitation" as an element of their complex survival strategies (Claude Servolin, 1972; and Arturo Warman, 1976). The other looks at the coexistence of peasants and landlords as a symbiotic functional relation whereby landlords extract a surplus from peasants on the land and labor markets.

PD February 1988. **TI** The Welfare Effects of Stabilization Policies and Structural Adjustment Programs Analyzed in CGE Frameworks: Results and Agenda. **AU** de Janvry, A.; Fargeix, A.; Sadoulet, E. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 460; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 54p. **PR** $10.80. **JE** 121, 133, 431, 111. **KW** Welfare Economics. Stabilization Policies. CGE Models. Developing Countries. Exchange Rates.

AB As a result of economic mismanagement or of unexpected internal or external shocks, most Third World countries have had to implement severe stabilization policies and structural adjustment programs, particularly during the last five years. Economic mismanagement resulted principally from severe distortions in international trade and overvalued exchange rates associated with ineffective import substitution industrialization policies as well as from excessively expensive schemes of producer and consumer subsidies financed by money creation.

PD February 1988. **TI** The Economics of Investment in Rural Development: Private and Social Accounting Experiences. **AA** Department of Agricultural and Resource Economics, University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 464; 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 23p. **PR** $4.60. **JE** 718, 121, 225. **KW** Rural Development. Social Accounting. Latin America. Externalities.

AB It is the thesis of this paper that there are many more situations where RDPs are profitable socially than privately because of the important positive externalities which they create. These externalities take the form of intersectoral and final demand linkage effects, ecological effects, and social effects. If these effects are properly accounted for, even though some are clearly very difficult to quantify, the social internal rate of return of many RDPs can compare favorably with that of other public projects. Further, if part of the next social gains which positive RDP externalities create are taxed to subsidize households in adopting RDP recommendations, projects can be made individually profitable for the households involved creating the necessary condition for adoption. It is this extension of the field of application of privately and socially profitable RDPs, through the social accounting of externalities and an optimum scheme of taxes and subsidies, that we explore in this paper.

De Long, J. Bradford

PD October 1987. **TI** The Economic Consequences of Noise Traders. **AU** De Long, J. Bradford; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert J. **AA** De Long: Boston University. Shleifer: University of Chicago. Summers and Waldmann: Harvard University. **SR** National Bureau of Economic Research Working Paper: 2395; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 023, 311. **KW** Misinformation. Market Noise. Rational Agent. Stock Market. Overlapping Generations. Asset Prices. Term

Structure. Capital Asset Pricing Model.
AB The claim that financial markets are efficient is backed by an implicit argument that misinformed "noise traders" can have little influence on asset prices in equilibrium. If noise traders' beliefs are sufficiently different from those of rational agents to significantly affect prices, then noise traders will buy high and sell low. They will then lose money relative to rational investors and eventually be eliminated from the market. We present a simple overlapping-generations model of the stock market in which noise traders with erroneous and stochastic beliefs (a) significantly affect prices and (b) earn higher returns than do rational investors. Noise traders earn high returns because they bear a large amount of the market risk which the presence of noise traders creates in the assets that they hold: their presence raises expected returns because sophisticated investors dislike bearing the risk that noise traders may be irrationally pessimistic and push asset prices down in the future. The model we present has many properties that correspond to the "Keynesian" view of financial markets.

de Zeeuw, Aart J.

TI Perfect Equilibrium in a Model of Competitive Arms Accumulation. **AU** van der Ploeg, Frederick; de Zeeuw, Aart J.

DeAngelo, Linda Elizabeth

PD September 1987. **TI** Market Value Substitutes and Asymmetric Information: The Role of Financial Accounting Information in Corporate Capital Transactions. **AA** William E. Simon Graduate School of Business Administration, University of Rochester. **SR** University of Rochester Managerial Economics Research Center Working Paper: MERC 87-07; William E. Simon Graduate School of Business Administration, University of Rochester, Rochester, NY 14627. **PG** 35. **PR** NC single copies 50[each paper beyond 5 in order. **JE** 541, 512, 521, 313, 223. **KW** Contracting. Market Value Substitutes. Trading. Capital Market. Asymmetric Information.
AB This paper analyzes the use of market value substitutes to set the terms of capital contributions to and withdrawals from publicly-traded corporations. These capital structure adjustments necessarily involve participation by insider-managers, hence from outsiders' perspective are imperfect substitutes for trades in anonymous capital markets. As a result, these exchanges do not occur at open-market prices, but rather their terms reflect objective and verifiable alternative measures of security values, including those based on financial accounting information. The paper discusses the use of accounting-based market value substitutes in a wide variety of corporate capital transactions that provide especially promising areas for future empirical research.

deBartolome, Charles A. M.

PD March 1987. **TI** Introducing the Peer Group Effect: Why Decentralization is Bad for Efficiency (But Good for Equity). **AA** New York University. **SR** New York University Economic Research Reports: RR 87-09; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 53. **PR** No Charge. **JE** 025, 024, 022, 941. **KW** Peer Group. Decentralization. Voting. Second Best Inefficiency. Equity.

Dews, Edmund

TI Thoughts on Reforming the Military Acquisition Process. **AU** Rich, Michael; Dews, Edmund.

Diamond, Jack

PD February 1988. **TI** The Growth of Government Expenditure: A Review of Quantitive Analysis. **AU** Diamond, Jack; Tait, Alan. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/17; International Monetary Fund, Washington D.C. 20431. **PG** 46. **PR** No Charge. **JE** 321, 322. **KW** Government Budget. Government Growth. Government.
AB This paper reviews the extensive empirical literature on the growth and determinants of government expenditure. Although the coverage does not aim to be exhaustive, the authors provide an overview of the quantitative approaches to analyzing the growth in government expenditure. The main debates in the literature are described, and the authors present a few tests of some theories and describe one or two of their own experiments in others. The paper highlights the data problems and the technical difficulties of hypothesis testing and model estimation in this area, many arising from the nature of the problem studied. It is contended that the quantitative analysis of government expenditure growth has often improved the formulation of hypotheses, but that data and theoretical limitations have meant that the methods employed have not always been justified.

Diebold, Francis X.

PD November 1986. **TI** The Dynamics of Exchange Rate Volatility: A Multivariate Latent Factor ARCH Model. **AU** Diebold, Francis X.; Nerlove, Marc. **AA** Diebold: Board of Governors of Federal Reserve Board. Nerlove: Department of Economics, University of Pennsylvania. **SR** University of Pennsylvania Econometrics Discussion Paper: No#'s Department of Economics, McNeil Building, 3718 Locust Walk, CR, University of Pennsylvania, Philadelphia, PA 19104. **PG** 54. **PR** $1.00. **JE** 431, 212. **KW** Exchange Rate. ARCH. Random Walk. Common Factor.
AB In this paper we develop time-series models for seven major exchange rates in which the innovations are characterized by autoregressive conditional heteroskedasticity (ARCH). We begin with a detailed analysis of univariate exchange rate structure and relate the findings to alleged "random walk" behavior, leptokurtic unconditional distributions, convergence to normality under temporal aggregation, standard measures of exchange rate "volatility", and interval exchange rate prediction. The univariate results point to the need for a multivariate specification, but successful multivariate ARCH modeling has to date proved elusive due to the large number of parameters which must be estimated. In this paper we progress by developing a multivariate latent-variable model in which the common factor may display ARCH. The rich conditional variance-covariance structure of the observed variables arises from their joint dependence on a common factor; this leads to commonality in temporal volatility movements across variables, which is in fact observed. The model is cast in state-space form, permitting convenient estimation via the Schweppe decomposition and the Kalman filter.

PD June 1987. **TI** Deviations from Random-Walk Behavior: Tests Based on The Variance-Time Function.

AA Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System Special Studies Section Discussion Paper: 224; Special Studies Section, Board of Governors of the Federal Reserve, Stop 180, 20th and C Streets, Washington, D.C. 20551. **PG** 41. **PR** No Charge. **JE** 212, 211, 131. **KW** Variance-Time Function. Error-Time Function. Long-Run Dependence. Persistence. Serial Correlation.
AB Tests for long-run temporal dependence based on the variance-time function are examined. The exact finite-sample distributions of existing scalar tests are tabulated. Fully joint tests of the linear variance-time relationship are proposed and tabulated as well, as are joint tests specifically robust to non-normal innovations, and "quick" joint tests based on order statistics. The ideas are illustrated via a sequence of examples.

PD August 1987. **TI** Does the Business Cycle have Duration Memory? **AU** Diebold, Francis X.; Rudebusch, Glenn D. **AA** Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System Special Studies Section Discussion Paper: 223; Special Studies Section, Board of Governors of the Federal Reserve, Stop 180, 20th and C Streets, Washington, D.C. 20551. **PG** 46. **PR** No Charge. **JE** 131, 212, 023. **KW** Business Cycle. Duration. Prediction. Forecasting. Turning Point. Expansion. Contraction.
AB Does the probability of a business cycle peak or trough increase with age of the ongoing expansion or contraction? Or equivalently, is there a tendency towards periodicity in aggregate economic activity? By examining the distributions of lengths of expansions and contractions, we show that, in general, the probabilities of turning points do not appear to be time-dependent; thus, there appears to be little evidence of periodic behavior in the economy. We discuss the implications of non-periodic versus periodic characterizations of the business cycle for econometric forecasting and the importance of permanent versus transient shocks to the economy.

PD January 1988. **TI** An Application of Operational-Subjective Statistical Methods to Rational Expectations: A Comment. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 6; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Wash., DC 20551. **PR** No Charge. **JE** 211. **KW** Rational Expectations. Bayesian Statistics. Methodology.
AB In this note, various aspects of the operational-subjective methodology of Blattenberger and Lad (1987) are discussed. Some interesting and nonstandard aspects of their analysis are highlighted, and alternative strictly proper scoring rules are considered. The paper concludes with a number of conjectures.

PD January 1988. **TI** Long Memory and Persistence in Aggregate Output. **AU** Diebold, Francis X.; Rudebusch, Glenn D. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 7; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Wash., DC 20551. **PR** No Charge. **JE** 131, 133, 212, 023. **KW** Unit Roots. Fractional Integration. Shock Persistence. Business Cycle. ARMA Model.
AB We examine persistence in United States aggregate output by estimating fractionally integrated ARIMA models, which provide better low-frequency approximations to the Wold representation than previous stochastic specifications. Earlier results on the importance of a permanent component in macroeconomic time series emerge as special cases. We find evidence of long memory, which induces persistence; however, the long memory is generally not associated with a unit autoregressive root. We examine a variety of real output measures, in particular, post-war quarterly real GNP and real GNP per capita, and conclude that macroeconomic shocks are not as persistent as some recent studies have suggested.

PD February 1988. **TI** Post-Deregulation Deposit Rate Pricing: The Temporal Dynamics. **AU** Diebold, Francis X.; Sharpe, Steven A. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 8; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Wash., DC 20551. **PR** No Charge. **JE** 311, 312, 522, 133. **KW** Interest Rates. Banking. Vector Autoregressions. Deregulation.
AB In the post-deregulation environment, aggregate retail deposit rates have exhibited a substantial divergence between their short-run behavior and any plausible long-run equilibrium relationship with market rates. Furthermore, cross-sectional research has suggested an important role for market structure in determining the prices that banks set. Such findings have implications for agents' portfolio-balance behavior, movements in the monetary aggregates, and the functioning of financial markets. The purpose of the research program of which this paper is a part is to shed light on these issues by studying the behavior of wholesale and retail deposit rates both spatially and temporally, in a time series of cross sections. This involves preliminary separate examinations of both cross-sectional and dynamic aspects, followed by pooling.

PD February 1988. **TI** State Space Modeling of Time Series: A Review Essay. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 9; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 211. **KW** State-Space Models. Multivariate Time Series. ARMA Models. Forecasting. Kalman Filter.
AB M. Aoki's State Space Modeling of Time Series is reviewed. Along with an exposition of the new techniques, critical remarks are given and alternative approaches are highlighted.

PD February 1988. **TI** On the Solution of Dynamic Linear Rational Expectations Models. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 19; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 213, 131, 023. **KW** Forward Solution. Backward Solution. Multiple Equilibria. Rational Expectations.
AB The problem of multiple equilibria in dynamic linear rational expectations models is studied. The solution space spanned by the forward and backward solutions is examined, and the K-step ahead prediction error variance minimizing forward weights are calculated for situations in which the driving process is more complicated than white noise. Regularity conditions are given which enable bounds to be placed on the sequence of forward weights, and examples are given. Finally, the choice of K is addressed through the solution of an optimum problem in present discounted values.

Dimsdale, N. H.

PD March 1988. **TI** Real Wages and Unemployment in Britain During the 1930s. **AU** Dimsdale, N. H.; Nickell, S. J.; Horsewood, H. **AA** Dimsdale: Queen's College, Oxford. Nickell and Horsewood: Institute of Economics and Statistics, University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 41; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 47. **PR** No Charge. **JE** 044, 131, 824. **KW** Real Wages. Prices. Unemployment. Interwar Period. Demand Shocks.

AB This paper explains shifts in the level of economic activity in Britain in the interwar period, particularly from 1928-37, and relates these to movements in the real wage. Our general thesis is that the real wage follows a path which is perfectly consistent with the recession of the early 1930's being instigated, in the main, by demand shocks. Supply side factors are only of minor significance.

Dolado, Juan

PD November 1987. **TI** An Empirical Study of the Interrelationship Between Employment, Price and Inventory Decisions in U.K. Manufacturing. **AA** Institute of Economics and Statistics, Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 38; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 43. **PR** No Charge. **JE** 131, 611, 631, 511. **KW** Imperfect Competition. Employment. Price. Inventory. Euler Equation. Finished Goods.

AB This paper investigates the dynamic behavior of employment, prices and inventories of finished goods when non-competitive firms take joint decision rules based upon the optimisation of a certain intertemporal criterion function. A theoretical model is developed to provide the specification of the Euler equations which characterize the previous optimal solutions. These are jointly estimated using data from the manufacturing sector in the United Kingdom, providing favorable evidence for the model.

PD November 1987. **TI** Cointegration: A Survey of Recent Developments. **AU** Dolado, Juan J.; Jenkinson, Tim. **AA** Dolado: Institute of Economics and Statistics, Oxford. Jenkinson: Keble College, Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 39; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 44. **PR** No Charge. **JE** 211, 023. **KW** Unit Root. Cointegration. Trends. Error Correction Mechanisms. Specification.

AB This paper provides an updated survey of a burgeoning literature on testing, estimation and model specification in the presence of integrated variables. Integrated variables are a specific class of non-stationary variables which seem to characterize faithfully the properties of many macroeconomic time series. Their statistical properties and implications for the interpretation of regression models are covered in a unified way.

TI Tests of the Life Cycle-Permanent Income Hypothesis in the Presence of Random Walks: Asymptotic Theory and Small Sample Interpretations. **AU** Banerjee, Anindya; Dolado, Juan.

Domar, Evsey D.

PD January 1988. **TI** The Blind Men and the Elephant: An Essay on ISMS. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 473; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 24. **PR** No Charge. **JE** 053. **KW** Capitalism. Socialism. Excess Demand. Risk. Power.

AB Here the populace is divided into producers and consumers and the welfare of each group is investigated under capitalism of the American type and under socialism of the Soviet variety, the distribution of risk and power being used as the criteria.

Donsimoni, Marie Paule

PD June 1987. **TI** Variations in Endowments and Utilities. **AU** Donsimoni, Marie Paule; Polemarchakis, Heraklis. **AA** Donsimoni: Universite Catholique de Louvain. Polemarchakis: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-85-27R; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 024, 021. **KW** Utility. Endowments. Competitive Equilibrium. Pareto Optimality.

AB The variation in the distribution of utilities is not in general related to the underlying variation in the distribution of endowments.

Dornbusch, Rudiger

PD December 1987. **TI** The EMS, the Dollar and the Yen. **AA** Massachusetts Institute of Technology. **SR** Centre for Economic Policy Research Discussion Paper: 216; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 29. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 133, 134, 432. **KW** Exchange Rates. Fiscal Policy. Seignorage. European Monetary System. Dual Exchange Rate System.

AB The paper investigates four challenges to exchange rate stability in the coming years and explores their implications for macroeconomic and exchange rate policy. The first section explores the importance of seigniorage in financing the government budget in Southern European countries. The second issue concerns real interest rates. The third obstacle to exchange rate stability is the continuing, sizeable overvaluation of the dollar. The paper also discusses excess capital mobility and the rationality of exchange markets, and endorses the Tobin proposal for market segmentation.

Draper, David

PD November 1987. **TI** A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald. **AA** The Rand Corporation. **SR** Rand Note: N-2683-RC; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 33. **PR** No Charge. **JE** 026. **KW** Decisions. Uncertainty. Hedging.

AB This note is about assessing the uncertainty that arises in the modeling step of statistical analyses and propagating that uncertainty through to the final inferences drawn or decisions made. It contains the project description section of a proposal to the Decision, Risk, and Management Sciences Program at

the National Science Foundation. The authors advocate a Bayesian methodology for assessment and propagation of model uncertainty, and also discuss frequentist alternatives. Successful research of the type proposed will provide new general-purpose tools for decisionmaking that will improve the assessment of how much hedging against uncertainty should be built in.

Dreze, J.

TI Generic Inefficiency of Stock Market Equilibrium When Markets are Incomplete. **AU** Geanakoplos, J.; Magill, M.; Quinzii, M.; Dreze, J.

Duan, Naihua

PD June 1987. **TI** The Rescaling of a Transformed Outcome Variable and Its Interpretations on a Predictive Scale. **AU** Duan, Naihua; Li, Ker Chau. **AA** The Rand Corporation. **SR** Rand Note: N-2397-SIMS/RC; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 22. **PR** No Charge. **JE** 211. **KW** Outcome Variable. Predictive. Transformation.

AB This note provides new statistical methods for rescaling a transformed outcome variable so as to obtain useful interpretations on a predictive scale.

Dutta, Jayasri

PD March 1987. **TI** Wages and Self-Sufficiency: Equilibrium and Growth With Surplus Labor. **AA** Columbia University, Barnard College, Department of Economics. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-07; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 33. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 824, 112, 023. **KW** Self-Sufficiency. Wages. Surplus Labor. Cheap Labor. Labor Supply.

AB Can a labor surplus economy always grow with cheap labor? In this paper, we examine the determination of wages in a closed, dual economy with unlimited supplies of labor. Wages determine the size of the home market, and clear the product markets. Equilibrium wages can be much higher than subsistence, particularly in economies where agricultural production does not grow at the rate of subsistence demand. This can explain disparities in the experience of wages and growth for dual economies.

PD April 1987. **TI** Market Structure and Expansionary Policy With Labor Surplus. **AA** Barnard College, Department of Economics. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-04; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 35. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 112, 322, 611, 321. **KW** Market Structure. Expansionary Policy. Public Sector.

AB Consider an economy where labor resources are underutilized, and the public sector operates as a channel for expansionary policy. The structure of markets in the private sector determines the effect of policy on wages, employment and output. The level of public sector activity determines whether wages are higher than subsistence, with labor underemployed; and market structure determines whether changes in policy are effective. With competitive behavior, expansionary policy is effective; with imperfect competition, policy can be ineffective, or its effects perverse. In a dual economy, expansionary policy is usually ineffective. We examine the effects of public activity on the emergence, and decline of an informal industrial sector; and its implication for the financing of public activity.

PD August 1987. **TI** Structure, Constraints and Limits to Growth: Policy Analysis in a Dual Economy. **AA** Barnard College; Department of Economics. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-06; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 30. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 112, 121. **KW** Expansionary Policy. Government Policy. Indian Economy. Foreign Exchange Reserves.

AB This paper examines the effects of short-run, structural constraints on the patterns and possibilities of long-run growth in a dual economy. The short-run constraints examined are: fixity of agricultural output, which may affect the real wage; and of foreign exchange reserves, which affects the availability of inputs. We show that expansionary government policy can only be effective up to a limit; and that there is a long-run limit on effective policy and on employment in industry. The paper also reports empirical analysis for the Indian economy to examine patterns of long-run policy and growth.

PD September 1987. **TI** Testing for Heterogeneous Parameters in a Least Squares Framework. **AU** Dutta, Jayasri; Leon, H. L. **AA** Dutta: Barnard College, Department of Economics. Leon: Carribean Development Bank. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-08; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 58. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 211. **KW** Parameter Stability. Heterogeneity. Stationarity. Least Squares approximation.

AB This paper suggests tests of alternative hypotheses about the heterogeneity of parameters in a least squares approximation. These hypotheses refer to weaker notions of stationary behavior -- or homogeneity -- in the parameters. We suggest three types of weak homogeneity: mean stationarity, predictability, and intrinsic homogeneity, which is the property of the parameters being independently and identically distributed.

PD October 1987. **TI** On Land and Life: Life Expectancy, Population Policy and the Land-Labor Ratio. **AU** Dutta, Jayasri; Mallick, Soumitra. **AA** Dutta: Barnard College, Department of Economics. Mallick: Columbia University, Graduate School of Business. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-05; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 42. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 111, 841. **KW** Overlapping Generations Model. Population Policy. Life Expectancy. Inheritance. Bequest. Mortality Rate.

AB This paper examines the impact of changes in life

expectancy in the context of a simple overlapping generations model. We contrast the optimal allocation with the equilibrium solution in a competitive economy with inheritance. The mortality rate indexes the nature of competitive inefficiency; in addition, the qualitative effect of changes in the mortality rate on welfare differ at the optimal and at the equilibrium solutions.

Dutta, Prajit K.

PD October 1987. **TI** Capital Deepening and Impatience Equivalence in Stochastic Aggregative Growth Models. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 367; Department of Economics, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00. **JE** 111. **KW** Production Shocks. Growth Model. Stochastic Shocks.

AB This paper analyzes the aggregative growth model subject to random production shocks. It is shown that for a higher discount factor the associated optimal plan maintains higher capital input at every time period and for almost all environments, in both the finite and infinite horizon problems. It is further shown that two alternative notions of decreasing impatience, lengthening the horizon (for a fixed discount factor) and increasing the discount factor (for a fixed horizon) are, in a precise sense, equivalent. Discount factor insensitivity is also established.

Dym, Steven

PD February 1988. **TI** Money Market Cash-Futures Relationships. **AA** BT Futures Corporation. **SR** New York University Salomon Brothers Center Working Paper: 454; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 29. **PR** $4.00. **JE** 313, 441. **KW** Futures. Hedging. Money Market. Contracts.

AB An understanding of the price dynamics of financial futures contracts requires an appreciation of the direct link between the contract price and that of the underlying cash instrument. Further, this relationship is crucial in constructing hedge ratios. This paper derives the cash-futures relationships for money market instruments. The financing of long and short cash positions is carefully handled. In particular, the paper shows that because Repurchase Agreements trade in an environment different from Treasury bills, implied cash forward rates should not equal futures yields. This is not the case for Eurodollar futures.

Economides, Nicholas

PD September 1987. **TI** Sequential Decisions in Quantity-Setting Oligopoly and Social Inefficiency. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 360; Department of Economics, Columbia University, New York, NY 10027. **PG** 14. **PR** $5.00. **JE** 022, 611, 024, 026. **KW** Sequential Decisions. Cournot Oligopoly. Social Inefficiency.

AB We analyze a game of simultaneous entry and sequential output choices. At its perfect equilibrium the production level of a firm is decreasing with the order of the firm in the decision making. The firm that chooses output last produces the same amount as a typical firm in the symmetric Cournot game. Moreover, industry output is identical in the sequential and the Cournot games. It follows that in the sequential game there are fewer active firms and higher total surplus than in the symmetric Cournot game.

Edwards, Sebastian

PD September 1987. **TI** Structural Adjustment Policies in Highly Indebted Countries. **AA** University of California Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 453; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 79. **PR** $2.50; checks payable to University of California Regents. **JE** 431, 443, 422, 421. **KW** Structural Adjustment. Debtor Countries. Trade Reforms. Debt Crisis.

AB This paper deals with structural adjustment in the highly indebted countries. The origins of the debt crisis are first analyzed. Then the nature of the adjustment followed by the debt ridden countries between 1982-1987 is discussed. It is noted that for most nations the adjustment has been highly recessive. Next, the potential role of trade reforms in securing the resumption of sustained growth is analyzed.

Eichenbaum, Martin

PD February 1988. **TI** Some Empirical Evidence on the Production Level and Production Cost Smoothing Models of Inventory Investment. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 2523; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 616, 522, 023. **KW** Inventories. Production. Finished Goods.

AB The production smoothing model of inventories has long been the basic paradigm within which empirical research on inventories has been conducted. The basic hypothesis embedded in this model is that inventories of finished goods serve primarily to smooth production levels in the face of fluctuating demand and convex cost functions. However once we allow for shocks to technology and the costs of producing output firms will also use inventories to shift production from periods in which production costs are relatively high to periods in which production costs are relatively low. In this sense inventories can serve to smooth production costs rather than production levels. In this paper we examine the empirical plausibility of the production level and production cost smoothing models of inventories. Our basic strategy is to derive and contrast a set of unconditional moment restrictions implied by these models in a way that minimizes the role of auxiliary assumptions regarding market structure and industry demand. We find overwhelming evidence against the production level smoothing model and very little evidence against the production cost smoothing model. We conclude that the variance of production exceeds the variance of sales in most manufacturing industries because the production cost smoothing role of inventories is quantitatively more important than the production level smoothing role of inventories.

Eichengreen, Barry

PD July 1987. **TI** Juvenile Unemployment in Interwar Britain: The Emergence of a Problem. **AA** University of California, Berkeley. **SR** Centre for Economic Policy Research Discussion Paper: 194; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 044, 824, 810, 841. **KW** Youth. Unemployment. Cyclical Sensitivity. Hiring. Redundancy Practices. England. Britain.

AB During the 1980s youth unemployment rates have

persistently exceeded unemployment rates for adults, in Britain as in other OECD countries. In the interwar period, youth unemployment rates in Britain were dramatically lower than those for adults. This paper explores possible reasons for the contrast, including demographic trends, changes in school attendance, changes in labor force participation, changes in the intensity of job search, macroeconomic conditions, shifts in the industrial composition of employment, and economy-wide changes in the share of juveniles employed (due to changes in youth/adult wage differentials, technologies or labor practices). Much of the explanation for the contrast turns out to lie in a rise in the cyclical sensitivity of youth unemployment between the interwar and postwar periods, apparently attributable to changes in hiring and redundancy practices.

PD July 1987. **TI** Hegemonic Stability Theories of the International Monetary System. **AA** University of California, Berkeley. **SR** Centre for Economic Policy Research Discussion Paper: 193; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 432, 423, 441, 431. **KW** International Regimes. Hegemonic Stability. International Monetary Relations. Hegemony. Bretton Woods. Gold Standard.

AB Specialists in international relations have argued that international regimes operate smoothly and exhibit stability only when dominated by a single, exceptionally powerful national economy. In particular, this "theory of hegemonic stability" has been applied to the international monetary system. The maintenance of the Bretton Woods System for a quarter of a century up to 1972 is ascribed to the singular power of the United States in the postwar world, while the persistence of the classical gold standard is similarly ascribed to Britain's dominance of 19th-century financial markets. In contrast, the instability of the interwar gold-exchange standard is attributed to the absence of a hegemonic power. This paper assesses the applicability of hegemonic stability theory to international monetary relations, approaching the question from both theoretical and empirical vantage points. Theory is of some help in understanding the relatively smooth operation of the classical gold standard and the early Bretton Woods System as well as some of the difficulties of the interwar years. Much of the evidence, however, proves to be difficult to reconcile with the hegemonic stability interpretation.

PD October 1987. **TI** Til Debt Do Us Part: The U.S. Capital Market and Foreign Lending: 1920-1955. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 2394; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 042, 443, 433, 441. **KW** Foreign Debt. International Lending. Gold Standard. Default. Capital Flows.

AB This paper analyzes United States experience with foreign lending in the half-century from 1920. A first question raised by this experience is what ignited the process of United States foreign lending. I conclude that lending was restrained at the beginning of the period by the debt overhang associated with reparations and by the post World War I disruption of international trade. Intervention by creditor country governments in the form of the Dawes Loan, League of Nations loans to Central Europe and reconstruction of the gold standard system was needed to initiate long-term capital flows. A second question is how to characterize the operation of the United States capital market once lending was again underway. I find that while lenders discriminated among potential borrowers and demanded compensation for default risk, they did so insufficiently. Neither an efficient-markets nor a fads-and-fashions model provides an adequate characterization of the data. A third question is whether default in the 1930s made it more difficult for countries to borrow in the 1940s and 1950s. I find no evidence that countries which interrupted debt service in the 1930s found it more difficult to borrow subsequently than did countries which maintained debt service continuously. Rather, default reduced access to private portfolio capital flows for defaulting and nondefaulting countries alike.

PD January 1988. **TI** Till Debt Do Us Part: The US Capital Market and Foreign Lending, 1920-1955. **AA** University of California, Berkeley. **SR** Centre for Economic Policy Research Discussion Paper: 212; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 59. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 441, 443, 042. **KW** Debt. Efficient Markets. Foreign Lending. United States. Loans.

AB This paper analyzes United States experience with foreign lending in the half-century from 1920. A first question raised by this experience is what triggered the process of United States foreign lending. I conclude that lending was restrained at the beginning of the period by the debt overhang associated with reparations and by the post World War I disruption of international trade. Intervention by creditor country governments in the form of the Dawes Loan, League of Nations loans to Central Europe and reconstruction of the gold standard system was needed to initiate long-term capital flows. A second question is how to characterize the operation of the United States capital market once lending was resumed. I conclude that while lenders discriminated among potential borrowers and demanded compensation for default risk, their efforts in this respect proved insufficient. Neither an efficient-markets nor a fads-and-fashions model provides an adequate characterization of the data. A third question is whether default in the 1930s made it more difficult for countries to borrow in the 1940s and 1950s. I find no evidence that countries which interrupted debt service in the 1930s found it more difficult to borrow subsequently than did countries which continued to service their debts. Instead, both defaulting and non-defaulting countries found their access to private portfolio capital flows reduced as a result of defaults.

PD April 1988. **TI** Resolving Debt Crisis: An Historical Perspective. **AA** University of California, Berkeley. **SR** National Bureau of Economic Research Working Paper: 2555; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 443, 433, 432, 041. **KW** Debt Crisis. Developing Country. International Lending. Debtor Nation. Negotiation.

AB Two general approaches have been offered for dealing with the developing country debt crisis: continued reliance on case-by-case negotiation, versus global plans for fundamentally restructuring the terms of international lending and repayment. Both approaches have precedents in earlier historical periods. In the 1930s, for instance, when some two thirds of foreign dollar bonds lapsed into default, several global schemes for resolving the crisis were considered even while individual debtor-creditor negotiations were underway. In the end no global plan was adopted and the debt crisis of the '30s was resolved by the "muddling-through" approach of case-by-case

negotiation. This experience suggests two questions about the efficacy of the alternative approaches. First, what stumbling blocks stand in the way of the adoption of global schemes? Second, as a crisis drags on, how do the evolution of debtor and creditor strategies permit it to be resolved through bilateral negotiation? In this paper historical evidence from the interwar period is addressed to these questions.

Engel, Charles

PD February 1988. **TI** Tariffs and Saving in a Model with New Families. **AU** Engel, Charles; Kletzer, Kenneth. **AA** Engel: University of Virginia. Kletzer: Yale University. **SR** National Bureau of Economic Research Working Paper: 2521; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 023. **KW** Tariff. Overlapping Generations. Income Distribution. Bequest.

AB The paper explores how a tariff may affect saving through intergenerational redistribution of income that is caused by changes in factor prices and by the distribution of tariff revenue. The model is a Blanchard-type overlapping generations model. Two types of revenue distribution schemes are examined -- lump-sum distribution of current revenues to currently living individuals, and distribution as a subsidy to holders of physical wealth. (There is no fiscal policy in this paper -- the government budget is continuously balanced). We draw some general conclusions about the non-neutralities that arise in this type of model as opposed to single-generation models, or models in which perfect bequest motives exist.

Erdos, P.

PD October 1986. **TI** On the Graph of Large Distances. **AU** Erdos, P.; Lovasz, L.; Vesztergombi, K. **AA** Erdos, Lovasz: University of Budapest. Vesztergombi: University of Szeged. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 86432-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 7. **PR** No Charge. **JE** 213. **KW** Chromatic Number. Convex Polygon. Non-Convex Case. Large Distances.

Erenguc, S. Selcuk

PD March 1987. **TI** An Algorithm for Indefinite Integer Quadratic Programming. **AU** Erenguc, S. Selcuk; Benson, Harold P. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 134; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611. **PG** 17. **PR** No Charge. **JE** 213. **KW** Nonlinear Integer Programming. Quadratic Programming. Algorithm. Minimization Problem.

AB We present an algorithm for finding the global minimum of an indefinite quadratic function over the integers contained in a compact, convex set. To find this minimum, the algorithm first transforms the problem into an equivalent problem with a separable objective function. It then uses a branch and bound search on the values of the constraints, rather than the variables, of the transformed problem.

PD June 1987. **TI** Concave Integer Minimization Over a Compact, Convex Set. **AU** Erenguc, S. Selcuk; Benson, Harold P. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 135; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611. **PG** 17. **PR** No Charge. **JE** 213. **KW** Concave Minimization. Nonlinear Programming. Algorithm.

AB We present an algorithm which finds the global minimum of a concave function over the integers contained in a compact, convex set. The objective function need not be separable or even analytically defined. To our knowledge, the algorithm is the first ever proposed for accomplishing this minimization.

TI An Algorithm for Concave Integer Minimization Over A Polyhedron. **AU** Benson, Harold P.; Erenguc, S. Selcuk.

Ericsson, Neil R.

PD December 1987. **TI** Monte Carlo Methodology and the Finite Sample Properties of Statistics For Testing Nested and Non-nested Hypotheses. **AA** International Finance Division, Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 317; International Finance Division, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 65. **PR** No Charge. **JE** 211. **KW** Asymptotic Distributions. Dynamics. Finite Sample Properties. Monte Carlo. Non-Nested Hypotheses. Simultaneity.

AB Using recently developed Monte Carlo methodology, this paper investigates the effect of dynamics and simultaneity on the finite sample properties of maximum likelihood and instrumental variables statistics for testing both nested and non-nested hypotheses. Numerical-analytical approximations (response surfaces) to the unknown finite sample size and power functions of those statistics are obtained for dynamic one- and two-equation models. The results illustrate the value of asymptotic theory in interpreting finite sample properties and certain limitations for doing so. Two practical finite sample results arise: the F form of the Wald statistic is strongly favored over its chi-squared form; and the effects of "large-sigma" and a small effective sample size are particularly pronounced for Sargan's (1958) instrumental variables statistic and Ericsson's (1983) Cox-type instrumental variables statistic. Re-examining Pesaran and Deaton's (1978) empirical example illustrates the additional information gained from the instrumental variables statistics.

Evans, David

PD July 1987. **TI** Why Do Smaller Firms Pay Less? **AU** Evans, David S.; Leighton, Linda S. **AA** Fordham University. **SR** New York University Economic Research Reports: RR 87-19; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 32. **PR** No Charge. **JE** 824. **KW** Heterogeneous Worker. Firm Size. Employment. Wages.

AB The purpose of this paper is twofold. First, we investigate the relationships among firm size, wages, wage growth, tenure, and separations using data from the National Longitudinal Survey (NLS) of Young Men for 1976 and 1981. Second, we examine the extent to which worker heterogeneity can explain the observed relationships.

PD August 1987. **TI** Entrepreneurial Choice and Liquidity Constraints. **AU** Evans, David; Jovanovic, Boyan. **AA** Evans: Fordham University. Jovanovic: New York University. **SR** New York University Economic Research Reports: RR 87-31; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New

York, N.Y. 10003. **PG** 31. **PR** No Charge. **JE** 315, 521. **KW** Liquidity Constraints. Self-Employment. Small Businesses. Entrepreneur.

AB Do liquidity constraints hinder individuals from starting businesses? The answer to this question is important for several reasons. First, the presence of liquidity constraints may explain the finding by Evans and Leighton (1987a) that the hazard into self-employment is constant in age. This finding is not consistent with the occupational choice stories told by Johnson (1978), Jovanovic (1979), and Miller (1982), which imply that individuals will try riskier occupations such as entrepreneurship when they are younger. But younger workers have had less time to accumulate the capital necessary for starting a business and, with liquidity constraints, will have difficulty borrowing start-up funds. Second, the belief that capital markets do not provide adequate funds for starting up businesses is at least one of the rationales for various government assistance programs to small businesses.

PD September 1987. **TI** The Effects of Demographic and Industry Changes on U.S. Self-Employment. **AU** Evans, David; Leighton, Linda. **AA** Fordham University. **SR** New York University Economic Research Reports: RR 87-34; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 38. **PR** No Charge. **JE** 826, 824, 812. **KW** Income Distribution. Self-employment. Industry Structure.

AB Recent trends in the distribution of income and wealth in the United States are in large measure determined by the distribution of the working population between paid employment and self-employment. The recent increase in the fraction of the non-agriculture workforce that is self-employed will have the effect of increasing the dispersion of all incomes in the United States, because the dispersion of self-employed incomes is significantly higher than the dispersion of earnings from paid employment. This paper explores the extent to which the recent aggregate trends in self-employment have been associated with changes in the demographic composition of the economy and changes in industry structure.

Evans, George

PD July 1987. **TI** The Fragility of Sunspots and Bubbles. **AA** Stanford University, London School of Economics. **SR** Stanford Institute for Mathematical Studies in the Social Sciences (Economics Series) Technical Report: 514; Institute for Mathematical Studies in the Social Sciences, Encina Hall, Fourth Floor, Stanford University, Stanford, CA 94305. **PG** 44. **PR** $4.00. **JE** 023, 021. **KW** Sunspots. Bubbles. Fragility. Expectations. Multiplicity. Stability. Learning. Disequilibrium. Rational Expectations. Inventory Model. Overlapping Generations Model.

AB Expectational stability is used to examine the multiplicity of solutions in a range of rational expectations models of interest, including Muth's inventory model and an overlapping generations model. It is found that sunspot and other "rational bubble" solutions can be weakly but not strongly expectationally stable. It is conjectured that this is a quite general result.

PD January 1988. **TI** Sectoral Imbalance and Unemployment in the United Kingdom. **AA** London School of Economics and Stanford University. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 300; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 30. **PR** No Charge. **JE** 131, 824. **KW** Unemployment. Sectoral Imbalance. Mismatch. Vacancies. United Kingdom. Cyclical.

AB Quarterly measures of United Kingdom labor market sectoral imbalance are computed using industrial and regional data, and a systematic attempt is made to correct for cyclical influences by using estimated output elasticities of sectoral labor demand. The corrected measures are used to examine the extent to which changes in sectoral imbalance affect the position of the U/V (unemployment / vacancy rate) curve. The substantial increase in industrial imbalance beginning in 1980 is estimated to have accounted for an increase in the unemployment rate, measured at U = V, of about 2.7 percentage points.

PD January 1988. **TI** Persistence, Trend and Cycle in Output and Unemployment. **AA** London School of Economics, and Stanford University. **SR** London School of Economics Centre for Labour Economics Discussion Paper: 301; Centre for Labour Economics, London School of Economics, Houghton Street, London WC2A 2AE, UNITED KINGDOM. **PG** 18. **PR** No Charge. **JE** 131. **KW** Persistence. Trend. Cycle. Okun's Law. Output. Fluctuations.

AB Bivariate models of output growth and unemployment support the importance of the cyclical component in accounting for fluctuations in aggregate United States output, both over the post-World War II period and over the 1890-1986 period.

Evans, Martin D. D.

PD October 1987. **TI** Risk and Rational Expectations: An Empirical Study of the Term Structure of Interest Rates. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 448; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 28. **PR** $4.00. **JE** 312, 311. **KW** Rational Expectations. Term Structure. Interest Rates. Yield Spread. Risk Premia.

AB This paper investigates whether movements in the risk premia can account for the predictive power of the yield spread for excess returns. Using an extension of the ARCH-M model, the paper analyzes a series of models in which the risk premia are correlated with the spread. These allow the distinction between a reassessment in the covariance of returns and a change in the expected path of short rates to be made. It is found that the yield spread cannot be used to predict excess returns independently of its ability to "track" revisions in the premia.

PD October 1987. **TI** A Macroeconomic Model of the Term Structure of Interest Rates. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 445; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 29. **PR** $4.00. **JE** 313, 311. **KW** Term Structure. Bonds. Monetary Policy.

AB This paper examines the interaction between the behavior of the term structure and other macroeconomic variables. Movements in the yield curve are shown to reflect changes in both the expected return on bonds and the term premium. The latter co-varies positively with innovations in the money stock and negatively with anticipated deviations in

output. The degree of variability attributable to these sources is related to the monetary regime and the degree of persistence displayed by output and prices. In particular, it is shown that the adoption of an interest sensitive monetary policy will significantly reduce the volatility of the premium.

PD October 1987. **TI** Credibility and Commitment: Some New Methods for the Design and Evaluation of Policy in Continuous Time Rational Expectations Models. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 442; New York University Salomon Brothers Center for the Study of Financial Institutions, 90 Trinity Place, New York, NY 10006. **PG** 32. **PR** $4.00. **JE** 023, 026, 212. **KW** Policy Evaluation. Rational Expectations. Commitment. Dynamic Game. Time Inconsistency.

AB The aim of the paper is to extend the techniques used for policy evaluation and design in continuous time rational expectations models. Following the recent literature, the optimal policy is designed in the context of a dynamic game, played between the government and the public. Using this we address the problem of time inconsistency that arises in the absence of a commitment by the government to follow the originally announced policy. Employing the concept of incentive compatibility it is shown that the government's commitment to its original policy can be determined endogenously. This allows a set of partially credible policies to be identified from which the optimal policy can be chosen. The technique is applied to a simple inflation model to illustrate how the range of policies available to the government are restricted by the requirement of incentive compatibility. It also allows the optimal policy to be examined in some detail.

Faig, Miquel

PD December 1987. **TI** Seasonal Fluctuations and the Transactions Elasticity of the Aggregate Demand for Money. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8721; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 24. **PR** No Charge. **JE** 311, 131. **KW** Seasonality. Transactions. Money. Aggregate Demand.

AB This paper analyzes the seasonal fluctuations of the real quantity of money and several measures of transactions in the economy. This provides support for viewing money balances as especially useful in small purchases (in practice expenditures in nondurables and services) and the payment of personal income. Finally, it estimates the transactions elasticity of the aggregate demand for money using a method that overcomes many of the previous identification problems. The values obtained are strikingly similar for the United States of America and Canada (around 0.3), and are substantially lower than most previous estimates.

Fair, Ray C.

PD January 1988. **TI** The Informational Content of Ex Ante Forecasts. **AU** Fair, Ray C.; Shiller, Robert J. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 857; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 16. **PR** $2.00. **JE** 132, 212. **KW** Forecasts. Ex Ante Forecasts. Informational Content.

AB The informational content of different forecasts can be compared by regressing the actual change in a variable to be forecasted on forecasts of the change. We use the procedure in Fair and Shiller (1987) to examine the informational content of three sets of ex ante forecasts: the American Statistical Association and National Bureau of Economic Research Survey (ASA), Data Resources Incorporated (DRI), and Wharton Economic Forecasting Associates (WEFA). We compare these forecasts to each other and to "quasi ex ante" forecasts generated from a vector autoregressive model, an autoregressive components model, and a large-scale structural model (the Fair model).

PD January 1988. **TI** VAR Models as Structural Approximations. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 856; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 15. **PR** $2.00. **JE** 211, 212. **KW** VAR. Vector Autoregressive Models. Simulation. Dynamic Model. Structural Model.

AB This paper presents a way of estimating how accurate vector autoregressive models are likely to be for answering structural questions. Data are generated from a dynamic deterministic solution of a structural model; a VAR model is estimated using a subset of these data; and the properties of the VAR model are compared to the properties of the structural model. This procedure has the advantage of eliminating the effects of error terms, since the data are generated from a deterministic simulation. The results show that the VAR models do not seem to be good structural approximations.

PD January 1988. **TI** Econometric Modeling as Information Aggregation. **AU** Fair, Ray C.; Shiller, Robert J. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 833-R; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 22. **PR** $2.00. **JE** 132, 211. **KW** Forecasting. Autoregressive Components Model.

AB The information contained in the forecasts from two econometric models can be compared by regressing the actual change in the variable forecasted on the two forecasts of the change. We do such comparisons in this paper, where the forecasts are based only on information through the period prior to the first period of the forecast. If a model's forecast is statistically significant in such a regression, we conclude that the model captures information not in the other model whose forecast is also included in the regression. The models studied include the Fair model, vector autoregressive (VAR) models estimated by ordinary least squares, vector autoregressive models estimated with Litterman priors, and a new class of models, which we call "autoregressive components" (AC) models. The AC models divide GNP into components and estimate an autoregressive equation for each component.

Fare, R.

PD July 1987. **TI** An Indirect Efficiency Approach to the Evaluation of Producer Performance. **AU** Fare, R.; Grosskopf, S.; Lovell, C. A. K. **AA** Fare and Grosskopf: Southern Illinois University. Lovell: University of North Carolina Chapel Hill. **SR** University of North Carolina Working Paper Series: 87-11; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 33. **PR** No Charge. **JE** 611, 614, 613. **KW** Public Sector. Production. Efficiency. Constraints. Resources.

AB The purpose of this paper has been to propose a new way

of looking at productive efficiency, and of comparing productive efficiency across producing units, particularly those operating in the public service sector of the economy. The analysis is based on Shephard's indirect production function, the cost indirect output correspondence in section 2 and the return indirect input correspondence in section 3. In contrast to traditional analysis using Farrell's resource-constrained output-based efficiency measures and output-constrained input-based efficiency measures, our analysis based on Shephard's indirect production function generates budget-constrained output-based efficiency measures and revenue-constrained input-based efficiency measures.

Fargeix, A.

TI The Welfare Effects of Stabilization Policies and Structural Adjustment Programs Analyzed in CGE Frameworks: Results and Agenda. **AU** de Janvry, A.; Fargeix, A.; Sadoulet, E.

Farrell, Joseph

PD February 1988. **TI** Cheap Talk Can Matter in Bargaining. **AU** Farrell, Joseph; Gibbons, Robert. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 482; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 27. **PR** No Charge. **JE** 026. **KW** Cheap Talk. Bargaining Theory. Game Theory. Reservation Prices. Negotiation.

AB This paper describes an intuitive way in which cheap talk can matter in a two-stage bargaining game in which talk may be followed by serious negotiation. The intuition that all buyers would claim to have low reservation prices is incorrect in our model. Instead, the paper emphasizes that if good-faith participation is endogenously determined then the parties can use talk to trade off bargaining position against the probability of continued negotiation. Our cheap-talk equilibrium features bargaining behavior that could not be equilibrium behavior in the absence of talk.

Faulhaber, Gerald R.

PD June 1987. **TI** Economists as Innovators: Practical Products of Theoretical Research. **AU** Faulhaber, Gerald R.; Baumol, William J. **AA** Faulhaber: University of Pennsylvania. Baumol: Princeton and New York University. **SR** New York University Economic Research Reports: RR 87-17; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 53. **PR** No Charge. **JE** 621. **KW** Innovation. Technology. Economic Innovations.

AB Economists have long recognized the importance of technological innovation for economic growth, and have studied how basic research yields new concepts which can in turn lead to new or improved devices or processes and ultimately to marketable products and services. However, economists have generally studied only such contributions of the physical sciences, overlooking the fact that economics itself has been the source of a surprising number of inventions that are widely used by both private industry and government agencies.

Fershtman, C.

PD March 1988. **TI** Fixed Rules and Decision Rules: Time Consistency and Subgame Perfection. **AA** Department of Economics, Tel-Aviv University. **SR** Tel-Aviv Foerder Institute for Economic Research Working Paper: 12-88; Department of Economics, Tel-Aviv University, Ramat Aviv 69978, Tel-Aviv, ISRAEL. **PG** 8. **PR** No Charge. **JE** 026. **KW** Optimal Dynamic Policy. Time Consistency. Subgame Perfection.

AB The paper investigates the relationship between time consistency and subgame perfection. We show that despite some suggestions in the literature, the two are not equivalent. Subgame perfection is a stronger refinement. The paper also discusses the classes of games in which time consistency and subgame perfection are equivalent.

Fischer, Stanley

TI Seigniorage, Operating Rules and the High Inflation Trap. **AU** Bruno, Michael; Fischer, Stanley.

PD February 1988. **TI** Rules Versus Discretion in Monetary Policy. **AA** The World Bank. **SR** National Bureau of Economic Research Working Paper: 2518; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 023. **KW** Policy Analysis. Discretionary Policy. Monetary Policy. Monetary Rules. Game Theoretic.

AB This paper examines the case for rules rather than discretion in the conduct of monetary policy, from both historical and analytic perspectives. The paper starts with the rules of the game under the gold standard. These rules were ill-defined and not adhered to; active discretionary policy was pursued to defend the gold standard -- but the gold standard came closer to a regime of rules than the current system. The arguments for rules in general developed by Milton Friedman are described and appraised; alternative rules including the constant money growth rate rule, interest rate rules, nominal GNP targeting, and price level rules are analyzed. Until 1977 the general argument for monetary rules suffered from the apparent dominance of discretion: if a particular monetary policy was desirable, it could always be adopted by discretion. The introduction of the notion of dynamic inconsistency made a stronger case for rules. The final sections analyze the case for rules rather than discretion in the light of recent game theoretic approaches to policy analysis.

Fishburn, Peter C.

TI Does Approval Voting Elect the Lowest Common Denominator? **AU** Brams, Steven; Fishburn, Peter C.

Fisher, Eric

PD December 1987. **TI** International Duopoly with Tariffs. **AU** Fisher, Eric; Wilson, Charles. **AA** Fisher: Cornell University. Wilson: New York University. **SR** New York University Economic Research Reports: RR 87-44; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 41. **PR** No Charge. **JE** 411, 422, 321. **KW** Tariffs. Duopoly. Protectionism.

AB The paper examines the effects of tariffs on price-setting duopolists selling a homogeneous product when they cannot segment geographically distinct markets. We provide a complete characterization of the equilibrium (mixed) strategies and analyze the pattern of competition for different levels of the tariffs. We show that, when either country increases its tariff, the profits of both producers increase, although the protected

firm typically benefits more than its foreign counterpart. We also demonstrate that growth in one market may reduce profits of the firm located in the other market.

Fisher, Franklin M.

PD March 1988. **TI** It Takes t* to Tango: Trading Coalition in the Edgeworth Process. **AA** MIT. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 486; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 29. **PR** No Charge. **JE** 021. **KW** General Equilibrium. Trade. Edgeworth Process. Non-Tatonnement. T-wise Optimality.

AB In the Edgeworth non-tatonnement process, trade occurs if there exists some coalition of agents able to make a Pareto-improving trade among themselves at current prices. It is known that the size of such coalitions is bounded by the number of commodities and that, provided all agents always have strictly positive endowments, bilateral trade suffices. These results are generalized so that the maximum required coalition size is given in terms of the number of agents holding at least m commodities and the number of commodities held by at least k agents.

Forsythe, Robert

PD November 1987. **TI** Theories and Tests of "Blind Bidding" in Sealed Bid Auctions. **AU** Forsythe, Robert; Isaac, R. Mark; Palfrey, Thomas R. **AA** Forsythe: University of Iowa. Isaac: University of Arizona. Palfrey: California Institute of Technology. **SR** Caltech Social Science Working Paper: 670; Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 48. **PR** No Charge. **JE** 026, 215. **KW** Auctions. Experiments. Disclosure. Adverse Selection.

AB This paper reports a series of auction experiments in which the seller knows the quality of the object for sale, but the buyers don't. Buyers have different valuations for the object, but these valuations are correlated with the quality of the object. The seller has an option either to voluntarily disclose the true quality of the object they are selling or "blind bid" the object. The theoretically predicted outcome is that the seller will disclose the quality of all except the worst quality objects. The outcomes of the experiment are very close to the predictions, after repetition. In early rounds, before there has been much repetition, significant inefficiencies are observed. The convergence process we observe is the commonly suggested "unravelling" phenomenon in which buyer beliefs in the event of nondisclosure become increasingly pessimistic over time.

Frankel, Jeffrey

PD February 1988. **TI** Obstacles to International Macroeconomic Policy Coordination. **AA** University of California at Berkeley. **SR** National Bureau of Economic Research Working Paper: 2505; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 421, 411. **KW** Coordination. International Trade. Trade Policy.

AB Coordination of macroeconomic policies among countries is not as straightforward in practice as it appears in theory. This paper discusses three obstacles to successful international coordination: (1) uncertainty as to the correct initial position of the economy, (2) uncertainty as to the correct objective, and (3) uncertainty as to the correct model linking policy actions to their effects in the economy. Previous results showed that coordination under conditions of policy-maker disagreement about the correct model could very well reduce national welfare rather than raise it. This paper extends those results to allow for explicit policy-maker recognition of uncertainty regarding the correct model, as well as uncertainty regarding the model to which other policy-makers subscribe. It also shows that the potential gains from coordination, even when positive, are usually small relative to the gains from unilateral policy changes based on improved knowledge of the model.

Franks, Julian

TI Means of Payment in Takeovers: Results for the UK and US. **AU** Harris, Robert; Mayer, Colin; Franks, Julian.

Freeman, Richard B.

PD October 1987. **TI** Contraction and Expansion: The Divergence of Private Sector and Public Sector Unionism in the U.S. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2399; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 831, 512, 832. **KW** Unions. Collective Bargaining Law. Public Sector. Canada. Management. United States.

AB This paper contrasts the differing experience of public sector unionism, which has expanded in the United States, and private sector unionism, which has contracted, in the past several decades. It uses the experience of other countries, particularly Canada, to rule out some explanations of the divergent trends. The paper finds that the major reason for the private sector decline is increased management opposition to union organization, motivated in part by profit-seeking behavior, and augmented by trade union responses; and that the major reason for the public sector union expansion is decreased market opposition due to passage of comprehensive collective bargaining laws and motivated in part by vote-seeking behavior.

TI Economic Development and the Timing and Components of Population Growth. **AU** Bloom, David; Freeman, Richard B.

TI The Labor Market Consequences of Generational Crowding. **AU** Bloom, David; Freeman, Richard B.; Korenman, Sanders D.

Fried, Dov

TI Finance Subsidiaries and Debt Capacity. **AU** Sondhi, Ashwinpaul; Fried, Dov; Ronen, Joshua.

Friedman, Benjamin

PD April 1988. **TI** Lessons on Monetary Policy from the 1980s. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 2551; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 431, 131. **KW** Monetary Policy. Financial Markets. United States. Exchange Rate.

AB Monetary policy events in the United States during the 1980s have led to important changes in thinking about monetary policy and in the actual conduct of policy. The central event in this regard has been the collapse of relationships connecting familiar money to both income and

prices. The fastest money growth since World War II, maintained for fully half a decade, occurred in conjunction with the greatest post-war reduction in the inflation. Other important changes have resulted from the increased openness of the United States economy and the United States financial markets. International considerations that previously could have mattered in a policy context, but typically did not, have reached macroeconomically meaningful magnitudes in the 1980s. Along with exchange rates, short-term interest rates have again emerged as the principal focus of policy. Economic research would probably prove more useful in a policy context if economists turned at least some of the efforts they have devoted to trying to resurrect money-income and money-price relationships to analyzing how to conduct monetary policy without them.

Friedman, Milton

PD March 1988. **TI** John Maynard Keynes. **AA** Hoover Institution. **SR** Stanford Hoover Institute Working Paper in Economics: E-88-17; Domestic Studies Program Working Paper Series, Hoover Institution, Stanford University, Stanford, CA 94305. **PG** 49. **PR** No Charge. **JE** 031, 036. **KW** Keynes.

Froot, Kenneth A.

PD March 1988. **TI** LDC Debt: Forgiveness, Indexation and Investment Incentives. **AU** Froot, Kenneth A.; Scharfstein, David; Stein, Jeremy. **AA** Froot and Scharfstein: Massachusetts Institute of Technology. Stein: Harvard. **SR** National Bureau of Economic Research Working Paper: 2541; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 441, 443, 432, 431, 411. **KW** Debtor Nation. Developing Countries. Moral Hazard. Incentives. Investment.

AB We compare different indexation schemes in terms of their ability to facilitate forgiveness and reduce the investment disincentives associated with the large LDC debt overhang. Indexing to an endogenous variable (e.g., a country's output) has a negative moral hazard effect on investment. This problem does not arise when payments are linked to an exogenous variable such as commodity prices. Nonetheless, indexing payments to output may be useful when debtors know more about their willingness to invest than lenders. We also reach new conclusions about the desirability of default penalties under asymmetric information.

Fudenberg, Drew

PD January 1988. **TI** Repeated Games with Long-Run and Short-Run Players. **AU** Fudenberg, Drew; Kreps, David; Maskin, Eric. **AA** Fudenberg: Massachusetts Institute of Technology. Kreps: Stanford Business School. Maskin: Harvard University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 474; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 33. **PR** No Charge. **JE** 026, 022. **KW** Game Theory. Folk Theorem. Equilibrium Payoffs. Repeated Games.

AB This paper studies the set of equilibrium payoffs in games with longand short-run players and little discounting. Because the short-run players are unconcerned about the future, equilibrium outcomes must always lie on their static reaction (best response) curves. The obvious extension of the Folk Theorem to games with this constraint would simply include the constraint in the definitions of the feasible payoffs and of the minmax values. This extension does obtain under the assumption that each player's choice of a mixed strategy for the stage game is publicly observable, but, in contrast to standard repeated games, the limit value of the set of equilibrium payoffs is different if players can observe only their opponents' realized actions.

Fuhrer, Jeffrey C.

PD January 1988. **TI** Estimating Time-Varying Parameters in a Nonlinear Multivariate Model: Inferring Changes in Expectation Behavior Over Time. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 5. **PG** 20. **PR** No Charge. **JE** 311, 111, 023. **KW** Time-varying Parameters. Expectations Formation. Macroeconomic Model. Money Growth.

AB This paper develops a method for inferring the structure of agents' expectations from macroeconomic time series. A simple macroeconomic model is posited. Expectations of money growth are a central driving variable, assumed to be formed as a time-varying weighted average of alternative money growth models. The weights are estimated as time-varying parameters jointly with the structural parameters for the model, using a nonlinear time-varying parameters method developed for the paper. The results allow us to infer how agents have revised their beliefs about competing money growth models (including Federal Reserve announcements) over the sample.

Fukuda, Shin ichi

TI Towards the Implementation of Desirable Rules of Monetary Coordination and Interventions. **AU** Hamada, Koichi; Fukuda, Shin ichi.

Fuss, Melvyn A.

PD October 1987. **TI** Heteroskedasticity-Consistent Estimation of the Variance-Covariance Matrix for the Almost Ideal Demand System. **AA** University of Toronto. **SR** National Bureau of Economic Research Working Paper: 2401; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 921, 212, 211. **KW** Aggregate Demand Model. Heteroskedasticity. Consumer Demand Theory. MLE. Maximum Likelihood Estimation.

AB In this note I demonstrate the previously overlooked fact that if the Almost Ideal Demand System aggregate demand model is constructed as the aggregation of individual consumer demands, then the error structure for any individual equation is necessarily heteroskedastic unless the distribution of income is constant across aggregates. Maximum likelihood estimation which ignores this heteroskedasticity yields inconsistent estimates of the variance-covariance matrix and renders likelihood ratio tests of the restrictions of consumer demand theory inappropriate. A heterokedasticity-consistent estimator of the variance-covariance matrix is proposed by adopting the technique of White (1980) to the case at hand.

Gale, William G.

PD November 1987. **TI** The Allocational and Welfare Effects of Federal Credit Programs: A Summary. **AA** University of California Los Angeles. **SR** University

of California at Los Angeles Department of Economics Working Paper: 460; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 18. **PR** $2.50; checks payable to University of California Regents. **JE** 315, 323, 322. **KW** Credit Subsidies. Credit Markets. Credit. Welfare. Government Policy.

AB Federal credit activity is large, diverse, and pervasive. The purpose of this research is to develop a framework for the analysis of the allocational and welfare effects of credit policy. Theoretical analysis and numerical simulation provide the basis for a variety of policy implications. Although there is a potentially useful role for federal credit, current subsidies and budgetary practices are seriously misguided.

Galeotti, Marzio

PD July 1987. **TI** Specification of the Technology for Neoclassical Investment Theory: Testing the Adjustment Cost Approach. **AA** University of Brescia. **SR** New York University Economic Research Reports: RR 87-23; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 36. **PR** No Charge. **JE** 023, 022, 522. **KW** Adjustment Costs. Investment.

AB The paper provides an empirical investigation into the existence and nature of adjustment costs and their implications for modelling the investment process. In particular, their role in today's most popular models of investment, rational flexible accelerator and Tobin's Q, is considered. The empirical analysis is based on the hypothesis that the firm is in temporary equilibrium and makes use of the theory of restricted profit functions. In this framework it is only assumed that costs of adjusting the level of quasi-fixed inputs affect the firm's operations regardless of specific optimal decision rules for investment. The results show that the shape of adjustment costs is consistent with the solution of the dynamic optimization problem faced by the representative firm. However, such structure is more complex than what is usually postulated in the literature. Finally, costs of adjustment represent a significant portion of the unit cost of new capital goods.

PD July 1987. **TI** Estimation and Test of a Marginal Q Model of Investment Behavior. **AA** University of Brescia. **SR** New York University Economic Research Reports: RR 87-27; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 40. **PR** No Charge. **JE** 522, 023, 022. **KW** Investment. Dynamic Model. Dynamic Equilibrium.

AB In this paper I estimate a structural model where investment is driven by Tobin's marginal Q. While conceptually powerful, the implementation of the Q theory has generally yielded unsatisfactory results. Following the dynamic factor demand literature, the investment demand function in this paper is embedded in a system where demand equations for variable inputs are specified and estimated. The hypothesis that the firm is in dynamic equilibrium, i.e. that the capital stock evolves along an optimal path defined by a marginal Q rule, is tested against a general alternative hypothesis that such path is either non-optimal or it is described by an optimal rule other than Q. I find that the investment equation is consistent with the underlying dynamic model in the sense that adjustment costs are "well-behaved". Nonetheless, the hypothesis that the firm is either in dynamic or long-run equilibrium is rejected. Thus, I am led to relate the poor specification of the investment equation to the basic assumptions made in the formulation of the dynamic problem. The conclusion is that it is mandatory to relax such assumptions and to revise the specification of empirical Q equations, for them to be still considered truly structural models.

Gately, Dermot

PD October 1986. **TI** The 1986 Oil Price Collapse: What Happened and What Did We Learn? **AA** New York University. **SR** New York University Economic Policy Papers: PP 45; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 37. **PR** No Charge. **JE** 723, 227. **KW** Oil Prices. Energy.

AB The 1986 oil price collapse returned oil prices to near their 1973 level. This paper reviews what happened and why, discusses whether it was or was not a surprise, and what it means for oil prices in 1986-87 and over the longer term.

PD July 1987. **TI** Taking Off: The U.S. Demand for Air Travel and Jet Fuel. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-22; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 24. **PR** No Charge. **JE** 723, 615, 635. **KW** Air Travel. Fuel. Gasoline. Energy. Efficiency.

AB Since 1965 United States air travel has grown three times faster than Gross National Product. Jet fuel demand, although virtually unchanged between 1969 and 1982 because of improved efficiency in fuel use by jet aircraft, has grown 30% since 1982. The key question is whether fuel-efficiency improvements can keep up with the rapid growth in air travel.

TI The U.S. Demand for Cocoa: Explaining the Apparent Insignificance of Income Growth. **AU** Andoh, Samuel Kojo; Gately, Dermot.

PD December 1987. **TI** The Adjustment of U.S. Oil Demand to the Price Increases of the 1970s. **AU** Gately, Dermot; Rappoport, Peter. **AA** Gately: New York University. Rappoport: Federal Reserve Bank Of New York. **SR** New York University Economic Research Reports: RR 87-46; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 17. **PR** No Charge. **JE** 723, 722. **KW** Oil Prices. Oil Demand. United States.

AB This paper examines the econometric evidence about the adjustment of United States oil demand in response to the price increases of the 1970's, and the implications for oil demand through the year 2000. It is organized as follows. Section II presents the data and briefly surveys the existing literature. Section III examines issues related to the specification of the demand equation, including those related to long-run price-asymmetries. Section IV presents the econometric results for a log-linear demand equation assuming no long-run asymmetry of response to price increases and declines; it also examines the contrasting assumption of complete long-run asymmetry (zero responsiveness to price declines that follow price increases). Section V summarizes the implications for United States oil demand to the year 2000 and Section VI presents the conclusions.

Geanakoplos, J.

TI Common Knowledge of Summary Statistics. **AU** Brandenburger, Adam; Geanakoplos, John.

PD February 1988. TI Generic Inefficiency of Stock Market Equilibrium When Markets are Incomplete. AU Geanakoplos, J.; Magill, M.; Quinzii, M.; Dreze, J. AA Geanakoplos: Yale University. Magill, Quinzii: University of Southern California. Dreze: CORE. SR Yale Cowles Foundation Discussion Paper: 863; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. PG 53. PR $2.00. JE 313. KW Securities. Stock Market. Market Efficiency.

AB A stock market is a mechanism by which the ownership and control of firms is determined through the trading of securities. It is on this market that many of the major risks faced by society are shared through the exchange of securities and the production decisions that influence the present and future supply of resources are determined. If the overall structure of markets is incomplete can the stock market be expected to perform its role of exchanging risks and allocating investment efficiently? It is this question that we seek to answer.

Gibbons, Robert

TI Cheap Talk Can Matter in Bargaining. AU Farrell, Joseph; Gibbons, Robert.

PD March 1988. TI Learning in Equilibrium Models of Arbitration. AA Massachusetts Institute of Technology and NBER. SR Massachusetts Institute of Technology Department of Economics Working Paper: 485; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. PG 38. PR No Charge. JE 832, 026, 022. KW Arbitration. Learning. Game Theory. Communication.

AB This paper analyzes strategic communication in equilibrium models of conventional and final-offer interest arbitration. Both models emphasize the role of learning by the arbitrator from the parties' offers about the state of the employment relationship, which is known to the parties but not to the arbitrator. In both models, the arbitrator's equilibrium behavior is identical to the reduced-form decision rule typically assumed in the empirical literature. The paper thereby provides a structural interpretation for the existing empirical work. The paper also represents progress towards a complete theory of arbitration because it satisfies three conditions that will be required of any such theory. First, the models' predictions match the existing empirical evidence. Second, the models describe equilibrium behavior. And third, the models are built on a common set of assumptions about preferences, information, and commitment. The paper therefore not only provides an equilibrium foundation for the intuition that the arbitrator might learn from the parties' offers, but also uses the idea of learning to develop a unified analytical treatment of the two major forms of interest arbitration.

Giovannini, Alberto

PD March 1988. TI The Time-Variation of Risk and Return in the Foreign Exchange and Stock Markets. AU Giovannini, Alberto; Jorion, Philippe. AA Columbia University. SR Centre for Economic Policy Research Discussion Paper: 228; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. PG 39. PR 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. JE 441, 521. KW Asset Returns. Equities. Foreign Exchange. Risk Premia. Conditional Variance. Time-Varying. Capital-Asset-Pricing Model.

AB Recent empirical work indicates that, in a variety of financial markets, both conditional expectations and conditional variances of asset returns are time-varying. The purpose of this paper is to determine whether these joint fluctuations of conditional first and second moments are consistent with the Sharpe-Lintner-Mossin capital-asset-pricing model (CAPM). We test the mean-variance model under several different assumptions about the time-variation of conditional second moments of returns, using weekly data from July 1974 to December 1986 on returns to a portfolio composed of dollar, Deutschmark, sterling, and Swiss franc assets, together with United States equities. The model is estimated constraining risk premia to depend on the time-varying conditional covariance matrix of the residuals of the expected returns equations. The results indicate that estimated conditional variances cannot explain the observed time-variation of risk premia. Furthermore, the constraints imposed by the static CAPM are always rejected.

Glassman, Debra

TI Alternative Tests of International Asset Substitutability. AU Boothe, Paul; Glassman, Debra.

Glyn, Andrew J.

TI The Diversity of Unemployment Experience Since 1973. AU Rowthorn, Bob; Glyn, Andrew J.

Goldin, Claudia

PD March 1988. TI The Poor at Birth: Infant Auxology and Mortality at Philadelphia's Almshouse Hospital, 1848-1873. AU Goldin, Claudia; Margo, Robert A. AA Goldin: University of Pennsylvania. Margo: Colgate University. SR National Bureau of Economic Research Working Paper: 2525; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PR $2.00. JE 913, 914. KW Mortality. Infant. Birth Weight. Urban Poor. Nineteenth Century.

AB This paper presents an analysis of birthweights and infant mortality in mid-nineteenth century Philadelphia using obstetrics records of Philadelphia's Almshouse hospital, an institution for the poor and their offspring. Children of the poor weighed between 2,900 and 3,200 grams on average at birth, or about the 10th to 25th centile of modern birthweight standards. Birthweights declined during the Civil War decade, consistent with the poor state of the economy in the 1860s. Because birthweights were lower than modern standards the urban poor suffered from higher rates of infant mortality than today. But infant mortality was far worse than that expected from a modern schedule of mortality by birthweight, and a major determinant of excess mortality appears to be the poor quality of nineteenth century obstetrics.

Goodman, David

PD 1987. TI Some Recent Tendencies in the Industrial Re-Organization of the Agro-Food System. AA Department of Economics University College London. SR University College London Discussion Paper: 87-25; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. PR No Charge. JE 713, 712. KW Agriculture. Food. Industrialization.

Gourieroux, C.

PD March 1988. TI Recherche et agrigation dam un

Modele d' equilibre a prix fixer. **AU** Gourieroux, C.; Laroque, G. **AA** Gourieroux: CEPREMAP. Laroque: INSEE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 8805; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 30. **PR** No Charge. **JE** 021, 022, 023. **KW** Search. Aggregation. Fix Price Model. Rationing.

AB Aggregation is studied in a quantity rationing model where the various micromarkets differ by their localization and where the microeconomic agents bear fixed costs of moving from one place to another. The probabilities of being rationed determine the optimal search behavior of the agents, instead of the prices. The existence of a rational expectations equilibrium is shown under standard assumptions, and aggregation is analyzed in this setup.

Grammatikos, Theoharry

PD January 1988. **TI** Additions to Bank Loan-Loss Reserves Good News or Bad News? **AU** Grammatikos, Theoharry; Saunders, Anthony. **AA** Grammatikos: University of Wisconsin. Saunders: New York University. **SR** New York University Salomon Brothers Center Working Paper: 451; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 27. **PR** $4.00. **JE** 312. **KW** Bank. Profits. Stockholders.

AB This paper has examined whether a bank's addition to its Loan-loss Reserves (LLR) is good or bad news for its stockholders. It was argued that LLR additions can be expected to have a number of conflicting positive and negative effects on bank returns. Consistent with this view it was found that in both the return and volume dimensions LLR additions had a heterogeneous effect across banks in the sample. However, using proxies for a capital structure/cost effect and a regulatory tax/bargaining effect it was found that these heterogeneous responses could at least be (partially) explained.

Grandmont, Jean Michel

PD June 1987. **TI** Local Bifurcations and Stationary Sunspots. **AA** CNRS and CEPREMAP. **SR** Stanford Institute for Mathematical Studies in the Social Sciences (Economics Series) Technical Report: 513; Institute for Mathematical Studies in the Social Sciences, Encina Hall, Fourth Floor, Stanford University, Stanford, CA 94305. **PG** 30. **PR** $4.00. **JE** 023, 132, 111. **KW** Business Cycles. Expectations. Bifurcations. Sunspots. Intertemporal Equilibria. Overlapping Generations Model. Golden Rule. Deterministic Dynamics.

AB This paper analyses the relations between deterministic intertemporal equilibria with perfect foresight, and stationary sunspot equilibria, near a stationary state. The study takes place within the framework of an overlapping generations model, where the deterministic dynamics is described by a one-dimensional difference equation, and employs elementary geometrical arguments. One verifies that a stationary sunspot equilibrium exists in every neighborhood of the Golden Rule if, and in general only if, it is stable in the deterministic dynamics. One shows also, by looking at what happens when a local bifurcation occurs, that a stationary sunspot equilibrium can exist in some neighborhood of the Golden Rule, even when it is unstable in the deterministic dynamics.

Greenhalgh, Christine

PD March 1988. **TI** Employment and Structural Change in Britain - Quantitative Evidence and Policy Simulations. **AU** Greenhalgh, Christine; Gregory, Mary; Ray, Amit. **AA** Greenhalgh: St. Peter's College and Institute of Economics and Statistics. Gregory: St. Hilda's College and Institute of Economics and Statistics. Ray: Institute of Economics and Statistics, University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 44; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 41. **PR** No Charge. **JE** 824, 321, 826. **KW** Employment. Britain. Disaggregated Analysis. Fiscal Policy. Output.

AB Part I documents the facts of British industrial output and employment from the mid-1950's to the early 1980's. Part II discusses the projections of the Cambridge Growth Project, to the year 2000, for various sectors of the economy identified in Part I as having significantly different historical growth paths. In Part III and IV we report on policy simulations with the CGP model. We demonstrate the employment generating effects of a range of government expenditure options, targetted towards specific sectors, and compare these effects with those arising from tax cuts.

PD March 1988. **TI** Employment and Structural Change in Britain: Trends and Policy Options. **AA** St. Peter's College and Institute of Economics and Statistics. **SR** Oxford Applied Economics Discussion Paper Series: 42; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 45. **PR** No Charge. **JE** 824, 611, 811, 621, 826. **KW** Employment. Britain. Unemployment. Training. Technology.

AB The paper surveys the empirical literature relating to structural change in Britain in the post-war period. The aim is to identify the main mechanisms which have contributed to the observed changes in long-run sectoral shares of employment and also to rising unemployment since the mid-1960s. It is argued that predicting the future growth and composition of employment requires a disaggregated approach which examines inter-industry demands as well as final output patterns. A critical element for employment is the direction of change in the United Kingdom's comparative advantage. It is concluded that short-run job creation policy will be more effective if it loosens the constraints of insufficient training and slow application of new technology which appear to have significantly inhibited UK trade performance and output growth.

Greenwald, Bruce

PD January 1988. **TI** Financial Market Imperfections and Business Cycles. **AU** Greenwald, Bruce; Stiglitz, Joseph. **AA** Greenwald: Bell Communications. Stiglitz: Princeton University. **SR** National Bureau of Economic Research Working Paper: 2494; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313. **KW** Asymmetric Information. Equity. Futures Markets.

AB This paper develops a simple model of macroeconomic behavior which incorporates the impact of financial market "imperfections," such as those generated by asymmetric information in financial markets. These information asymmetries may lead to breakdowns in markets, like that for equity, in which risks are shared. In particular, we analyze firm

behavior in the presence of equity rationing and imperfect futures markets, in which there are lags in production. As a consequence, firms act in a risk-averse manner. We trace out the macroeconomic consequences, and show that they are able to account for many of the widely observed aspects of actual business cycles.

Greenwood, Jeremy

PD March 1988. **TI** International Financial Intermediation and Aggregate Fluctuations Under Alternative Exchange Rate Regimes. **AU** Greenwood, Jeremy; Williamson, Stephen D. **AA** Greenwood: University of Western Ontario and Rochester Center for Economic Research. Williamson: Research Department, Federal Reserve Bank of Minneapolis. **SR** Federal Reserve Bank of Minneapolis Staff Report: 112; Research Department, Federal Reserve Bank of Minneapolis, 250 Marquette Avenue, Minneapolis, MN 55480. **PG** 49. **PR** No Charge. **JE** 431, 441, 314, 131, 311. **KW** Financial Intermediation. Fluctuations. Exchange Rates. Monitoring Costs. Overlapping Generations.

AB This paper presents a two-country overlapping generations model in which financial intermediation arises endogenously as an incentive-compatible means of economizing on monitoring costs. Because of the existence of transactions costs, money markets in the two countries are segmented and investors have differential access to international credit markets. The model is used to generate predictions about the role of international intermediation in economic development and to examine the nature of business cycle phenomena across alternative exchange rate regimes. Disturbances are propagated by a credit allocation mechanism, which also lends a novel flavor to the model's long-run properties.

Gregory, Mary

TI Employment and Structural Change in Britain - Quantitative Evidence and Policy Simulations. **AU** Greenhalgh, Christine; Gregory, Mary; Ray, Amit.

Griesinger, Harriet

TI Deterrence, Work and Crime: Revisiting the Issues with Birth Cohort Data. **AU** Tauchen, Helen; Witte, Ann Dryden; Griesinger, Harriet.

Grosskopf, S.

TI An Indirect Efficiency Approach to the Evaluation of Producer Performance. **AU** Fare, R.; Grosskopf, S.; Lovell, C. A. K.

Grossman, Gene M.

PD October 1987. **TI** Import Competition and the Stock Market Return to Capital. **AU** Grossman, Gene M.; Levinsohn, James A. **AA** Grossman: Princeton University. Levinsohn: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2420; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313, 421, 441, 521, 522. **KW** Capital Mobility. Investment Behavior. Assets. CAPM. Returns.

AB We measure the responsiveness of returns to capital invested in six United States industries to shocks to the prices of competing import goods. Recognizing that most capital services are not traded on spot rental markets, we treat the intersectoral mobility of capital as the outgrowth of investment behavior. Then the return to capital is realized as an asset return to equity holders. We model expected returns by CAPM, and relate "excess" returns in a period to unanticipated shocks to the variables that affect current and future profits. We find that positive shocks to import prices cause higher than normal stock market returns in all six industries. The magnitudes of the responses are consistent with the hypothesis that capital is highly sector specific in five of these industries.

Guesnerie, R.

TI Government Intervention in Production and Incentives Theory: A Review of Recent Contributions. **AU** Caillaud, B.; Guesnerie, R.; Rey, P.; Tirole, J.

TI Noisy Observation in Adverse Selection Models. **AU** Caillaud, Bernard; Guesnerie, Ragu; Rey, Patrick.

Gulati, Gaurang Mitu

TI Turning Points in Economic Time Series, Loss Structures and Bayesian Forecasting. **AU** Zellner, Arnold; Hong, Chansik; Gulati, Gaurang Mitu.

Gustman, Alan L.

PD March 1988. **TI** An Analysis of Pension Benefit Formulas, Pension Wealth and Incentives from Pensions. **AU** Gustman, Alan L.; Steinmeier, Thomas L. **AA** Gustman: Dartmouth College. Steinmeier: Texas Tech University. **SR** National Bureau of Economic Research Working Paper: 2535; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 918, 824, 921. **KW** Pensions. Incentives. Retirement. Job Mobility.

AB This paper investigates empirical issues related to pensions. It uses the 1983 Survey of Consumer Finances (SCF), a data set with detailed information both on workers and on their pensions. The paper presents new estimates of pension values for various groups. It compares pension values based on relatively complete SCF data with estimates based on incomplete data of the type found in other data sets. It also examines incentives that pensions create for retirement and job mobility, and relates these incentives to plan characteristics. Some findings appear inconsistent with standard explanations for the existence and nature of pensions.

Hamada, Koichi

PD June 1987. **TI** Towards the Implementation of Desirable Rules of Monetary Coordination and Interventions. **AU** Hamada, Koichi; Fukuda, Shin ichi. **AA** Yale University. **SR** Yale Economic Growth Center Discussion Paper: 538; Economic Growth Center, Yale University, Box 1987 Yale Station, New Haven, CT 06520. **PG** 41. **PR** $2.00. **JE** 432, 311, 431. **KW** Monetary Coordination. Exchange Rates. Intervention.

AB Adopting the decomposition of the world system into subsystems of the sum of and the difference of variables, the paper considers the characteristics of optimal rules of monetary coordination and exchange-rate intervention in a symmetric, two-country Dornbusch model. Global monetarism concerns the sum or average system. Discussions of misalignment of exchange rate concerns the difference variables. It is shown that the results by Poole (QJE 1970) have a strong analogy in this framework. No or little intervention is desirable if

dominant country-specific shocks are in IS curves; interventions to keep exchange rates are desirable if dominant country-specific shocks are in LM curves.

Hamermesh, Daniel S.

PD October 1987. **TI** What Do We Know About Worker Displacement in the United States. **AA** Michigan State University. **SR** National Bureau of Economic Research Working Paper: 2402; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 823, 826, 631, 611. **KW** Unemployment. Wages. Earnings. Plant Closings. Wage Cuts. Layoffs.

AB In the United States roughly one-half million workers with 3+ years on the job have become unemployed each year during the 1980s because of plant closings. There is evidence that this represents an increase over earlier periods of similar macroeconomic conditions. Wage cuts within the observed range lower only slightly the probability that a plant will close. The average loss of earnings, due to long spells of post-displacement unemployment and to subsequent reduced wages, is substantial. While minorities suffer an above-average rate of displacement, the earnings losses they experience upon displacement are not disproportionately high. Women and older workers are no more likely than others to become displaced, and their losses are not disproportionate; but workers who have been on the job longer lose more.

Hammons, Glenn T.

TI Managing for Survival: How Successful Academic Medical Centers Cope with Harsh Environments. **AU** Williams, Albert P.; Carter, Grace M.; Hammons, Glenn T.; Pointer, Dennis.

Handa, Puneet

TI Convertible Debt Issuance and Call Policy Before and After Conversion Value Exceeds Call Price. **AU** Acharya, Sankarshan; Handa, Puneet.

Hansen, Gary

PD September 1987. **TI** Straight Time and Overtime in Equilibrium. **AU** Hansen, Gary; Sargent, Thomas J. **AA** Hansen: University of California Los Angeles. Sargent: Stanford University. **SR** University of California at Los Angeles Department of Economics Working Paper: 455; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 40. **PR** $2.50; checks payable to University of California Regents. **JE** 824, 821. **KW** Overtime. Wage Premium. Growth Model. Equilibrium Business Cycle. Employment.

AB We formulate an equilibrium model of straight time and overtime wages by imposing restrictions on agents' consumption sets, and using a commodity space that includes employment lotteries. We extract some time series implications from a linear-quadratic approximation to our model evaluated at particular parameter values. We use our model informally to interpret some features of observed time series for wages and employment.

Hardle, Wolfgang

PD February 1988. **TI** Cross section Engel Curves Over Time. **AU** Hardle, Wolfgang; Jerison, Michael. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A 160; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 39. **PR** No Charge. **JE** 921, 022. **KW** Engel Curves. Cross Section. Nonparametric Smoothing. Invariance. Expenditure. Nonparametric Estimation.

AB Methods for nonparametric estimation and comparison of cross section Engel curves are presented and applied to United Kingdom 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.

Hardwick, Philip

PD October 1987. **TI** Multi-Product Cost Attributes: A Study of U.K. Building Societies. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8722; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 43. **PR** No Charge. **JE** 621, 212, 022. **KW** Economies of Scale. Services.

AB A translog multi-product cost function is estimated jointly with a derived input cost share equation to obtain estimates of overall economies of scale and 'augmented' overall economies of scale for the United Kingdom building society industry. The 'augmented' measure takes into account induced changes in the number of building society branch offices as the outputs vary. The parameter estimates are then used to compute the derivatives of the marginal costs of each product to test for product-specific economies of scale and economies of scope.

Harris, C.

PD 1987. **TI** Investment and Shadow Pricing in a Growing Economy with Tax Restrictions. **AU** Harris, C.; Heady, C.; Mitra, P. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-21; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 522, 023. **KW** Investment. Terms of Trade. Cost-Benefit Analysis.

AB This paper (1) examines the intertemporal behavior of investment and the associated shadow prices used in cost-benefit analyses in a partially decentralized developing economy and (2) explores their sensitivity to changes in such parameters as the terms of trade, the payment of an exogenously specified amount of resources (such as debt service) and attitudes towards inequality. To that end, it (1) formulates a model of an open dual economy where the government maximizes the discounted sum of utilities subject to limitations on its powers of commodity and income taxation; (2) calibrates that model on data from a less developed country; (3) calculates the steady state behavior as well as the intertemporal paths of investment and key shadow prices such as accounting rates of interest (ARIs) and consumption rates of interest (CRIs); and (4) examines the sensitivity of investment and shadow prices to changes in underlying parameters described above.

Harris, Jeffrey E.

PD March 1988. **TI** Environmental Policy Making: Act Now or Wait for More Information? **AA** Department of Economics, Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 488; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 49. **PR** No Charge. **JE** 613, 722. **KW** Benefit-Cost Analysis. Sunken Costs. Environment. Regulation.

AB This paper explores a central, paradigmatic problem in environmental decision making -- the problem of timing. Do we act now or do we hold out for more information? The frequently-voiced preference for waiting, I suggest, is based upon a strong but unstated assumption -- namely, that environmental policies are irreversible. That is, interventions by regulatory agencies impose large, sunken costs on private firms and consumers that cannot later be taken back. My analysis points toward a style of environmental regulation in which agencies take small, incremental regulatory steps at the early stages of a problem. These small steps would be designed to impose minimal sunken investments in compliance, yet provide essential information on the uncertain benefits and costs of future interventions.

Harris, Robert

PD August 1987. **TI** Means of Payment in Takeovers: Results for the UK and US. **AU** Harris, Robert; Mayer, Colin; Franks, Julian. **AA** Franks: London Business School. Harris: University of North Carolina, Chapel Hill. Mayer: City University Business School. **SR** Centre for Economic Policy Research Discussion Paper: 200; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 64. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 521, 313. **KW** Acquisitions. Means of Payment. Takeovers. Corporate Raiders.

AB 2,500 acquisitions in the United Kingdom and United States are used to examine means of payment in acquisitions. There has been a substantial increase in the proportion of acquisitions financed with cash in the United States over the period of the study from 1955 to 1985. Mixed bids are more common in the UK. Bid premia are significantly larger in cash than equity acquisitions and the differences cannot be wholly attributed to the nature of the bid. Cash acquisitions display a better post acquisition performance than equity. These results bear directly on theories of acquisition finance and cast serious doubt on several commonly cited factors.

Hatton, Tim

PD July 1987. **TI** A Quarterly Model of the Labour Market in Interwar Britain. **AA** University of Essex. **SR** Centre for Economic Policy Research Discussion Paper: 186; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 044, 824, 212. **KW** Britain. Unemployment. Labor Market Adjustment. Wage Setting. Wage Rigidity. Unemployment. Wages.

AB The paper analyses the determinants of interwar unemployment using a previously unexploited quarterly data set for 1924-39. Individual equations for insured employment, insured unemployment and the nominal wage rate are estimated and tested. The results indicate that the real wage was an important determinant of employment but not of the labor force, where demographic variables and the effects of the insurance system dominate. The model of wage setting encompasses several different hypotheses concerning the operation of the labor market. Three special cases with widely differing implications for labor market adjustment are each found to be consistent with the data. The data used in this study do not allow us to distinguish between interpretations which emphasize structural unemployment, wage rigidity or benefit-induced unemployment: this helps explain why such divergent views have been maintained.

Heady, C.

TI Investment and Shadow Pricing in a Growing Economy with Tax Restrictions. **AU** Harris, C.; Heady, C.; Mitra, P.

PD 1987. **TI** A New Look at the Symmetry of the Slutsky Matrix. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-16; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 022, 213. **KW** Goods. Substitution.

AB This paper provides an intuitive explanation of why the Slutsky substitution matrix is symmetrical, using simple economic concepts and avoiding the use of the symmetry properties of second-order derivatives. In the two good case the symmetry is shown to follow from the tangency between the indifference curve and the budget constraint. This is extended to three goods by introducing labor supply choice and showing that the good whose demand increases most as labor supply increases is the good whose price has the greatest effect on labor supply. The extension to the more general many-goods case is then straightforward.

Helfand, Gloria E.

TI Reconciling the Von Liebig and Differentiable Crop Production Functions. **AU** Berck, Peter; Helfand, Gloria E.

Helkie, William

PD December 1987. **TI** Modeling Investment Income and Other Services in the U.S. International Transactions Accounts. **AU** Helkie, William; Stekler, Lois. **AA** Division of International Finance, Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 319; Division of International Finance Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 26. **PR** No Charge. **JE** 132, 431, 441, 212. **KW** Forecasting. Simulations. Current Account. Services Sector.

AB This paper presents the services account sector of a model of United States international transactions (the USIT model) that is maintained in the Division of International Finance of the Federal Reserve Board. Part I presents the models for payments and receipts on direct investment, other investment income, and non-investment services. Part II reports on simulations that indicate the sensitivity of the model's forecast to changes in its predetermined variables such as interest rates and exchange rates. In particular, we explore the implications of large current account deficits and the resulting accumulation of net claims by foreigners on the United States for the services balance.

Hendershott, Patric H.

TI On the Determinants of the Value of Call Options on Default-Free Bonds. **AU** Buser, Stephen A.; Hendershott, Patric H.; Sanders, Anthony B.

Hendricks, Ken

PD January 1987. **TI** Equilibrium in Preemption Games with Complete Information. **AU** Hendricks, Ken; Wilson, Charles. **AA** Hendricks: State University of New York at Stony Brook. Wilson: New York University. **SR** New York University Economic Research Reports: RR 87-02; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 33. **PR** No Charge. **JE** 026. **KW** Complete Information. Preemption Games. Asymmetric Payoffs.

AB The paper provides a complete characterization of the equilibria for a class of "preemption" games when time is continuous and information is complete. It allows for asymmetric payoffs and an arbitrary time horizon. It extends the analyses of earlier authors to include a class of games in which players move according to a continuous distribution over some interval of the game.

PD January 1987. **TI** The War of Attrition in Continuous Time with Complete Information. **AU** Hendricks, Ken; Weiss, Andrew; Wilson, Charles. **AA** Hendricks: State University of New York at Stony Brook. Weiss: Bell Communications Research. Wilson: New York University. **SR** New York University Economic Research Reports: RR 87-03; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 30. **PR** No Charge. **JE** 026. **KW** Attrition. Nash Equilibrium. Complete Information.

AB The paper provides a complete characterization of the Nash equilibrium outcomes for the War of Attrition when time is continuous and information is complete. It allows for asymmetric payoffs and an arbitrary time horizon. In addition to certain (asymmetric) pure strategy equilibria which always exist, we establish the conditions under which there is also a continuum of mixed strategy equilibria. These are most likely to exist when either the horizon is infinite or the game is symmetric.

Hickson, Charles R.

PD January 1988. **TI** A New Interpretation of Guilds, Tariffs, and Laissez-Faire. **AU** Hickson, Charles R.; Thompson, Earl A. **AA** University of California Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 461; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 49. **PR** $2.50; checks payable to University of California Regents. **JE** 041. **KW** Guilds. Tariffs. Laissez-Faire. Defense Externality. Transaction Costs. Political Efficiency.

AB This paper theoretically derives and tests a new explanation of historically observed variations in guilds, tariffs and laissez faire policies. The traditional view is that guild and tariff policies have been monopolistic and inefficient, and that the political associations formed to effect such redistributional policies represent a net drain on society's resources. In contrast, our view, based on a new theory of political association formation and a couple of rather straightforward market failures, is that guilds and protectionist lobbies, and correspondingly government-sanctioned entry-restrictions and protective tariffs, have been adopted and maintained by a state when and only when they have been in the collective interest of the members of the state.

Hinton, Janice

PD July 1986. **TI** China's Steel Industry: The Policy Implications of Technology Transfer to the People's Republic of China. **AA** The Rand Corporation. **SR** Rand Paper: P-7245-RGS; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 194. **PR** No Charge. **JE** 621, 631. **KW** Steel Industry. China. Technology.

AB This paper considers the growth of China's steel industry since the inception of the Four Modernizations plan for economic development. The paper focuses primarily on Beijing's decision to import foreign technology to facilitate this development. To analyze the merits of the various policy options open to the Chinese, the author answers the following questions regarding their steel industry: (1) Is importing foreign technology cost-effective? (2) How difficult is it to assimilate modern foreign equipment into China's steel industry? (3) Will foreign technology enable China to attain its goal of self-sufficiency in steel production? (4) What technological innovations can China produce without foreign assistance? Case studies of four integrated iron and steel facilities present four different approaches to producing more and better-quality steel.

Hirshleifer, Jack

PD June 1987. **TI** The Analytics of Continuing Conflict. **AA** University of California at Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 467A; Department of Economics - University of California at Los Angeles Los Angeles, CA 90024. **PR** $2.50. **JE** 114, 026, 022, 025. **KW** Conflict. War and Peace. Rent-Seeking. Cournot Solution. Stackelberg Solution. Combat. Threat and Promise. Income Distribution.

AB Individuals, groups, or nations -- if rational and self-interested -will be balancing on the margin between two alternative ways of generating income: (1) "peaceful" production and exchange, versus (2) "appropriative" efforts designed to seize resources previously controlled by others (or to defend against such invasions). Both production and appropriation, on the assumption here, are entirely normal lines of activity engaged in to the extent that doing so seems profitable. The general-equilibrium steady-state model involves a resource partition function, a social production function, a combat power function, and an income distribution equation. Solutions were obtained under the symmetrical Cournot protocol and two alternative asymmetrical assumptions: the familiar Stackelberg condition and a more novel hierarchical protocol called Threat-and-Promise. The analysis demonstrates that, in contrast with the harmonistic bias of orthodox economic theory, a general-equilibrium model can also encompass the hostile and destructive interactions that characterize real-world social relations.

PD October 1987. **TI** Comments on Gordon Tullock's "The Economics of Conflict". **AA** University of California Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 454; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 9. **PR** $2.50; checks payable to University of California

Regents. **JE** 114. **KW** Conflict. Cooperation. Equilibrium. Prisoners' Dilemma. War.
AB Tullock is unduly pessimistic in declaring that "we should not expect economics to provide too much aid in analyzing conflict". Many actual and prospective applications of economics to the study of conflict are listed here, and a Bibliography is provided. Even if certain specific economic models of conflict are characterized by "non-existence of equilibrium", as Tullock contends, that would be no disproof of the validity of economic reasoning. Furthermore, it is not correct to assert that all conflict situations can be characterized as Prisoners' Dilemma, or to claim that game theory would imply that it is now or ever was optimal strategy for the Soviet Union and the United States to initiate nuclear attacks against one another.

Hodges, James S.

TI A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald.

Holtham, Gerry

TI International Policy Cooperation and Model Uncertainty. **AU** Hughes, Hallett Andrew; Holtham, Gerry.

Holtz, Eakin Douglas

PD September 1987. **TI** The Line Item Veto and Public Sector Budgets: Evidence from the States. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 358; Department of Economics, Columbia University, New York, NY 10027. **PG** 39. **PR** $5.00. **JE** 321, 322, 324. **KW** Line Item Veto. Presidential Powers. Government Spending.
AB Proponents of recent proposals to give the President a line item veto suggest that it will reduce government spending. This paper investigates this claim by examining the effect of the item veto on the states. The analysis explicitly incorporates political incentives and the effect of the veto on the relative power of the governor and the legislature. The results indicate that the item veto does not affect long run budgets. However, in certain political circumstances, the item veto power results in lower current, lower capital, and higher grants-in-aid spending. Weaker evidence suggests that in the same circumstances the line item veto permits Democratic governors to raise taxes and Republican governors to reduce non-tax revenues.

PD March 1988. **TI** The Line Item Veto and Public Sector Budgets: Evidence from the States. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 2531; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 322, 321. **KW** Veto. Government Spending. President. Government Size.
AB Recent proposals assume that endowing the United States President with a line item veto will reduce spending. Analysis of a rich set of state budget data indicates that long run budgets are not altered by an item veto. In the short run, the item veto's potency is contingent upon the political setting. Governors with political incentives to use an item veto alter spending and revenues in a statistically significant and quantitatively important fashion. These results suggest that adoption of the line item veto, in general, is unlikely to reduce the size of the federal government.

Hong, Chansik

TI Forecasting International Growth Rates Using Bayesian Shrinkage and Other Procedures. **AU** Zellner, Arnold; Hong, Chansik.

TI Turning Points in Economic Time Series, Loss Structures and Bayesian Forecasting. **AU** Zellner, Arnold; Hong, Chansik; Gulati, Gaurang Mitu.

Honkapohja, Seppo

PD July 1987. **TI** On Government Deficits and Speculation. **AU** Honkapohja, Seppo; Lempinen, Urho. **AA** Honkapohja: Yrjo Jahnsson Foundation, Finland. Lempinen: Bank of Finland, Finland. **SR** Centre for Economic Policy Research Discussion Paper: 192; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 322, 023, 311, 321. **KW** Monetary Policy. Fiscal Policy. Random Taxation. Government Deficits. Growth. Cash in Advance.
AB We consider a simple general equilibrium model for the determination of asset prices together with full equilibria in the commodity and money markets. In this way portfolio aspects are introduced into a dynamic macro model which has many features from growth theory. Money holdings are modelled through a simple cash-in-advance constraint and all the assets are real investments of capital into productive processes. The government budget constraint is also explicitly incorporated. In this framework we generalize the distinction between anticipated and unanticipated policies into probabilistic anticipations about some money-financed fiscal policies. As the analytically simplest case we study the effects of temporary taxes that are randomly introduced. These surprise taxes are foreseen by consumers and influence their portfolio investment allocations. Moreover, consumers' expectations regarding the introduction of surprise taxes alter the variability of the government "fundamental deficit", so that the naive idea of using surprise temporary taxes to control the cumulative deficit does not work in general. It is, however, possible to devise a sophisticated scheme that in a rational expectations framework achieves intertemporal government budgetary balance.

Horsewood, H.

TI Real Wages and Unemployment in Britain During the 1930s. **AU** Dimsdale, N. H.; Nickell, S. J.; Horsewood, H.

Hosek, James R.

TI Military Enlistment and Attrition: An Analysis of Decision Reversal. **AU** Antel, John; Hosek, James R.; Peterson, Christine E.

Howell, David R.

TI Labor Quality and Productivity Growth in the U.S.: An Input-Output Growth Accounting Framework. **AU** Wolff, Edward N.; Howell, David R.

Hughes, Hallett Andrew

PD July 1987. **TI** International Policy Cooperation and Model Uncertainty. **AU** Hughes, Hallett Andrew; Holtham, Gerry. **AA** Hughes: Department of Economics, The University, Newcastle-upon-Tyne. Holtham: Credit Suisse First Boston Bank Ltd. **SR** Centre for Economic Policy

Research Discussion Paper: 190; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 423, 432, 026, 132, 212. **KW** International Policy Cooperation. Model Uncertainty. Coordination Gains. Policy Robustness. Bargaining.

AB The main obstacles to coordinating policies in practice are uncertainty about the correct model to use for policy design, and uncertainty about external variables. This paper examines the former problem. Numerical calculations using ten models from the recent Brookings Multicountry comparison exercise showed both policies and the gains to coordination are quite sensitive to model variations - and hence to model errors. A framework is therefore set up in which policy-makers are able to choose their model and their policies jointly in order to try and protect the gains from coordination from potential model misspecifications and/or disagreements over which model is most appropriate. That produces an alternative policy bargaining system and better results in terms of the success of coordination.

Hulten, Charles R.

PD October 1987. **TI** Energy, Obsolescence, and the Productivity Slowdown. **AU** Hulten, Charles R.; Robertson, James W.; Wykoff, Frank C. **AA** Hulten: University of Maryland. Robertson: Maxwell Stamp Associates. Wykoff: Pomona College. **SR** National Bureau of Economic Research Working Paper: 2404; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 825, 723, 522. **KW** Productivity. Energy Prices. Capital Stock. Obsolescence.

AB The growth rate of output per worker in the United States declined sharply during the 1970s. A leading explanation of this phenomenon holds that the dramatic rise in energy prices during the 1970s caused a significant portion of the United States capital stock to become obsolete. This led to a decline in effective capital input which, in turn, caused a reduction in the growth rate of output per worker This paper examines a key prediction of this hypothesis. If there is a significant link between energy and capital obsolescence, it should be revealed in the market price of used capital: if rising energy costs did in fact render older, energy-inefficient capital obsolete, prospective buyers should have reduced the price that they were willing to pay for that capital. An examination of the market for used capital before and after the energy price shocks should thus reveal the presence and magnitude of the obsolescence effect. We have carried out this examination for four types of used machine tools and five types of construction equipment. We did not find a general reduction in the price of used equipment after the energy price shocks. Indeed, the price of used construction equipment - the more energy intensive of our two types of capital - tended to increase after 1973. We thus conclude that our data do not support the obsolescence explanation of the productivity of slowdown.

Humphrey, David B.

TI New Banking Powers: A Portfolio Analysis of Bank Investment in Real Estate. **AU** Rosen, Richard J.; Lloyd, Davies Peter; Kwast, Myron L.; Humphrey, David B.

Hurd, Michael D.

PD October 1987. **TI** The Importance of Gifts and Inheritances Among the Affluent. **AU** Hurd, Michael D.; Mundaca, B. Gabriella. **AA** State University of New York at Stony Brook. **SR** National Bureau of Economic Research Working Paper: 2415; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 921, 841. **KW** Wealth. Bequests. Inheritance. Income. Assets. Rich.

AB Using data from the 1964 Survey of the Economic Behavior of the Affluent, we estimate directly the fraction of household assets which come from inheritances and the fraction from gifts. These data are well suited for this calculation because the survey is heavily weighted toward households with high incomes, and because the respondents were directly asked about the sources of their wealth. We estimate that 15-20% of household wealth came from inheritances and 5-10% from gifts. Even in households with very high incomes, very few people say that a large fraction of their assets were inherited or were given to them. According to the responses in this survey, it is not creditable that as much as 50% of household assets came from gifts and inheritances. Using data from the 1983 Survey of Consumer Finances with high income supplement, we roughly confirm the 1964 results, although the 1983 data are much less complete than the 1964 data.

PD October 1987. **TI** The Marginal Value of Social Security. **AA** State University of New York at Stony Brook. **SR** National Bureau of Economic Research Working Paper: 2411; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 915, 918. **KW** Social Security. Annuity. Elderly. Aged. Retirement. Bequests.

AB If annuities such as Social Security are not choosen freely, the consumption path typically cannot be determined independently of the path of annuities. This constraint reduces the value of the annuity from the point of view of the annuitant. I measure the value of the annuity by the marginal rate of substitution (MRS), the amount of bequeathable wealth that will substitute for a dollar of annuity wealth. In the analytical section of the paper, I show that the MRS increases as bequeathable wealth increases; in that sense the wealthy benefit more from Social Security than the poor. In the empirical section, I estimate the MRS for a sample of retired single elderly. The MRS varies considerably from individual to individual because of differences in the mix of bequeathable wealth and annuities. For the parameter values that best fit the data, a substantial fraction of the sample has more Social Security than it would like in that it would be willing to trade, at the margin, a claim to Social Security for an increase in bequeathable wealth.

Ingberman, Daniel E.

PD October 1987. **TI** The Political Economy of Fiscal Policy. **AU** Ingberman, Daniel E.; Inman, Robert P. **AA** University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 2405; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 321, 025, 023. **KW** Government Expenditure. Economic Policy. Social Resources. Political Science. Fiscal Policy. Public Goods. Collective Action. Democratic Society.

AB If there has been a dominant trend in the evolution of the modern industrial societies of this century it has been the growing importance of government in the allocation of social resources. It is important that we appreciate the fundamentally

political nature of the formation of government economic policy. This survey reviews and assesses our present understanding of how the political system might shape a nation's fiscal policy. Our approach is eclectic, drawing both from economics and political science, and decidedly micro-analytic in its orientation. From economics we adopt the perspective of utility maximizing agents and the analytics of trade, agreement, and market failure. From political science we learn just how and when these individual agents might act collectively to provide public goods, redistribute income, or issue government debt. Together the micro-analytics of economics and political science form the core theory of the 'new' political economy and provide a framework for understanding the emergence, and the performance, of governments. There is no more important test for the new discipline than providing a compelling explanation for the formation of fiscal policy in democratic societies.

Ingham, A.

PD November 1987. **TI** A Vintage Model of Scrapping and Investment. **AU** Ingham, A.; Ulph, A.; Toker, M. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8801; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 33. **PR** No Charge. **JE** 621, 631. **KW** Factor Demands. Energy. Investment. Technology Capital. Vintage Model.

AB This paper describes work done on a project to construct a dynamic model of factor demands by British manufacturing industry, particularly the demand for energy. Work on earlier stages of this project has been described in several papers. All of those results were based on models for which investment was taken to be exogenous. This has had two consequences that the present work seeks to remedy. Firstly it is difficult to represent a model as being dynamic if the most important link between present and past decisions, the level of investment, is taken to be outside the model. Our previous model explained the design of machines invested in over time, but clearly explaining the level of investment is an important aspect of a dynamic model. The second consequence, which follows on from this, is that the parameters which related to capital in the model, i.e. those determining the capital-output ratio, were being explained by their influence on the demand for the other factors in the model and consequently were somewhat imprecise. This led to some unsatisfactory results from the earlier models, such as a relatively low number of vintages used and the early retirement of some vintages and the persistence of others.

Inman, Robert P.

TI The Political Economy of Fiscal Policy. **AU** Ingberman, Daniel E.; Inman, Robert P.

Ioannides, Yannis M.

PD June 1987. **TI** Time to Build and Aggregate Fluctuations: A Note. **AU** Ioannides, Yannis M.; Taub, Bart. **AA** Virginia Polytechnic Institute and State University. **SR** Virginia Polytechnic Institute and State University Working Paper in Economics: E88-04-03; Working Paper Coordinator, Department of Economics Sandy Hall, Blacksburg, VA 24061. **PG** 24. **PR** Free by request. **JE** 131, 111, 133. **KW** Time to Build. Fluctuations. Capital Growth. Real Business Cycle Theory.

AB Kydland and Prescott (1982) have argued, theoretically and empirically, that the assumption that more than the one time period is needed for the construction of new productive capital dramatically improves the ability of equilibrium growth models to explain aggregate economic fluctuations. This paper argues that the techniques of analysis pursued by Kydland and Prescott in that very influential paper in real business cycle theory fail to clarify which of their results are due to properties of the time-to-build investment technology, or due to other features of their model. We show that the dynamic behavior of the Kydland-Prescott equilibrium model with time-to-build technology is not intrinsically oscillatory. Instead the Kydland and Prescott model exhibits local asymptotic stability of the saddle point type around the steady state. Even though it may be a more convincing model of investment it fails to deliver inherently cyclical behavior.

PD January 1988. **TI** Dynamic Switching Regression Models as a Generalized Euler Equation Approach to Liquidity Constraints. **AA** Virginia Polytechnic Institute and State University. **SR** Virginia Polytechnic Institute and State University Working Paper in Economics: E88-04-02; Working Paper Coordinator, Department of Economics Sandy Hall, Blacksburg, VA 24061. **PG** 43. **PR** Free by request. **JE** 023, 921, 315, 211, 022. **KW** Euler. Switching Regression. Liquidity Constraints. Consumption. Labor Supply. Life-cycle.

AB This paper introduces switching regression models for estimating preference parameters from consumption and labor supply data. Switching is endogenous, and used to account for the potential impact of liquidity constraints on consumption decisions over the life cycle. We emphasize that when lifetime utility is additively separable, liquidity (that is, borrowing) constraints affect the components of the consumption bundle only through total expenditure per period. Consequently, marginal utility of wealth-constant (or, Frisch) demand functions are invariant to the presence of liquidity constraints and are, therefore, particularly useful in estimating preference parameters. The paper also addresses the identification of whether or not liquidity constraints are binding, on which consistent estimation of preference parameters hinges crucially. Under certain identifying assumptions we show that first differencing of the Frisch demands leads to a regression equation, if the liquidity constraint is not binding for two consecutive periods, and to an inequality, which may be handled by a Probit-type regression. The estimation model we derive requires panel data, whose dynamic structure it utilizes fully. This model is extended for the case when the event that liquidity constraints are binding is observed imperfectly. The latter estimation would be computationally infeasible, were it not for a recurrence relationship which simplifies computations enormously.

Irvine, F. Owen

TI Using Panel Data to Assess the Bias in Cross-Sectional Inferences of Life-Cycle Changes in the Level and Composition of Household Wealth. **AU** Jianakoplos, Nancy A.; Menchik, Paul L.; Irvine, F. Owen.

Isaac, R. Mark

TI Theories and Tests of "Blind Bidding" in Sealed Bid Auctions. **AU** Forsythe, Robert; Isaac, R. Mark; Palfrey, Thomas R.

Jayet, H.

PD March 1988. **TI** Proportional Hazards Model: Estimation and Specification Tests Using Asymptotic Least Squares. **AU** Jayet, H.; Moreau, A. **AA** Unite Recherche, INSEE. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 8804; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 24. **PR** No Charge. **JE** 211. **KW** Proportional Hazards Test. Estimation. Asymptotic Least Squares.

AB In this paper we propose an asymptotic least squares method of estimation and test for proportional hazards models with fixed qualitative covariates. We use Nelson-Aalen estimators of the cumulative hazards on the left-hand side of a regression equation whose coefficients are the covariates effects. In this case, asymptotic least squares reduce to generalized least squares on the corresponding regression equation, giving consistent estimates and specification tests. Examples show that asymptotic least squares and partial likelihood estimation give very close results.

Jenkinson, Tim

TI Cointegration: A Survey of Recent Developments. **AU** Dolado, Juan J.; Jenkinson, Tim.

Jerison, Michael

TI Cross section Engel Curves Over Time. **AU** Hardle, Wolfgang; Jerison, Michael.

Jianakoplos, Nancy A.

PD November 1987. **TI** Using Panel Data to Assess the Bias in Cross-Sectional Inferences of Life-Cycle Changes in the Level and Composition of Household Wealth. **AU** Jianakoplos, Nancy A.; Menchik, Paul L.; Irvine, F. Owen. **AA** Department of Economics, Michigan State University. **SR** Michigan State Econometrics and Economic Theory Workshop Paper: 8711; Department of Economics, Michigan State University, East Lansing, MI 48824. **PG** 170. **PR** No Charge. **JE** 918, 921. **KW** Panel Data. Household Wealth. Household Portfolios. Life-Cycle Hypothesis.

AB Panel data are used to assess the biases present in cross-sectional inferences of life-cycle changes in the level and composition of household wealth. We compare age-wealth profiles based on five cross-sectional surveys of a panel with time-series age-wealth profiles for each of the fifteen age cohorts from the same panel. These comparisons confirm Shorrocks' hypothesis that productivity growth and differential mortality cause distortions in age-wealth profiles based on cross-sectional data. Our evaluation of procedures used in previous research to adjust cross-sectional data for the productivity effect indicate that these fixups are unreliable and do not correct for the differential mortality effect. Cohort-specific productivity effects and differential mortality present in cross-sectional data also result in misleading inferences about portfolio reallocations over time. This research also points out the need to adjust panel data for differential attrition before making inferences about individual behavior.

Jorion, Philippe

TI The Time-Variation of Risk and Return in the Foreign Exchange and Stock Markets. **AU** Giovannini, Alberto; Jorion, Philippe.

Joshi, Heather

TI Econometric Modelling of the Birth Rate. **AU** De Cooman, Eric; Joshi, Heather.

Joshi, Vijay

TI Exchange Rate Protection and Exchange Rate Conflict. **AU** Bliss, Christopher; Joshi, Vijay.

Jovanovic, Boyan

TI Entrepreneurial Choice and Liquidity Constraints. **AU** Evans, David; Jovanovic, Boyan.

PD September 1987. **TI** Long Waves and Short Waves: Growth Trough Intensive and Extensive Search. **AU** Jovanovic, Boyan; Rob, Rafael. **AA** Jovanovic: New York University. Rob: University of Pennsylvania. **SR** New York University Economic Research Reports: RR 87-35; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 20. **PR** No Charge. **JE** 621, 111, 022. **KW** Technological Change. Search Theory. Growth.

AB This paper presents a model of growth through technical progress. The nature and scope of what is learned is derived from a set of axioms, and optimal search behavior by agents is then analyzed. Agents can search intensively or extensively. Intensive search explores a technology in greater depth, while extensive search yields new technologies. Agents alternate between these two modes of search. The economy grows forever and the growth rate is bounded away from zero. The growth rate is on average higher during periods of intensive search than during periods of extensive search. Epochs of higher growth are initiated by discoveries that call for further intensive exploration. This mechanism is reminiscent of the process described by Schumpeter as causing long-wave business cycles. Serial correlation properties of output and growth stem from the presence of intensive rather than extensive search. The two key parameters are technological opportunity, sigma, and the cost of extensive search, c.

Judge, G. G.

TI Sampling Performance of Some Joint One-Sided Preliminary Test Estimators Under Squared Error Loss. **AU** Yancey, T. A.; Judge, G. G.; Bohrer, Robert.

Karni, E.

PD February 1988. **TI** Behaviorally Consistent Optimal Stopping Rules. **AU** Karni, E.; Safra, Z. **AA** Karni: The Johns Hopkins University. Safra: Tel-Aviv University. **SR** Tel-Aviv Foerder Institute for Economic Research Working Paper: 9-88; Department of Economics, Tel-Aviv University, Ramat Aviv 69978, Tel-Aviv, ISRAEL. **PG** 29. **PR** No Charge. **JE** 022, 026, 213. **KW** Behavioral Consistency. Dynamic Consistency. Search Theory. Expected Utility. Stopping Rules.

AB This paper analyzes the optimal stopping rules when the decision-maker's preferences are nonlinear in the probabilities. Assuming behavioral consistency we establish the existence and characterize the nature of the optimal stopping rules for search models without recall from known distribution with and without bound on the number of observations allowed.

PD March 1988. **TI** Rank-Dependent Probabilities. **AU** Karni, E.; Safra, Z. **AA** Karni: The Johns Hopkins University. Safra: Tel-Aviv University. **SR** Tel-Aviv

https://doi.org/10.1017/S0951007900001212 Published online by Cambridge University Press

Foerder Institute for Economic Research Working Paper: 11-88; Department of Economics, Tel-Aviv University, Ramat Aviv 69978, Tel-Aviv, ISRAEL. **PG** 29. **PR** No Charge. **JE** 026, 022, 213. **KW** Expected Utility. Anticipated Utility. Preference Reversals. Rank Dependent. Lottery. Insurance. Risk.

AB Within the framework of the theory of expected utility with rank dependent probabilities we present an hypothesis concerning the shape of the probability transformation function. We show that this hypothesis is consistent with a simultaneous participation in actuarially unfair lotteries and insurance, with aversion to fair, symmetric, risks, with the "preference reversals" phenomenon, and with some other experimental evidence concerning choice under risk. The main novelty of our hypothesis is that it is consistent with: (a) the finding that, in the "preference reversals" experiments, the frequency of reversals is higher when the P-bet is preferred to the corresponding $-bet than when the $-bet is preferred over the corresponding P-bet and, (b) the finding that the $-bet, the more risky prospect, is chosen more frequently than the corresponding P-bet.

PD March 1988. **TI** Generalized Expected Utility Analysis of Multivariate Risk Aversion. **AA** The Johns Hopkins University. **SR** Tel-Aviv Foerder Institute for Economic Research Working Paper: 10-88; Department of Economics, Tel-Aviv University, Ramat Aviv 69978, Tel-Aviv, ISRAEL. **PG** 14. **PR** No Charge. **JE** 026, 022, 213. **KW** Expected Utility. Risk Aversion. Consumption-Saving Decision.

AB This paper examines the robustness of results concerning multivariate risk aversion obtained under expected utility theory to relaxation of the linearity of the representation functional. In particular, it is shown that well-known propositions obtained under the expected utility hypothesis extend when the restrictions that are imposed on the preferences in expected utility theory are imposed on the "local preferences" in the generalized theory.

Katseli, Louka

PD August 1987. **TI** On the Effectiveness of Discrete Devaluation in Balance of Payments Adjustment. **AA** Tsakalof 28, Athens 10673, Greece. **SR** Centre for Economic Policy Research Discussion Paper: 199; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 134, 212. **KW** Exchange Rates. Price Adjustment. Discrete Devaluation. Crawling Peg. Greece.

AB In the context of monopolistic price adjustment and price setting behavior on the part of firms, it is shown that a large discrete adjustment of the nominal exchange rate as opposed to a crawling peg is likely to result in faster adjustment of domestic prices. This is the case because an increase in the variance of exchange rate changes, associated with a policy of discrete devaluation, strengthens expectations about faster incipient increases of competitors' prices and thus of local demand as well as of marginal costs. The above hypothesis is empirically tested on Greek monthly data and seems to be validated by the empirical evidence presented. Specifically, the variance of exchange rate changes proves to be an important independent variable in explaining domestic price adjustment. These results confirm the underlying policy hypothesis that the effectiveness of exchange rate policy in balance-of-payment adjustment is a function not only of economic fundamentals but of exchange-rate management in so far as the latter affects the expectations of private market participants.

Keith, Steven

PD August 1987. **TI** Assessing the Outcome of Affirmative Action in Medical Schools: A Study of the Class of 1975. **AU** Keith, Steven; Bell, Robert M.; Williams, Albert P. **AA** The Rand Corporation. **SR** Rand Report: R-3481; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica CA 90406-2138. **PG** 47. **PR** No Charge. **JE** 812, 917. **KW** Affirmative Action. Doctors. Minorities. Medicine.

AB Based on an analysis of data on people who graduated from United States medical schools in 1975, this study reports on the ways that specialty choice, practice location, patient populations served, and board certification rates differ between minority and nonminority graduates. It also considers the relationship of premedical school performance and socioeconomic status to these variables. Although they entered the primary care specialties to a greater extent than nonminorities, there is an impressive dispersion of minority graduates across all specialties. Minority graduates are practicing in physician-shortage areas at twice the rate of their nonminority counterparts, and they are caring for significantly greater proportions of minority and Medicaid patients. Only about half the minority physicians had obtained board certification in their specialty, compared with four-fifths of the nonminority graduates. The results for specialty choice, practice location, and patient characteristics support the continuing affirmative action in medical schools.

Khanna, Naveen

TI Equilibrium with Debt and Equity Financing of New Projects: Why More Equity Financing Occurs When Stock Prices are High. **AU** Bagnoli, Mark; Khanna, Naveen.

Kilgour, D. Marc

TI Is Nuclear Deterrence Rational, and Will Star Wars Help? **AU** Brams, Steven; Kilgour, D. Marc.

Kim, In Joon

PD January 1988. **TI** The Role of Price Dynamics in the Valuation of Contingent Claims. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 450; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 22. **PR** $4.00. **JE** 313. **KW** Contingent Claims. General Equilibrium. Assets. Prices. Dividends.

AB We develop a general equilibrium model to show that price dynamics of an asset are not independent of the dividend process. The price of an asset is the expectation of marginal rate of substitution weighted future dividends. An implication of this result for the valuation of contingent claims is that valuation models may violate arbitrage bounds if the specification of the dividend rule is incompatible with the assumed price dynamics. The general equilibrium approach allows us to clarify comparative statics properties of the Black and Scholes model. Closed form solutions for the call option price are derived in an economy where the intertemporal CAPM holds.

King, Mervyn A.

PD September 1987. **TI** Asset Accumulation, Information, and the Life Cycle. **AU** King, Mervyn A.; Leape, Jonathan I. **AA** London School of Economics. **SR** National Bureau of Economic Research Working Paper: 2392; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 921, 313. **KW** Life Cycle Model. Households. Wealth. Household Portfolio Composition.

AB Empirical tests of the life cycle model have focused on its implications for the level of a household's total net worth and paid little attention to changes in portfolio composition over the life cycle. In this paper, we examine a new survey of the asset holdings of 6,010 United States households and show that there is a pronounced life-cycle pattern to both the number and value of assets held by United States households. Direct survey evidence suggests that incomplete information is a significant determinant of household portfolio composition. We test the hypothesis that information about investment opportunities arrives stochastically over time, estimating a Poisson model for the arrival of new information.

Kipnis, Victor

PD November 1987. **TI** Model Selection and Predictive Assessment in Multiple Regression. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8739; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 10. **PR** No Charge. **JE** 132, 211. **KW** Model Selection. Predictive Power. Simulation.

AB The problem of estimating the predictive ability of a model selected among a class of potential linear regression models is considered. The theory behind most estimators for the predictive efficiency is not valid when model selection and estimation are from the same data. The very selecting process may affect the distribution of those estimators for the selected model and, in particular, lead to their substantial bias when the selecting effect is not allowed for. An approach based on applying the same selecting procedure to bootstrap-like pseudosamples as was used for the original data is suggested. Simulation results comparing the estimator for the MSEP provided by this method with conventional estimators are described. It is also shown that the presented method may help in finding a good prediction equation.

Kletzer, Kenneth

TI Tariffs and Saving in a Model with New Families. **AU** Engel, Charles; Kletzer, Kenneth.

Klevorick, Alvin

TI Appropriating the Returns from Industrial R & D. **AU** Levin, Richard; Klevorick, Alvin; Nelson, Richard R.; Winter, Sidney G.

Kniesner, Thomas J.

PD September 1987. **TI** Separating the Reporting Effects from the Injury Rate Effects of Worker's Compensation Insurance: A Hedonic Simulation. **AU** Kniesner, Thomas J.; Leeth, John D. **AA** Kniesner: University of North Carolina Chapel Hill. Leeth: Bentley College. **SR** University of North Carolina Working Paper Series: 86-5; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 50. **PR** No Charge. **JE** 822, 616, 613. **KW** Labor. Workers' Compensation. Insurance. Industrial Safety.

AB This paper investigates the economic links between the labor market and the workers' compensation insurance (WC) system with a focus on two issues: (1) incomplete experience rating of WC premiums by insurance providers and (2) imperfect state verification by insurance providers -- the inability to determine precisely the cause and extent of an injury. By numerically simulating a hedonic equilibrium model of industrial safety, the analysis clarifies the relationships among the parameters of the WC system, the number of insurance claims filed and paid (reported injuries), and the actual level of industrial safety.

PD December 1987. **TI** How Fragile Are Male Labor Supply Function Estimates? **AU** Kniesner, Thomas J.; Smith, Karen. **AA** Kniesner: University of North Carolina Chapel Hill. Smith: University of New Hampshire. **SR** University of North Carolina Working Paper Series: 87-14; Department of Economics, CB #3305, Gardner Hall, University of North Carolina, Chapel Hill, NC 27599-3305. **PG** 51. **PR** No Charge. **JE** 824, 821, 212. **KW** Robust. Labor Supply. Life-Cycle. Sex Differences. Sensitivity Analysis.

AB This paper reports on our progress in re-examining the fragility of male labor supply frontier estimates in light of the recent theoretical and econometric improvements in estimating labor supply just noted.

Kollintzas, Tryphon E.

PD March 1988. **TI** A Generalized Variance Bounds Test. **AA** Research Department, Federal Reserve Bank of Minneapolis and Department of Economics, University of Pittsburgh. **SR** Federal Reserve Bank of Minneapolis Staff Report: 113; Research Department, Federal Reserve Bank of Minneapolis, 250 Marquette Avenue, Minneapolis, MN 55480. **PG** 27. **PR** No Charge. **JE** 211, 023. **KW** Variance Bounds Test. Rational Expectations. Nonlinear Models.

AB This paper derives a variance bounds test for a broad class of linear rational expectations models. According to this test, if observed data accord with the model, then a weighted sum of auto-covariances of the covariance-stationary components of the endogenous state variables should be nonnegative. The new test reinterprets West's (1986) variance bounds test and extends its applicability by not requiring observable exogenous state variables, covariance-stationary exogenous or endogenous state variables, or a zero initial value for the endogenous state variable. The paper also discusses the possibility of the new test's application to nonlinear models.

Kolluri, B. H.

TI What Do Regressions of Interest Rates on Deficits Imply? **AU** Swamy, P. A. V. B.; Kolluri, B. H.; Singamesetti, R. N.

Korenman, Sanders D.

TI The Labor Market Consequences of Generational Crowding. **AU** Bloom, David; Freeman, Richard B.; Korenman, Sanders D.

Kornhauser, Lewis

PD October 1987. **TI** An Experimental Study of Single Actor Accidents. **AU** Kornhauser, Lewis; Schotter, Andrew.

AA New York University. **SR** New York University Economic Research Reports: RR 87-39; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 48. **PR** No Charge. **JE** 916, 215. **KW** Deterrance. Liability. Accident Law. Incentive. Policy Choice.

AB The incentive effects of various legal rules governing liability for accidents have been the subject of much controversy among lawyers and of much formal study among economists. To lawyers, the deterrence effect of a legal rule of strict liability relative to one of negligence or negligence with contributory negligence bears on the policy choice among rules. During the past twenty-five years, the legal debate over the empirical question of deterrence has often turned not on actual deterrence effects but on the economic models of accident law which predict the deterrence effects of various legal rules. In this paper we experimentally investigate three hypotheses offered by these models concerning the incentive effects of the rules of strict liability and negligence.

Kotowitz, Y.

TI Compensation Schemes with Bankruptcy Considerations. **AU** Berkowitz, M. K.; Kotowitz, Y.

Krasa, Stefan

PD November 1987. **TI** Existence of Competitive Equilibria for Option Markets. **AA** Stanford University. **SR** Stanford Graduate School of Business Research Paper: 977; Graduate School of Business, Stanford University, Stanford, CA 94305-5015. **PG** 11. **PR** No Charge. **JE** 313, 021, 311. **KW** General Equilibrium. Options. Existence. Aggregate Supply.

AB In a general equilibrium model with options, Polemarchakis and Ku (1986) give an example of an economy where no competitive equilibrium exists. Their model is robust in the sense that slight changes of the parameters of the economy does not lead to the existence of an equilibrium. The aim of this paper is to show that this nonexistence of equilibrium results from too little variation of the aggregate supply of commodities over the states of the world. We show that the fraction of economies (parameterized by endowments) with equilibria converges to one with increasing variation in the total endowment, in a precise sense.

Kravis, Irving B.

PD March 1988. **TI** National Price Levels and the Prices of Tradables and Nontradables. **AU** Kravis, Irving B.; Lipsey, Robert E. **AA** Kravis: University of Pennsylvania and National Bureau of Economic Research. Lipsey: Queens College, CUNY and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2536; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 134, 431. **KW** Prices. Exports. Imports. Tradables.

AB This paper examines changes in national price levels and prices of tradables and nontradables and relates them to changes in variables found earlier to be associated with price level differences among countries. Across countries, national price levels increase systematically with the level of a country's per capita income, and the ratios of tradables to nontradables prices decrease. Over time, increases in per capita income are generally associated with increases in price levels in the industrial countries, although the opposite relationship tended to prevail among developing countries. Increases in income are associated with declines in the ratio of tradables to nontradables price levels more consistently than with the increases in general price levels. Increases in the exchange value of a currency are also associated with declines in the price levels for tradables relative to nontradables. Countries with price levels that were high or low relative to those predicted by the structural equations tended to move toward those predicted levels.

Kreps, David

TI Repeated Games with Long-Run and Short-Run Players. **AU** Fudenberg, Drew; Kreps, David; Maskin, Eric.

Krishna, Kala

PD March 1988. **TI** Optimal Policies with Strategic Distortions. **AU** Krishna, Kala; Thursby, Marie C. **AA** Krishna: Harvard University. Thursby: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2527; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 411. **KW** Trade Policy. Oligopoly. Optimal trade. Imperfect competition.

AB Recent work in optimal trade policy for imperfectly competitive markets usually identifies the optimal level of an instrument, and when more instruments are allowed, general interpretations have been unavailable. This paper analyzes the jointly optimal levels of a variety of instruments with oligopolistic competition. A targeting principle for identifying optimal policies is derived using the concept of a "strategic distortion". It is shown how optimal policies vary with the distortions present and the number of firms, as well as assumptions about market segmentation and regulation. The principles of targeting are illustrated using agricultural marketing boards.

Krueger, Anne O.

PD October 1987. **TI** Prospects for Liberalizing the International Trading System. **AA** Duke University. **SR** National Bureau of Economic Research Working Paper: 2409; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 420, 411, 431. **KW** Protection. Trade Negotiation. Trade Liberalization. GATT. Uruguay Round. Trade Barriers. Nontariff Barriers.

AB This paper analyzes the equilibrium degree of protection as the outcome of the interaction of demands for protection and the demand for a liberal international trading order. It then assesses the current balance. On one hand, the nature of technical progress, the institution of the Uruguay Round, the mounting costs of agricultural protection, and the increasingly high costs of protection as the world economy integrates all conduce toward a more liberal trading order. Demands for protection will intensify to the extent that growth decelerates, that trade negotiators fail to find mechanism to deal with nontariff barriers, and that the United States fails to assume this leadership role that was earlier taken.

PD February 1988. **TI** The Political Economy of Controls: American Sugar. **AA** Duke University. **SR** National Bureau of Economic Research Working Paper: 2504; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 613, 321. **KW** Regulation. Controls. Sugar Program.

AB This paper outlines the salient characteristics of competing models of economic regulation and controls. It then examines the evolution of the American sugar program from 1934 to 1987 in light of these models. While lobbying and other features of traditional models were clearly important, other elements also played a key role. In particular, a technocracy developed, and complexity of regulation served as an important factor perpetuating the sugar program. Similarly, lobbying and the role of vested interests was clearly important in the evolution of the program once it began but there was an element of "accident" in the programs initiation. Once it existed, it became an instrument to be captured and used by politicians, technocrats, and economic interests alike.

Ku, Bon Il

TI Options and Equilibrium. **AU** Polemarchakis, Heraklis; Ku, Bon Il.

Kuester, Kathleen A.

PD February 1988. **TI** Asymptotic Consistency and Normality of Least Absolute Deviations Applied to Seemingly Unrelated Regression Systems. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 16; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 27. **PR** No Charge. **JE** 211. **KW** Least Absolute Deviations. Semiparametric Estimation. Seemingly Unrelated Regression. Asymptotic Theory.

AB We investigate two least absolute deviations estimation techniques applied to seemingly unrelated regression systems. They are "stacked" ordinary least absolute deviations, which is analogous to stacked ordinary least squares, and seemingly unrelated regression least absolute deviations, which is similar to SUR least squares. Their asymptotic consistency and normality are proven in a manner similar to Amemiya's (1982) proof. Both techniques are preferable to single equation least absolute deviations only under certain conditions. Also, the asymptotic normality of SUR-LAD depends on a rather restrictive assumption.

Kwast, Myron L.

TI New Banking Powers: A Portfolio Analysis of Bank Investment in Real Estate. **AU** Rosen, Richard J.; Lloyd, Davies Peter; Kwast, Myron L.; Humphrey, David B.

Lach, Saul

PD September 1987. **TI** The Interaction Between Capital Investment and R&D in Science-Based Firms. **AU** Lach, Saul; Schankerman, Mark. **AA** Lach: Columbia University. Schankerman: London School of Economics. **SR** New York University Economic Research Reports: RR 87-36; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 37. **PR** No Charge. **JE** 621, 522, 631. **KW** R&D. Capital Investment. Stock Market.

AB This paper analyzes the interaction among R&D, capital investment, and the stock market rate of return for 191 firms in science-based industries for the period 1973-1981. Using a framework based on dynamic factor analysis, we show how several prominent hypotheses about the determination of R&D and investment generate testable parameter restrictions. The data indicate that R&D Granger-causes investment, but that investment does not Granger-cause R&D. We use this finding to examine the validity of those hypotheses, to characterize the movements over time of R&D and investment, and to measure the stock market valuation of these movements.

Laffont, J. J.

TI Testing the Democratic Hypothesis in the Provision of Local Public Goods. **AU** Aragon, Y.; Laffont, J. J.; Le, Pottier J.

Laitner, John

PD March 1987. **TI** Bequests, Gifts, and Social Security. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-17; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 37. **PR** No Charge. **JE** 921, 915, 918. **KW** Bequests. Intergenerational Transfers. Social Security. Overlapping Generations.

AB This paper analyzes the very long run, or "stationary state," impact of of an unfunded social security system. We use an overlapping generations model framework. A key feature is that while parents care about their children and can leave non-negative bequests to them, children also care about their parents and can make non-negative "gifts" to them. We show that the possibility of negative "net bequests" may make social security less harmful to private wealth accumulation than would otherwise be the case. A subsidiary finding is that risk-loving behavior may emerge for some households due to the nature of intergenerational transfers within family lines.

PD May 1987. **TI** Dynamic Determinacy and the Existence of Sunspot Equilibria. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-18; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 9. **PR** No Charge. **JE** 311, 023, 213. **KW** Sunspots. Stability. Stationarity. Dynamic Models.

AB This paper relates the existence of stationary sunspot equilibria in the vicinity of a conventional stationary state to the phase diagram surrounding the latter. We find that the local condition required for a unique equilibrium path returning to the stationary state following any slight perturbation is also sufficient to exclude stationary sunspot equilibria in the state's immediate vicinity or (if the model includes predetermined variables) to exclude local sunspot outcomes which are not virtually indistinguishable from the stationary state itself. In that sense, an eigenvalue condition can tell us something about the possibilities of local sunspot activity.

Lal, Deepak

PD June 1987. **TI** The Fable of the Three Envelopes: The Analytics and Political Economy of the Reform of Chineses State Owned Enterprises - A Geometric Note. **AA** University College London. **SR** University College London Discussion Paper: 87-29; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PG** 24. **PR** 1.50 pounds sterling. **JE** 124, 052. **KW** Political Economy. Reform. China. State Owned. Ownership.

PD July 1987. **TI** Structural Adjustment, the Basic Needs Approach and Development Policy. **AA** University College London. **SR** University College London Discussion Paper: 87-31; Department of Economics, University College London,

Gower Street, London, WC1E 6BT. **PG** 27. **PR** 1.50 pounds sterling. **JE** 112. **KW** Structural Adjustment. Needs. Approach. Development.

Lam, David

PD June 1987. **TI** Lorenz Curves, Inequality, and Social Welfare Under Changing Population Composition. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory Working Paper: 87-10; Department of Economics, University of Michigan, Ann Arbor, MI 48109. **PG** 20. **PR** No Charge. **JE** 024, 921, 841, 121. **KW** Income Distribution. Brazil. Lorenz Curves.

AB This paper analyzes the properties of Lorenz curves and generalized Lorenz curves produced from combinations of income distributions. The paper shows that when sub-populations have equal means, a number of simple conditions govern the position of the Lorenz curve for the combined population relative to the Lorenz curves for the sub-populations. These conditions become less regular when the sub-populations have different means, and suggest that a combined distribution will almost never Lorenz dominate an original distribution. Implications of the results for intertemporal comparisons of social welfare and inequality are discussed, and are illustrated by comparing income distributions across generations in Brazil.

Laroque, G.

TI Recherche et agrigation dam un Modele d' equilibre a prix fixer. **AU** Gourieroux, C.; Laroque, G.

Le, Pottier J.

TI Testing the Democratic Hypothesis in the Provision of Local Public Goods. **AU** Aragon, Y.; Laffont, J. J.; Le, Pottier J.

Leamer, Edward E.

TI A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald.

Leape, Jonathan I.

TI Asset Accumulation, Information, and the Life Cycle. **AU** King, Mervyn A.; Leape, Jonathan I.

LeBlanc, M. R.

TI The Stochastic Coefficients Approach to Econometric Modeling Part I: A Critique of Fixed Coefficient Models. **AU** Swamy, P. A. V. B.; Conway, R. K.; LeBlanc, M. R.

Leeth, John D.

TI Separating the Reporting Effects from the Injury Rate Effects of Worker's Compensation Insurance: A Hedonic Simulation. **AU** Kniesner, Thomas J.; Leeth, John D.

Lehmann, Bruce

PD March 1988. **TI** Fads, Martingales, and Market Efficiency. **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 2533; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 313. **KW** Efficient Market. Finance. Equity. Fads. Arbitrage.

AB Much of the theoretical basis for current monetary and financial theory rests on the economic efficiency of financial markets. Not surprisingly, considerable effort has been expended to test the efficient markets hypothesis, usually by examination of the predictability of equity returns. Unfortunately, there are two competing explanations of the presence of such predictable variation: (1) market inefficiency and stock price 'overreaction' due to speculative 'fads' and (2) predictable changes in expected security returns associated with forecasted changes in market or individual security 'fundamentals'. These explanations can be distinguished by examining equity returns over short time intervals since there should be negligible systematic changes in the fundamental valuation of individual firms over intervals like a week in an efficient market. This study finds sharp evidence of market inefficiency in the form of systematic tendencies for current winners and 'losers' in one week to experience sizeable return reversals over the subsequent week in a way that reflect apparent arbitrage profits. These measured arbitrage profits persist after corrections for the mismeasurement of security returns because of thin trading and bid-ask spreads and for plausible levels of transactions costs.

Leighton, Linda

TI Why Do Smaller Firms Pay Less? **AU** Evans, David S.; Leighton, Linda S.

TI The Effects of Demographic and Industry Changes on U.S. Self-Employment. **AU** Evans, David; Leighton, Linda.

Lempinen, Urho

TI On Government Deficits and Speculation. **AU** Honkapohja, Seppo; Lempinen, Urho.

Leon, H. L.

TI Testing for Heterogeneous Parameters in a Least Squares Framework. **AU** Dutta, Jayasri; Leon, H. L.

Levin, Richard

PD February 1988. **TI** Appropriating the Returns from Industrial R & D. **AU** Levin, Richard; Klevorick, Alvin; Nelson, Richard R.; Winter, Sidney G. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 862; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 79. **PR** $2.00. **JE** 621, 612. **KW** R & D. Technological Change. Innovation. Patents. Public Policy.

AB In this paper, we describe the results of an inquiry into the nature of appropriability conditions in over one hundred manufacturing industries, and we discuss how this information has been and might be used to cast light on important issues in the economics of innovation and public policy. Our data, derived from a survey of high-level R & D executives, are informed opinions about the nature of an industry's technological and economic environment rather than quantitative measures of inputs and outputs.

Levine, Paul

TI International Cooperation and Reputation in an Empirical Two-Bloc Model. **AU** Currie, David; Levine, Paul; Vidalis, Nic.

PD January 1988. **TI** Does Time Consistency Matter? **AA** London Business School. **SR** Centre for Economic

Policy Research Discussion Paper: 227; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 82. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 023, 026, 321. **KW** Time Inconsistency. Reputation. Credibility. Rational Expectations.

AB The paper addresses the Kydland and Prescott (1977) argument that the optimal policy in models with rational expectations is time-inconsistent. This, it is argued, undermines the credibility of the optimal policy in the eyes of the private sector, who will expect the policy-maker to reoptimize. Therefore policy, if it is to be credible, must be constrained to be time-consistent. For many models, this is a serious constraint. Barro and Gordon offer a different approach to the time inconsistency problem. They assume that policy-makers suffer a loss of reputation if they renege on earlier commitments. With this "punishment" mechanism in place, Barro and Gordon show that there exist policies superior to the time-consistent policy which are credible and sustainable. The Barro-Gordon analysis is, however, model-specific and, in particular, applies only to static models. The main purpose of this paper is to show how their analysis can be generalized to any rational expectations model with structural dynamics and stochastic exogenous shocks.

Levinsohn, James A.

TI Import Competition and the Stock Market Return to Capital. **AU** Grossman, Gene M.; Levinsohn, James A.

Li, Ker Chau

TI The Rescaling of a Transformed Outcome Variable and Its Interpretations on a Predictive Scale. **AU** Duan, Naihua; Li, Ker Chau.

Lichtenberg, Frank R.

PD January 1988. **TI** Government Subsidies to Private Military R&D Investment: DOD's IR&D Policy. **AA** Columbia University, Graduate School of Business. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-01; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 14. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 621, 323, 114. **KW** Research and Development. National Defense. Government Subsidies. Defense Spending. Innovation. Subsidy.

AB A relatively obscure defense procurement policy establishes a large subsidy to private military R&D investment. On the surface, it appears that the marginal subsidy to such investment is zero, but this is only true in the short run. Due to DOD's policy of allowable-cost determination, the long-run subsidy is substantial. It is much larger, in fact, than the subsidy provided by the R&D Tax Credit enacted in 1981. I calculate the subsidy by estimating an econometric model using contractor-level data from the Defense Contract Audit Agency. This subsidy may have an important influence on the amount and character of privately financed innovation in the United States.

Lin, Justin Yifu

PD June 1987. **TI** An Economic Theory of Institutional Change: Induced and Imposed Change. **AA** Postdoctoral Fellow, Yale University. **SR** Yale Economic Growth Center Discussion Paper: 537; Economic Growth Center, Yale University, Box 1987 Yale Station, New Haven, CT 06520. **PG** 54 pp. **PR** $2.00. **JE** 024, 025. **KW** Institutional Change. Disequilibrium. Public Goods. Government. Incentives.

AB This paper applies the demand-and-supply approach to the process of institutional change. Both the induced, voluntary change and the imposed, government-instituted change are discussed. The induced institutional change is a response to the profitable opportunities that arise from institutional disequilibrium. The sources of institutional disequilibrium are identified in this paper. Since an institutional arrangement is a public good, the supply of new institutional arrangements by the induced process will be less than the social optimum. To rectify the undersupply, government initiatives are often required. However, for the reasons that are discussed under the title of policy failures, the government may not have incentives to take such action.

Lindbeck, Assar

PD July 1987. **TI** Cooperation, Harassment, and Involuntary Unemployment: An Insider-Outsider Approach. **AU** Lindbeck, Assar; Snower, Dennis J. **AA** Lindbeck: Director, Institute for International Economic Studies. Snower: Birkbeck College, LONDON. **SR** Centre for Economic Policy Research Discussion Paper: 196; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 821, 824, 026, 023. **KW** Unemployment. Cooperation. Harassment. Insiders. Outsiders. Wages. Turnover.

AB We present a theory of involuntary unemployment which explains why the unemployed workers ("outsiders") are unable or unwilling to find jobs even though they are prepared to work for less than the prevailing wages of incumbent workers ("insiders"). The outsiders do not underbid the insiders since, were they to do so, the insiders would withdraw cooperation from them and make their work unpleasant (i.e. "harass" them), thereby reducing the productivity and increasing the reservation wages of the underbidders. The resulting labor turnover costs create economic rent which the insiders tap in wage-setting and, as a result, involuntary unemployment may arise.

Lipman, Barton L.

TI Provision of Public Goods: Fully Implementing the Core through Private Contributions. **AU** Bagnoli, Mark; Lipman, Barton L.

TI Successful Takeovers without Exclusion. **AU** Bagnoli, Mark; Lipman, Barton L.

Lipsey, Robert E.

TI National Price Levels and the Prices of Tradables and Nontradables. **AU** Kravis, Irving B.; Lipsey, Robert E.

Lloyd, Davies Peter

TI New Banking Powers: A Portfolio Analysis of Bank Investment in Real Estate. **AU** Rosen, Richard J.; Lloyd, Davies Peter; Kwast, Myron L.; Humphrey, David B.

Lovasz, L.

TI On the Graph of Large Distances. **AU** Erdos, P.; Lovasz, L.; Vesztergombi, K.

Lovell, C. A. K.

TI An Indirect Efficiency Approach to the Evaluation of Producer Performance. **AU** Fare, R.; Grosskopf, S.; Lovell, C. A. K.

Lucas, Deborah

PD October 1987. **TI** Bank Financing and Investment Decisions with Asymmetric Information. **AU** Lucas, Deborah; McDonald, Robert. **AA** Northwestern University. **SR** National Bureau of Economic Research Working Paper: 2422; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 310, 521, 522. **KW** Banking. Investment. Loan Quality. Banks. Risky Debt. Loans.

AB Banks know more about the quality of their assets than do outside investors. This informational asymmetry can distort investment decisions if the bank must raise funds from uninformed outsiders, and assets sold will be subject to a lemons discount. Using a three-period equilibrium model we examine the effect of asymmetric information about loan quality on the asset and liability decisions of banks and the market valuation of bank liabilities. The existence of a precautionary demand for T-bills against future liquidity needs depends both on the regulatory environment and the informational structure. If banks are ex ante identical, issuing risky debt to fund a deposit outflow is preferred to holding T-bills ex ante. However, if banks have partial knowledge of loan quality, and if their asset choice is observable, they may hold T-bills to signal their quality, enabling them to issue risky debt at a lower interest rate.

PD October 1987. **TI** Bank Portfolio Choice with Private Information About Loan Quality: Theory and Implications for Regulation. **AU** Lucas, Deborah; McDonald, Robert. **AA** Northwestern University. **SR** National Bureau of Economic Research Working Paper: 2421; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 310, 613. **KW** Bank Asset Choice. Loans. Banking. Equity Requirement. Regulation. Portfolio.

AB This paper models bank asset choice when shareholders know more about loan quality than do outsiders. Because of this informational asymmetry, the price of loans in the secondary market is the price for poor quality loans. Banks desire to hold marketable securities in order to avoid liquidating good quality loans at the "lemons" price, but also have a countervailing desire to hold risky loans in order to maximize the value of deposit insurance. In this context, portfolio composition and bank safety is examined as a function of the market distribution of loan quality, and the distribution of deposits. The model suggests that off-balance sheet commitments have little effect on bankruptcy risk, and induce banks to hold more securities. We also show that an increase in the bank equity requirement will unambiguously increase bank safety in the long run. In the short run, banks are unambiguously riskier on-balance-sheet, although the effect on bank safety is ambiguous.

Lund, John

TI Toward a Profile of Soviet Behavior in International Financial Markets. **AU** Neu, C. R.; Lund, John.

Lutz, Nancy A.

PD March 1988. **TI** Warranties as Signals Under Consumer Moral Hazard. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 867; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PR** $2.00. **JE** 026, 511, 022, 611. **KW** Warranties. Moral Hazard. Signalling. Product Quality. Game Theory.

AB In this paper, I examine whether and how warranties serve as signals of product quality in an environment where there are opportunities for consumer moral hazard. My model is very similar to Grossman's. A risk neutral monopolist produces a good of fixed and exogenous quality. This product is offered to a market of identical risk-averse consumers, and it can be bundled with a warranty of the monopolist's choosing. The probability that the product breaks down is a function of its quality and the effort the consumer takes in using it. This consumer effort cannot be observed by the monopolist or any third party, so that the warranty cannot be made conditional on the effort taken, and in choosing the warranty the monopolist must take the moral hazard problem into account.

Mackenzie, G. A.

PD February 1988. **TI** Social Security Issues in Developing Countries: The Latin American Experience. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/21; International Monetary Fund, Washington D.C. 20431. **PG** 51. **PR** No Charge. **JE** 121, 322, 915. **KW** Social Security. Latin America. Pension Plan.

AB The paper surveys the major economic, financial, and administrative issues that confront social security systems in Latin America. The larger systems have contributed substantially to public sector financial disequilibria. Expenditures of the younger systems with more limited coverage could increase dramatically as the pension plan matures, life expectancy increases, and coverage is broadened, but the narrow revenue base will force a tradeoff between broader coverage and the generosity of benefits. Most plans are pay-as-you-go, and the case for full or partial funding is not found to be compelling. The inflationary environment can have a substantial effect on the financial balance, even under full indexation.

MacLeod, W. Bentley

PD September 1987. **TI** Labour Turnover and the Natural Rate of Unemployment: An Incomplete Contracts Approach. **AU** MacLeod, W. Bentley; Malcomson, James M. **AA** MacLeod: Queen's University. Malcomson: University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8721; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 30. **PR** No Charge. **JE** 821, 023. **KW** Labor Turnover. Unemployment. Natural Rate Hypothesis. Wages. Jobs.

AB The model in this paper provides a relatively simple theoretical framework, in which wages do not adjust to clear labor markets and in which layoffs are involuntary, that can be used for analyzing changes in the natural rate of

unemployment. It allows for analysis of changes both in turnover and in the duration of unemployment. In this model, the natural rate of unemployment increases when the average profitability of jobs falls. It also increases with increases in purely relative shifts in the pattern of production resulting from demand shifts, relative price changes, etc., that increase turnover. Indeed, any increase in uncertainty about the pattern of production in the future will do this, so greater uncertainty per se will affect the natural rate. At the same time, an increase in turnover actually increases the wage of those employed. The model, however, retains the standard features that an increase in the supply of labor relative to the number of potential jobs reduces the wage and that an increase in unemployment benefits has the effect of increasing both the natural rate of unemployment and the wage of those employed.

Madan, Dilip B.

PD July 1987. **TI** A Note on the Estimation of Non-Symmetric Dynamic Factor Demand Models. **AU** Madan, Dilip B.; Prucha, Ingmar R. **AA** University of Maryland. **SR** New York University Economic Research Reports: RR 87-25; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 10. **PR** No Charge. **JE** 211. **KW** Factor Demand Models. Non-Symmetric Factor Demands. Dynamic Models.

AB In a recent article Epstein and Yatchew (1985) introduced a simplified procedure for the estimation of symmetric dynamic factor demand models. This procedure hinges on a reparametrization of the model, results in closed form analytic expressions for the firm's factor demand, and can be carried out by standard econometric packages. The purpose of this note is to extend the procedure to the case of non-symmetric dynamic factor demand models.

Magill, M.

TI Generic Inefficiency of Stock Market Equilibrium When Markets are Incomplete. **AU** Geanakoplos, J.; Magill, M.; Quinzii, M.; Dreze, J.

Majd, Saman

PD October 1987. **TI** The Learning Curve and Optimal Production Under Uncertainty. **AU** Majd, Saman; Pindyck, Robert S. **AA** Majd: Salomon Brothers, Incorporated. Pindyck: Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 2423; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 631, 026, 611, 022. **KW** Learning. Production. Critical Price.

AB This paper examines the implications of the learning curve in a world of uncertainty. We consider a competitive firm whose costs decline with cumulative output. Because the price of the firm's output evolves stochastically, future production and cumulative output are unknown, and are contingent on future prices and costs. We derive an optimal decision rule that maximizes the firm's market value: produce when price exceeds a critical level, which is a declining function of cumulative output. We show how the shadow value of cumulative production, as well as the total value of the firm, depend on the volatility of price and other parameters. Over the relevant range of prices, uncertainty reduces the shadow value of cumulative production, and therefore increases the critical price required for the firm to begin producing.

Majumdar, M.

TI Global Equilibrium Dynamics with Stationary Recursive Preferences. **AU** Benhabib, J.; Majumdar, M.; Nishimura, K.

Malcomson, James M.

TI Labour Turnover and the Natural Rate of Unemployment: An Incomplete Contracts Approach. **AU** MacLeod, W. Bentley; Malcomson, James M.

Mallick, Soumitra

TI On Land and Life: Life Expectancy, Population Policy and the Land-Labor Ratio. **AU** Dutta, Jayasri; Mallick, Soumitra.

Mansur, Ahsan

PD January 1988. **TI** Fiscal-Monetary Mix and Exchange Rate Movements in the Major Industrial Countries 1980-84. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/3; International Monetary Fund, Washington DC 20431. **PG** 25. **PR** No Charge. **JE** 431, 441, 311, 122. **KW** Policy. Exchange Rate. Industrial Countries. Capital Movement.

AB This paper analyzes the financial policies pursued in the major industrial countries under the flexible exchange rate regime, and links misalignments in policies and their mixes to exchange rate variations among the major currencies. A number of indicators note that misalignments in fiscal policy led to a corresponding divergence of fiscal and monetary policy mix among the industrial countries, and, together, contributed to the rapid appreciation of the dollar during the early 1980s. The continued liberalization of international capital movements and the differences in the savings rate also amplified the effects of policy divergences and their mixes on the exchange rate movements.

Margo, Robert A.

TI The Poor at Birth: Infant Auxology and Mortality at Philadelphia's Almshouse Hospital, 1848-1873. **AU** Goldin, Claudia; Margo, Robert A.

Markandya, A.

TI Marginal Opportunity Cost as a Planning Concert in Natural Resource Management. **AU** Pearce, D.; Markandya, A.

Marley, Marcia

TI Long-Term Trends in U.S. Wealth Inequality: Methodological Issues and Results. **AU** Wolff, Edward; Marley, Marcia.

Maskin, Eric

TI Repeated Games with Long-Run and Short-Run Players. **AU** Fudenberg, Drew; Kreps, David; Maskin, Eric.

Mathieson, Donald J.

PD February 1988. **TI** Exchange Rate Arrangements and Monetary Policy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/14; International Monetary Fund, Washington D.C. 20431. **PG** 39. **PR** No Charge. **JE** 431, 421, 311. **KW** Asia.

Policy Instruments. Trade Reform. Monetary Policy. Exchange Rates.

AB This paper examines the relationship between monetary and exchange rate policies by considering the factors that have led the authorities in developed and developing countries in Asia to alter their use of monetary policy instruments and exchange rate arrangements since the mid-1970s. There is first consideration of the extent to which real and monetary shocks, country size, and the degree of goods and capital market integration can explain the evolution of exchange rate arrangements. There is then an examination of the factors influencing the choice of money and credit policy instruments. Finally, there is a discussion of integrating monetary and exchange policies with extensive trade and financial market reforms.

Mathur, P.

PD 1987. **TI** Price Behaviour with Vintage Capital. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-27; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 621, 611. **KW** Vintage. Technology. Prices. Capital.

PD 1987. **TI** Price Behaviour with Vintage Capital. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-20; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 621. **KW** Technology. Vintage Capital. Prices.

Mayer, Colin

TI Means of Payment in Takeovers: Results for the UK and US. **AU** Harris, Robert; Mayer, Colin; Franks, Julian.

McCallum, Bennett T.

PD February 1988. **TI** The Role of Demand Management in the Maintenance of Full Employment. **AA** Carnegie-Mellon University. **SR** National Bureau of Economic Research Working Paper: 2520; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 023. **KW** Policy. Keynesian. Phillips Curve. Demand. Monetary Policy.

AB This paper begins by identifying nominal price stickiness as the logical basis for the Keynesian or activist point of view concerning demand management policy. It then characterizes two alternative approaches to policy analysis that have been adopted by adherents of the Keynesian position, the "disequilibrium" and "Phillips curve" approaches. The former is inherently defective, it is argued, while the latter has yet to be satisfactorily implemented. Indeed, implementation that is not open to Lucas-critique weaknesses is not in sight. In response to the implied dilemma for policy makers, the paper describes a rule for the conduct of monetary policy that relies upon minimal understanding of price-adjustment dynamics and which should be robust to regulatory and technological change in the economy's financial and payments institutions. A bit of evidence is presented to suggest that the rule would, if adopted, lead to approximately zero inflation (on average) and to output/employment fluctuations that are small by historical standards. Possible criticisms relating to recent European experience and to recent theoretical developments are considered.

McColl, Robert A.

PD January 1988. **TI** Change of Ownership and Time of Recording in the National Accounts. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/6; International Monetary Fund, Washington D.C. 20431. **PG** 15. **PR** No Charge. **JE** 221, 541, 431. **KW** National Accounts. Ownership. Accounting.

AB This paper establishes "economic ownership" as a crucial concept in analyses of the flows of goods and services in the production and consumption processes, and of income to the factors of production. The paper argues that an approximation to economic ownership or control is legal ownership, which will serve in most cases but requires modification when legal title is established for taxation or regulatory purposes unrelated to economic risks of ownership. It is recommended that national accounting standards recognize the economic ownership concept and be consistent and flexible in its implementation to avoid asymmetry yet accommodate evolving commercial accounting practices.

McCulloch, Rachel

PD October 1987. **TI** United States-Japan Economic Relations. **AA** Brandeis University. **SR** National Bureau of Economic Research Working Paper: 2408; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 421, 431, 422, 440, 621. **KW** Foreign Trade. Trade Friction. Trade Deficit. Foreign Investment. Japan. United States.

AB The bilateral relationship with Japan now dominates American thinking on the benefits and costs of foreign trade. This paper reevaluates the past and future course of United States-Japan economic relations. It identifies six distinct aspects of the relationship that may underlie the continuing friction: bilateral imbalance on merchandise trade, capital flows from Japan to the United States, the yen/dollar exchange rate, sectoral trade distortions, Japan's technological catch-up, and societal differences. For each source of conflict, the main causes and potential remedies are assessed. Several important conclusions emerge from the analysis. First, although the bilateral trade and capital-account imbalances were produced primarily by macroeconomic factors and can therefore be viewed as "temporary" rather than long-term developments, elimination of the imbalances without serious damage may be difficult to achieve. In terms of sectoral adjustments, the United States-Japan relationship is entering a new phase as the two nations grow more similar in terms of technology base, abundance of capital and skilled labor, and per capita income. Two-way trade in technology and in technology-based services will become increasingly important, while both nations will cope with similar problems of adjustment to pressure from a new tier of competitors in Asia and elsewhere. As the aggregate imbalances diminish, sectoral trade conflict will be concentrated on the two ends of the technology spectrum, with issues raised both by conflicting approaches to the phasing out of uncompetitive industries and by the nurturing of new technology-based industries.

PD February 1988. **TI** The Challenge to U.S. Leadership in High-Technology Industries (Can the United States Maintain Its Lead? Should It Try?). **AA** Brandeis University. **SR** National Bureau of Economic Research Working Paper: 2513; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 621, 422, 321. **KW** Technology. Government Policy.

Industry. Production.
AB The United States emerged from World War II as the acknowledged global leader in basic science and its industrial application. While United States science has been able to maintain that preeminence in most areas, the nation's technological lead has met increasingly formidable challenges from abroad. Although the evidence on recent United States performance is mixed, other nations, and especially Japan, have clearly gained ground in high-technology production and trade. The future of United States high-technology production has thus emerged as a major focus of public policy. This paper reviews the recent performance of United States high-technology industries, examines possible motives underlying government policies to promote high-technology production, and offers some guidelines for evaluating the outcomes of alternative policy regimes.

McDermed, Ann A.

TI Why Do Pensions Reduce Mobility? **AU** Allen, Steven; Clark, Robert L.; McDermed, Ann A.

McDonald, Robert

TI Bank Financing and Investment Decisions with Asymmetric Information. **AU** Lucas, Deborah; McDonald, Robert.

TI Bank Portfolio Choice with Private Information About Loan Quality: Theory and Implications for Regulation. **AU** Lucas, Deborah; McDonald, Robert.

McKee, Michael

TI Controlling the Game: Political Sponsors and Bureaus. **AU** Bagnoli, Mark; McKee, Michael.

McKenzie, George

PD February 1988. **TI** Monetary Policy and Bank Credit Creation in the U.K. **AU** McKenzie, George; Thomas, Stephen H. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8804; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 19. **PR** No Charge. **JE** 311, 312. **KW** Liquidity. Credit. Financial Institutions. Aggregate measures.
AB A weakness of contemporary macroeconomic theory and policy has been its excessive preoccupation with aggregate measures of liquidity and credit. In this paper we argue that a necessary precondition for understanding the monetary transmission mechanism is the explicit modelling of the behavior of financial institutions. To support our analysis we present an econometric model of the United Kingdom economy which focuses upon the banking sector and its overseas linkages. Two central conclusions emerge. First, wealth effects, including government debt, play a significant role in the monetary transmission process. Second, interest rate substitution effects are also statistically significant and highlight the need for further analysis of the components of liquidity and credit.

Meghir, C.

TI Labour Supply and Hours Constraints. **AU** Arellano, M.; Meghir, C.

Melino, Angelo

PD December 1987. **TI** The Pricing of Foreign Currency Options. **AU** Melino, Angelo; Turnbull, Stuart M. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8720; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 48. **PR** No Charge. **JE** 313, 431. **KW** Foreign Currency Options. Exchange Rate. Option Prices.
AB This study examines the assumption that the exchange rate follows a log-normal probability distribution, and tests whether different stochastic specifications translate into important differences in implied option prices. We investigate a class of processes, which includes the log-normal probability distribution as a limiting case. None of the models perform particularly well. The main problem appears to be that the volatility estimates from actual exchange rate data are significantly smaller than those implied by observed option prices.

Melitz, J.

PD January 1988. **TI** Monetary Discipline and Cooperation in the EMS: A Synthesis. **AA** INSEE. **SR** Centre for Economic Policy Research Discussion Paper: 219; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 33. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 311, 423, 431, 432, 112. **KW** European Monetary System. Monetary Discipline. Competitiveness. Incentives. International Exchange.
AB This paper tries to explain how, despite its fundamental asymmetry, the European Monetary System may benefit all its members. I argue that the high-inflation members obtain benefits of increased monetary discipline, while the others experience improvements in their international competitiveness. For the low-inflation members, moreover, the incentive to disinflate increases as a result of EMS membership. Finally, the benefits of membership for low-inflation countries are secure; for those with higher inflation, the gains from membership depend on a variety of factors whose net effect is uncertain.

PD January 1988. **TI** The Dynamic Stability of the European Monetary System: A Restatement. **AU** Melitz, J.; Michel, P. **AA** Melitz: INSEE. Michel: Universite Paris I. **SR** Unite de Recherche Document de Travail ENSAE/INSEE: 8803; INSEE, Unite de Recherche, 18 Bd. Adolphe Pinard, 75675 Paris cedex 14, FRANCE. **PG** 43. **PR** No Charge. **JE** 431, 432. **KW** European Monetary System. Transactions Balances. International Policy Coordination. Currency Realignment Dates. Speculation.
AB The European Monetary System has proven to work remarkably well thus far, despite repeated realignments. We make an attempt to explain the dynamic stability of the system. Movements in desired transactions balances -or "leads and lags", as they are known- assume a central place in our model. This is so because the authorities are able to ward off wider sources of speculative movements. The major instruments in their hands are interest rates and the timing of realignments. As to the timing, the authorities deliberately keep the market guessing about the date of realignment. We allow the earliest and latest possible dates of realignment, thus the time limits within which market uncertainty about the date of realignment can be sustained, to be determined by the requirements of

dynamic stability.

Menchik, Paul L.

TI Using Panel Data to Assess the Bias in Cross-Sectional Inferences of Life-Cycle Changes in the Level and Composition of Household Wealth. **AU** Jianakoplos, Nancy A.; Menchik, Paul L.; Irvine, F. Owen.

Mendelson, Haim

TI Liquidity and Asset Prices: Financial Management Implications. **AU** Amihud, Yakov; Mendelson, Haim.

Merrick, John J.

PD July 1987. **TI** Hedging with Mispriced Futures. **AA** Federal Reserve Bank of Philadelphia and New York University. **SR** New York University Salomon Brothers Center Working Paper: 433; Salomon Brothers Center, Graduate School of Business Administration, New York University, 100 Trinity Place, New York, NY 10006. **PG** 34. **PR** $3.00. **JE** 311, 313. **KW** Futures Market. Hedging. Mispricing. Portfolio Theory.

AB This paper analyzes the correspondence between the pricing performance of the futures-cash arbitrage sector and a futures market's short-term hedging costs and effectiveness. In particular, the analysis reveals how reversals of initial contract mispricings by arbitrage sector trading leads to an important "mispricing return" component in the total return to futures-cash hedge portfolios. The existence of the mispricing return has implications for initial hedge ratio selection, hedging effectiveness and expected hedge return. The analysis is used to interpret the hedge ratio guidance and performance of short-term hedges between the S&P500 stock index futures contract and the underlying S&P500 cash stock index portfolio over the 1982-86 period. We show that reversals of the initial futures mispricing dominate the average return performance of these short-term hedges. Furthermore, we find that underhedging is necessary for short-term risk minimization because futures mispricings are associated with "overshootings" of the futures versus the cash. We also document an increase in the hedging effectiveness of short-term S&P500 index futures hedges since 1985, reflecting improvements in the pricing performance of the arbitrage sector. Finally, the differences between the Johnson-Stein portfolio theory "selective hedging" and Working's "carrying charge hedging" concepts are discussed within our framework.

PD August 1987. **TI** Portfolio Insurance with Stock Index Futures. **AA** Federal Reserve Bank of Philadelphia and New York University. **SR** New York University Salomon Brothers Center Working Paper: 434; Salomon Brothers Center, Graduate School of Business Administration, New York University, 100 Trinity Place, New York, NY 10006. **PG** 27. **PR** $3.00. **JE** 311, 313. **KW** Stock Index Futures. Portfolio Insurance. Futures. Hedging. Options. Puts.

AB In this paper, we analyze the use of stock index futures contracts as substitutes for cash market stock baskets in achieving stock portfolio insurance targets. We investigate the differences between the results from alternative simulated cash S and P500 portfolio insurance programs created through S and P500 futures trades. The focus of both our analytical and empirical results is on the impact of futures contract mispricings on portfolio insurance cost and effectiveness. The empirical analysis reveals three basic results. First, Black's '1976 option on the futures model consistently generates greater policy premium valuations than those from the cash index option model simply because the volatility of the futures return is observed to be greater than that of the cash return. This futures-cash volatility difference is the result of intermediate date mispricings between the two markets. Second, Black's model is better specified than alternative futures-based models incorporating explicit cost of carry pricing restrictions from the viewpoint of delivering a hedging strategy that hits the end-of-period portfolio put target. Nevertheless, simple adjustments to the cost of carry models imply futures-based strategies which outperform the Black model on a cost-adjusted basis. Finally, we show how the initial futures mispricing provides significant predictive power for the deviation of the synthetic put strategy from its terminal date target value.

Meyer, Bruce D.

PD March 1988. **TI** Unemployment Insurance and Unemployment Spells. **AA** Northwestern University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2546; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 822, 824. **KW** Unemployment Insurance. Unemployment.

AB This paper tests the effects of the level and length of unemployment insurance (UI) benefits on unemployment durations. The paper particularly studies individual behavior during the weeks just prior to when benefits lapse. Higher UI benefits are found to have a strong negative effect on the probability of leaving unemployment. However, the probability of leaving unemployment rises dramatically just prior to when benefits lapse. When the length of benefits is extended, the probability of a spell ending is also very high in the week benefits were previously expected to lapse. Individual data are used with accurate information on spell durations, and the level and length of benefits. Semiparametric estimation techniques are used and compared to alternative approaches. The semiparametric approach yields more plausible estimates and provides useful diagnostics.

Michel, P.

TI The Dynamic Stability of the European Monetary System: A Restatement. **AU** Melitz, J.; Michel, P.

Micklewright, J.

TI Fuel and the Family Expenditure Survey. **AU** Baker, P.; Micklewright, J.

TI Modelling Energy Demand in the UK Using Micro-Data. **AU** Baker, P.; Blundell, RW; Micklewright, J.

TI Modelling Energy Demand and Household Welfare Using Micro-Data. **AU** Baker, P.; Blundell, R. W.; Micklewright, J.

Minford, Patrick

PD July 1987. **TI** The Effects of Housing Distortions on Unemployment. **AU** Minford, Patrick; Ashton, Paul; Peel, Michael. **AA** The University of Liverpool. **SR** Centre for Economic Policy Research Discussion Paper: 191; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 821, 824, 932, 122, 212. **KW** Unemployment. Labor

Markets. Mobility. Rent Control. Housing Subsidies. Wages. Unemployment Benefits. Pooled Data. United Kingdom.

AB The paper uses a general equilibrium model of regional labor markets, in which national and local factors interact to determine local wages and unemployment; when mobility between regions is obstructed by rent subsidies and controls, unemployment and wage differentials arise. Because unemployment benefits set a floor beneath the supply price of labor, as these differentials rise, so too does the national unemployment rate (in declining regions unemployment is the major response, in growing regions wages respond predominantly). The hypothesis is tested on United Kingdom regional unemployment data from 1963 to 1979. It is broadly consistent with this data, though there are some problems in pooling the cross-section and time-series variation. If the pooled equation is used as a basis for prediction, then the national unemployment rate would have fallen just under a half of a percentage point in 1979 if all problem regions were to have adopted "best practice" in application of existing Rent Act and council subsidy regulations. If all rent restrictions had been abolished, the reduction in the national unemployment rate in 1979 would have been about four times as large (1.8 percentage points). This estimate, however, is subject to greater uncertainty than the previous one since we are extrapolating well beyond experience in the sample. Nevertheless, effects of this order (no doubt higher today) should be sufficient to motivate political interest in the deregulation of the housing markets.

PD October 1987. **TI** Policy Interdependence: Does Strategic Behavior Pay? An Empirical Investigation Using the Liverpool World Model. **AU** Minford, Patrick; Canzoneri, Matthew. **AA** Minford: University of Liverpool. Canzoneri: Georgetown University. **SR** Centre for Economic Policy Research Discussion Paper: 201; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 35. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 432, 433, 023. **KW** Policy Coordination. Liverpool Model. Interdependence. Cooperative Equilibria. International Policy.

AB Previous empirical studies have found the gains from international policy coordination to be small relative to the imprecision with which policy can be framed. This paper investigates whether there are larger gains to strategic behavior (interpreted as Nash noncooperative equilibria), as compared with "insular" strategies, in which it is assumed that other players do not react to changing circumstances. It identifies the frequent international meetings of officials as a means to strategic behavior. The paper considers three episodes: United States and European disinflation in the early 1980s, Mitterrand's "dash for growth" in 1981-2, and the timing of Mrs. Thatcher's disinflation in 1980. The Liverpool World Model, which exhibits high spillovers because of both trade and financial market linkages, is used to estimate the "strategic", "insular" and "cooperative" solutions for these episodes. The paper finds in each case that the move from insular to strategic behavior does indeed yield larger gains than the further move from strategic to cooperative behavior.

Mirakhor, Abbas

PD February 1988. **TI** Stabilization and Growth in an Open Islamic Economy. **AU** Mirakhor, Abbas; Zaidi, Iqbal. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/22; International Monetary Fund, Washington D.C. 20431. **PG** 24. **PR** No Charge. **JE** 121, 133, 311, 431. **KW** Financial System. Open Economy. Capital Flows.

AB Islam proposes the replacement of an interest-based financial system with one which operates on the basis of risk and profit sharing. Using a general equilibrium model, this paper investigates some open-economy implications of the adoption of Islamic banking for growth and stabilization of the economy. It analyzes the long-run effects of Islamic banking on international capital flows and on the economy's capacity to adjust to disturbances. It concludes that monetary policy can be used effectively for stabilization purposes and that disturbances to asset positions are absorbed efficiently in an Islamic financial system.

Mirowski, Philip

PD September 1987. **TI** Why Economists Don't Replicate (Although They Do Reproduce). **AU** Mirowski, Philip; Sklivas, Steven. **AA** Mirowski: Yale University. Sklivas: Columbia University. **SR** Columbia Department of Economics Working Paper: 357; Department of Economics, Columbia University, New York, NY 10027. **PG** 25. **PR** $5.00. **JE** 211, 212. **KW** Replication. Empirical. Econometrics.

AB In the first throes of the "econometrics revolution", one of the earliest associates of the Cowles commission wrote that, "The analysis of time series has also revealed the present status of economics as a science." It seems that a half-century of econometric research has taught us that such sentiments, though well-meaning, were optimistically premature. As it has happened, the technical aspects of econometrics have not solved many of the profound problems of relating dependable empirical practices to existing theoretical structures, as recent soul-searching articles such as Leamer (1983) and Gilbert & de Marchi (1988) reveal.

Mishkin, Frederic S.

PD October 1987. **TI** Can Futures Market Data be Used to Understand the Behavior of Real Interest Rates? **AA** Columbia University. **SR** National Bureau of Economic Research Working Paper: 2400; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 311, 313, 131, 134, 212. **KW** Interest Rates. Futures Markets. Prices. Monetary Policy.

AB Understanding the behavior of real interest rates is a central issue in monetary/macro economics. Recently researchers have begun to use futures market data to examine real interest rate behavior. Futures market data can be used to directly construct own-commodity real interest rates -i.e., the ex-ante real return on a bond in terms of specific commodities -and then the own-commodity real rates can be used to make inferences about the real interest rate for the aggregate economy. This paper examines whether futures market data can be used to understand the behavior of real interest rates. The conclusion is a negative one: futures market data do not appear to be particularly informative about real interest rates.

Mitchell, Olivia S.

PD October 1987. **TI** Worker Knowledge of Pension Provisions. **AA** Cornell University. **SR** National Bureau of Economic Research Working Paper: 2414; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 821, 813.

KW Workers. Labor. Pensions. Retirement. Myopia. Information.
AB This paper evaluates the quality of workers' information regarding pension offerings using both administrative records and worker reports of pension provisions. Missing and misinformation proves to be widespread. Unionized employees, higher income workers and those in large firms, the better educated, and those with greater seniority are better informed about their pensions. There are also demographic differences: nonwhites have less pension knowledge than whites, but women are better informed than men along several pension dimensions. Myopia about pension incentive structures is troubling since workers may save or consume suboptimally, change jobs, or retire earlier than they would have if equipped with better pension information. The prevalence of missing data should also be troubling to empirical pension analysts using data sets reporting workers' assessments of pension provisions.

Mitra, P.

TI Investment and Shadow Pricing in a Growing Economy with Tax Restrictions. **AU** Harris, C.; Heady, C.; Mitra, P.

Mizon, Grayham E.

TI What Can Statistics Contribute to the Analysis of Economic Structural Change? **AU** Anderson, Gordon J.; Mizon, Grayham E.

Moffitt, Robert

PD February 1988. **TI** Has State Redistribution Policy Grown More Conservative? **AA** Brown University. **SR** National Bureau of Economic Research Working Paper: 2516; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 914, 911, 322, 921. **KW** AFDC. Food Stamps. Benefits. Redistribution. Transfers. Lump-sum.
AB It is well-known that real benefits in the major cash transfer program in the United States -- the Aid to Families with Dependent Children (AFDC) program -- have fallen drastically over the past twenty years. State legislatures, which set AFDC benefit levels, have failed to increase nominal benefits to keep up with inflation, resulting in a 25 percent decline in real benefits between 1960 and 1984. The most popular explanation for this decline is that state legislatures, reflecting the changing preferences of voters, have grown more conservative in their tastes for redistribution. The evidence presented in this paper is consistent instead with a different explanation, that legislatures have let federally-financed Food Stamps displace state-financed AFDC benefits. A similar displacement of AFDC by Medicaid benefits appears to have occurred. Aside from implying that preferences for redistribution have not in fact changed, the results also show that the total transfer benefit has increased, as should be expected from growing income levels. The findings also imply that neither the Food Stamp program nor, presumably, any other lump-sum transfer provided by Congress is likely to have any effect on the incomes of the poor female-head population. Instead, such programs will merely provide budget relief to the states.

Molho, Lazaros

TI Financial Reform and Monetary Control in Indonesia. **AU** Sundararajan, V.; Molho, Lazaros.

Morck, Randall

PD March 1988. **TI** Alternative Mechanisms for Corporate Control. **AU** Morck, Randall; Shleifer, Andrei; Vishny, Robert W. **AA** Morck: University of Alberta. Shleifer, Vishny: University of Chicago. **SR** National Bureau of Economic Research Working Paper: 2532; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 511, 512, 514. **KW** Fortune 500. Takeover. Leadership. Turnover.
AB We examine performance and management characteristics of Fortune 500 firms experiencing one of three types of control change: internally precipitated management turnover, hostile takeover, and friendly takeover. We find that firms experiencing internally precipitated management turnover perform poorly relative to other firms in their industries, but are not concentrated in poorly performing industries. In contrast, targets of hostile takeovers are concentrated in troubled industries. There is also weaker evidence that hostile takeover targets underperform their industry peers. We interpret this evidence as consistent with the idea that the board of directors is capable of firing managers whose leadership leads to poor performance relative to industry, but that an external challenge in the form of a hostile takeover is often required when the whole industry is in decline.

Moreau, A.

TI Proportional Hazards Model: Estimation and Specification Tests Using Asymptotic Least Squares. **AU** Jayet, H.; Moreau, A.

Morris, Carl N.

TI A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald.

TI A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald.

Mundaca, B. Gabriella

TI The Importance of Gifts and Inheritances Among the Affluent. **AU** Hurd, Michael D.; Mundaca, B. Gabriella.

Munley, Vincent G.

TI Economic Incentives and Political Institutions: Spending and Voting in School Budget Referenda. **AU** Romer, Thomas; Rosenthal, Howard; Munley, Vincent G.

Murphy, Kevin

TI The Family and the State. **AU** Becker, Gary S.; Murphy, Kevin.

Nadiri, M. Ishaq

TI Investment, Depreciation and Capital Utilization. **AU** Bernstein, Jeffrey I.; Nadiri, M. Ishaq.

TI On the Computation of Estimators in Systems with Implicitly Defined Variables. **AU** Prucha, Ingmar R.; Nadiri, M. Ishaq.

TI Spillover Effects, Linkage Structure, Technical Change and Research and Development. **AU** Wolff, Edward N.; Nadiri, M. Ishaq.

TI Interindustry R&D Spillovers, Rates of Return and Production in High-Tech Industries. **AU** Bernstein, Jeffrey; Nadiri, M. Ishaq.

Nason, James M.

PD February 1988. **TI** The Equity Premium and Time-Varying Risk Behavior. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 11; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, D.C. 20551. **PG** 47. **PR** No Charge. **JE** 023, 311, 313. **KW** Equity Premium. Time-varying Risk Behavior. Uncertainty. Volatility. Simulation.

AB This paper investigates the equity premium puzzle first studied by Mehra and Prescott. Their pure-exchange representative agent economy is transformed by replacing their constant relative risk aversion utility function with a utility function exhibiting time-varying risk behavior. In this case the uncertainty facing the agent is altered creating the possibility of generating enough volatility in the demand for assets of differing risk to produce a large equity premium. Simulation experiments of the economy with time-varying risk behavior are presented. Within two of these simulations large average equity premium are generated suggesting a possible solution of the equity premium puzzle.

Nelson, Richard R.

TI Appropriating the Returns from Industrial R & D. **AU** Levin, Richard; Klevorick, Alvin; Nelson, Richard R.; Winter, Sidney G.

Nerlove, Marc

TI The Dynamics of Exchange Rate Volatility: A Multivariate Latent Factor ARCH Model. **AU** Diebold, Francis X.; Nerlove, Marc.

PD October 1987. **TI** Corrective Policies for a Bequest Constrained Economy. **AU** Nerlove, Marc; Razin, Assaf; Sadka, Efraim. **AA** Nerlove: University of Pennsylvania. Sadka and Razin: Tel-Aviv University. **SR** Tel-Aviv Foerder Institute for Economic Research Working Paper: 28-87; Department of Economics, Tel-Aviv University, Ramat Aviv 69978, Tel-Aviv, ISRAEL. **PG** 27. **PR** No Charge. **JE** 321, 521, 541, 023. **KW** Bequest Constraints. Endogenous Fertility. Corrective Policies. Bequest. Income Tax. Taxes.

AB Bequest constraints have played a major role in the discussion of government debt neutrality, but not in regard to their normative implications. This paper focuses on the welfare implications of such constraints within the framework of endogenous fertility. The paper identifies a market failure associated with the nonnegativity constraint on bequests and examines corrective second-best policies. The key result of the paper is that an income tax is welfare improving in such a context. It is justified here on pure efficiency grounds rather than on the more conventional redistribution grounds.

Neu, C. R.

PD August 1987. **TI** Toward a Profile of Soviet Behavior in International Financial Markets. **AU** Neu, C. R.; Lund, John. **AA** The Rand Corporation. **SR** Rand Report: R-3524; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica CA 90406-2138. **PG** 58. **PR** No Charge. **JE** 441, 431, 224. **KW** Financial Markets. Soviet Union. Balance of Payments.

AB This report uses publicly available, unclassified information as background for an effort to describe the nature of and motivations for Soviet international hard-currency financial transactions. These include all Soviet dealings with the industrialized world outside the Soviet Bloc and most Soviet dealings with developing countries. The authors attempt to determine how much, with whom, how, and why the Soviets deal in international financial markets. In addition, they have aimed to assess the value of future research into Soviet financial dealings. The report (1) provides an overview of the Soviet hard-currency balance sheet; (2) assesses the completeness of current reporting on Soviet debts; (3) discusses Soviet assets; (4) examines the style of Soviet operations in international financial markets; and (5) outlines possible directions for future research.

Nickell, S. J.

TI Real Wages and Unemployment in Britain During the 1930s. **AU** Dimsdale, N. H.; Nickell, S. J.; Horsewood, H.

Nishimura, K.

TI Global Equilibrium Dynamics with Stationary Recursive Preferences. **AU** Benhabib, J.; Majumdar, M.; Nishimura, K.

Nocera, Simon

TI Debt/Equity Swaps. **AU** Blackwell, Michael; Nocera, Simon.

Obstfeld, Maurice

PD February 1988. **TI** Exchange Rate Dynamics and Optimal Asset Accumulation Revisited. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Technical Paper: 64; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 431, 022. **KW** Optimal Control. Exchange Rate.

AB It has recently been observed that when equations of motion for state variables are nonautonomous, optimal control problems involving Uzawa's endogenous rate of time preference cannot be solved using the change-of-variables method common in the literature. Instead, the problem must be solved by explicitly adding an additional state variable that measures the motion of time preference over time. This note reassesses earlier work of my own on exchange rate dynamics, which was based on a change-of-variables solution procedure. When the correct two-state-variable solution procedure is used, the model's qualitative predictions are unchanged. In addition, the analysis yields an intuitive interpretation of the extra costate variable that arises in solving the individual's maximization problem.

PD March 1988. **TI** Competitiveness, Realignment, and Speculation: The Role of Financial Markets. **AA** National Bureau of Economic Research Working Paper: 2539; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 431, 411, 432. **KW** Capital Accounts. European Monetary System. Exchange Rate.

AB Current and planned measures liberalizing the external capital accounts of France and Italy call into question the continued viability of the policy of periodic exchange-rate

realignment followed to date in the European Monetary System (EMS). This paper is intended as a first step in studying the real and monetary effects of EMS-style realignments in a setting of free cross-border financial flows. The first set of results derived concerns a situation in which there are no fundamental factors behind domestic inflation. Under a policy regime in which domestic inflation automatically triggers devaluation, the economy can undergo self-fulfilling depreciation-inflation spirals, triggered by speculative attack on the exchange rate. Such spirals do not occur when realignments do not offset past inflation fully. The second set of results shows how an exchange rate collapse can occur after inflation is set off by expansionary fiscal policy. Sometimes, but not always, the crisis will be preceded by a period of capital inflows and real currency appreciation. In other cases fiscal expansion may set off an immediate crisis.

OFlaherty, Brendan

PD August 1987. **TI** Some Results on Two-Armed Bandits When Both Projects Vary. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 359; Department of Economics, Columbia University, New York, NY 10027. **PG** 10. **PR** $5.00. **JE** 026, 022, 213. **KW** Bandit Problem. Myopic Policy.

AB In the well-known multi-armed bandit problem, first solved by Gittins and Jones '1974, the decision-maker must choose each period a single project to work on. From the chosen project she receives an immediate reward that depends on the current state of the project. In the next period the chosen project makes a stochastic transition to a new state. Projects that are not chosen are "frozen": they remain in the same state. This paper examines the consequences of loosening the "freezing" assumption in two-armed bandit problems. We allow the project not chosen to make stochastic transitions, as well as the chosen project. We derive two different sufficient conditions for the optimal policy to be myopic: choose the project whose current reward is higher.

PD October 1987. **TI** What is Inconsistency? **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 365; Department of Economics, Columbia University, New York, NY 10027. **PG** 28. **PR** $5.00. **JE** 026. **KW** Inconsistency. Government. Game Theory. Benevolence Games.

AB In pure benevolence games, where aims are agent-neutral, inconsistency is impossible. In general games, inconsistency is impossible if the government is inconsequential or if the game is dilemma-less. This means that with Paretian governments inconsistency is a problem only if citizens are playing a prisoners' dilemma game. This makes sense: the government should act inconsistently only as a partial substitute for inconsistent action by citizens.

PD October 1987. **TI** The Option Value of Tax Delinquency: Theory. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 368; Department of Economics, Columbia University, New York, NY 10027. **PG** 43. **PR** $5.00. **JE** 916, 921, 324. **KW** Tax Enforcement. Tax Evasion. Property Taxes.

AB How taxes are enforced matters. Current enforcement of real property taxes does not consider the option value of delinquency: the ultimate penalty is confiscation of property sometime in the future, but the value of the property to be confiscated is not known with certainty. If redemption fees are sufficiently small, it can be optimal to wait and see what the size of the penalty will be before paying taxes. We show how this can lead to inefficient behavior and excessive abandonment, and examine proposals for reform.

Ordover, Janusz

TI The Cost of the Tort System. **AU** Schotter, Andrew; Ordover, Janusz.

PD October 1986. **TI** Conflicts of Jurisdiction: Antitrust and Industrial Policy. **AA** New York University. **SR** New York University Economic Policy Papers: PP 44; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 21. **PR** No Charge. **JE** 612, 442. **KW** Antitrust Laws. International Law. Jurisdiction.

AB Economists have been reluctant to venture into the unchartered waters of international jurisdiction issues as they apply to antitrust. This essay may convince the reader that such reluctance has been justified. In my view, however, some positive insights emerge from this tentative first step. The most significant one is that not much can be gained from aggressive exercise or jurisdiction in cases alleging violations of Section 2 of the Sherman Act. At the same time, much can be gained from claiming jurisdiction in Section 1 cases. In such cases, the defense of sovereign compulsion should be construed as narrowly as possible. In fact, there is a strong argument for denying such defenses to private firms in order to discourage participation in such pernicious arrangements. Unfortunately, such an unyielding position may violate established principles of international law, which is not my area of expertise, and may potentially lead to strategic responses which could be worse than the cartel problem itself. I am not convinced that the latter problem is significant enough not to justify expansive jurisdiction policy.

PD March 1987. **TI** Predation, Monopolization, and Antitrust. **AU** Ordover, Janusz; Saloner, Garth. **AA** Ordover: New York University. Saloner: MIT and Hoover Institution. **SR** New York University Economic Research Reports: RR 87-07; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 86. **PR** No Charge. **JE** 611, 511. **KW** Market Share. Barriers to Entry. Market Rivalry. Incumbent Firms.

AB In this chapter, we shall study a wide range of strategies that can be employed by incumbent firms to either protect or to extend their market shares against competitive attacks by actual and potential entrants. The hallmark of these strategies is that, invariably, they reduce the expected level of profits that incumbent's rivals -- present and future -- can hope to earn. As such, they differ from those types of conduct whose aim is to implement and enforce collusive arrangements among market participants. Unlike many collusive strategies, these hostile and exclusionary strategies which are the focus here, and which include low prices, output expansions, introductions of new products, redesigns of the existing products, promotions, and so on, are difficult to distinguish from and, in fact, are a part and parcel of market rivalry that economists find salutary for economic welfare, that policy-makers wish to promote, and that business leaders often deplore (but find unavoidable).

TI Market Structure and Optimal Management Organizations. **AU** Bull, Clive; Ordover, Janusz.

Osborne, Martin J.

TI Crime, Punishment and the Redistribution of Wealth. **AU** Benoit, Jean Pierre; Osborne, Martin J.

Ostry, Jonathan

PD January 1988. **TI** The Balance of Trade, the Terms of Trade and the Real Exchange Rate: An Intertemporal Optimizing Framework. **AA** University of Chicago. **SR** International Monetary Fund Working Paper: WP/88/2; International Monetary Fund, Washington D.C. 20431. **PG** 41. **PR** No Charge. **JE** 431, 411. **KW** Intertemporal Model. Open Economy. Terms of Trade. Exchange Rates.

AB This paper uses an intertemporal optimizing model of a small open economy to analyze how terms of trade changes affect real exchange rates and the trade balance. We consider temporary current, anticipated future, and permanent changes in the terms of trade. The results suggest that the relationship between the terms of trade and the current account (the so-called Harberger-Laursen-Metzler effect) may be quite sensitive to whether or not the model incorporates nontraded goods. Thus, the real exchange rate may be an important variable through which terms of trade shocks are transmitted to the current account.

Oswald, Andrew J.

TI Efficient and Inefficient Employment Outcomes: A Study Based on Canadian Contract Data. **AU** Christofides, Louis N.; Oswald, Andrew J.

Otani, Ichiro

PD February 1988. **TI** Financial, Exchange Rate, and Wage Policies in Singapore, 1979-86. **AU** Otani, Ichiro; Sassanpour, Cyrus. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/12; International Monetary Fund, Washington D.C. 20431. **PG** 21. **PR** No Charge. **JE** 431, 311, 122, 133. **KW** Policy Simulation. China. Monetary Policy.

AB This paper discusses the unique aspects of Singapore's financial, exchange rate, and wage policies during the period 1979-86, and attempts to quantify the impact of alternative policies on major macroeconomic variables. For this purpose, a simple short-term model is formulated and estimated, and various policy simulations conducted. It is found that the wage policy pursued by the authorities in the early 1980s played a significant role in influencing output and prices and that an appropriate wage policy is complementary to exchange rate policy in maintaining external competitiveness in Singapore.

Palfrey, Thomas R.

TI Theories and Tests of "Blind Bidding" in Sealed Bid Auctions. **AU** Forsythe, Robert; Isaac, R. Mark; Palfrey, Thomas R.

Park, Rolla Edward

TI Response to Time-of-Day Electricity Rates by Large Business Customers: Reconciling Conflicting Evidence. **AU** Acton, Jan Paul; Park, Rolla Edward.

Pauls, B. Dianne

PD December 1987. **TI** Improving the Forecast Accuracy of Provisional Data: An Application of the Kalman Filter to Retail Sales Estimates. **AA** International Finance Division, Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 318; International Finance Division Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 29. **PR** No Charge. **JE** 132, 633. **KW** Kalman Filter. Vector Autoregression. Forecasting. Retail Sales.

AB If forecasts of economic activity are to relay on preliminary data, the predictable component of the data revisions should be taken into account. This paper applies the Kalman filter to improve the forecast accuracy of published preliminary estimates of retail sales. Successive estimates of retail sales are modeled jointly as a vector autoregressive process, incorporating panel rotation and calendar effects. Estimates of retail sales based on this model are then combined with the raw Census estimates via the Kalman filter. This technique, which may be applied to other bodies of data, yields a significant improvement in the efficiency of the raw Census data, reducing the mean-squared error by about 1/3.

Pearce, D.

PD 1987. **TI** Natural Resource Degradation in Developing Countries: A Causal Analysis of Agricultural Colonisation. **AU** Pearce, David; Southgate, D. **AA** University College London. **SR** University College London Discussion Paper: 87-26; Department of Economics, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 721, 711, 717. **KW** Natural Resources. Agriculture. Land.

PD 1987. **TI** Economic Value and the Natural Environment. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-08; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 720.

PD 1987. **TI** The Sustainable Use of Natural Resources in Developing Countries. **AA** Department of Economics, University College London. **SR** University College London Discussion Paper: 86-15; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 721. **KW** Developing Country. Natural Resource.

PD 1987. **TI** Marginal Opportunity Cost as a Planning Concert in Natural Resource Management. **AU** Pearce, D.; Markandya, A. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-06; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 721. **KW** Planning. Natural Resource.

PD December 1987. **TI** Renegotiation-Proof Equilibria: Collective Rationality and Intertemporal Cooperation. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 855; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 33. **PR** $2.00. **JE** 026, 022. **KW** Repeated Games. Infinite Games. Cooperative Games. Negotiation. Contracts.

AB Cooperation in repeated games relies on the possibility that equilibrium play following some t-period history depends on more than simply the structure of the game remaining after the first t periods, that structure being always the same. In a

nondegenerate theory of renegotiation, what a player expects, and the statements he finds credible at the end of period t must be affected by the history that has transpired, and perhaps by the implicit agreement that was in force. The solution concept proposed in this paper acknowledges both these influences, while imposing a certain stationarity on beliefs regarding what renegotiation options are available: renegotiation to an equilibrium sigma will not take place if, after some history h, the continuation equilibrium sigma given h is itself vulnerable to renegotiation to sigma (in the sense that all players prefer *sigma to sigma given h*).

Peel, Michael

TI The Effects of Housing Distortions on Unemployment. **AU** Minford, Patrick; Ashton, Paul; Peel, Michael.

Pesaran, Hashem M.

PD October 1987. **TI** A Rejoinder: On the Policy Ineffectiveness Proposition and a Keynesian Alternative. **AA** University of California at Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 470; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 9. **PR** $2.50; checks payable to University of California Regents. **JE** 824, 023. **KW** New Classical Models. Keynesian Models. Unemployment.

AB This note draws attention to two important limitations of the recent empirical evidence reported by Rush and Waldo (1988) on the relative performance of the 'new classical' (NC) and Keynesian-type explanations of unemployment. It first points out that the use of dummy variables such as a WAR dummy used by Rush and Waldo (RW) is difficult to justify in the context of rational expectations models under incomplete learning. Secondly it shows that the conclusion reached by RW, favoring the NC model against the Keynesian model, is far from being robust and is highly sensitive to minor changes in the specification of the Keynesian Unemployment equation. This note shows that contrary to what RW conclude, the 'Keynesian' model provides a more satisfactory explanation of unemployment than the NC model once due account is taken of the dynamic adjustments of the unemployment rate to changes in money supply growth and the endings of wars.

PD February 1988. **TI** An Econometric Analysis of Exploration and Extraction of Oil in the U.K. Continental Shelf. **AA** University of California at Los Angeles and Trinity College. **SR** University of California at Los Angeles Department of Economics Working Paper: 471; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 49. **PR** $2.50; checks payable to University of California Regents. **JE** 723, 212. **KW** Oil. Exploration. Extraction. Oil Discovery. Natural Resources.

AB This paper, builds on the theoretical contributions of Pindyck, Uhler, and Devarajan and Fisher and develops an econometric framework for the empirical analysis of exploration and production policies of "price-taking" suppliers. It derives exploration and output equations for oil which explicitly take account of the oil discovery process and the intertemporal nature of exploration and production decisions. The framework is then applied to an empirical analysis of oil exploration and extraction on the United Kingdom Continental Shelf.

Peterson, Christine E.

TI Military Enlistment and Attrition: An Analysis of Decision Reversal. **AU** Antel, John; Hosek, James R.; Peterson, Christine E.

Pfleiderer, Paul

TI A Theory of Intraday Trading Patterns: Volume and Price Variability. **AU** Admati, Anat; Pfleiderer, Paul.

Phelps, Edmund S.

PD December 1987. **TI** A Working Model of Slump and Recovery from Disturbances to Capital-Goods Demand in an Open Non-Monetary Economy. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 372; Department of Economics, Columbia University, New York, NY 10027. **PG** 12. **PR** $5.00. **JE** 411, 023. **KW** Unemployment. Wage Contract. Open Economy.

AB This paper contributes toward a non-monetary theory of unemployment fluctuations resting on modern informational treatments of the contract between worker and firm. In the present model, each firm operates both a consumer-good-producing branch and a capital-good-producing branch. This paper focuses on the case of a small open economy in which the capital good (or at least one of the capital goods produced) is non-tradable. In this model the use of the capital good is confined to the consumer good branch; a companion paper has begun to tackle the more general case. The principal shock examined is an increase of the world real rate of interest, which drives down the real demand price of the capital good and thus, in combination with the other features of the model, causes a slump in the capital-good-producing branch of the firms. A shock to the "marginal efficiency of capital" is shown to act similarly.

Pindyck, Robert S.

TI The Learning Curve and Optimal Production Under Uncertainty. **AU** Majd, Saman; Pindyck, Robert S.

Piterman, Sylvia

TI Israel's Stabilization: A Two-Year Review. **AU** Bruno, Michael; Piterman, Sylvia.

Pitt, Mark M.

PD March 1988. **TI** The Compliance Cost of Itemizing Deductions: Evidence from Individual Tax Returns. **AU** Pitt, Mark M.; Slemrod, Joel. **AA** Pitt: University of Minnesota. Slemrod: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2526; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323. **KW** Deductions. Income Tax. Internal Revenue Service.

AB The resource cost of operating the income tax system is large, totalling as much as seven to eight percent of revenue raised. One source of this cost is the system of itemized deductions, which can require extensive record keeping and calculation. This paper estimates the resource cost of itemizing deductions. In contrast to previous studies of compliance cost which rely on survey evidence, we infer this evidence from data reported on tax returns which suggest that there exists taxpayers who would save money by itemizing but who choose not to. We find that in 1982 the private cost of itemizing totalled $1.44 billion, or $43 per itemizing taxpayer. The compliance cost dissuaded from itemizing over 650,000

taxpayers who would have thereby saved taxes, causing an extra tax liability of nearly $200 million. Increasing the standard deduction by $1,000 would save $100 million in resources that would otherwise have been devoted to itemizing.

Pointer, Dennis

TI Managing for Survival: How Successful Academic Medical Centers Cope with Harsh Environments. **AU** Williams, Albert P.; Carter, Grace M.; Hammons, Glenn T.; Pointer, Dennis.

Polemarchakis, Heraklis

PD July 1986. **TI** Options and Equilibrium. **AU** Polemarchakis, Heraklis; Ku, Bon Il. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-11; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 8. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 313, 311, 022. **KW** Options. Equilibrium. Asset Market. Exercise Price.
AB When the asset market is incomplete, options at a priori specified exercise prices may prevent the existence of competitive equilibria. The failure of existence may be robust to perturbations.

TI Variations in Endowments and Utilities. **AU** Donsimoni, Marie Paule; Polemarchakis, Heraklis.

Poterba, James M.

TI What Moves Stock Prices? **AU** Cutler, David M.; Poterba, James M.; Summers, Lawrence H.

Potscher, Benedikt M.

PD July 1987. **TI** A Uniform Law of Large Numbers for Dependent and Heterogeneous Data Processes. **AU** Potscher, Benedikt M.; Prucha, Ingmar R. **AA** Potscher: University of Technology Vienna. Prucha: University of Maryland. **SR** New York University Economic Research Reports: RR 87-26; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 13. **PR** No Charge. **JE** 211. **KW** Nonlinear Models. Consistency. Law of Large Numbers. Estimators.
AB Uniform laws of large numbers constitute important tools in proving consistency of estimators in nonlinear econometric models. A uniform law of large numbers used widely in the recent econometric literature is that of Hoadly (1971). It turns out that the assumptions maintained by this theorem (or some modified versions of it) are severe in that they preclude the analysis of many estimators and models of interest in economics. This paper introduces an alternative uniform law of large numbers for dependent and heterogeneous data processes that is based on a quite general and easy-to-verify catalog of assumptions.

Prager, Jonas

PD March 1986. **TI** Just Sit Tight and Do Nothing: A Perspective on the Current Impasse in Federal Banking Legislation. **AA** New York University. **SR** New York University Economic Policy Papers: PP 43; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 7. **PR** No Charge. **JE** 312, 311. **KW** Bank Reform. Monetary Policy. Commercial Banks.
AB "Don't just stand there; do something]" is an all too familiar refrain heard in the halls of Congress. No matter whether this call to action is self-motivated or externally generated, it frequently leads to ill-conceived policies whose results are perverse. Today, the "do something" litany is most often voiced in connection with banking system reform, instigated by record highs in post-Depression bank failures in each of the past few years. The new element at present lies in the tendency to blame the initial steps taken in banking deregulation as causal, with the obvious corollary -- reregulate and the crisis will blow over. How superficial and nearsighted in this line of reasoning]

PD May 1987. **TI** "Basic Banking": How Basic Is It? **AA** New York University. **SR** New York University Economic Policy Papers: PP 47; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 7. **PR** No Charge. **JE** 312. **KW** Banking. Commercial Banks.
AB Is access to a bank and its key services a constitutionally-guaranteed right? If not, is it nevertheless so fundamental to the social or economic fabric of the United States that Congress or local legislators ought to coerce bankers into providing below-cost services to specific community groups?

Press, S. James

PD May 1987. **TI** Analysis of Repeated Measures Experiments with Binary Outcomes. **AA** The Rand Corporation. **SR** Rand Paper: P-7348; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 9. **PR** No Charge. **JE** 211. **KW** Repeated Measures. Binary Outcomes. Response Function. Logistic Regression.
AB This research examines the analysis of repeated measures experiments that have binary outcomes. Intersubject differences are explained by attribute vectors for each subject. A method is provided for modeling the response function over time. Outside of the assumptions of multivariate logistic regression, no distributional assumptions are made, nor are any assumptions made about the nature of the serial dependence of the response over time.

Prucha, Ingmar R.

TI A Note on the Estimation of Non-Symmetric Dynamic Factor Demand Models. **AU** Madan, Dilip B.; Prucha, Ingmar R.

TI A Uniform Law of Large Numbers for Dependent and Heterogeneous Data Processes. **AU** Potscher, Benedikt M.; Prucha, Ingmar R.

PD November 1987. **TI** On the Computation of Estimators in Systems with Implicitly Defined Variables. **AU** Prucha, Ingmar R.; Nadiri, M. Ishaq. **AA** Prucha: University of Maryland. Nadiri: New York University. **SR** New York University Economic Research Reports: RR 87-40; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 8. **PR** No Charge. **JE** 211. **KW** Estimators. Algorithm. Systems of Equations.
AB Estimators are often defined as the maximizing values of some objective function. This note introduces an algorithm for

the computation of such estimators for the parameters of a system of equations where some of the variables are implicitly defined by an auxiliary set of equations. Systems of equations of this kind have been considered in the recent factor demand literature as well as in other areas. The algorithm is a gradient procedure. To keep the computational burden manageable it calculates the gradient from analytic expressions rather than by numerical differentiation.

Quah, Danny

PD February 1988. **TI** A Common Error in the Treatment of Trending Time Series. **AU** Quah, Danny; Wooldridge, Jeffrey M. **AA** MIT. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 483; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 22. **PR** No Charge. **JE** 211, 131. **KW** Difference-stationary. Trend-stationary. Spurious Cyclicality. Causality.

AB There are two common misconceptions in the analysis of trending time series. First, if a series is difference-stationary, removing a linear trend induces spurious cyclicality. Second, regardless of whether a series is difference-stationary or trend-stationary, taking first differences produces in either case a covariance stationary sequence, and so is recommended econometric practice. We show that the first statement is incorrect and that the second can be misleading.

Quinzii, M.

TI Generic Inefficiency of Stock Market Equilibrium When Markets are Incomplete. **AU** Geanakoplos, J.; Magill, M.; Quinzii, M.; Dreze, J.

Quirmbach, Herman C.

PD November 1987. **TI** R&D: Competition, Risk, and Performance. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8742; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 47. **PR** No Charge. **JE** 621, 611, 022. **KW** R&D. Innovation. Collusion. Oligopoly.

AB Post-innovation collusion helps induce R&D but also yields deadweight losses. In balancing this trade-off, Bertrand industries sometimes outperform Cournot; sometimes not. Both usually outperform perfect collusion. The optimal collusion for a given project is independent of how many firms succeed at research and is often less collusive than a Cournot duopoly. For given collusion levels, do enough firms do R&D? For Bertrand industries and for industries facing high risk, the answer is no. However, perfectly collusive industries overinvest in low to medium risk projects. A Cournot industry tends to overinvest in minimal risk projects but otherwise invests fairly well.

Radner, Roy

PD November 1987. **TI** The Sealed-Bid Mechanism: An Experimental Study. **AU** Radner, Roy; Schotter, Andrew. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-41; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 40. **PR** No Charge. **JE** 026, 215. **KW** Sealed-Bid Mechanism. Trading. Bidding. Bargaining. Incomplete Information.

AB This paper presents the results of a set of experiments performed to test the theoretical and empirical properties of a bargaining mechanism (called the sealed-bid mechanism) used to structure bargaining under incomplete information. The mechanism, first studied by Chatterjee and Samuelson (1983), has been investigated in greater detail by Myerson and Satterthwaite (1983) and more recently by Leininger, Linhart, and Radner (1986). In this paper the sealed-bid mechanism is tested by performing a set of eight different experiments. Our results indicate that the mechanism performs quite well. When using it, experimental subjects are able to capture a large portion of the potential gains from trade. In addition, the behavior of the subjects is qualitatively consistent with one particular equilibrium of the mechanism, namely the one with linear bidding strategies. However, while experimental sellers tended, on average, to bid according to their predicted linear strategy, buyers, while bidding in a linear fashion, tended not to shave their bids by as much as the linear equilibrium bidding strategy dictates. This overbidding is responsible for the good performance of the mechanism. Finally, an experiment performed allowing experienced subjects to repeat the experiment for relatively large numbers of rounds, suggests that, with enough experience, other equilibria may appear, in which the subjects use "step function" strategies.

Ramachandran, S.

PD January 1988. **TI** The Debt-Equity Composition of International Investment. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/8; International Monetary Fund, Washington D.C. 20431. **PG** 35. **PR** No Charge. **JE** 433, 322, 443. **KW** Capital Flows. Debt. Equity. Loans.

AB Capital flows to the nonindustrial countries share three striking characteristics. First, the bulk of these flows was in the form of debt, not equity; second, the loans were mostly to, or guaranteed by, debtor governments; and third, these debts were largely bank loans, not bonds. This paper examines the economic factors that may have been responsible.

Ramsey, James B.

PD July 1987. **TI** The Statistical Properties of Dimension Calculations Using Small Data Sets. **AU** Ramsey, James B.; Yuan, Hsiao Jane. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-20; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 53. **PR** No Charge. **JE** 213. **KW** Fractal Dimension. Attractor. Sample Size.

AB Simultaneously, interest in the use of dimension concepts has spread far beyond the early physical and chemical experiments wherein data sets with observations numbered in the tens of thousands were common. Recently, researchers in a variety of fields, such as brain research, optics, meteorology, and economics have tried to apply the correlation integral approach to dimension to small data sets; indeed, very small, with numbers of observations ranging from less than a thousand to less than two hundred. Even for attractors with fractal dimension less than two, such data sets are miniscule. Consequently, there is considerable concern, even skepticism, about the validity of any findings based on such small numbers of data points. Intuitively, because measures of scaling are measuring the relative sparseness of the attractor's points

within some n-dimensional subspace, that is, the attractor does not fill out the space within a given region, but leaves a series of self-similar open subspaces, any measure of fractal dimension cannot easily distinguish the absence of data points due to the structure of the attractor and the absence of points due merely to the sparseness of a few data points scattered in n-dimensional space. Further, the degree of scaling of the correlation integral may well vary with the range of scales used. In short, the efficiency of estimation of fractal dimension depends upon the interaction between sample size, the scaling range, the embedding dimension, and the structure of the attractor itself.

Rankin, Neil

PD June 1987. **TI** An Intertemporal Version of Mundell's Two-Country Flexible Exchange Rates Model with Disequilibrium Microfoundations: Is Policy Interdependence Inevitable? **AA** Queen Mary College. **SR** Centre for Economic Policy Research Discussion Paper: 185; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 023, 311, 321, 821. **KW** Labor Market. Disequilibrium. Exchange Rates. Policy Interdependence. Monetary Policy. Fiscal Policy. Open Economy.

AB As a companion to a previous paper, monetary and fiscal policy are analyzed in (a) a small open economy and (b) a two-country world, where in addition to a fixed wage causing unemployment, countries now produce specialized products whose prices are fixed, causing excess supply. There are two periods, and perfect foresight. Markets clear in the second period. Exchange rates are flexible, and there is perfect capital mobility. Both monetary and fiscal policy raise domestic output whether the country is small or not, but do not affect foreign output or interest rates. Flexible exchange rates thus recover their "insulating" properties.

Rappoport, Peter

TI The Adjustment of U.S. Oil Demand to the Price Increases of the 1970s. **AU** Gately, Dermot; Rappoport, Peter.

Rasche, Robert H.

PD September 1987. **TI** M1-Velocity and Money Demand Functions: Do Stable Relationships Exist? **AA** Michigan State University. **SR** Michigan State Econometrics and Economic Theory Workshop Paper: 8705; Department of Economics, Michigan State University, East Lansing, MI 48824. **PG** 96. **PR** No Charge. **JE** 311, 131, 212. **KW** Money Velocity. Money Demand. Time Series.

AB This study is an investigation of a prominent empirical problem: what has happened to the behavior of M1 velocity measures and M1 money demand functions in the 1980s? The broad outline of this problem is well known: apparently sometime in the late 1970s or early 1980s the relatively constant trend that characterized M1 velocity during the preceding 30-35 years ended. Subsequently there has been an explosive outpouring of research on velocity or money demand and numerous hypotheses have been advanced that allegedly account for the observed phenomenon. Under these circumstances it is the height of arrogance to suggest that there is a significantly positive marginal product associated with yet another empirical study of this issue. Yet the existing state of our knowledge is fundamentally unsatisfactory. The mechanism behind the change in the character of velocity has not been identified, and the literature does not appear to rule out any of the major competing hypotheses. The results of this study fail to produce a totally constructive solution to the problem. However, the research reported here shows that there exists a parsimonious parameterization of the change in money demand which produces a function that is stable in all other respects for over 30 years of post-Accord history.

Raut, L. K.

PD March 1987. **TI** Effects of Social Security on Fertility and Saving: An Overlapping Generations Model. **AA** University of Chicago. **SR** Economics Research Center/NORC Discussion Paper: 87-13; Economics Research Center/NORC, 6030 S. Ellis, Chicago, IL 60637. **PG** 30. **PR** $2.00; send requests to Librarian, NORC. **JE** 915, 918, 021. **KW** Social Security. General Equilibrium. Overlapping Generations. Fertility.

AB This paper studies the general equilibrium effects of various social security programs on the rates of population growth and capital accumulation within an overlapping generations framework with endogenous fertility and savings. It provides a simpler proof for the existence and uniqueness of perfect foresight competitive equilibrium using recursively the equilibria of a sequence of one period Arrow-Debreu economies. It also shows that for certain low levels of exogenously given inter-generational transfers of income from old to young generations and cost of child care, a competitive equilibrium follows a path of over-population and capital accumulation in a modified Pareto optimal sense; a social security program in such a case is Pareto improving. A fully funded system is not neutral if it is financed by child taxes. It also shows that unlike in the case of exogenous fertility where a steady-state is attained asymptotically, a unique globally stable steady state is attained only in the second generation when fertility is endogenous.

Ray, Amit

TI Employment and Structural Change in Britain - Quantitative Evidence and Policy Simulations. **AU** Greenhalgh, Christine; Gregory, Mary; Ray, Amit.

Razin, Assaf

TI Corrective Policies for a Bequest Constrained Economy. **AU** Nerlove, Marc; Razin, Assaf; Sadka, Efraim.

Recski, Andras

PD December 1987. **TI** Applications of Combinatorics to Electrical Engineering and Rigidity. **AA** University of Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: 87483-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** No Charge. **JE** 213. **KW** Network Theory. Statics. Pattern Recognition.

AB In this chapter we present three engineering problems where combinatorial methods are needed for the solution. In order to emphasize the methods: (i) we proceed in the solutions of the three problems simultaneously, and (ii) we do not intend to present the engineering problems in their most general form. The presented applications refer to electric network theory, to statics and to pattern recognition. Further applications of

similar combinatorial tools are also known in control and system theory, see (Iri and Fujishige, 1981) and in geodesy (Snay, 1978; Spriggs and Snay, 1982).

Reisman, Haim

PD October 1987. **TI** Valuation of Claims with Noisy Payoffs. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 440; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 24. **PR** $4.00. **JE** 313. **KW** Asset Pricing Theory. Idiosyncratic Noise. Claims.
AB The Ross' Asset Pricing Theory studies an approximate valuation model in a market with many assets in which the payoff of each asset is a linear combination of some K fixed payoffs (called factors) and an (idiosyncratic) noise term. The present paper generalizes Ross' result to the case where idiosyncratic noise uncertainty may enter the payoff of each asset in a complex way, e.g., the payoff of each asset may be a nonlinear function of some factors and a noise term.

PD October 1987. **TI** Intertemporal Arbitrage Pricing Theory. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 441; New York University Salomon Brothers Center for the Study of Financial Institutions, 90 Trinity Place, New York, NY 10006. **PG** 39. **PR** $4.00. **JE** 313. **KW** Asset Payoff. APT. Securities. Risk Premium. Arbitrage.
AB The paper studies an intertemporal version of the Ross' APT (1976). It is assumed that asset payoffs satisfy a "dynamic" approximate factor structure in the style of Chamberlain and Rothschild's (1983) static APT. It is proved that the instantaneous risk premium of each asset is approximately explained by its instantaneous betas with a set of K securities (factors) and their instantaneous risk premia. In addition the factors determine by arbitrage, in some approximate sense, the price process of each asset.

Rey, P.

TI Government Intervention in Production and Incentives Theory: A Review of Recent Contributions. **AU** Caillaud, B.; Guesnerie, R.; Rey, P.; Tirole, J.

TI Noisy Observation in Adverse Selection Models. **AU** Caillaud, Bernard; Guesnerie, Ragu; Rey, Patrick.

Rich, Michael

PD May 1987. **TI** Thoughts on Reforming the Military Acquisition Process. **AU** Rich, Michael; Dews, Edmund. **AA** The Rand Corporation. **SR** Rand Paper: P-7352; The Rand Corporation, 1700 Main Street, PO Box 2138, Santa Monica, CA 90406-2138. **PG** 11. **PR** No Charge. **JE** 114. **KW** Defense spending. Acquisition. Military Expenditure. Packard Commission.
AB This paper, based on testimony given by Michael Rich to the United States Senate Committee on Armed Services, Subcommittee on Defense Industry and Technology, on April 9, 1987, outlines an approach to reforming the defense acquisition process and describes a prescription for reform based on RAND research results. In doing so, it challenges several aspects of conventional wisdom and popular belief and offers a set of recommendations that go beyond those of the Packard Commission. The traditional measures of effectiveness for major system acquisitions are cost growth, schedule slippage, performance shortfalls, and fielding times. These measures, given our current ability to quantify them, do not tell the whole story about the effectiveness of defense acquisition, but they do give important insights. RAND research shows that government and industry management can claim at least modest improvements over time -- a conclusion contrary to the usual assertion that defense acquisition has become progressively less effective.

Riley, John G.

PD February 1988. **TI** An Introduction to the Theory of Contests. **AA** University of California at Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 469; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 51. **PR** $2.50; checks payable to University of California Regents. **JE** 022, 611. **KW** Contests. Auctions. Rent Seeking. Attrition.
AB Over the last few years, economists have successfully applied the theory of contests to a broad range of economic phenomena. In contrast to standard neoclassical models, the reward to an agent in a contest is dependent upon his relative, rather than absolute performance. For example, in patent races, bidding for an object d'art, or competing in the political arena for a franchise, it is the winner who takes all. This paper examples several examples of contests and, in so doing, develops the central theoretical insights of the recent literature.

Riordan, Michael

PD February 1988. **TI** Sectoral Shocks and Structural Unemployment. **AU** Riordan, Michael; Staiger, Robert W. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2522; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 824, 821, 822. **KW** Labor Quality. Unemployment. Sectoral Shock. Layoffs.
AB When current employers have more information about worker quality than do potential employers, sectoral shocks cause structural unemployment. That is, some workers laid off from an injured sector remain unemployed despite the fact that they are of sufficient quality to be productively employed in an expanding sector at the prevailing wage. Moreover, sectoral unemployment rates are not monotonic in the severity of sectoral shocks due to the interaction of layoff activity and hiring activity. Finally, equilibrium employment decisions are not constrained Pareto efficient, and can be improved by a policy of adjustment assistance.

Rob, Rafael

TI Long Waves and Short Waves: Growth Trough Intensive and Extensive Search. **AU** Jovanovic, Boyan; Rob, Rafael.

Robertson, James W.

TI Energy, Obsolescence, and the Productivity Slowdown. **AU** Hulten, Charles R.; Robertson, James W.; Wykoff, Frank C.

Robinson, P. M.

PD 1987. **TI** Nonparametric Estimation of Time-Varying Parameters. **AA** London School of Economics. **SR** London School of Economics Econometrics Programme Discussion Paper: R.8; Department of Economics, London School of Economics and Political Science, Houghton Street,

London WC2A 2AE, ENGLAND. **PG** 19. **PR** No Charge. **JE** 211. **KW** Time Varying Parameter Models. Nonparametric Estimation. Kernel Function.

AB A sequence of observations y(t), t=1,2,..,N, is generated by the time-varying multiple regression model y(t)=beta(t)'x(t) + sigma(t)u(t), t=1,2,..,N, where, for t=1,2,..,N, u(t) is an unobservable random variable with zero mean and unit variance, x(t) is an observable p-vector-valued variable, and sigma(t) and beta(t) are respectively unobservable scalar and p-vector-valued parameters. No model (stochastic or nonstochastic) is assumed for the sigma(t) or beta(t); instead they are assumed to be smoothly varying over t, in a certain sense. A class of estimators of the beta(t), sigma(t) is proposed, for each value of t; the estimators optimise a criterion prompted by Gaussian maximum likelihood considerations, and may be viewed as analogous to certain nonparametric function fitting estimators, employing a kernel function and bandwidth parameter, both selected by the practitioner. Consistency and asymptotic normality are established in case of independent u(t), and a consistent estimator of the asymptotic covariance matrix of the beta(t) estimators is given. Such results are also possible for serially correlated u(t). We discuss questions of implementation, in particular the choice of kernel function and bandwidth. Generalisation of the class of estimators to include certain robust estimators is possible. Generalisation of the methods to more general models involving time-varying parameters is also possible.

PD 1987. **TI** Root-N-Consistent Semiparametric Regression. **AA** London School of Economics. **SR** London School of Economics Econometrics Programme Discussion Paper: R.9; Department of Economics, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 36. **PR** No Charge. **JE** 211. **KW** Semiparametric Estimation. Nonparametric Estimation.

AB One type of semiparametric regression on a R(p) x R(q) - valued random variable (X,Z) is beta'X + theta(Z), where beta and theta(Z) are an unknown slope coefficient vector and function, and X is neither wholly dependent on Z nor necessarily independent of it. Estimators of beta based on incorrect parameterisation of theta are generally inconsistent, whereas consistent nonparametric estimators deviate from beta by a larger probability order than N(-1/2), where N is sample size. An estimator generalising the ordinary least squares estimator of beta is constructed by inserting nonparametric regression estimators in the nonlinear orthogonal projection on Z. Under regularity conditions beta hat is shown to be N(-1/2) consistent for beta and asymptotically normal, and a consistent estimator of its limiting covariance matrix is given, affording statistical inference that is not only asymptotically valid but has non-zero asymptotic first-order efficiency relative to estimators based on a correctly parameterised theta. We discuss the identification problem and beta hat's efficiency, and report results of a Monte Carlo study of finite-sample performance.

Robinson, Sherman

TI Macroeconomic Shocks, Foreign Trade, and Structural Adjustment: A General Equilibrium Analysis of the U.S. Economy, 1982-1986. **AU** Adelman, Irma; Robinson, Sherman.

Rochet, J. C.

TI Existence of Price Equilibrium in a Differentiated Industry. **AU** Champsaur, P.; Rochet, J. C.

Rodriguez, Carlos A.

PD February 1988. **TI** The Strategy of Debt Buybacks: A Theoretical Analysis of the Competitive Case. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/20; International Monetary Fund, Washington D.C. 20431. **PG** 14. **PR** No Charge. **JE** 443, 431. **KW** Debtor Country. Debt Repurchases.

AB This paper is concerned with analyzing the strategy of a debtor country repurchasing its debt at market prices. The main result, for the case when unpaid interest is rolled over, is that a strategy of announced debt repurchases at market prices, under competitive conditions and rational expectations, will only allow the country to recover debt at par value whenever the market expects the remaining debt to be fully served at some time in the future. When debt holders are myopic with respect to future debt repurchases, a strategy can be devised by which all of the "excess" debt is repurchased at a price equal, in present value, to that one prevailing before the policy was announced.

Romer, David

TI The Equilibrium and Optimal Timing of Price Changes. **AU** Ball, Laurence; Romer, David.

Romer, Thomas

PD October 1987. **TI** Economic Incentives and Political Institutions: Spending and Voting in School Budget Referenda. **AU** Romer, Thomas; Rosenthal, Howard; Munley, Vincent G. **AA** Romer and Rosenthal: Carnegie-Mellon University. Munley: Lehigh University. **SR** National Bureau of Economic Research Working Paper: 2406; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 912, 025, 324, 212, 325. **KW** Education. Referendum. Local School Districts. Elections. Voting. Public Schools. Grant Structure.

AB Allocation of resources in the local public sector involves economic and political forces. Spending for elementary and secondary education is a major area of public expenditure. In many states, the bulk of this spending is subject to referendum. In addition, grants-in-aid from state governments to local school districts form an important component of the district revenues. This paper has two main features. One is the characterization of local spending when the state aid structure is of the closed-end matching grant type. Under this structure, local tax price is endogenous, since the amount of state subsidy depends on the district's spending choice. The other main feature is the linking of spending proposals to referendum outcomes. In this way, our model makes use of voting data to shed light on the extent to which referenda constrain spending. The empirical setting is public school budget referenda in 544 New York school districts for the 1975-76 school year. Our econometric results and simulations based on them reveal considerable sensitivity of spending to the form of the grant structure, as well as to the referendum requirement. In addition, large school districts appear to behave more like "budget-maximizers" than do small districts, where proposals appear to be more in line with "median voter" demands.

Ronen, Joshua

TI Finance Subsidiaries and Debt Capacity. **AU** Sondhi,

Ashwinpaul; Fried, Dov; Ronen, Joshua.

Rosen, Richard J.

PD February 1988. **TI** Research and Development with Asymmetric Firm Sizes. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 17; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 621, 611. **KW** Research and Development. Technological Change. R&D. Innovation.

AB This paper presents a theoretical model of research and development competition among firms. The goal of the model is to simultaneously explain two empirical observations pertaining to the persistence of dominant firms. The first observation is that small firms make a disproportionate share of major innovations. And the second observation is that large firms tend to spend more (in absolute terms) on research and development than small firms do. This paper presents a simple model of cost-reducing innovation that, by allowing firms a richer set of research and development options than previous studies, yields prediction consistent with the empirical observations.

PD February 1988. **TI** New Banking Powers: A Portfolio Analysis of Bank Investment in Real Estate. **AU** Rosen, Richard J.; Lloyd, Davies Peter; Kwast, Myron L.; Humphrey, David B. **AA** Rosen, Kwast: Board of Governors of the Federal Reserve System. Lloyd-Davies: Federal Home Loan Mortgage Corporation. Humphrey: Federal Reserve Bank of Richmond. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 20; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 13. **PR** No Charge. **JE** 312. **KW** Real Estate. Banking. Risk. Diversification. Equity. Investment.

AB A new banking power currently under consideration is bank direct equity investment in real estate. A portfolio analysis of the possible effect of this new power is presented using two sets of data on returns to direct real estate investment. While it is estimated that there can be benefits from bank diversification into this area, the results suggest that risk may be increased, rather than reduced, if real estate investment exceeds certain relatively low levels of concentration.

Rosen, Sherwin

PD October 1987. **TI** Transaction Costs and Internal Labor Markets. **AA** University of Chicago. **SR** National Bureau of Economic Research Working Paper: 2407; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 510, 821. **KW** Transaction Costs. Personnel Management Systems. Agency Theory. Decentralization. Organization.

AB The concept of transactions costs used by Coase in "The Nature of the Firm" is applied to the internal labor market of an organization. Under joint production it is shown that the number of transaction-specific prices necessary to decentralize labor allocations rises geometrically with the size of the work force. Complexity of calculation and costs of implementation constrains the possibilities for internal decentralization through a price mechanism and substitutes a more authoritarian system of allocation instead. These same issues of complexity and implementation costs limit the usefulness of agency theory as a conceptual framework for this problem. The analysis suggests that an internal labor market must be viewed in a more comprehensive framework of a personnel management system.

PD December 1987. **TI** The Value of Changes in Life Expectancy. **AA** University of Chicago. **SR** Economics Research Center/NORC Discussion Paper: 87-14; Economics Research Center/NORC, 6030 S. Ellis, Chicago, IL 60637. **PG** 37. **PR** $2.00; send requests to Librarian, NORC. **JE** 918, 921. **KW** Cost-Benefit Analysis. Life-Cycle Hypothesis. Life Expectancy. Mortality Risk.

AB Valuation formulas for age-specific mortality risks are derived from life-cycle allocation theory under uncertainty and related to empirical estimates of the value of life. A change in an age-specific mortality risk affects all subsequent survivor functions and reallocates consumption and labor supply over the entire life cycle. The value of eliminating a risk to life at a specific age is the expected present value of consumer surplus from that age forward. Approximate numerical extrapolations from cross-section estimates imply that ^{c}values decrease rapidly in current age and in the distance between current age and age at risk.

Rosenthal, Howard

TI Economic Incentives and Political Institutions: Spending and Voting in School Budget Referenda. **AU** Romer, Thomas; Rosenthal, Howard; Munley, Vincent G.

Rossi, Nicola

PD January 1988. **TI** Dependency Rates and Private Savings Behavior in Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/10; International Monetary Fund, Washington D.C. 20431. **PG** 16. **PR** No Charge. **JE** 112, 121, 023. **KW** Savings. Developing Countries. LDCs. Consumption Growth. Demographics.

AB A firm theoretical basis for the empirical relationship between dependency rates and savings behavior in developing countries is still lacking. Two demographic extensions of the representative household's stochastic dynamic optimization problem are presented here. It is shown that the relationship between expected dependency rates and consumption growth depends on two parameters: the demographically varying committed consumption and the intertemporal elasticity of substitution. Thus, the expected path of demographic variables can provide information on the consumers' willingness to smooth consumption, and on the savings responsiveness to changes in the real interest rate.

Rowthorn, Bob

PD November 1987. **TI** The Diversity of Unemployment Experience Since 1973. **AU** Rowthorn, Bob; Glyn, Andrew J. **AA** Rowthorn: Department of Applied Economics, University of Cambridge. Glyn: Corpus Christi College, Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 40; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 89. **PR** No Charge. **JE** 123, 826, 824. **KW** Unemployment. OECD. Diversity.

AB This paper begins with an overview of OECD unemployment since 1973. It then explains the diversity of unemployment experience in the OECD countries, analysing the patterns of labor supply, employment and output performance which are associated with this diversity. Five 'star

performers' are identified - Switzerland, Norway, Japan, Sweden and Austria - and consideration is give to the extent to which they exhibit a common pattern of economic experience. Finally, the way in which their institutional and political circumstances have contributed to their capacity to maintain low unemployment is assessed.

Rubin, Donald

TI A Research Agenda for Assessment and Propagation of Model Uncertainty. **AU** Draper, David; Hodges, James S.; Leamer, Edward E.; Morris, Carl N.; Rubin, Donald.

Rudebusch, Glenn D.

TI Does the Business Cycle have Duration Memory? **AU** Diebold, Francis X.; Rudebusch, Glenn D.

TI Long Memory and Persistence in Aggregate Output. **AU** Diebold, Francis X.; Rudebusch, Glenn D.

Runsten, David

TI Toward a Rural Development Program for the United States: A Proposal. **AU** de Janvry, Alain; Runsten, David; Sadoulet, Elisabeth.

Sadka, Efraim

TI Corrective Policies for a Bequest Constrained Economy. **AU** Nerlove, Marc; Razin, Assaf; Sadka, Efraim.

Sadoulet, E.

TI Toward a Rural Development Program for the United States: A Proposal. **AU** de Janvry, Alain; Runsten, David; Sadoulet, Elisabeth.

TI Land-Labor Interlinkages in a Latin American Context. **AU** de Janvry, Alain; Sadoulet, Elisabeth.

TI The Welfare Effects of Stabilization Policies and Structural Adjustment Programs Analyzed in CGE Frameworks: Results and Agenda. **AU** de Janvry, A.; Fargeix, A.; Sadoulet, E.

Safra, Z.

TI Behaviorally Consistent Optimal Stopping Rules. **AU** Karni, E.; Safra, Z.

TI Rank-Dependent Probabilities. **AU** Karni, E.; Safra, Z.

Sahi, S.

TI A Strategic Marker Game with Complete Markets. **AU** Amir, R.; Sahi, S.; Shubik, M.; Yao, S.

Salinger, Michael A.

PD January 1988. **TI** Event Studies When the Event Changes the Market Model Parameters. **AA** Columbia Business School. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-02; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 60. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 211, 313, 611. **KW** Event Studies. Mergers. Abnormal Returns.

AB This paper demonstrates that the cumulative abnormal return based on the pre-event market model parameters measures the effect of an event on the value of a firm whereas the cumulative abnormal return based on the true market model parameters does not and discusses the implications of that result for interpreting event studies. It also shows that ignoring the intertemporal correlation of estimated abnormal returns can result in significant understatements of the variance. This latter point is then demonstrated empirically in a study of post-merger stock performance.

PD January 1988. **TI** Horizontal Mergers and the Market Value of Rivals: The "In Play" Effect. **AU** Salinger, Michael A.; Schumann, Laurence. **AA** Salinger: Columbia Business School. Schumann: United States Federal Trade Commission. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-88-03; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 35. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 313, 612, 611. **KW** Event Studies. Horizontal Mergers. Rival Firms. Mergers.

AB Eckbo (1983) found that the rivals of firms undertaking horizontal mergers had positive abnormal returns at the merger announcement, but no statistically significant abnormal returns at a subsequent antitrust challenge. He interpreted his results to indicate that mergers challenged by the Department of Justice and Federal Trade Commission had, on average, increased competition. This paper tests whether the initial increase in the value of the rivals can be attributed to anticipation that they too would be acquired (the "in play" effect). It also tests further implications of the hypothesis that the challenged mergers were pro-competitive. While some of the individual results suggest an "in play" effect, the results as a whole do not.

Saloner, Garth

TI Predation, Monopolization, and Antitrust. **AU** Ordover, Janusz; Saloner, Garth.

Sanders, Anthony B.

TI On the Determinants of the Value of Call Options on Default-Free Bonds. **AU** Buser, Stephen A.; Hendershott, Patric H.; Sanders, Anthony B.

Sargent, Thomas J.

TI Straight Time and Overtime in Equilibrium. **AU** Hansen, Gary; Sargent, Thomas J.

Sassanpour, Cyrus

TI Financial, Exchange Rate, and Wage Policies in Singapore, 1979-86. **AU** Otani, Ichiro; Sassanpour, Cyrus.

Saunders, Anthony

PD October 1987. **TI** Ownership Structure, Deregulation and Bank Risk Taking. **AU** Saunders, Anthony; Strock, Elizabeth; Travlos, Nickolaos G. **AA** Saunders and Strock: New York University. Travlos: Boston College. **SR** New York University Salomon Brothers Center Working Paper: 443; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 33. **PR** $4.00. **JE** 312, 512, 522. **KW** Commercial Banks. Risk Taking. Banking. Stockholders.

AB The results in Section IV are generally consistent with the contention that risk-taking and ownership structure are

directly related in banking firms and that conflicting incentives, among managers and stockholders, regarding risk-taking tend to be accentuated in periods of deregulation with "mispriced" deposit insurance guarantees present. Using two different variables to measure the degree of managerial control it was found that in a period of relative regulation '1975-1979 risk-taking differences, between managerially and stockholder controlled banks, were quite small while in a period of deregulation '1981-1985 more significant differences in risk-taking were observed.

TI Additions to Bank Loan-Loss Reserves Good News or Bad News? **AU** Grammatikos, Theoharry; Saunders, Anthony.

Schankerman, Mark

TI The Interaction Between Capital Investment and R&D in Science-Based Firms. **AU** Lach, Saul; Schankerman, Mark.

Scharfstein, David

TI LDC Debt: Forgiveness, Indexation and Investment Incentives. **AU** Froot, Kenneth A.; Scharfstein, David; Stein, Jeremy.

Schmidt, Peter

TI Predicting Criminal Recidivism Using "Split Population" Survival Time Models. **AU** Witte, Ann Dryden; Schmidt, Peter.

TI Instrumental Variables Estimation of Production Functions with Cross-Sectional and Time-Series Variation in Productivity Levels. **AU** Cornwell, Christopher; Schmidt, Peter; Sickles, Robin C.

Schmitz, Heinz Peter

TI Calibrating Histograms with Application to Economic Data. **AU** Scott, David; Schmitz, Heinz Peter.

Schotter, Andrew

PD March 1986. **TI** The Cost of the Tort System. **AU** Schotter, Andrew; Ordover, Janusz. **AA** New York University. **SR** New York University Economic Policy Papers: PP 42; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 105. **PR** No Charge. **JE** 916. **KW** Tort System. Court Systems. Third-party Liability. Insurance. Administrative Costs.
AB In this report we estimate the administrative costs of the tort system using four different methods and four different assumptions within each method. Two of the methods rely heavily upon the allocated and unallocated loss adjustment expense data furnished in Schedule P of A.M. Best's Aggregates and Averages, while the other two rely heavily upon court case load statistics to estimate the number of tort cases filed and then estimates the costs involved in resolving these cases. To a large extent our estimates were remarkably consistent. For instance, in 1984 eleven of our 16 estimates were in the $10 Billion to $17 Billion range, four were between $22 and $27 Billion, and one was $9.05 Billion.

PD September 1987. **TI** Corporate Incentives and Long-Term Bonuses: An Experimental Study. **AU** Schotter, Andrew; Weigelt, Keith. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-32; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 27. **PR** No Charge. **JE** 511, 512, 215, 514. **KW** Bonus. Corporation. Stockholders. Incentives.
AB The task of providing the proper set of managerial incentives is a complex problem in principal-agent theory. The problem arises because executives may discount the future at a higher rate than stockholders and hence determine policies that are too myopic from the stockholders' point of view. This high discount rate may induce corporate decisions which yield flashy short-run profits today at the expense of long run profits tomorrow. To align these two conflicting sets of preferences, corporations have developed incentive bonus programs which try to motivate executives toward the corporation's goals. Using short and long-term bonus plans, managerial compensation is partially put "at risk" because compensation is made a function of corporate (or business unit) performance. It is our contention that many times these plans fail to reconcile the divergent preferences of the corporation and its managers. To illustrate this point we ran a set of laboratory experiments with paid volunteers using graduate students at the New York University Graduate School of Business.

TI Asymmetric Tournaments, Equal Opportunity Laws and Affirmative Action: Some Experimental Results. **AU** Bull, Clive; Schotter, Andrew; Weigelt, Keith.

TI An Experimental Study of Single Actor Accidents. **AU** Kornhauser, Lewis; Schotter, Andrew.

TI The Sealed-Bid Mechanism: An Experimental Study. **AU** Radner, Roy; Schotter, Andrew.

Schultz, T. Paul

PD September 1987. **TI** Population Programs: Measuring Their Impact on Fertility and the Personal Distribution of Their Effects. **AA** Yale University. **SR** Yale Economic Growth Center Discussion Paper: 541; Economic Growth Center, Yale University, Box 1987 Yale Station, New Haven, CT 06520. **PG** 35. **PR** $2.00. **JE** 841, 921, 121. **KW** Fertility. Family Planning. Taiwan. Contraception. Population Growth.
AB Evaluating population programs involves statistically inferring how the interregional variation in subsidized family planning activity (or other program intervention) is related to fertility, holding constant for an array of initial endowments, prices, wages, and environmental factors that are determined independently of parents and are likely to exert an exogenous influence on desired and actual fertility. This paper illustrates how most family planning evaluation schemes are flawed because they focus analysis on measured contraceptive use rather than on the final fertility outcome. Furthermore, the choice of environmental determinants of fertility, other than the local activity of the family planning program, are rarely conceptualized as including only exogenous conditions influencing the reproductive goals and behavior of couples. Review of evidence from the early years of the Taiwan family planning program illustrates many of the issues discussed at the outset of the paper.

Schumann, Laurence

TI Horizontal Mergers and the Market Value of Rivals: The "In Play" Effect. **AU** Salinger, Michael A.; Schumann, Laurence.

Scotchmer, Suzanne

PD February 1988. **TI** Randomness in Tax Enforcement. **AU** Scotchmer, Suzanne; Slemrod, Joel. **AA** Scotchmer: University of California, Berkeley. Slemrod: University of Michigan. **SR** National Bureau of Economic Research Working Paper: 2512; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323. **KW** Audit. Income Tax. Taxes.

AB For most parameter values, increased randomness about how much taxable income an auditor would assess leads to higher reported income and more revenue. When reducing randomness is costly, optimality requires some randomness in assessed taxable income. Even if reducing randomness is costless, taxpayers may prefer some randomness when the increased revenue can be rebated, so that the government's revenue stays fixed. These results do not rely on the presence of a distortion in labor supply.

Scott, David

PD January 1988. **TI** Calibrating Histograms with Application to Economic Data. **AU** Scott, David; Schmitz, Heinz Peter. **AA** Scott: University of Houston. Schmitz: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A 150; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 15. **PR** No Charge. **JE** 211, 214. **KW** Histogram. Bin Width. Cross Validation. Semiparametric Methods. Algorithms.

AB In this paper the problem of automatic calibration of histograms by cross-validation is considered, assuming the true underlying density is continuous with continuous first derivative. Alternative philosophies and approaches of cross-validation for histograms are presented. Understanding their performance in this relatively simply setting should prove valuable when cross-validating other more complex semiparametric procedures.

Segal, Uzi

PD January 1988. **TI** Anticipated Utility: A Measure Representation Approach. **AA** Department of Economics, University of Toronto. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8803; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 25. **PR** No Charge. **JE** 026. **KW** Anticipated Utility. Finitely Additive Measures. Lottery. Preference Relation.

AB This paper presents axioms which imply that a preference relation over lotteries can be represented by a measure of the area above the distribution function of each lottery. A special case of this family is the anticipated utility functional. One additional axiom implies this theory. This functional is then extended for the case of vectorial prizes.

PD March 1988. **TI** Local Risk Aversion. **AU** Segal, Uzi; Spivak, Avia. **AA** Segal: Department of Economics, University of Toronto. Spivak: Department of Economics, Ben Gurion University, Beer Sheva, Israel. **SR** University of Toronto Institute for Policy Analysis Working Paper: 8806; Department of Economics, University of Toronto, Toronto, Ontario, CANADA M5S 1A1. **PG** 32. **PR** No Charge. **JE** 022, 024. **KW** Risk Aversion. Anticipated Utility. Frechet Differentiality. Insurance. Expected Utility Theory.

AB Local risk neutrality has some unreasonable economic implications, especially in insurance theory. Expected utility theory implies local risk neutrality, and we show first that so do all Frechet differentiable functionals. We then show that within the anticipated utility framework (which is known to be non-Frechet differentiable), risk aversion implies local risk aversion. It turns out that this property can explain several seemingly unintuitive results obtained from the Frechet differentiability assumption. In this paper we discuss two of these problems: the connection between full insurance and marginal loading, and the desirability of price stabilization.

Selten, Reinhard

PD March 1988. **TI** Anticipatory Learning in Two-Person Games. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B 93; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 82. **PR** No Charge. **JE** 026. **KW** Two-Person Game. Repeated Game. Mixed Strategies. Anticipatory Learning Process. Anticipation Effects. Stability.

AB The theory presented here exhibits anticipation as a potentially stabilizing force in game equilibrium learning. The anticipatory learning process can serve as a point of departure in the analysis of laboratory experiments. Of course, adjustments have to be made for the finiteness of laboratory populations. Frequency distributions over pure strategies cannot be identified with mixed strategies. Moreover, one must expect that the parameters alpha and beta vary from subject to subject. In principle, this does not pose insurmountable obstacles for the theoretical analysis of specific data sets, even if the direct application of the results of this paper may not be possible.

Sharpe, Steven A.

TI Post-Deregulation Deposit Rate Pricing: The Temporal Dynamics. **AU** Diebold, Francis X.; Sharpe, Steven A.

Shiller, Robert J.

TI Prices of Single Family Homes Since 1970; New Indexes for Four Cities. **AU** Case, Karl E.; Shiller, Robert J.

TI The Informational Content of Ex Ante Forecasts. **AU** Fair, Ray C.; Shiller, Robert J.

TI Econometric Modeling as Information Aggregation. **AU** Fair, Ray C.; Shiller, Robert J.

TI Stock Prices, Earnings and Expected Dividends. **AU** Campbell, John Y.; Shiller, Robert J.

Shleifer, Andrei

TI The Economic Consequences of Noise Traders. **AU** De Long, J. Bradford; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert J.

TI Alternative Mechanisms for Corporate Control. **AU** Morck, Randall; Shleifer, Andrei; Vishny, Robert W.

Shubik, M.

TI A Strategic Marker Game with Complete Markets. **AU** Amir, R.; Sahi, S.; Shubik, M.; Yao, S.

Sickles, Robin C.

TI Instrumental Variables Estimation of Production Functions with Cross-Sectional and Time-Series Variation in

Productivity Levels. **AU** Cornwell, Christopher; Schmidt, Peter; Sickles, Robin C.

Singamesetti, R. N.

TI What Do Regressions of Interest Rates on Deficits Imply? **AU** Swamy, P. A. V. B.; Kolluri, B. H.; Singamesetti, R. N.

Sklivas, Steven

TI Why Economists Don't Replicate (Although They Do Reproduce). **AU** Mirowski, Philip; Sklivas, Steven.

Skott, Peter

PD February 1987. **TI** Finance, Accumulation and the Choice of Technique. **AA** University of Copenhagen and University College London. **SR** University College London Discussion Paper: 87-07; Department of Economics, University College London, Gower Street, London WC1E 6BT. **PG** 44. **PR** No Charge. **JE** 023. **KW** Investment. Finance. Saving. Retention Rate. Valuation Effect. Warranted Growth. Tobin's Q.

AB The paper analyzes the short and long run interaction between financial and real variables in the context of a Keynesian model where firms finance investment through retained earnings, new issues or bank loans and where households hold financial assets. The desired level of financial stocks is related to current income flows and the average saving propensity becomes an endogenous variable determined jointly by household and firm decisions. Changes in the basic parameters give rise to both saving and valuation effects and it is shown that if the valuation effect dominates then an increase in saving parameters may be expansionary.

Slemrod, Joel

TI Randomness in Tax Enforcement. **AU** Scotchmer, Suzanne; Slemrod, Joel.

TI The Compliance Cost of Itemizing Deductions: Evidence from Individual Tax Returns. **AU** Pitt, Mark M.; Slemrod, Joel.

Smith, Karen

TI How Fragile Are Male Labor Supply Function Estimates? **AU** Kniesner, Thomas J.; Smith, Karen.

Snower, Dennis J.

TI Cooperation, Harassment, and Involuntary Unemployment: An Insider-Outsider Approach. **AU** Lindbeck, Assar; Snower, Dennis J.

TI Production Decisions Under Demand Uncertainty: The High-Low Search Approach. **AU** Alpern, Steve; Snower, Dennis J.

TI A Search Model of Optimal Pricing and Production. **AU** Alpern, Steve; Snower, Dennis J.

Solow, Robert M.

PD March 1988. **TI** Robert M. Solow Bibliography 1950-1987. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 489; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 14. **PR** No Charge. **JE** 011. **KW** Bibliography. Solow.

Sondermann, Dieter

PD March 1988. **TI** Reinsurance in Arbitrage -- Free Markets. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B 82; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 32. **PR** No Charge. **JE** 026, 022. **KW** Reinsurance Markets. Collective Risk. Insurance.

AB In this paper we study truly dynamic reinsurance policies which are conditioned on the information structure, i.e., which can be revised at any point of time depending on the development of claims, premiums and interest rates.

Sondhi, Ashwinpaul

PD January 1988. **TI** Finance Subsidiaries and Debt Capacity. **AU** Sondhi, Ashwinpaul; Fried, Dov; Ronen, Joshua. **AA** New York University. **SR** New York University Salomon Brothers Center Working Paper: 452; New York University Salomon Brothers Center for the Study of Financial Institutions 90 Trinity Place, New York, NY 10006. **PG** 31. **PR** $4.00. **JE** 611, 314. **KW** Debt Capacity. Capital. Subsidiary.

AB This paper provides a general framework for the evaluation of debt capacity under two alternative capital structures. First, it developed the debt capacity for a single entity. Then, the debt capacity of a single economic entity operating as two legally separate units was developed. A numerical simulation assuming cash flows are distributed normally is also reported. Various results of this comparison and the numerical simulation are discussed. The analysis suggests that the creation of a finance subsidiary may allow an increase in debt capacity. The numerical simulation shows that low and high-risk firms will not derive significant benefits from the creation of the finance subsidiary. The greatest benefits of subsidiarization are enjoyed by the well-established, prime credits. These results suggest an empirical test of risk classes of firms forming subsidiaries. This test may also help predict which firms are likely to benefit the most from the creation of finance subsidiaries.

Southgate, D.

TI Natural Resource Degradation in Developing Countries: A Causal Analysis of Agricultural Colonisation. **AU** Pearce, David; Southgate, D.

Spencer, Barbara

PD February 1988. **TI** Capital Subsidies and Countervailing Duties in Oligopolistic Industries. **AA** University of British Columbia. **SR** National Bureau of Economic Research Working Paper: 2519; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 422, 421, 411. **KW** Subsidies. Duty. GATT. Tariff. Exports. Countervailing Duty.

AB Under GATT, countries are allowed to impose countervailing duties to offset foreign subsidies. However GATT rules limit the amount of duty to the amount of the subsidy. This paper examines a generalized model of imperfect competition with capital subsidies and shows the conditions under which a countervailing duty will offset the effect of the subsidy on exports. Also, conditions are specified under which

exports will increase despite the imposition of the maximum tariff under GATT. In addition, the paper considers whether profit shifting motives for a subsidy still exist even when this maximum duty is anticipated.

Spivak, Avia

TI Local Risk Aversion. **AU** Segal, Uzi; Spivak, Avia.

Sprague, Alison

PD March 1988. **TI** Work Experience, Earnings and Participation: Evidence from the Women and Employment Survey. **AA** Institute of Economics and Statistics, University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 43; Institute of Economics and Statistics, Saint Cross Building, Manor Road, Oxford OX1 3UL, ENGLAND. **PG** 20. **PR** No Charge. **JE** 813, 824, 826, 821. **KW** Women. Participation. Wages. Labor Force. Female.

AB This paper presents a probit model of labor force participation and a set of earnings equations estimated using data from the 1980 Women and Employment Survey. The results of the participation model compare with previous findings and the earnings models give typical results for human capital and job characteristics variables. Exclusion of the sample selection effect appears to be of importance and a linear piecewise experience variable outperforms the quadratic specification.

Staiger, Robert

PD February 1988. **TI** Heckscher-Olin Theory and Non-Competitive Markets. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2515; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 323, 422, 411. **KW** Export. Subsidy. Product Quality. Entry Barrier. Price. Trade Policy.

AB We explore in this paper the role of export subsidies when goods arriving from foreign countries are initially of unknown quality to domestic consumers, who learn about their quality only through consumption. If, when confronted with such goods, consumers view price as a signal of quality, a role for export subsidies can arise. In particular, we show that absent export subsidies, entry of high quality firms may be blocked by their inability to sell at prices reflecting their true quality. Export subsidies enable high quality producers to begin exporting profitably even while unable to credibly convey their high quality to consumers in the "introductory" period. Thus, in breaking the entry barrier for high quality firms, export subsidies can raise average quality in the market and a welfare-improving role for export subsidies emerges. Moreover, even when high quality firms find it possible to signal their high quality to consumers through an introductory pricing strategy, a role for government policy can arise: the signal (low introductory price) represents a transfer of surplus from foreign producers to domestic consumers which, as we show below, can be avoided with an appropriate export tax/subsidy policy.

PD February 1988. **TI** Organized Labor and the Scope of International Specialization. **AA** Stanford University. **SR** National Bureau of Economic Research Working Paper: 2514; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 831, 411, 616. **KW** Union. Wage. Heterogeneity. Labor-Intensive.

AB This paper examines the interaction between union wages and the international pattern of production and trade. If union goods are heterogeneous in labor intensity, the introduction of an active union in the domestic country causes only the least labor-intensive range of union goods to be produced there, with goods of greatest labor intensity produced abroad due to the relatively high cost of domestic union labor. A narrowing of the scope of domestic union production will eliminate relatively labor-intensive goods, leading a rent-maximizing union to raise its union premium. The implications of this union behavior for comparative statics results are considered.

TI Sectoral Shocks and Structural Unemployment. **AU** Riordan, Michael; Staiger, Robert W.

Stein, Jeremy

TI LDC Debt: Forgiveness, Indexation and Investment Incentives. **AU** Froot, Kenneth A.; Scharfstein, David; Stein, Jeremy.

Steinmeier, Thomas L.

TI An Analysis of Pension Benefit Formulas, Pension Wealth and Incentives from Pensions. **AU** Gustman, Alan L.; Steinmeier, Thomas L.

Stekler, Lois

TI Modeling Investment Income and Other Services in the U.S. International Transactions Accounts. **AU** Helkie, William; Stekler, Lois.

Stewart, Geoff

PD September 1987. **TI** Profit-Sharing in Cournot-Nash Oligopoly. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8718; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 14. **PR** No Charge. **JE** 611. **KW** Nash Oligopoly. Entry Deterrence. Firm Ownership.

AB In the absence of productivity gains the introduction of profit-sharing by an individual firm is generally thought to result in losses for shareholders, the workforce or both. Whilst true for monopoly, this paper demonstrates that in a quantity-setting Nash oligopoly the opposite will generally be the case. Also, a switch to profit-sharing may deter a potential entrant which would have entered if faced with an incumbent operating a conventional wage system. Once again there is the possibility of higher incomes for both shareholders and workers under profit-sharing.

PD September 1987. **TI** The Separation of Ownership and Control in Capitalist and Labour-Managed Firms Under Oligopoly. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8719; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 16. **PR** No Charge. **JE** 611, 511. **KW** Labor Managed Firms. Firm Ownership. Entry Deterrence. Cournot Oligopoly.

AB It has recently been shown that the separation of ownership and control in a capitalist firm may not lead to a conflict of interests between managers and owners when there are oligopolistic interactions between firms. This paper introduces labor-managed firms into the picture. We show that when the labor-managed firm is involved the prospect of gains

from managerial discretion under Cournot oligopoly may be replaced by an inevitable loss. In an entry deterrence framework on the other hand there is, once more, the possibility of mutual gains.

Stewart, Michael

PD 1987. **TI** The World Economy: Some Medium Term Perspectives. **AA** Department of Economics, University College London. **SR** University College London Discussion Paper: 86-10; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 411, 421.

Stiglitz, Joseph

TI Financial Market Imperfections and Business Cycles. **AU** Greenwald, Bruce; Stiglitz, Joseph.

TI Randomization with Asymetric Information. **AU** Arnott, Richard; Stiglitz, Joseph.

Strock, Elizabeth

TI Ownership Structure, Deregulation and Bank Risk Taking. **AU** Saunders, Anthony; Strock, Elizabeth; Travlos, Nickolaos G.

Subrahmanyam, Marti G.

TI A Simple Formula to Compute the Implied Standard Deviation. **AU** Brenner, Menachem; Subrahmanyam, Marti G.

TI Arbitrage Opportunities in the Nikkei Spot and Futures Markets. **AU** Brenner, Menachem; Subrahmanyam, Marti G.

Summers, Lawrence H.

TI The Economic Consequences of Noise Traders. **AU** De Long, J. Bradford; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert J.

TI The Economic Consequences of Noise Traders. **AU** De Long, J. Bradford; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert J.

TI The Costs of Conflict Resolution and Financial Distress: Evidence from the Texaco-Pennzoil Litigation. **AU** Cutler, David M.; Summers, Lawrence H.

TI What Moves Stock Prices? **AU** Cutler, David M.; Poterba, James M.; Summers, Lawrence H.

Sundararajan, V.

PD January 1988. **TI** Financial Reform and Monetary Control in Indonesia. **AU** Sundararajan, V.; Molho, Lazaros. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/4; International Monetary Fund, Washington DC 20431. **PG** 31. **PR** No Charge. **JE** 311, 312, 313, 121. **KW** Indonesia. Monetary Policy. Financial Reform. Money Market.

AB This paper analyzes the evolution and effectiveness of Indonesia's monetary control system following the financial reforms implemented since 1983. These reforms entailed the abolition of interest rate and credit ceilings, a change in the central bank's funding role, the introduction of new instruments of indirect monetary control, and measures to develop money markets. The new monetary control system was conducive to a more integrated and more competitive financial system and helped achieve the external balance objective. However, the pace of liberalization of money market rates was constrained by the choice of policy mix to deal with economic shocks.

Svensson, Lars E. O.

PD October 1987. **TI** Trade in Nominal Assets: Monetary Policy, and Price Level and Exchange Rate Risk. **AA** University of Stockholm. **SR** National Bureau of Economic Research Working Paper: 2417; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 441, 411, 431, 432, 313. **KW** International Trade. Comparative Advantage. Asset Trade. Exchange Rates. Monetary Policy. Prices.

AB In a previous paper, "Trade in Risky Assets", I have analyzed the pattern of international trade in risky real assets between barter economies, relying on the Law of Comparative Advantage and using autarky asset price differences to predict the pattern of asset trade. In this paper the analysis is extended to international trade in nominal assets (assets with returns paid in currencies) between monetary economies. The risk characteristics of real returns on nominal assets depend on price level and exchange rate risk, and therefore on monetary policy. It is examined how different combinations of monetary policies and exchange rate regimes affect nominal assets' return risk characteristics, their autarky prices, and hence their trade pattern, when countries differ with respect to their outputs or their attitudes towards risk. When world asset markets are incomplete, different monetary policies and exchange rate regimes have dramatic effects on risk characteristics of home and foreign currency bonds and on the trade pattern in these assets, as well as on aggregate capital and current accounts.

PD October 1987. **TI** Trade in Risky Assets. **AA** University of Stockholm. **SR** National Bureau of Economic Research Working Paper: 2403; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 411, 441, 442, 311, 313. **KW** Comparative Advantage. Asset Trade. Interest Rates. Capital Flows. Time Preference. Risk Measure. Capital Account.

AB This paper develops a theory of the international trade pattern in risky assets by applying the law of comparative advantage to asset trade. According to this law there is a tendency for a country to import assets that have relatively high autarky prices. The autarky price of an asset is high if the autarky real interest rate is low, or if the asset's autarky risk measure (the product of the risk premium and the asset price) is low. It is examined how autarky interest rates and risk measures are affected by international differences in (i) stochastic properties of output/endowments, (ii) the rate of time preference, (iii) the degree of risk aversion, and (iv) subjective beliefs, and how such differences predict overall capital account deficits or surpluses as well as the composition of the capital account into trade in arbitrary risky assets and the special cases of sure indexed bonds, stocks (claims to output), and Arrow-Debreu securities.

Swamy, P. A. V. B.

PD January 1988. **TI** The Stochastic Coefficients Approach to Econometric Modeling Part I: A Critique of Fixed Coefficient Models. **AU** Swamy, P. A. V. B.; Conway, R. K.; LeBlanc, M. R. **AA** Swamy: Board of Governors of the Federal Reserve System. Conway and LeBlanc: United States Department of Agriculture. **SR** Board of Governors of the

Federal Reserve System Finance and Economics Discussion Series: 2; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 211, 132. **KW** Stochastic Coefficients. Fixed Coefficients. Aggregation. Classical Logic. Probalistic Logic.
AB Stochastic coefficients models are proving to be successful in providing accurate agricultural sector forecasts and useful policy analysis. Coefficient variation may occur for many reasons including aggregating over micro units, omitting variables, using an incorrect functional form, and allowing for a dynamic economic theory of optimizing behavior. In Part I of this series, we address the logical problems with fixed coefficients models. There are a number of auxiliary and possibly contradictory assumptions imposed on econometric models to make them empirically manageable. In later articles we show how stochastic coefficients models eliminate the logical problems associated with fixed coefficients models.

PD January 1988. **TI** What Do Regressions of Interest Rates on Deficits Imply? **AU** Swamy, P. A. V. B.; Kolluri, B. H.; Singamesetti, R. N. **AA** Swamy: Board of Governors of the Federal Reserve System. Kolluri and Singamesetti: University of Hartford. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 3; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PR** No Charge. **JE** 311, 322, 131. **KW** Deficits. Interest Rates. Ricardian Equivalence. Stochastic Coefficients.
AB This study shows that the federal deficit has incremental predictive power for the (3-month) Treasury bill rate beyond that of current and lagged inflation rates and current money growth. The relationship between deficits and the bill rate in any quarter can be either positive or negative depending on how deficits, working in conjunction with other variables like money growth rate and inflationary expectations, alter the supply and demand for funds, and hence the point of their intersection, in that quarter. Because quarters in which the relationship was negative dominated quarters in which the relationship was positive, the mean relationship was negative.

PD February 1988. **TI** Modeling Buffer Stock Money -- An Appraisal. **AU** Swamy, P. A. V. B.; Tavlas, George S. **AA** Board of Governors of the Federal Reserve System and International Monetary Fund. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 15; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, D.C. 20551. **PR** No Charge. **JE** 311, 023. **KW** Money. Buffer Stock. Overshooting Effect. Unanticipated Money. Coherence. Liquidity.
AB The buffer stock role of absorbing temporary discrepancies between the purchases and sales is assigned to money because money, being the most liquid of all assets, performs the buffer function best. However, as this paper shows, the attempts to model the buffer stock role led to certain incoherencies. Specifically, this paper shows that the econometric models of buffer stock money published in the literature are incompatible with the theory of buffer stock money and imply two different probability distributions for the same variable, thus resulting in an incoherency.

PD March 1988. **TI** On a Problem in Identifying Linear Parametric Models. **AU** Swamy, P. A. V. B.; von zur Muehlen, Peter. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 18; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 9. **PR** No Charge. **JE** 211. **KW** Identification. Linear Structural Models. Simultaneous Equations.
AB The so-called necessary and sufficient conditions stated in econometrics textbooks for the identifiability of coefficients in a linear simultaneous equations system are insufficient in the overidentified case unless an additional criterion for choosing among an infinite number of solutions for the unknown structural coefficients occurs naturally as part of the system.

Tabellini, Guido

PD January 1988. **TI** Domestic Politics and the International Coordination of Fiscal Policies. **AA** Carnegie-Mellon University. **SR** Centre for Economic Policy Research Discussion Paper: 226; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 29. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 321, 322, 025, 423. **KW** Fiscal Policy. Budget Deficit. Political Economy. Public Spending. Coordination. International Policy.
AB This paper investigates the desirability of international fiscal policy coordination in the presence of a domestic political distortion. The domestic distortion results from the inability of the current policy-maker to enter into a binding agreement with future policy-makers about the composition of public spending. This distortion generates a bias towards budget deficits. International coordination can exacerbate this bias, and thus reduce social welfare at home and abroad. The reason is that international coordination enables the domestic and foreign governments to form a coalition that excludes future policy-makers. This international coalition reduces the cost of running a budget deficit, and thus enhances the adverse effects of the domestic political distortion.

Tait, Alan

TI The Growth of Government Expenditure: A Review of Quantitive Analysis. **AU** Diamond, Jack; Tait, Alan.

Takagi, Shinji

PD February 1988. **TI** On the Statistical Properties of Floating Exchange Rates: A Reassessment of Recent Experience and Literature. **AA** Institute for Monetary and Economic Studies of the Bank of Japan. **SR** International Monetary Fund Working Paper: WP/88/11; International Monetary Fund, Washington D.C. 20431. **PG** 36. **PR** No Charge. **JE** 431. **KW** Exchange Rates. Random Walks. Heterogeneity. Information Set.
AB The paper reviews the statistical behavior of major currency exchange rates during 1975-86. A close inspection indicates small deviations of recent exchange rate behavior from random walks and some systematic movements in monthly data, possibly corresponding to the relatively infrequent arrivals of information concerning major macroeconomic variables. The distributional characteristics of exchange rate changes differ between daily and monthly data and thus imply the possible presence of heterogeneity in underlying factors. These and other observations suggest care in the use of daily data in empirical work and the usefulness of explicit modeling of heterogeneity among market participants and in information structure.

Tan, Hong W.

PD May 1987. **TI** Entry Restrictions and Japanese Lawyers' Incomes in International Legal Practice. **AU** Tan, Hong W.; Alexander, Arthur J. **AA** The Rand Corporation. **SR** Rand Report: R-3498; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica, CA 90406-2138. **PG** 30. **PR** No Charge. **JE** 812, 824. **KW** Entry Barriers. Law. Legal Services. Japan.

AB This report investigates a potential economic motive for the Japanese Federation of Bar Associations restriction on entry of foreign lawyers into the profession, namely the preservation of high incomes for its members. It provides an overview of the institutional setting and changes over time in the supply and demand for legal services in Japan; describes the data and presents summary estimates for the relative incomes of attorneys in domestic and international practice; and presents tobit estimates of pooled cross-section time-series models of incomes. The authors found evidence that entry barriers to the Japanese legal profession have given rise to very high attorney incomes relative to other skilled occupations, especially in the 1960s and early 1970s.

Tanzi, Vito

PD January 1988. **TI** The Role of the Public Sector in the Market Economies of Developing Asia: General Lessons for the Current Debt Strategy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/7; International Monetary Fund, Washington D.C. 20431. **PG** 41. **PR** No Charge. **JE** 443, 322, 121. **KW** Public Sector. Asia. Debt. Intervention.

AB This paper pursues several objectives. First, it presents a sketch of a positive (or real-world) theory of public sector intervention. Second, it analyzes in some detail the activity of the public sector in nine market economies of developing Asia and relates this activity to the growth of the foreign debt of these countries. It is argued that the relatively good performance of those countries was achieved at considerable and growing costs, especially in terms of external debt accumulation. Finally, the paper uses the experience of the Asian countries to draw some general lessons for the current debt strategy.

Taub, Bart

TI Time to Build and Aggregate Fluctuations: A Note. **AU** Ioannides, Yannis M.; Taub, Bart.

Tauchen, Helen

PD February 1988. **TI** Deterrence, Work and Crime: Revisiting the Issues with Birth Cohort Data. **AU** Tauchen, Helen; Witte, Ann Dryden; Griesinger, Harriet. **AA** Tauchen: University of North Carolina, Chapel Hill. Witte: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 2508; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PR** $2.00. **JE** 916. **KW** Crime. Deterrance. Incentive.

AB In this paper we analyze the criminal behavior of a cohort sample of young men over an eight year period using random effects probit and Tobit techniques. Our major advances relate to our careful conceptualization of general deterrence, and our data. As far as we are aware, this work represents the first time that a richly specified model of criminal activity has been estimated using panel data for a general population group. We find very robust evidence for a general deterrent effect emanating from police resources. Our results regarding general deterrence are open to fewer questions than previous findings. We also find that working and going to school significantly decrease the probability of committing criminal acts and by virtually identical amounts. This similarity of effect when coupled with other findings suggests that crime does not serve mainly as a direct source of income and that incentive effects emanating from higher wages are not very strong. There is little empirical support for the "crime as work" model that has dominated economic thought regarding crime over the last two decades. More fruitful models of work and crime may result if work is conceived as having its primary effects either through preferences or through information.

TI A Structural Equation Model for Tax Compliance and Auditing. **AU** Beron, Kurt; Tauchen, Helen V.; Witte, Ann Dryden.

Tavlas, George S.

TI Modeling Buffer Stock Money -- An Appraisal. **AU** Swamy, P. A. V. B.; Tavlas, George S.

Taylor, J. Edward

TI Life in a Mexican Village: A SAM Perspective. **AU** Adelman, Irma; Taylor, J. Edward; Vogel, Stephen.

Teja, Ranjit S.

PD February 1988. **TI** The Case for Earmarked Taxes: Theory and an Example. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/88/18; International Monetary Fund, Washington D.C. 20431. **PG** 21. **PR** No Charge. **JE** 322, 323. **KW** Taxes. Earmarking. Expenditures. Fiscal Policy.

AB The earmarking (or setting aside) of revenues from various taxes for specific types of expenditure is a much maligned fiscal practice. The paper examines a number of theoretical arguments and institutional circumstances under which earmarking (even widespread earmarking) may be welfare enhancing. The paper also questions the criticism that earmarking seriously erodes budgetary efficiency, and draws on the experience of Columbia to demonstrate that the worst fears of critics do not necessarily come to pass.

Temin, Peter

PD February 1988. **TI** Vertical Integration and Product Quality in the Early Cotton Textile Industry. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 477; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 31. **PR** No Charge. **JE** 042, 044, 611, 421. **KW** Vertical Integration. Cotton Industry. Product Quality. Tariff. Trade.

AB This article examines vertical integration in the cotton industry in the first half of the nineteenth century in both England and the United States. Despite the conventional view of international contrast, Lancashire and the United States both contained a mix of integrated and specialized firms in the early nineteenth century. The main impetus for the integration of spinning and weaving was the increasing range of power looms, allowing finer fabrics to be factory made. In addition, the political power of the Waltham patent holders had a

determining influence on the product mix of the American cotton industry. The greater integration of the American industry reflected the different product mix of the two countries, which owed as much to the shape of the American tariff as it did to the character of American demand.

PD February 1988. **TI** Free Land and Federalism: American Economic Exceptionalism. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 481; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 38. **PR** No Charge. **JE** 042. **KW** American Exceptionalism. Free Land. Federalism. Economic History. Southern Landowners.
AB The American economy has seemed exceptional to generations of domestic and foreign observers. American uniqueness derived from two characteristics of the economy: the pervasive availability of "free land," and the federal form of government. Domar has argued that you cannot have free land, free labor, and a non-working aristocracy. Federalism allowed the North and South to make different choices in the presence of free land: free labor and a non-working aristocracy, respectively. This set the stage for differential development in the North and South and then for an armed struggle between the two systems. The large Southern land-owners were disenfranchised and restricted in control of their workers as a result of the Civil War, leading to further government support of Northern style industry. The paper is composed of four sections: Domar's theory of "free land" and its application to the North; free land in the South and the effects of the defeat of Southern landowners in the Civil War; the interaction of government and industry; and, the impact of these factors on the growth of the American economy.

Thane, Pat

PD June 1987. **TI** Economic Burden or Benefit? A Positive View of Old Age. **AA** Department of Social Science and Administration, University of London, Goldsmiths College. **SR** Centre for Economic Policy Research Discussion Paper: 197; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 918, 914, 841, 915, 911. **KW** Population Growth. Pensions. Welfare. Old Age. Social Services. Elderly. Dependency Ratio.
AB In the current debate about the ageing of British and other societies the changing age structure is seen in almost entirely negative terms. This paper argues for a less pessimistic approach. The transition to an older population will be gradual enough to allow us time to plan. The overall "dependency ratio" will not rise significantly since the numbers of younger people are falling. Nor is there any clear evidence that as more people live to be older health and social service costs will rise accordingly: people are remaining fit to later ages and there is strong evidence that they can continue to make a positive contribution to the economy as workers and as consumers until relatively late ages. Social services can also be redesigned to maximize the independence of the elderly while minimizing costs. Since the ageing of society is unavoidable we should seek ways to treat the elderly as a resource rather than viewing them as a burden.

Thomas, L. G.

PD September 1987. **TI** Regulation & Firm Size: FDA Impacts on Innovation. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-87-24; First Boston Series, Graduate School of Business, Columbia University, New York, NY 10027. **PG** 40. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside United States, Canada and Puerto Rico). **JE** 613, 621. **KW** Regulation. Innovation. FDA. Pharmaceutical Firms.
AB This study estimates the highly differential impacts of FDA regulations on pharmaceutical firms of various sizes (where size is measured as scale of R&D expenditures). Estimation is performed using the method of maximum quasi-likelihoods. It is shown that smaller United States pharmaceutical firms suffered devastating reductions in research productivity due to FDA regulations. In contrast, the largest United States pharmaceutical firms apparently benefitted from regulation, as sales gains due to reduced competition more than offset their quite moderate declines in research productivity.

Thomas, Stephen H.

TI Monetary Policy and Bank Credit Creation in the U.K. **AU** McKenzie, George; Thomas, Stephen H.

Thompson, Earl A.

TI A New Interpretation of Guilds, Tariffs, and Laissez-Faire. **AU** Hickson, Charles R.; Thompson, Earl A.

Thum, Frederick

PD November 1987. **TI** Debt Forgiveness and Currency Substitution: Mexico's Experience 1971-75 and 1983-86. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8738; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 21. **PR** No Charge. **JE** 443, 431, 411, 432, 121. **KW** Debt Forgiveness. Public Debt. Mexico. Debtor Nation. Borrowing.
AB This paper explores the issue of debt forgiveness in the case of Mexico during the periods 1971-75 and 1983-86. An attempt is made to contrast the real costs of foreign borrowing over periods during which the degree of currency substitution implied by the differing economic regimes should have changed substantially. The analysis employs a statistical specification of the underlying macroeconomic relationships that is model-free and has proved to provide superior out-of-sample forecasts of macroeconomic variables. Also, due to the coarseness of some of the time series for debt, a special procedure for the interpolation of monthly series from quarterly series is considered.

Thursby, Marie C.

TI Optimal Policies with Strategic Distortions. **AU** Krishna, Kala; Thursby, Marie C.

Tirole, J.

TI Government Intervention in Production and Incentives Theory: A Review of Recent Contributions. **AU** Caillaud, B.; Guesnerie, R.; Rey, P.; Tirole, J.

Toker, M.

TI A Vintage Model of Scrapping and Investment. **AU** Ingham, A.; Ulph, A.; Toker, M.

Travlos, Nickolaos G.

TI Ownership Structure, Deregulation and Bank Risk Taking. **AU** Saunders, Anthony; Strock, Elizabeth; Travlos, Nickolaos G.

Turnbull, Stuart M.

TI The Pricing of Foreign Currency Options. **AU** Melino, Angelo; Turnbull, Stuart M.

Turner, Paul

PD August 1987. **TI** The UK Demand for Money 1871-1980. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8716; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 24. **PR** No Charge. **JE** 044, 311, 212. **KW** United Kingdom. Money Demand. Monetary Policy. Velocity of Money.

AB This paper examines the question of whether a conventional demand for money function can explain the secular trends in velocity observed over the last century. Modern econometric techniques are used to abstract from the short run dynamics of the money demand function and to focus attention on its long run properties. The effects of historical and institutional changes on the form of the estimating equation are also discussed. While the standard function performs reasonably well up to World War 2 evidence is found of unexplained secular trends thereafter. Abstracting from these trends means that a significant relationship between money and income can be detected but this leaves open the question of the causes of the trends observed.

Ulph, A.

PD 1987. **TI** Bargaining Structures and Delay in Innovation. **AU** Ulph, Alistair; Ulph, David. **AA** Ulph, A.: University of Southampton. Ulph, D.: University of Bristol. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8723; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 22. **PR** No Charge. **JE** 621, 831, 026. **KW** Technology. Innovations. Unions. R&D. Incentives.

AB It is sometimes argued that fears about the employment consequences of introduction of new technology may lead unions to wish to delay innovations, and this may reduce incentives for firms to carry out R&D. We explore these issues in a model of two countries who compete over both market share and R&D and we restrict attention to cases where unions would wish to delay innovation. We show that allowing unions to bargain over the timing of innovation need not reduce the possibility of a firm successfully competing for R&D, because (i) it reduces the incentive for both the firm and its rivals to innovate and (ii) by using a more efficient bargain, the incentive to R&D can be increased. However, simulations suggest that, for a particular model, allowing unions to delay innovation does not help a firm compete over R&D.

TI A Vintage Model of Scrapping and Investment. **AU** Ingham, A.; Ulph, A.; Toker, M.

PD February 1988. **TI** The Economics of Energy and the Energy of Economics. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 8803; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 45. **PR** No Charge. **JE** 723. **KW** Oil Prices. Energy. Energy Demand. Natural Resource Policy. Natural Resources.

AB I shall outline the developments that have taken place in two areas of energy economics with which I have been associated to illustrate how new ideas have evolved over the past 10 years or so in response to the need both to answer immediate policy questions and to solve the intellectual problems that underlie these policy questions. The two areas I shall discuss are understanding the fluctuation in oil prices, and analyzing the demand for energy.

Ulph, David

TI Bargaining Structures and Delay in Innovation. **AU** Ulph, Alistair; Ulph, David.

van der Ploeg, Frederick

PD November 1987. **TI** Perfect Equilibrium in a Model of Competitive Arms Accumulation. **AU** van der Ploeg, Frederick; de Zeeuw, Aart J. **AA** van der Ploeg: London School of Economics. de Zeeuw: Tilburg University. **SR** Centre for Economic Policy Research Discussion Paper: 206; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 26. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 114, 026. **KW** Arms Accumulation. Dynamic Game. Subgame-perfect Equilibrium. Monitoring. Defense. Military Spending.

AB We consider a model in which two countries are involved in arms accumulation. The West is a decentralized market economy whose government uses optimal taxation to provide a public good, defense. The East is a centrally planned economy. Utility depends on consumption, leisure and defense; defense is a characteristic which is an increasing function of the difference between home and foreign weapon stocks. The cooperative outcome leads to a moratorium on investment in weapons. Two non-cooperative solutions to this differential game are also considered. The first is an open-loop Nash equilibrium solution, which presumes that countries cannot condition their investment in arms on the rival's weapon stocks. The second is a perfect Nash equilibrium solution, which presumes that countries can monitor foreign weapon stocks. The perfect equilibrium solution leads to lower levels of arms and is therefore more efficient, so that a unilateral arms treaty should allow countries to observe their rival's weapon stocks. In other words, verification leads to lower weapon stocks and higher welfare for both countries. The perfect equilibrium solution also provides a more satisfactory strategic foundation for the Richardson equations.

PD December 1987. **TI** International Interdependence and Policy Coordination in Economies with Real and Nominal Wage Rigidity. **AA** London School of Economics. **SR** Centre for Economic Policy Research Discussion Paper: 217; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 70. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 321, 311. **KW** Policy Coordination. Floating Exchange Rates. Fiscal Policy. Supply-Side Policy. Wage Rigidity. OECD. Monetary Policy.

AB The development of the seven main OECD economies during the 1970s and 1980s is discussed. Subsequently, wage equations of the error-correction type for the seven largest OECD economies are estimated. The hypothesis of real wage

rigidity cannot be rejected for the French, German, Italian and Japanese economies, but the Canadian, United Kingdom and United States economies display a significant degree of nominal wage rigidity. An analytical two-country model with floating exchange rates, uncovered interest parity, imperfect substitution between home and foreign goods, and sluggish labor markets is then formulated.

van Dijk, Herman

TI Bayesian Specification Analysis and Estimation of Simultaneous Equation Models Using Monte Carlo Methods. **AU** Zellner, Arnold; Bauwens, Luc; van Dijk, Herman.

VanHoose, David D.

PD February 1988. **TI** Discount Rate Policy and Alternative Federal Reserve Operating Procedures in a Rational Expectations Setting. **AA** Monetary Studies Section, Division of Monetary Affairs, Board of Governors and Indiana University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 12; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, D.C. 20551. **PG** 19. **PR** No Charge. **JE** 311. **KW** Discount Rate Policy. Federal Reserve. Targeting Policy.

AB This paper examines the optimal conduct of discount rate policy under three different Federal Reserve operating procedures: Federal Funds rate targeting, nonborrowed reserves targeting, and borrowed reserves targeting. It is shown that optimal discount rate policy depends crucially upon the operating procedure used by the Federal Reserve. Furthermore, it is demonstrated that the relative desirability, from a monetary control perspective, of alternative operating procedures depends upon the manner in which discount rate policy is conducted. Specifically, it is demonstrated that a Federal Funds rate targeting procedure and a borrowed reserves targeting procedure are always inferior, from a monetary control perspective, to a nonborrowed reserves targeting procedure, provided that the Fed optimally indexes the setting of the discount rate to fluctuations in the value of the Federal Funds rate when it follows a non-penalty rate policy.

PD February 1988. **TI** Floating Rate Loan Contracts and Monetary Policy. **AA** Monetary Studies Section, Division of Monetary Affairs, Board of Governors, and Indiana University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 13; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, D.C. 20551. **PG** 15. **PR** No Charge. **JE** 311, 312, 315. **KW** Floating Loan Rates. Loan Contracts. Monetary Policy. Credit. Interest Rates.

AB This paper provides an analysis of the monetary policy implications of the widespread use of loan contracts in which loan interest rates are indexed to other market interest rates. Using a simple IS-LM model with an expanded financial sector, it is demonstrated that loan rate indexation tends to insulate equilibrium aggregate income from loan market variability and thereby can eliminate the need for monetary policy to take into account exogenous disturbances to the public's demand for credit. On the other hand, the use of floating rate loan contracts increases the sensitivity of equilibrium income to variations in market interest rates, requiring a more accommodative monetary policy than is necessary in the absence of loan rate indexation.

PD February 1988. **TI** Combination Monetary Policies in a Disaggregated Economy with Endogenous Wage Indexation. **AU** VanHoose, David D.; Waller, Christopher J. **AA** VanHoose: Monetary Studies Section, Board of Governors and Indiana University. Waller: Indiana University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 14; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, D.C. 20551. **PG** 21. **PR** No Charge. **JE** 311, 821, 023. **KW** Monetary Policy. Wage Indexation. Wage Contracts. Information Asymmetry.

AB This paper develops a synthesized macroeconomic model that incorporates the local-global informational asymmetries that arise in an "islands" model into a wage indexation model. As in standard wage indexation models, agents are unable to filter out the separate influences of demand and supply shocks on the observed price, so that the optimal wage indexation parameter is a weighted average of supply and demand variances. In addition, however, agents are unable to distinguish between local and aggregate disturbances as factors determining the price of real output in each individual market, forcing wage setters to update their optimal forecasts of the future price level. As a result of the interaction between these two informational problems, the optimal formulation of combination monetary policies generally depends in a complex manner upon variabilities of local and aggregate supply and demand.

PD March 1988. **TI** Optimal Monetary Policy and Alternative Wage Indexation Schemes in a Model with Interest-Sensitive Labor Supply. **AU** VanHoose, David D.; Waller, Christopher J. **AA** VanHoose: Monetary Studies Section, Board of Governors and Indiana University. Waller: Indiana University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 21; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** No Charge. **JE** 311, 821, 133, 023. **KW** Wage Indexation. Combination Policies. Monetary Policy. Wage Contracts. Interest Rate. Supply Shocks.

AB This paper examines the implications for wage indexation behavior and for optimal monetary policy of extending macroeconomic contracting models to settings in which wage setters are influenced by the real rate of interest. It is demonstrated that, in such a setting, interest-rate-contingent monetary policy may become impotent as a tool for real sector stabilization if wages are indexed optimally to the real interest rate or to a real variable that provides an indirect observation of the real rate. In addition, it is shown that Gray's result concerning full wage indexation to unanticipated inflation in the absence of productivity disturbances does not generalize to this type of environment, nor does the result of Pethke and Jackman that optimal indexation precludes a need for the monetary authority to consider supply shocks when formulating an optimal combination policy.

Vaughan, R. N.

PD 1987. **TI** Welfare Approaches to the Measurement of Poverty. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-15; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 914, 024. **KW** Poverty Indices. Social Welfare. Poverty.

AB A set of poverty indices is constructed which is based on an explicit view of the loss of social welfare which results from the existence of poverty, in comparison to a society in which poverty has been eliminated. The indices are based on the entire distribution of income, rather than only on the incomes of the poor, and thus embody the concept of relative deprivation. Formal properties of the indices are developed, including the problems of decomposability across population sub-groups, endogeneity of the poverty line implied by a given welfare target, and the relationship to welfare based inequality indices.

PD 1987. **TI** Uncertainty, Investment and the Dynamics of Industrial Structure. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-13; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 022, 611. **KW** Investment. Industrial Structure. Supply. Firm Size.
AB The paper investigates the relationship between the theory of the firm, market equilibrium, and the evolution of the size distribution of firms. The basic framework requires the specification of the mean and variance of the growth rates of firm size, together with conditions relating to the inflow and outflow of firms. An adjustment cost model of the firm under uncertainty is used to specify such growth rates, and the resulting equilibrium distribution, a member of the Pearson family, is explicitly derived. Uniqueness and equilibrium properties are developed, together with implications regarding the Marshallian theory of supply.

Vegh, Carlos

PD January 1988. **TI** The Effects of Currency Substitution on the Response of the Current Account to Supply Shocks. **AA** University of Chicago. **SR** International Monetary Fund Working Paper: WP/88/5; International Monetary Fund, Washington DC 20431. **PG** 20. **PR** No Charge. **JE** 431. **KW** Oil Prices. Current Account. Exchange Rate.
AB Standard real models predict that a permanent increase in oil prices would result in a current account surplus. This is due to the fact that investment falls while saving remains unchanged. This paper shows that if currency substitution is introduced into the analysis, the same shock could cause a current account deficit. Furthermore, the higher the dependence of the economy on oil, the larger would be the deficit. The presence of foreign money makes it optimal for the public to decrease saving following the terms of trade deterioration. The fall in saving could be larger than the decline in investment.

Veljanovski, C.

PD 1987. **TI** Cable and Satellite - The Market for Programmes. **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-18; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 613. **KW** Deregulation. Public Broadcasting. Regulation. Cable TV.
AB In the space of several years there has been considerable deregulation of broadcasting and television sectors. Cable and satellite are important components of the new technologies which are capable of providing new services and more competition to industries typically characterized by monopoly. The recent Peacock Report places cable and satellite technology at the centre of its vision of the future development of broadcasting. It claims that government policy has inhibited the growth of these two industries and that a positive programme should be pursued to create a national cable grid run by BT. In this paper the state of the cable and satellite television sectors is examined together with a critical appraisal of current policy and the Peacock recommendations. The paper argues that the case for a national telecommunication grid based on cable technology has not been made out and has a set of detrimental effects. Moreover, it presupposes that cable and satellite television and pay-TV are the most likely structure of television in the future.

PD 1987. **TI** Commercial Broadcasting in the UK - Over-regulation and Misregulation? **AA** Department of Economics University College London. **SR** University College London Discussion Paper: 87-17; Department of Political Economy, University College London, Gower Street, London WC1E 6BT, ENGLAND. **PR** No Charge. **JE** 613. **KW** Regulation. Public Broadcasting.
AB The Peacock Report has brought about a serious re-consideration of the basis for the regulation of broadcasting in the United Kingdom. Its underlying premise is that broadcasting should be transformed into a pay-TV system based on the new technologies and that positive steps should be taken to foster investment in a national cable grid. In this paper an alternative approach is taken based on an assessment of the present state of broadcasting regulation and the proposals for its reform. In particular, it is argued that the traditional grounds for broadcasting regulation (scarcity of the radio spectrum, maintaining programme standards) are weak and that Peacock's proposal to transform broadcasting into a subscription service is questionable.

Vesztergombi, K.

TI On the Graph of Large Distances. **AU** Erdos, P.; Lovasz, L.; Vesztergombi, K.

Vickrey, William

PD August 1987. **TI** New York's Inefficient Fare Structure and How to Fix It. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 355; Department of Economics, Columbia University, New York, NY 10027. **PG** 17. **PR** $5.00. **JE** 615. **KW** Mass Transit. Fare Structures. Subway System.
AB The MTA has in the past repeatedly raised the fares for travel on its facilities with no apparent thought given to the possibility that more could be accomplished by an adjustment of the fare structure than by continuing to exacerbate the wasteful impact of what has become the world's worst fare structure, in terms of its failure to promote efficiency in use and in its perpetuation of arbitrary and inequitable discriminations. Nowhere else is a flat fare charged for such a wide range of distances. Few if any other cities suffer such an arbitrary hodgepodge of multiple fares and transfers based on historical accident and bureaucratic inertia rather than on any present rationality. The case for a more efficient fare structure has been before the TA at least since 1951, with the publication of the monograph "Revision of the Rapid Transit Fare Structure of the City of New York," but nothing seems to have been accomplished in spite of the numerous examples of better fare structures elsewhere.

PD August 1987. **TI** Observations on Modern Transit. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 356; Department of Economics, Columbia University, New York, NY 10027. **PG** 66. **PR** $5.00. **JE** 615. **KW** Mass Transit. Fare Structure. Subway System.

AB It is a basic proposition of welfare economics that to obtain efficient utilization of facilities the prices charged for their use must be set as close to short-run marginal social cost as is practical, subject to constraints imposed by available pricing machanisms and sources of financing. The development of various forms of magnetic-card fare-collection systems, on the one hand, and the possibility of financing deficits through land taxes, on the other, have removed most of these constraints, though obsolete habits of thought and political constraints have generally interfered with taking full advantage of the possibilities.

Vidalis, Nic

TI International Cooperation and Reputation in an Empirical Two-Bloc Model. **AU** Currie, David; Levine, Paul; Vidalis, Nic.

Vishny, Robert W.

TI Alternative Mechanisms for Corporate Control. **AU** Morck, Randall; Shleifer, Andrei; Vishny, Robert W.

Vogel, Stephen

TI Life in a Mexican Village: A SAM Perspective. **AU** Adelman, Irma; Taylor, J. Edward; Vogel, Stephen.

Von Ungern, Sternberg Thomas

PD November 1, 1987. **TI** Free Entry Perfect Equilibrium. **AA** University of Lausanne, Switzerland. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 8710; Departement d'econometrie et d'economie politique, Universite de Lausanne BFSH1- Dorignv, CH-1015 Lausanne / SWITZERLAND. **PG** 19. **PR** No Charge. **JE** 022, 026, 611. **KW** Perfect Equilibrium. Monopolistic Competition. Free Entry.

AB One possible approach to modelling the entry process into an industry characterized by monopolistic competition is that of a game taking place in three different stages: First, firms decide whether to enter the market, second, they make certain irreversible decisions (such as location), and finally they fix their more flexible parameters (such as prices). A 'natural' equilibrium concept to use in this kind of situation is the perfect equilibrium. The purpose of this paper is to point out some weaknesses of this approach. The "free entry" equilibria it yields may be subject to profitable subsequent (later) entry, i.e. while additional entry may not be profitable in the first stage of the game it may become so once the other firms on the market have made their irreversible (location) decisions. Since in practice firms may decide to enter a market at any point in time, it is hard to see just how one should interpret the free entry equilibria obtained from models where entry is permitted only prior to any firm having made its location decision. Some specific examples are given of the kind of problems one encounters using this approach.

PD January 1988. **TI** Excess Capacity as a Commitment to Promote Entry. **AA** Department of Economics, University of Lausanne. **SR** Universite de Lausanne Cahiers de Recherches Economiques: 8801; Departement d'econometrie et d'economie politique, Universite de Lausanne BFSH1-Dorignv, CH-1015 Lausanne / SWITZERLAND. **PG** 12. **PR** No Charge. **JE** 641, 611, 024. **KW** Vertical Relations. Entry. Capacity Commitment. Sunk Investment.

AB Excess capacities held by a dominant firm are usually viewed as anti-competitive because they constitute a barrier to entry. This paper explores an alternative reason for a dominant firm to hold excess capacities. They serve as an assurance to upstream (or downstream) companies that the dominant firm will not behave opportunistically once they have made their sunk investments. Excess capacities held for this reason lead to a welfare (Pareto) improvement.

von Weizsacker, Robert

PD December 1987. **TI** Umverteilungsbesteuerung, Rentenfinanzierung und demographischer Wandel: Eine Inzidenzanalyse. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-145; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 31. **PR** No Charge. **JE** 323, 841. **KW** Income Distribution. Age Structure. Tax System. Pension Scheme.

von zur Muehlen, Peter

TI On a Problem in Identifying Linear Parametric Models. **AU** Swamy, P. A. V. B.; von zur Muehlen, Peter.

Waldman, Michael

PD October 1987. **TI** Underinvestment in Entry Deterrence: When and Why. **AA** University of California Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 456; Department of Economics, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024. **PG** 31. **PR** $2.50; checks payable to University of California Regents. **JE** 022, 611, 024. **KW** Entry Deterrence. Public Goods. Free Rider Problem. Collusion.

AB This paper considers environments in which incumbent firms cannot collude on an investment in entry deterrence, and attempts to identify the circumstances under which the free rider problem leads to underinvestment. What I show is that underinvestment can arise if some factor is present which smooths the return to investing in entry deterrence. In particular, in the first part of the paper I consider an environment in which underinvestment can arise if either: i) uncertainty is present; ii) entry deterrence has the effect of delaying the date at which entry occurs; or iii) entry deterrence decreases the market share of the entrant upon entry. At the end of the paper I then consider how these results relate to recent papers by McLean and Riordan, and Eaton and Ware.

Waldmann, Robert J.

TI The Economic Consequences of Noise Traders. **AU** De Long, J. Bradford; Shleifer, Andrei; Summers, Lawrence H.; Waldmann, Robert J.

Wall, Richard

PD January 1988. **TI** Leaving Home and Living Alone: An Historical Perspective. **AA** Cambridge Group for History of Population and Social Structure. **SR** Centre for Economic Policy Research Discussion Paper: 211; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA,

ENGLAND. **PG** 29. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 044, 841, 932. **KW** Family. Household. Europe. Census. Elderly.
AB This paper provides a historical and geographical perspective on the composition of households in present-day Europe. Many more people today live on their own than was the case in pre-industrial England, but there are some surprising continuities in household composition. In particular, households in the pre-industrial era were no more likely than present-day ones to include distant relatives. In addition, the recent rise in the proportion of one-parent families due to divorce has resulted in a household composition which resembles that produced by early widowhood in the seventeenth century. Nor has the recent increase in the proportion of one-person households been accompanied by any reduction in the variation within Europe in the frequency of living alone, which remains much lower in Southern and parts of Eastern Europe than in Western Europe and Scandinavia. More thorough comparisons are hampered by inconsistencies in the ways individual countries design tables to illustrate household types. The paper concludes by suggesting that a standard set of tables should be agreed upon and produced for different national populations within Europe.

Waller, Christopher J.

TI Combination Monetary Policies in a Disaggregated Economy with Endogenous Wage Indexation. **AU** VanHoose, David D.; Waller, Christopher J.

TI Optimal Monetary Policy and Alternative Wage Indexation Schemes in a Model with Interest-Sensitive Labor Supply. **AU** VanHoose, David D.; Waller, Christopher J.

Warshawsky, Mark J.

PD February 1988. **TI** Aggregate Debt and Wealth: The Significance of the Bequest Motive. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 10; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Wash., DC 20551. **PG** 25. **PR** No Charge. **JE** 023, 022. **KW** Bequest Motive. Wealth. Debt. Savings Rate. Life Cycle Hypothesis. Simulation.
AB Recent studies have cast doubt on the empirical validity of the basic life cycle hypothesis in explaining saving behavior and wealth accumulation in the United States. Simulations of a model developed in this paper give support to the view that a bequest motive must be present to explain the magnitude of observed aggregate ratios of debt and wealth to income. Assuming the values of parameters currently found in the literature, the strength of the bequest motive necessary to explain observed behavior ranges from 6 to 27 percent of the maximum value of the bequest motive parameter implied by full altruism.

Waterman, David

PD November 1987. **TI** Vertical Integration in Information Industries. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8740; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 13. **PR** No Charge. **JE** 611, 522, 511, 635. **KW** Retail Industry. Vertical Integration. Cable Television. Newspapers.
AB Information vehicles at the retail level (cable TV systems, newspapers, movie theaters) offer a menu of differentiated products (cable TV networks, newspaper editorials, movies) to consumers. Under what conditions might a retailer choose to vertically integrate with a supplier and as a result, alter the content of prices of this menu? This paper addresses this question in a neoclassical framework. The distinguishing feature of the model is that upstream suppliers are modelled as monopolistically competitive firms with fixed setup costs and constant marginal costs. Downstream retailers are assumed to be local monopolists. For a two product case, integration is shown to result in a lower retail price for the product supplied by an upstream corporate relative than for the competitively supplied product. The reason for this is that because the product is sold with increasing returns to scale, the integrated system's perceived marginal cost of distributing a corporate relative's product to each additional consumer is lower than that of distributing a non-corporate relative's product.

Weber, Guglielmo

PD November 1987. **TI** The Euler Equation for Aggregate Consumption when Capital and Labour Markets are Imperfect: Time Series Evidence for the UK. **AA** University College London. **SR** University College London Discussion Paper: 87-32; Department of Economics, University College London, Gower Street, London, WC1E 6BT. **PG** 35. **PR** 1.50 pounds sterling. **JE** 315, 824, 921. **KW** Consumption. Unemployment. Liquidity Constraints. Euler Equation.
AB In this paper a flexible functional form for within period indirect utility is used to derive a simple Euler equation for consumption relating changes in individual expenditure to switches from one employment status to another. The aggregate Euler equation links the first difference in consumption to current realizations of unemployment and retirement flows. In the case where some or all the unemployed face binding liquidity constraints, we show how the equations can be modified, mainly by means of the addition of further regressors. On a number of simplifying assumptions, we can specify two sets of Euler equations, depending on whether or not the unemployed are liquidity constraints: time series estimates for the United Kingdom do not reveal any major misspecification in most equations, but a non-nested test procedure provides support for the view that the unemployed are subject to borrowing constraints.

Weibull, Jorgen W.

PD January 1988. **TI** Refinements of Subgame Perfection - Without "Trembles". **AA** University of Stockholm. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: A-146; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 34. **PR** No Charge. **JE** 026. **KW** Nash Equilibrium. Sequential Equilibrium. Subgame Perfection. Consistent Equilibrium. Rationality.
AB A notion of structurally consistent equilibrium is developed for games in extensive form. In contrast to sequential equilibrium and other refinements of Nash equilibrium beyond subgame perfection, its definition does not involve any continuity condition with respect to perturbations or "trembles". Instead, it combines a form of structural consistency with a form of sequential rationality. Some general properties of this new equilibrium concept are examined, and

its relation to subgame perfect and sequential equilibrium is studied. It is also shown how structurally consistent equilibria can be endowed a certain forwards-induction property.

Weigelt, Keith

TI Corporate Incentives and Long-Term Bonuses: An Experimental Study. **AU** Schotter, Andrew; Weigelt, Keith.

TI Asymmetric Tournaments, Equal Opportunity Laws and Affirmative Action: Some Experimental Results. **AU** Bull, Clive; Schotter, Andrew; Weigelt, Keith.

Weiss, Andrew

TI The War of Attrition in Continuous Time with Complete Information. **AU** Hendricks, Ken; Weiss, Andrew; Wilson, Charles.

Weitzman, Martin L.

PD August 1987. **TI** A Theory of Job Market Segmentation. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 475; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 23. **PR** No Charge. **JE** 812, 824, 825, 833, 026. **KW** Wage Dispersion. Job Market Segmentation. Wage Policy. Labor Supply.

AB Job market segmentation refers to the idea that there tends to be a correlation among high wages, high productivity, high mechanization, production of expensive goods, few quits relative to layoffs, low labor turnover. This paper develops a theory of job market segmentation based on the very sparse assumption that the only departure from a strictly orthodox neoclassical model consists of wages being sticky in the short run. Implications are explored. The segmentation phenomenon arises generally in a sticky-wage fluctuating economy because of the basic tradeoff between a low-wage policy that can obtain cheap labor during times of weak aggregate demand and a high-wage policy that guarantees a secure labor supply at all times.

PD January 1988. **TI** Consumer's Surplus As An Exact Approximation When Prices are Appropriately Deflated. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 476; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 16. **PR** No Charge. **JE** 024, 227. **KW** Consumer Surplus. Welfare Economics. Price Deflator. Price Index.

AB A canonical price-normalized form is proposed as a generalization of the ordinary consumer's surplus expression commonly used to evaluate changes in economic welfare. This familiar-looking formula, it is proved, can be rigorously interpreted as representing the first and second order terms of a Taylor-series expansion for the equivalent-variation or willingness-to-pay function of a single consumer. In principle, the lowly consumer's surplus triangle-and-rectangle methodology can be rigorously defended as an exact approximation to a theoretically meaningful measure so long as prices are appropriately deflated. The appropriate price deflator is derived and some implications are discussed.

Wettstein, David

PD January 1988. **TI** Continuous Implementation of Constrained Rational Expectations Equilibria. **AA** Department of Economics, University of Western Ontario. **SR** University of Western Ontario Center for Decision Sciences and Econometrics Technical Report: 20; Department of Economics, University of Western Ontario, London, Ontario CANADA N6A 5C2. **PG** 22. **PR** Not for Sale. **JE** 025, 026. **KW** Social Choice. Non Exclusive Information. Rational Expectations. Equilibria.

AB We investigate the implementability of the Social Choice Correspondence induced by Constrained Rational Expectations Equilibria. An "almost continuous" mechanism implementing it is constructed, provided certain conditions, one of which is Non Exclusive Information, are satisfied.

White, Kenneth J.

TI Estimation and Testing in Demand Systems with Concavity Constraints. **AU** Chalfant, James A.; White, Kenneth J.

Whitesell, William

PD February 1987. **TI** Endogenous Cycles with Uncertain Lifespans in Continuous Time. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-06; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 28. **PR** No Charge. **JE** 133, 023. **KW** Fiscal Policy. Dynamic System. Business Cycles. Heterogeneous Model.

AB This paper studies the dynamics of a modified version of the heterogeneous agent model that Blanchard (1985) built to study fiscal policy. Blanchard's assumption of exogenous labor income is here replaced by making endogenous both real wages and the supply of labor. Using constant elasticity of substitution utility and production functions, the resulting dynamic system is found to display endogenous real business cycles at a wide range of parameter values when both elasticities of substitution are less than unity. Cycles arise around efficient stationary states with positive real interest rates.

PD January 1988. **TI** Age Heterogeneity and the Tobin Effect with Infinite Horizons. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 4; C/O Francis X. Diebold, Mail Stop 180, Federal Reserve Board, Washington, DC 20551. **PG** 17. **PR** No Charge. **JE** 311, 111, 023. **KW** Heterogeneity. Tobin Effect. Infinite Horizons. Money Growth.

AB This paper shows that the introduction of age heterogeneity into a Sidrauski-type infinite horizon model results in a Tobin effect and a steady state optimum at positive money growth and a positive nominal interest rate.

Wiesmeth, Hans

PD July 1987. **TI** Complete Markets. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Paper: B 79; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 30. **PR** No Charge. **JE** 313, 311, 022. **KW** Temporal Exchange Economy. Commodity Securities. Contingent Claims. Radner Model. Arbitrage Pricing.

AB This paper introduces alternative 'completeness' concepts for a temporal exchange economy with commodity securities, characterized by state-contingent payoffs (Radner

model). The basic idea is to compare relevant properties of the given Radner model to those of an Arrow-Debreu model associated with the original model in a natural way. Inclusions among these various completeness definitions are then discussed with a special consideration of the theory of arbitrage pricing of contingent claims.

Williams, Albert P.

TI Assessing the Outcome of Affirmative Action in Medical Schools: A Study of the Class of 1975. **AU** Keith, Steven; Bell, Robert M.; Williams, Albert P.

PD October 1987. **TI** Managing for Survival: How Successful Academic Medical Centers Cope with Harsh Environments. **AU** Williams, Albert P.; Carter, Grace M.; Hammons, Glenn T.; Pointer, Dennis. **AA** The Rand Corporation. **SR** Rand Report: R-3493; The Rand Corporation, 1700 Main Street P.O. Box 2138, Santa Monica CA 90406-2138. **PG** 87. **PR** No Charge. **JE** 511, 931. **KW** Environment. Decision Theory. Academic Medicine. Medicine.

AB Environmental harshness was measured for all academic medical centers (AMCs), and an expert panel judged six as dealing particularly successfully with the harsh environments. Structured interviews at these centers yielded information on their operations and characteristics. The lessons synthesized pertain to (1) entrepreneurship, (2) governance, (3) management of faculty-generated revenue, (4) tenure, (5) strategic use of resources, (6) the patient base, and (7) cost containment. Their common theme is that AMCs increasingly require effective coordinated action to cope effectively with current environmental challenges, whereas in the 1970s and early 1980s independent action by subunits was often well rewarded. The problem is to integrate decisionmaking and coordination without stifling the initiative, creativity, and responsibility of individuals, departments, and teaching hospitals, which are crucial to the education, research, and patient care functions of academic medicine.

Williamson, Stephen D.

TI International Financial Intermediation and Aggregate Fluctuations Under Alternative Exchange Rate Regimes. **AU** Greenwood, Jeremy; Williamson, Stephen D.

Wilson, Charles

TI Equilibrium in Preemption Games with Complete Information. **AU** Hendricks, Ken; Wilson, Charles.

TI The War of Attrition in Continuous Time with Complete Information. **AU** Hendricks, Ken; Weiss, Andrew; Wilson, Charles.

PD February 1987. **TI** On the Optimal Pricing Policy of a Monopolist. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-04; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 21. **PR** No Charge. **JE** 022. **KW** Monopoly. Price Dispersion. Imperfect Competition.

AB The paper presents a simple explanation of price dispersion by a monopolist assuming only that consumers arrive in a random order and are served on a first come, first serve basis. A firm can sometimes increase its profits by charging two different prices for the same good and rationing sales at the lower price. However, it is never necessary to charge more than two prices, and a single price is sufficient as long as either the marginal revenue curve is everywhere downward sloping or the marginal cost of production is constant.

TI International Duopoly with Tariffs. **AU** Fisher, Eric; Wilson, Charles.

Winter, Sidney G.

TI Appropriating the Returns from Industrial R & D. **AU** Levin, Richard; Klevorick, Alvin; Nelson, Richard R.; Winter, Sidney G.

Winters, Alan

PD January 1988. **TI** Completing the European Internal Market: Some Notes on Trade Policy. **AA** University College of North Wales. **SR** Centre for Economic Policy Research Discussion Paper: 222; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PG** 40. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 422, 423, 421, 411. **KW** EC. Subsidies. Trade Policy. Factor Mobility.

AB This paper examines international trade policy within a completed European internal market. The Ethier-Horn argument for internal tariffs in a customs union is shown to be inapplicable to most of the EC's existing, cost-increasing barriers to trade. The implications are examined of abolishing both Article 115, which prevents trade deflection, and Monetary Compensatory Amounts on agricultural trade. National production subsidies are examined in the context of the free intra-EC mobility of capital and skilled labor. Subsidies are doubly harmful to a small open economy in the presence of factor mobility. Moreover, even where rent-snatching subsidies may be profitable for the EC as a whole, subsidy wars could erupt between member states as they compete for rent-generating industries.

Witte, Ann Dryden

PD November 1987. **TI** Predicting Criminal Recidivism Using "Split Population" Survival Time Models. **AU** Witte, Ann Dryden; Schmidt, Peter. **AA** Witte: Department of Economics, Wellesley College. Schmidt: Department of Economics, Michigan State University. **SR** Michigan State Econometrics and Economic Theory Workshop Paper: 8710; Department of Economics, Michigan State University, East Lansing, MI 48824. **PG** 27. **PR** No Charge. **JE** 916, 212. **KW** Survival Time. Failure Time. Recidivism. Split Population Model.

AB In this paper we develop a survival time model in which the probability of eventual failure is less than one, and in which both the probability of eventual failure and the timing of failure depend (separately) on individual characteristics. We apply this model to data on the timing of return to prison for a sample of prison releases, and we use it to make predictions of whether or not individuals return to prison. Our predictions are more accurate than previous predictions of criminal recidivism. The model we develop has potential applications in economics; for example, it could be used to model the probability of default and the timing of default on loans.

TI Deterrence, Work and Crime: Revisiting the Issues with Birth Cohort Data. **AU** Tauchen, Helen; Witte, Ann Dryden; Griesinger, Harriet.

TI A Structural Equation Model for Tax Compliance and

Auditing. **AU** Beron, Kurt; Tauchen, Helen V.; Witte, Ann Dryden.

Wolff, Christian C. P.

PD July 1987. **TI** Forward Foreign Exchange Rates, Expected Spot Rates, and Premia: A Signal-Extraction Approach. **AA** London Business School. **SR** Centre for Economic Policy Research Discussion Paper: 189; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 132, 212, 313. **KW** Exchange Rates. Premia. Kalman Filter. Signal Extraction. Time Series. Persistence. Financial Markets.

AB In this paper, we implement a methodology to identify and measure premia in the pricing of forward foreign exchange. The methodology involves application of signal-extraction techniques from the engineering literature. Diagnostic tests indicate that these methods are quite successful in capturing the essence of the time-series properties of premium terms. The estimated premium models indicate that premia show a certain degree of persistence over time and that more than half the variance in the forecast error that results from the use of current forward rates as predictors of future spot rates is accounted for by variation in premium terms. The methodology can be applied straightforwardly to the measurement of unobservables in other financial markets.

PD July 1987. **TI** Exchange Rates, Innovations and Forecasting. **AA** London Business School. **SR** Centre for Economic Policy Research Discussion Paper: 188; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 132, 212. **KW** Exchange Rates. Forecasting. News. Random Walk.

AB In this paper an ex-post forecasting experiment is performed on the basis of a version of the "news" model of exchange rate determination. A general finding is that the "news" formulation of monetary exchange rate models leads to relatively accurate ex post exchange rate forecasts. Often the results compare favourably with those obtained from the naive random walk forecasting rule. Thus, the evidence presented in this paper supports the argument that the 1983 finding by Meese and Rogoff (that structural models do not even outperform the random walk in an ex post forecasting experiment) may be due to the fact that the models were not properly tested in a "news" framework.

PD July 1987. **TI** Forward Foreign Exchange Rates and Expected Future Spot Rates. **AA** London Business School. **SR** Centre for Economic Policy Research Discussion Paper: 187; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, ENGLAND. **PR** 1 pound ($2.00) individuals; 1.50 pounds ($3.00) companies, libraries, institutions. **JE** 431, 132, 212, 313. **KW** Exchange Rates. Premia. Forecasting. Kalman Filter. Signal Extraction. Time Series. Forward Rates.

AB In this paper I explore whether knowledge of the time-series properties of premia in the pricing of forward foreign exchange can be usefully exploited in forecasting future spot exchange rates. I use signal-extraction techniques, based on recursive application of the Kalman filter, to identify these premia. Predictions using premium models compare favourably with those obtained from the use of the forward rate as a predictor of the future spot rate. The results also provide an interesting description of the time-series properties of premia. This methodology can be applied straightforwardly to other financial markets, such as futures markets and markets for government debt instruments.

Wolff, Edward

PD April 1987. **TI** Long-Term Trends in U.S. Wealth Inequality: Methodological Issues and Results. **AU** Wolff, Edward; Marley, Marcia. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-10; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 87. **PR** No Charge. **JE** 921, 229. **KW** Household Wealth. Microdata.

AB Our paper has two primary objectives. First, we discuss some of the methodological issues involved in reconciling microdata and published data on household wealth distribution both with each other and with aggregate balance sheet data on household wealth. Second, based on selected measures, we attempt to construct a reasonably consistent time-series on the size distribution of household wealth for the period 1922 to 1983. In so doing, this paper builds on previous research on household wealth, including the work of Lampman, Smith, Schwartz, Goldsmith, Ruggles and Ruggles, and Musgrave. Our major purpose is to extend and improve this body of wealth data by reconciling and aligning the published sources on wealth concentration with those on aggregate household wealth. We estimate alternative measures of wealth concentration and inequality based on different sources and different imputation techniques. We also present alternative estimates based on different concepts of household wealth.

PD May 1987. **TI** Labor Quality and Productivity Growth in the U.S.: An Input-Output Growth Accounting Framework. **AU** Wolff, Edward N.; Howell, David R. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-11; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 60. **PR** No Charge. **JE** 226, 222, 825, 851. **KW** Productivity Growth. Human Capital. Skilled Labor.

AB To explore the changes in the skill content of labor inputs and to determine the implications of these changes for the measurement and analysis of productivity growth, we have employed a variety of measures of job skill requirements from the Dictionary of Occupational Titles. These measures were chosen to capture the cognitive, interactive and motor skills dimensions of job requirements. Based upon changes in occupation mix alone, our results indicate a general upgrading of the skill content of labor inputs over the 1960-85 period, with the greatest increases occurring in the 1960-70 decade. While these results are consistent with earlier studies (Rumberger, 1981; Spenner, 1983) our employment matrices have enabled us to calculate changes in industry as well as occupation skill levels. In regard to the productivity analysis, there are two principal results. First, productivity growth slowed down in almost all sectors of the economy between the 1958-1967 and the 1967-1977 periods. The slowdown in the growth of skills helps explain the decline in sectoral productivity growth in the latter period. This result holds for all five indices of skill presented in this paper. Second, the slowdown in the rate of increase in the skill level of the work

force explains a portion of the slowdown in overall labor productivity growth between the 1958-1967 and the 1967-1977 periods. The proportion of the productivity slowdown explained varied among the five skill measures.

PD June 1987. **TI** Sources of Postwar Growth of Information Activity in the U.S. **AU** Wolff, Edward N.; Baumol, William J. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-14; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 41. **PR** No Charge. **JE** 635, 825, 813. **KW** Information. Services Sector. Productivity.
AB There have been a number of studies that provide data documenting the explosive expansion in the share of the labor force engaged in information related activities (see, e.g., Machlup '1962, Porat '77 and Beniger '1986). This paper offers a bit more evidence to this effect, as well as some extension of the required classification scheme which we believe to be illuminating.

PD September 1987. **TI** Capital Formation and Long-Term Productivity Growth: A Comparison of Seven Countries. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-37; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 43. **PR** No Charge. **JE** 121, 226, 621. **KW** Technology. Capital Formation. Developing Countries.
AB This paper investigates the growth in total factor productivity and capital stock over the period from 1870 to 1979 among seven countries: Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The results lend strong support to three hypotheses. The first is the advantages of backwardness hypothesis, that countries furthest from the technological frontier benefit most by borrowing the technology of advanced economies. The second is the accumulation hypothesis, that technological backwardness may induce a high rate of capital formation. The third is the embodiment hypothesis, that more advanced technology is embodied in new capital equipment and that such new investment is necessary to acquire new technology.

PD November 1987. **TI** Spillover Effects, Linkage Structure, Technical Change and Research and Development. **AU** Wolff, Edward N.; Nadiri, M. Ishaq. **AA** New York University. **SR** New York University Economic Research Reports: RR 87-43; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, NY 10003. **PG** 39. **PR** No Charge. **JE** 621, 024. **KW** Technology. Spillover Effect.
AB In this paper, we investigate three related issues. First, does research and development (R&D) performed in one sector or industry affect the rate of technical change in related sectors or industries? This is often referred to as the spillover effect of R&D or its social rate of return. Second, does technical progress in one industry affect the rate of technical change in related industries, independently of its level of R&D activity? Third, does R&D or technical progress in a given industry affect its degree of linkage with other industries in the economy?

Wooldridge, Jeffrey M.

PD December 1987. **TI** Specification Testing and Quasi-Maximum Likelihood Estimation. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 479; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 46. **PR** No Charge. **JE** 211. **KW** Conditional Moment Tests. Robustness. Quasi-Maximum Likelihood. Linear Exponential Family.
AB This paper develops robust, regression-based forms of Newey's conditional moment tests for models estimated by quasi-maximum likelihood using a density in the linear exponential family. A novel feature of these tests is that, in addition to the original estimation, they require only two linear least squares regressions for computation, while remaining robust to distributional assumptions other than those being explicitly tested. Several examples are presented to illustrate the simplicity and scope of the procedure: a Lagrange multiplier test for nonlinear regression, the score form of the Hausman test for the parameters of a conditional mean, and a regression form of the Davidson-MacKinnon nonnested hypotheses test. All of the tests assume only that the conditional mean is correctly specified under the null hypothesis.

PD December 1987. **TI** A Regression-based Lagrange Multiplier Statistic that is Robust in the Presence of Heteroskedasticity. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 478; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 18. **PR** No Charge. **JE** 211. **KW** Lagrange Multiplier. Heteroskedasticity. Regression-Based. Robustness.
AB This paper derives a form of the Lagrange Multiplier statistic for nonlinear regression models that does not assume conditional homoskedasticity under the null hypothesis. In addition to the initial nonlinear least squares estimation, computation of the statistic requires only two linear least squares regressions. The problems of computing tests of exclusion restrictions and tests for serial correlation in dynamic linear models with unknown heteroskedasticity are presented as simple applications.

PD January 1988. **TI** A Unified Approach to Robust, Regression-based Specification Tests. **AA** MIT. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 480; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 32. **PR** No Charge. **JE** 211. **KW** Regression-based. Robust. Specification Test. Conditional Mean. Conditional Variance.
AB This paper develops a new approach to robust specification testing for dynamic econometric models. A novel feature of these tests is that, in addition to the estimation under the null hypothesis, computation requires only a matrix linear least squares regression and then an ordinary least squares regression similar to those employed in popular nonrobust tests. The statistics proposed here are robust to departures from distributional assumptions that are not being tested. Moreover, the statistics may be computed using any square root(T) consistent estimator. Several examples are presented to illustrate the generality of the procedure. Among these are conditional mean tests for models estimated by weighted nonlinear least squares which do not require correct specification of the conditional variance, and tests of conditional means and variances estimated by quasi-maximum

likelihood under nonnormality. Also, some new, computationally simple tests for the tobit model are proposed.

TI A Common Error in the Treatment of Trending Time Series. **AU** Quah, Danny; Wooldridge, Jeffrey M.

Wren, Lewis Simon

TI Evaluating the Extended Target Zone Proposal for the G3. **AU** Currie, David; Wren, Lewis Simon.

Wykoff, Frank C.

TI Energy, Obsolescence, and the Productivity Slowdown. **AU** Hulten, Charles R.; Robertson, James W.; Wykoff, Frank C.

Yancey, T. A.

PD February 1988. **TI** Sampling Performance of Some Joint One-Sided Preliminary Test Estimators Under Squared Error Loss. **AU** Yancey, T. A.; Judge, G. G.; Bohrer, Robert. **AA** Yancey and Bohrer: University of Illinois at Urbana-Champaign. Judge: University of California at Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics (CUDARE) Working Paper: 462; Department of Agricultural and Resource Economics, 313 Giannini Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 36. **PR** $7.20. **JE** 211. **KW** Squared Error Loss. Inequality Hypothesis Tests. Likelihood Ratio Tests. Risk Functions. Power Functions.

AB In this paper we evaluate under a squared error loss measure the risk characteristics of preliminary test estimators that evolve when an estimation decision is taken as a result of a particular inequality hypothesis test based on the data at hand. The sampling performances of the pretest estimators that result from two one-sided multivariate hypothesis tests, null: A(beta) = 0 versus the alternative: A(beta) >= 0 and the null: A(beta) >= 0 versus the alternative: A(beta) not >= 0, are evaluated and compared, and the unsatisfactory sampling (risk) performances of these inequality pretest estimators, over part of the parameter space, are established. Over much of the hypothesis specification error part of the parameter space, the pretest estimator resulting from the test mechanism the null: A(beta) = 0 is risk inferior to the pretest estimator resulting from the null: A(beta) >= 0. Power functions for the two one-sided tests are presented and the difficulty of using the power criteria in practice is noted.

Yao, S.

TI A Strategic Marker Game with Complete Markets. **AU** Amir, R.; Sahi, S.; Shubik, M.; Yao, S.

Yuan, Hsiao Jane

TI The Statistical Properties of Dimension Calculations Using Small Data Sets. **AU** Ramsey, James B.; Yuan, Hsiao Jane.

Zabel, Edward

PD January 1987. **TI** Equilibrium and Adjustments in Noncompetitive Markets. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 133; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611. **PG** 32. **PR** No Charge. **JE** 022. **KW** Trading. Random Demand. Price. Output. Decisions.

AB This paper considers trading processes in which, periodically, price and output decisions are made before the realization of a random demand. A major achievement is to extend the scope of outcomes for the lost sales trading process by demonstrating that the class of PF2 density functions preserves uniqueness and regularity of behavior without imposing any linearity requirements. A second achievement is to verify that the backlogging, full payment process and the lost sales process share common qualitative features with the major difference arising in properties of system equilibria.

PD September 1987. **TI** Price, Output and Inventory Behavior with a General Demand Structure. **AA** University of Florida. **SR** University of Florida Center for Econometrics and Decision Sciences Working Paper: 132; Center for Econometrics and Decision Sciences, College of Business Administration, University of Florida, Gainesville, FL 32611. **PG** 27. **PR** No Charge. **JE** 022. **KW** Price Smoothing. Inventory. Additive Demand Function. Backlogging.

AB Recent studies examining price smoothing, inventories and adjustments in noncompetitive industries have assumed that demand is additive, i.e., demand consists of an expected demand depending on price plus a random disturbance term. The present paper considers generalizations of demand in both the backlogging and the lost sales systems. In the backlogging system it is shown that previous qualitative results are preserved when demand has an additive-multiplicative structure. In the lost sales system the additive-multiplicative structure preserves outcomes when the density function of the random term belongs to the class of Polya Frequency Functions of Order 2 and an additional restriction is imposed on parameters.

Zaidi, Iqbal

TI Stabilization and Growth in an Open Islamic Economy. **AU** Mirakhor, Abbas; Zaidi, Iqbal.

Zaman, Asad

PD October 1987. **TI** Semiuniform Convergence and the Consistency of M-Estimators: The Discrete Case. **AA** Columbia University. **SR** Columbia Department of Economics Working Paper: 369; Department of Economics, Columbia University, New York, NY 10027. **PG** 34. **PR** $5.00. **JE** 213. **KW** M-Estimators. Consistency.

AB Novel techniques are used to obtain results regarding consistency of M-estimators when the sample space is discrete. The question of consistency can be split into two parts. The first is to determine conditions under which convergence of a (deterministic) sequence of functions to a limit entails convergence of their maxima to a maximum of the limit. We show that a one-sided analog of uniform convergence, labelled semiuniform convergence, is enough to ensure this. The second is to determine when averages of a sequence of i.i.d. random functions converge to some limit 'semiuniformly'. Under the hypothesis of global dominance, we show that this question, and that of consistency reduces to whether or not maxima of a deterministic sequence (of expectations, truncated below) converge to some fixed point in the parameter space. Necessary and sufficient conditions for consistency (which resemble Huber's(1967) conditions, but are simpler) in the case of local dominance are also given.

Zellner, Arnold

PD January 1988. **TI** Causality and Causal Laws in Economics. **AA** University of Southern California. **SR** University of Southern California Modelling Research Group Working Paper: M8801; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 31. **PR** No Charge. **JE** 036. **KW** Causality. Methodology.

AB After presenting and discussing H. Feigl's definition of causality and the general properties of causal laws in science, an explanation of why research in the area of "causality testing" in the last two decades has not produced many, if any, causal laws in economics. Then a leading study is reviewed which illustrates the author's preferred methodological approach and which yielded many fruitful research results. It is concluded that more studies of this kind will help to produce more causal laws in economics.

PD January 1988. **TI** Bayesian Specification Analysis and Estimation of Simultaneous Equation Models Using Monte Carlo Methods. **AU** Zellner, Arnold; Bauwens, Luc; van Dijk, Herman. **AA** University of Southern California. **SR** University of Southern California Modelling Research Group Working Paper: M8804; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 45. **PR** No Charge. **JE** 211. **KW** Bayesian. Monte Carlo. Simultaneous Equation Model. Finite Sample.

AB Bayesian methods for specification analysis or diagnostic checking of the simultaneous equation model are formulated and applied in analysis of two models. In this work, a direct Monte Carlo simulation approach is employed to compute exact posterior distributions of parameters measuring discrepancies from specifying assumptions, e.g., identifying restrictions, exogeneity, etc. Also, a new approach for calculating the posterior distributions of a structural equation's parameters is developed and applied using Monte Carlo numerical methods. It is concluded that the methods developed will permit convenient computation of exact finite sample specification error and estimation results for simultaneous equation models.

PD January 1988. **TI** Forecasting International Growth Rates Using Bayesian Shrinkage and Other Procedures. **AU** Zellner, Arnold; Hong, Chansik. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8802; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 24. **PR** No Charge. **JE** 132. **KW** Growth Rates. Output. Forecasts. Bayesian Statistics.

AB Bayesian and other procedures are developed and applied to forecast annual output growth rates for eighteen countries year by year for the period 1974-84. This work extends earlier work relating to nine countries' data, 1974-81. The new calculations indicate that previous methods work well in forecasting using the new, extended data base. Comparisons of the performance of various Bayesian shrinkage procedures, other procedures and OECD forecasts are provided. It is found that the autoregressive-leading indicator models used in past work continued to perform well in the present study based on an enlarged data base.

PD January 1988. **TI** Optimal Information-Processing and Bayes' Theorem. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8803; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 8. **PR** No Charge. **JE** 211. **KW** Bayes' Theorem. Statistical Inference. Efficiency. Information Rule.

AB An information-processing representation of statistical inference is formulated and utilized to derive an optimal information-processing rule. When particular input and output information measures and an information criterion functional are employed, the derived optimal information-processing rule is Bayes' Theorem. It is also shown that Bayes' Theorem is a 100% efficient information-processing rule.

PD January 1988. **TI** Turning Points in Economic Time Series, Loss Structures and Bayesian Forecasting. **AU** Zellner, Arnold; Hong, Chansik; Gulati, Gaurang Mitu. **AA** University of Southern California. **SR** University of Southern California Modelling-Research Group Working Paper: M8805; Department of Economics, University of Southern California, University Park, Los Angeles, CA 90089-0152. **PG** 23. **PR** No Charge. **JE** 132. **KW** Forecasting. Loss Structure.

AB Methods for forecasting turning points and future values of economic time series are developed which take account of a forecaster's loss structure. For example, it is found that the decision to forecast a downturn in an economic series is very sensitive to the form of the forecaster's loss structure as well as to the predictive probability of a downturn. Using an autoregressive-leading indicator model and data on real output growth rates for eighteen countries, turning point forecasts were made for each year, 1974-84. Overall, 66% of the 68 downturn and no-downturn forecasts were correct and 75% of the 82 upturn and no-upturn forecasts were correct.