ABSTRACTS OF WORKING PAPERS IN ECONOMICS

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Aardal, Karen

PD January 2000. **TI** Non-Standard Approaches to Integer Programming. **AU** Aardal, Karen; Weismantel, Robert; Wolsey, Laurence. **AA** Aardal: University of Utrecht. Weismantel: Otto-von Guericke Universitat, Germany. Wolsey: CORE and INMA. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/02; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 59. **PR** $100 per year. **JE** C10, C61. **KW** Integer Programming. Lattices. Basis Reduction. Asymptotic Group Problem. Corner Polyhedron.

AB In this survey we address three of the principle algebraic approaches to integer programming. After introducing lattices and basis reduction, we first survey their use in integer programming, presenting among others Lenstra's algorithm that is polynomial in fixed dimension, and the solution of diophanine equations using basis reduction. The second topic concerns augmentation algorithms and test sets, including the role played by Hilbert and Grobner bases in the development of a primal approach to solve a family of problems for all right-hand sides. Thirdly we survey the group approach of Gomory, showing the importance of subadditivity in integer programming and the generation of valid inequalities, as well as the relation to the parametric problem cited above of solving for all-right hand sides.

Abadie, Alberto

PD October 1999. **TI** Instrumental Variables Estimates of the Effect of Subsidized Training on the Quantiles of Trainee Earnings. **AU** Abadie, Alberto; Angrist, Joshua; Imbens, Guido W. **AA** Abadie: Massachusetts Institute of Technology. Angrist: Massachusetts Institute of Technology and National Bureau of Technology. Imbens: University of California, Los Angeles and National Bureau of Economic Research. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/16; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 36. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C13, C14, C31, D31, J31. **KW** Quantile Regression. Dummy Variables. Income Distribution. Human Capital. Wages.

AB The effect of government programs on the distribution of participants' earnings is important for program evaluation and welfare comparisons. This paper reports estimates of the effects of JTPA training programs on the distribution of earnings. The estimation uses a new instrumental variable (IV) method that measures program impacts on the quantiles of outcome variables. This quantile treatment effects (QTE) estimator accommodates exogenous covariates and reduces to quantile regression when selection for treatment is exogenously determined. The QTE estimator can be computed as the solution to a convex linear programming problem, although this requires first-step estimation of a nuisance function. We develop distribution theory for the case where the first step is estimated nonparametrically. For women, the empirical results show that the JTPA program had the largest proportional impact at low quantiles. Perhaps surprisingly, however, JTPA training raised the quantiles of earnings for men only in the upper half of the trainee earnings distribution.

Abbring, Jaap H.

PD August 1999. **TI** Business Cycles and Compositional Variation in U.S. Unemployment. **AU** Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C. **AA** Abbring: Free University. Van den Berg: Free University and CEPR. Van Ours: CentER, Tilburg University, and CEPR. **SR** Tilburg CentER for Economic Research Discussion Paper: 9965; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 53. **PR** no charge. **JE** C41, E32, J64. **KW** Unemployment Incidence. Unemployment Duration. Business Cycles. Sorting. Ranking.

AB In this paper, we study U.S. unemployment dynamics using grouped unemployment data from the Current Population Survey over the period 1968-1992. We estimate a model that traces variation in these unemployment data, both over time and between demographic groups, back to the underlying variation in the inflow and the outflow. In turn, we model the outflow as a transition process in which we allow the exit probabilities to depend on calendar time, duration, and demographic group. We particularly focus on the measurement and economic interpretation of the interaction of duration dependence of exit probabilities and the business cycle.

PD September 1999. **TI** The Anatomy of Unemployment Dynamics. **AU** Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C. **AA** Abbring: Free University. Van den Berg: Free University and CEPR. Van Ours: CentER, Tilburg University and CEPR. **SR** Tilburg CentER for Economic Research Discussion Paper: 9981; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 43. **PR** no charge. **JE** C41, E24, E32, J10, J64. **KW** Unemployment. Unemployment Duration. Business Cycles. Duration Dependence. Seasonality.

AB This paper examines the relation between individual unemployment durations and incidence on the one hand, and the time-varying macroeconomic conditions in the economy on the other. We allow for contemporaneous calendar time effects acting on the exit probabilities for all currently unemployed. Also, we allow for cohort effects on the exit probabilities by allowing the composition of the inflow into unemployment to depend on calendar time. In both cases we distinguish between business cycle effects and seasonal effects. The model is estimated with aggregate unemployment duration data, in which we allow for unobserved heterogeneity and correlated measurement errors. The results enable us to give a complete decomposition of the dynamics of unemployment over calendar time.

Abel, Andrew B.

PD March 1999. **TI** The Social Security Trust Fund, the Riskless Interest Rate, and Capital Accumulation. **AA** University of Pennsylvania and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6991; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 35. **PR** $5.00. **JE** E22, E62, G11, H30, H55. **KW** Social Security. Capital. Interest Rates. Equity Premium. Portfolio Choice.

AB This paper develops a tractable stochastic overlapping generations model to analyze the equilibrium equity premium and growth rate of the capital stock in the presence of a defined-benefit Social Security system. If the Social Security Trust Fund increases the share of its portfolio held in risky capital, the equilibrium equity premium falls in the following period and along a constant growth path. This change in the portfolio of the Social Security Trust Fund will increase the growth rate of capital in the following period, and, if a certain sufficient condition is satisfied, will increase the growth rate of the capital stock along a constant growth path. Calibration of the model indicates that it can match the historical average equity premium and the historical average growth rate of the capital stock using plausible values of the preference parameters. In addition, the sufficient condition for the growth rate of the capital stock to increase along a constant growth path is satisfied. Quantitatively, the effects on the riskless interest rate and the growth rate of capital are small.

Abowd, John M.

PD March 1999. **TI** Minimum Wages and Employment in France and the United States. **AU** Abowd, John M.; Kramarz, Francis; Margolis, David N. **AA** Abowd: Cornell University and National Bureau of Economic Research. Kramarz: INSEE/CREST. Margolis: University of Paris. **SR** National Bureau of Economic Research Working Paper: 6996; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** E24, J23, J31, J38. **KW** Minimum Wages. Employment. Wages. Unemployment. Labor Markets.

AB We use longitudinal individual wage and employment data in France and the United States to investigate the effect of changes in the real minimum wage on an individual's employment status. We find that movements in both French and American real minimum wages are associated with mild employment effects in general and very strong effects on workers employed at the minimum wage. In the French case, a 1% increase in the real minimum wage decreases the future employment probability of a man (respectively, a woman) currently employed at the minimum wage by 1.3% (1.0%). In the United States, a decrease in the real minimum wage of 1% increases the probability that a man (woman) employed at the minimum wage came from unemployment in the previous year by 0.4% (1.6%).

Acemoglu, Daron

PD January 1999. **TI** Productivity Differences. **AU** Acemoglu, Daron; Zilibotti, Fabrizio. **AA** Acemoglu: Massachusetts Institute of Technology and National Bureau of Economic Research. Zilibotti: Stockholm University. **SR** National Bureau of Economic Research Working Paper: 6879; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 34. **PR** $5.00. **JE** F43, J24, O14, O34, O47. **KW** Technological Choice. Total Factor Productivity. Mismatch. Skill. Human Capital.

AB Many technologies used by the LDCs are developed in the OECD economies, and as such are designed to make optimal use of the skills of these richer countries' workforces. Due to differences in the supply of skills, some of the tasks performed by skilled workers in the OECD economies will be carried out by unskilled workers in the LDCs. Since the technologies in these tasks are designed to be used by skilled workers, productivity in the LDCs will be low. Even when all countries have equal access to new technologies, this mismatch between skills and technology can lead to sizable differences in total factor productivity and output per worker. Our theory also suggests that productivity differences should be highest in medium-tech sectors, and that the trade regime and the degree of intellectual property right enforcement in the LDCs have an important effect on the direction of technical change and on productivity differences.

PD March 1999. **TI** Patterns of Skill Premia. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7018; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** J31, O14, O33. **KW** Skill Premia. International Trade. Wage Inequality. Technological Change.

AB This paper develops a model to analyze how skill premia differ over time and across countries, and uses this model to study the impact of international trade on wage inequality. Skill premia are determined by technology and the relative supply of skills. An increase in the relative supply of skills, holding technology constant, reduces the skill premium. An increase in the supply of skills over time, however, induces a change in technology, increasing the demand for skills. As a result, the relationship between relative supplies and skill premia over time may be increasing. Similarly, across countries developing their own technologies, there need not be a decreasing relationship between relative supply and skill premia. Holding technology constant, an increase in the volume of international trade increases the skill premium in countries where skills are abundant, and reduces it in skill- scarce countries. Trade also induces skill-biased technical change, creating a powerful force towards higher skill premia in both skill- abundant and skill-scarce countries. As a result, trade opening can cause a rise in inequality in the U.S. and the LDCs, and this can happen without the usual intervening mechanism of standard trade models.

PD October 1999. **TI** Minimum Wages and On The Job Training. **AU** Acemoglu, Daron; Pischke, Jorn-Steffen. **AA** Massachusetts Institute of Technology.

SR Massachusetts Institute of Technology, Department of Economics Working Paper: 99/25; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 43. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** J24, J31, J38, J41. **KW** Labor Markets. Low Wage Workers. Human Capital. Training. Minimum Wages.

AB Becker's theory of human capital predicts that minimum wages should reduce training investments for affected workers, because they prevent these workers from taking wage cuts necessary to finance training. We show that when the assumption of perfectly competitive labor markets underlying this theory is relaxed, minimum wages can increase training of affected workers, by inducing firms to train their unskilled employees. More generally, a minimum wage increases training for constrained workers, while reducing it for those taking wage cuts to finance their training. We provide new estimates on the impact of the state and federal increases in the minimum wage between 1987 and 1992 on the training of low wage workers. We find no evidence that minimum wages reduce training. These results are consistent with our model, but difficult to reconcile with the standard theory of human capital.

PD October 1999. **TI** A Theory of Political Transitions. **AU** Acemoglu, Daron; Robinson, James A. **AA** Acemoglu: Massachusetts Institute of Technology. Robinson: University of California, Berkeley. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/26; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 31. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D63, D72, D74, O15, P16. **KW** Democracy. Dictatorship. Inequality. Political Instability. Redistribution.

AB We develop a theory of political transitions inspired in part by the experiences of Western Europe and Latin America. Nondemocratic societies are controlled by a rich elite. The initially disenfranchised poor can contest power by threatening social unrest or revolution and this may force the elite to democratize. Democracy may not consolidate because it is more redistributive than a nondemocratic regime, and this gives the elite an incentive to mount a coup. Because inequality makes democracy more costly for the elite, highly unequal societies are less likely to consolidate democracy and may end up oscillating between regimes or in a nondemocratic repressive regime. An unequal society is likely to experience fiscal volatility, but the relationship between inequality and redistribution is nonmonotonic; societies with intermediate levels of inequality consolidate democracy and redistribute more than both very equal and very unequal countries. We also show that asset redistribution, such as educational and land reform, may be used to consolidate both democratic and nondemocratic regimes.

PD October 1999. **TI** Democratization or Repression? **AU** Acemoglu, Daron; Robinson, James A. **AA** Acemoglu: Massachusetts Institute of Technology. Robinson: University of California, Berkeley. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/27; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 12. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D72, D74, O15, P16. **KW** Democracy. Dictatorship. Political Economy. Redistribution. Repression.

AB Regimes controlled by a rich elite often collapse and make way for democracy amidst widespread social unrest. Such regime changes are often followed by redistribution to the poor at the expense of the former elite. We argue that the reason why the elite may have to resort to full-scale democratization, despite its apparent costs to themselves, may be that lesser concessions would be viewed as a sign of weakness and spur further unrest and more radical demands. The elite may therefore be forced to choose between repression and the most generous concession, a transition to full democracy.

PD October 1999. **TI** Certification of Training and Training Outcomes. **AU** Acemoglu, Daron; Pischke, Jorn-Steffen. **AA** Acemoglu: Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/28; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 11. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** J24, J31, J41, J42. **KW** Human Capital. Training. Adverse Selection. Apprenticeship System.

AB External certification of workplace skills obtained through on-the- job training is widespread in many countries. This may indicate that training is financed by workers, and certification serves to assure the quality of the training offered by the firm. However, other evidence shows that general training is financed by firms, especially in Germany. We show in this paper that external certification of training may also be necessary for an equilibrium with firm-sponsored training. Firm financing of training is only possible if firms have monopsony power over the workers after training. If the training firm can extract too much of the employment rents, however, workers may not have sufficient incentives to put forth effort during training. Certification increases the values of training to the outside market, and hence to workers, making firm-sponsored training possible.

PD October 1999. **TI** Productivity Gains from Unemployment Insurance. **AU** Acemoglu, Daron; Shimer, Robert. **AA** Acemoglu: Massachusetts Institute of Technology. Shimer: Princeton University. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/29; MIT, Deptartment of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 36. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D83, J24, J64, J65. **KW** Efficiency. Risk-Aversion. Job Search. Unemployment Insurance. Consumption Smoothing.

AB This paper argues that unemployment insurance increases labor productivity by encouraging workers to seek higher productivity jobs, and by encouraging firms to create those jobs. We use a quantitative general equilibrium model to investigate whether this effect is comparable in magnitude to the standard moral hazard effects of unemployment insurance. Our model economy captures the behavior of the U.S. labor market for high school graduates quite well. When unemployment insurance becomes more generous starting from the current U.S. levels, there is an increase in unemployment similar in magnitude to the micro-estimates, but because the composition of jobs also changes, total output and welfare increase as well.

PD October 1999. **TI** How Large are the Social Returns to Education? Evidence from Compulsory Schooling Laws. **AU** Acemoglu, Daron; Angrist, Joshua. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/30;

MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 43. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D62, I20, J24, J31, O15. **KW** Human Capital Externalities. Returns to Schooling. Wage Equations.

AB Average schooling in U.S. states is highly correlated with state wage levels, even after controlling for the direct effect of schooling on individual wages. We use an instrumental variables strategy to determine whether this relationship is driven by social returns to education. The instruments for average schooling are derived from information on the child labor laws and compulsory attendance laws that affected men in our Census samples, while quarter of birth is used as an instrument for individual schooling. This results in precisely estimated private returns to education of about 7 percent, and small social returns, typically less than 1 percent, that are not significantly different from zero.

Acharya, Viral V.

PD January 2000. **TI** Optimal Financial Integration and Security Design. **AU** Acharya, Viral V.; Bisin, Alberto. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/00/12; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 16. **PR** $5.00 each; $100.00 yearly subscription. **JE** F36, G12, G14. **KW** Asset Pricing. CAPM. Financial Innovation. Securitization. Incomplete Markets.

AB We characterize the optimal financial asset structure and the optimal composition of traders of simple two-period Capital Asset Pricing Model economies with incomplete markets and restricted participation. We identify a minimal property of optimal financial structures which is required to decentralize such structures with markets for intermediated services, and characterize the conditions under which the optimal financial structures of CAPM economies satisfy such property.

PD February 2000. **TI** Costly Financing, Optimal Payout Policies and the Valuation of Corporate Debt. **AU** Acharya, Viral V.; Huang, Jing-zhi; Subrahmanyam, Marti G.; Sundaram, Rangarajan. **AA** Acharya, Subrahmanyam and Sundaram: New York University. Huang: Penn State University. **SR** New York University, Salomon Center Working Paper: S/00/08; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 27. **PR** $5.00 each; $100.00 yearly subscription. **JE** G32, G35. **KW** Corporate Finance. Debt Valuation. Payout Policy. Dividends.

AB This paper presents a cash-flow based model of corporate debt valuation that incorporates two novel features. First, the authors allow for the separation and optimal determination of the firm's debt-service and dividend policies. Second, the model admits the possibility that raising resources through issuance of new equity could be a costly procedure. The authors provide an analytical characterization of equilibrium behavior in their model. Numerical analysis of the equilibrium reveals that the model predicts substantially higher yield spreads than the canonical Merton-type model. More importantly, the authors find that the two novel features of the model are crucial determinants of not only the overall spreads that result but also of the marginal impact of allowing for debt-service to be strategic. Specifically: (a) assuming residual rather than optimal dividend policies can result in a significant upward bias in the yield spreads predicted by the model; (b) the size of this bias depends in a central way on the costs of equity issuance; (c) the marginal impact of strategic debt-service is substantial, in general, only for low equity- issuance costs, and (d) under optimally-determined dividends, strategic debt-service can actually result in a narrowing of yield spreads.

Agung, J.

PD October 1998. **TI** Bank Behaviour and the Channel of Monetary Policy in Japan. **AU** Agung, J.; Ford, Jim L. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/02; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 22. **PR** 2 pounds ($4); no charge to academics. **JE** E52, G21, G28, G32. **KW** Monetary Policy. Banking. External Finance. Financial Deregulation.

AB This paper investigates whether there are differential effects of monetary policy across bank size and business size in Japan, to test the presence of the "bank lending channel" of monetary policy. The findings support the two necessary conditions for the channel, i.e., monetary policy is able to constrain bank loan supply (especially for small banks) and there exists a group of firms that are reliant on bank borrowing for external finance. Furthermore, we find that financial deregulation has weakened the effectiveness of this channel, particularly as a result of a shift in sources of external finance for businesses.

PD October 1998. **TI** Money Multipliers for Simple Sum and Divisia Monetary Aggregates for Japan: Cointegration and ECM Modelling 1968(3) - 1996(2). **AU** Agung, J.; Ford, Jim L. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/03; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 16. **PR** 2 pounds ($4); no charge to academics. **JE** C20, C30, E51. **KW** Monetary Aggregates. Divisia Index. Cointegration. Causality. ECM Modeling.

AB This paper focuses on the relationship between the monetary base and monetary aggregates in Japan via the money multiplier. The two broadest definitions of the (simple sum) monetary aggregate that are used by the Bank of Japan (M2 and M3: the latter differing from the former by postal savings and trusts) and their Divisia counterparts are used as the alternative definitions of money. Cointegration is found between both Divisia M3 and M3 with the monetary base, but only between Divisia M2 and that base. The speeds of adjustment to (lagged) dis-equilibrium are negative for both Divisia indices; they are incorrectly signed for the simple sum aggregates. Tests for weak exogeneity confirm that Divisia M2 is (statistically significantly) 'caused' by the monetary base; so too is Divisia M3, but there is also bi-causality between it and that base.

PD October 1998. **TI** Economic Development, Financial Development and Deregulation: Japan, 1960 to 1996. **AU** Agung, J.; Ford, Jim L. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/04; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website:

www.bham.ac.uk/economics. **PG** 21. **PR** 2 pounds ($4); no charge to academics. **JE** E44. O16. **KW** Economic Development. Financial Development. Deregulation. Cointegration. Causality.

AB This paper is an econometric study of the links between financial and economic development, taking cognizance of financial deregulation, for Japan. The techniques used are the related ones of integration, cointegration, ECM; augmented, as apposite, by VARs and Granger- causality tests. The results suggest that four of the five measures of financial development are cointegrated with economic development post deregulation, with only two of them exhibiting cointegration for the whole and the pre-deregulation periods. For the post deregulation period tests of weak exogeneity indicate that those four variables are exogenous with respect to economic development. Prior to deregulation no such evidence can be demonstrated.

Ahn, Namkee

PD November 1999. **TI** Unemployment Duration and Workers' Wage Aspirations in Spain. **AU** Ahn, Namkee; Garcia-Perez, J. Ignacio. **AA** Ahn: FEDEA. Garcia-Perez: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 426; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 16. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C41, J31, J64. **KW** Willingness to Work. Wages. Reservation Wages. Unemployment Duration. Unobserved Heterogeneity.

AB This paper examines unemployed workers' declared willingness to work for a wage lower than the one warranted by their qualification. We analyze which personal and economic characteristics determine this willingness and how it changes as unemployment spells lengthen. Moreover, we also study the influence of this willingness on unemployment duration. The main results are: (i) Young workers, those less educated and those living in regions with high unemployment show a more positive attitude towards accepting lower wages while married women with a working husband show more negative attitudes; (ii) The exhaustion of unemployment benefits has positive effects in the transition probability of the attitude from negative to positive; (iii) The effect of this attitude on the unemployment hazard rate is positive but only marginally significant which may be showing that this willingness is not only reflecting the worker's reservation wage but also some unobserved heterogeneity; (iv) The negative duration dependence of the unemployment hazard rate is substantially reduced when unobserved heterogeneity is controlled for.

Aizenman, Joshua

PD March 1999. **TI** Reserve Requirements on Sovereign Debt in the Presence of Moral Hazard -- on Debtors or Creditors? **AU** Aizenman, Joshua; Turnovsky, Stephen J. **AA** Aizenman: Dartmouth College and National Bureau of Economic Research. Turnovsky: University of Washington. **SR** National Bureau of Economic Research Working Paper: 7004; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** D82, F15, F34, F36, O19. **KW** Reserve Requirements. Debt. Lending. International Finance. Moral Hazard.

AB This paper characterizes the effects of reserve requirements on financial loans in the presence of moral hazard on the lender side (i.e., the anticipation that the taxpayer will bailout lending banks if large default occurs) and sovereign risk on the borrower side. The impacts of such reserve requirements on the equilibrium degree of default risk and borrowing are analyzed, and their welfare implications for both the borrowing and the lending nations discussed. More generous bailouts financed by the high income block encourage borrowing and increase the probability of default. The authors show that the introduction of a reserve requirement in either country reduces the risk of default and raises the welfare of both economies. In these circumstances, the lender's optimal reserve requirement is shown to increase with the expected bailout. Such a policy induces the lender to internalize the expected tax payer cost of the bailout. Thus a more generous bailout that is accompanied by an optimal adjustment in the lender's reserve requirements exactly neutralizes its effects on welfare. Unlike the case of the lender, the effect of the more generous bailout on the borrower's optimal reserve requirement is ambiguous.

Alberola Ila, Enrique

PD November 1998. **TI** Is There Scope for Inflation Differentials in EMU? **AU** Alberola Ila, Enrique; Tyrvainen, Timo. **AA** Alberola: Banco de Espana. Tyrvainen: Bank of Finland. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9823; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 33. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E31, F15, F33, F42, F47. **KW** Sector Productivity. Inflation Differentials. European Union. Simulation. Economic Integration.

AB The Balassa-Samuelson (BS) model is evaluated in eight of the eleven EMU countries. This model suggests that productivity differentials between traded and non-traded goods sectors generate sectoral inflation differentials (dual inflation). Furthermore, differentials in the degree of dual inflation induce inflation differentials between countries. The standard BS model implies a cointegration relationship between relative prices and sectoral productivities. While this link generally seems to exist, the magnitudes of the parameter estimates are not in accordance with the theoretical model in most countries. Since the presumed uniformity of sectoral wages is rejected in most cases, relative wages are allowed to enter the estimation. This extended BS model is endorsed by the data in every country. Simulations based on these results are carried out to quantify possible inflation differentials. Setting EMU-wide inflation equal to 2% and assuming that PPP holds for traded goods, the projected inflation varies around the EMU-average within a margin of some plus or minus 1 percentage points across countries.

Alberola, Enrique

PD August 1999. **TI** On the Relevance and Nature of Regional Inflation Differentials: The Case of Spain. **AU** Alberola, Enrique; Marques, Jose Manuel. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9913; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 36. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C23, E31, F31, R11. **KW** Regional Inflation. Economic

Integration. Wage Mechanisms. Panel Cointegration. Relative Prices.
AB This paper studies two aspects of the behavior of provincial relative prices in Spain: the relevance and the nature of provincial inflation divergences and relative price shifts. Inflation differentials are found to be small (the range is less than a half point per year in the long-run), but deviations of relative prices from equilibrium can be very persistent. Relative price shifts turn out to be determined by characteristics which are intrinsic to very deep economic integration, in particular, price and wage mechanisms which operate at the national level. This is in stark contrast to evidence on the determinants of real exchange rates among countries; as a consequence, the Balassa-Samuelson hypothesis results are clearly rejected. Therefore, while admitting that inflation differentials among EMU participants are possible, their nature will be different from those existing among Spanish provinces.

PD September 1999. **TI** Internal and External Exchange Rate Equilibrium in a Cointegration Framework: An Application to the Spanish Peseta. **AU** Alberola, Enrique; Lopez, Humberto. **AA** Alberola: Banco de Espana. Lopez: World Bank. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9916; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 26. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C32, F31, F32, F41. **KW** Exchange Rates. Cointegration. Balassa-Samuelson. Current Account. Sectoral Prices.
AB A simple method to estimate multilateral equilibrium real exchange rates in a cointegration framework is used to compute the equilibrium real exchange rate for the peseta. The stock of foreign assets and the evolution of sectoral prices have been considered to be the fundamentals for the real exchange rate. After testing for cointegration among the three variables, we proceed to decompose the series into a permanent and a transitory component, following the method devised by Gonzalo and Granger. The permanent component of the real exchange rate corresponds to its (time-varying) equilibrium value, and the deviations of the actual real exchange rate from this equilibrium value gives an estimation of the degree of misalignment of the real exchange rate. The results show that the equilibrium real exchange rate displays an appreciation trend and that deviations from equilibrium are sizeable. In particular, by the end of 1998, the peseta is estimated to be moderately undervalued with respect to its equilibrium level.

Alcala, Francisco

PD October 1999. **TI** Economic Booms, Trade Deficits, and Economic Policy. **AU** Alcala, Francisco; Penyarrubia, Diego. **AA** Universidad de Murcia. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 397; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 26. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E62, F10, F32, F41, F43. **KW** Open Economy. Market Failures. Economic Policy. Current Account Deficit. Borrowing Constraints.
AB We characterize the dynamics created by an expected productivity rise in an open economy where firms have limited access to financial markets. An anticipated positive productivity shock raises the relative price of the nontraded goods, and creates a trade deficit. Since capital is assumed to be non-mobile across industries, and its maintenance implies some overhead costs, the relative price shift may bring the traded sector into losses. Borrowing constraints may cause more capacity reduction in the traded sector than in the efficient path, as well as larger trade deficits. The effects of different economic policies on welfare and the balance of payments are explored.

Alesina, Alberto

PD January 1999. **TI** Is Europe Going Too Far? **AU** Alesina, Alberto; Wacziarg, Romain. **AA** Alesina: Massachusetts Institute of Technology and National Bureau of Economic Research. Wacziarg: Stanford University. **SR** National Bureau of Economic Research Working Paper: 6883; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 36. **PR** $5.00. **JE** E58, F15, F33, F42, P16. **KW** Political Economy. Economic Integration. Monetary Policy. Political Integration.
AB This paper examines the process of European political integration. We start with a political economy model of monetary policy, illustrating a general principle: economic integration requires setting up European institutions endowed with the authority to enact Europe- wide policies. However, when countries can take advantage of scale effects thanks to economic integration, the need for large countries is reduced. Thus increased economic integration reduces the need for political integration in Europe. To reconcile these views, we propose a model for the optimal allocation of prerogatives across levels of government. When the provision of public goods is characterized by cross-border spillovers, some centralization of policies may be needed to internalize the externality. These gains from centralization must be traded-off against the costs from imposing the same policies upon heterogeneous groups. The optimal allocation of prerogatives results from this trade-off. Using our model as a benchmark, we analyze the institutional incentives at play for the allocation of political prerogatives in Europe and conclude that the European Union has gone too far on most issues.

PD June 1999. **TI** Participation in Heterogeneous Communities. **AU** Alesina, Alberto; La Ferrara, Eliana. **AA** Alesina: Harvard University and NBER. La Ferrara: IGIER, U. Bocconi. **SR** National Bureau of Economic Research Working Paper: 7155; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** D71, J71, R10, R20. **KW** Group Formation. Communities. Participation. Income. Race.
AB This paper studies both theoretically and empirically the determinants of group formation and of the degree of participation when the population is heterogeneous, both in terms of income and race or ethnicity. We are especially interested in whether and how much the degree of heterogeneity in communities influences the amount of participation in different types of groups. Using survey data on group membership and data on US localities, we find that, after controlling for many individual characteristics, participation in social activities is significantly lower in more unequal and in more racially or ethnically fragmented localities. We also find that those individuals who express views against racial mixing are less prone to participate in the groups the more racially heterogeneous their community is.

Allen, Steven G.

PD February 1999. **TI** Has Job Security Vanished in Large Corporations? **AU** Allen, Steven G.; Clark, Robert L.; Schieber, Sylvester J. **AA** Allen: North Carolina State University and National Bureau of Economic Research. Clark: North Carolina State University. Schieber: Watson Wyatt Worldwide. **SR** National Bureau of Economic Research Working Paper: 6966; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 32. **PR** $5.00. **JE** J23, J63, L20. **KW** Job Stability. Turnover. Large Corporations. Downsizing. Employment.

AB The prevailing wisdom in media accounts is that job stability has vanished, especially for those in large corporations. Academic studies of job stability have found little difference between the 1990s and earlier decades, but these studies have not been able to focus on large firms. This paper provides the first detailed analysis of job stability in large corporations in the 1990s using a sample of 51 firms that are clients of Watson Wyatt Worldwide. We find that mean tenure and the percentage of employees with 10 or more years of service have actually increased in our sample. Even in large firms with shrinking employment, the odds that a worker would be with the same employer five years later were higher than the same odds for the labor market as a whole. There is no evidence that mid-career employees have been singled out in downsizing decisions; their turnover rate is the same in both growing and downsizing firms. Regression analysis shows that the impact of downsizing is still being borne by the most junior workers and that there is no evidence that rising wage differentials by experience are encouraging firms to substitute junior for senior workers.

Allsopp, Louise

PD December 1998. **TI** A Model to Explain the Timing of an Exchange Rate Collapse. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 98/27; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 23. **PR** 2 pounds ($4); no charge to academics. **JE** D83, F31, F32, F41. **KW** Information Externalities. Currency Crises. Speculative Attacks. Foreign Exchange. Tobin Tax.

AB There are two main schools of thought which seek to explain currency crises: fundamentalist theories (Krugman, 1979) and speculative theories (Obstfeld, 1986). However, neither of these approaches considers the timing of a speculative attack on a currency. I explain the timing of a crisis in terms of an information externality in the foreign exchange market. I then consider the effect of a Tobin tax in deterring such a crisis.

PD December 1998. **TI** Two Experiments to Test a Model of Herd Behaviour. **AU** Allsopp, Louise; Hey, John D. **AA** Allsopp: University of Birmingham. Hey: University of York. **SR** University of Birmingham, Department of Economics Discussion Paper: 98/28; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 28. **PR** 2 pounds ($4); no charge to academics. **JE** C70, C90, D81, D82, D83. **KW** Herd Behavior. Decision Making. Signaling. Experiments. Game Theory.

AB We carry out two experiments to test a model of herd behavior based on the work or Banerjee (1992). He shows that herding occurs as a result of people observing the actions of others and using this information in their own decision rule. However, in our experiments herding does not occur as frequently as Banerjee predicts. Contrary to his results, the subjects' behavior appears to depend on the probabilities of receiving a signal and of this signal being correct. Furthermore, he finds that the pattern of decision making over a number of rounds of the game is volatile whereas we find that decision making is volatile within rounds.

Almond, Douglas

TI Capital, Wages, and Growth: Theory and Evidence. **AU** Ciccone, Antonio; Peri, Giovanni; Almond, Douglas.

Altman, Daniel

TI Unemployment Insurance Savings Accounts. **AU** Feldstein, Martin; Altman, Daniel.

Altman, Edward I.

PD January 2000. **TI** An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings. **AU** Altman, Edward I.; Saunders, Anthony. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/00/09; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 18. **PR** $5.00 each; $100.00 yearly subscription. **JE** F33, G11, G15, G21, G28. **KW** Credit Risk. Capital Requirements. Banking. Corporate Loans. Portfolio Diversification.

AB This paper has examined two specific aspects of stage 1 of the Bank for International Settlement's (BIS's) proposed reforms to the 8% risk- based capital ratio. We argue that relying on "traditional" agency ratings could produce cyclically lagging rather than leading capital requirements, resulting in an enhanced rather than reduced degree of instability in the banking and financial system. Despite this possible shortcoming, we believe that sensible risk based weighting of capital requirements is a step in the right direction. The current risk based bucketing proposal, which is tied to external agency ratings, or possibly to internal bank ratings, however, lacks a sufficient degree of granularity. In particular, lumping A and BBB (investment grade corporate borrowers) together with BB and B (below investment grade borrowers) severely misprices risk within that bucket and calls, at a minimum, for that bucket to be split into two. We examine the default loss experience on corporate bonds for the period 1981-1999 and propose a revised weighting system which more closely resembles the actual loss experience on credit assets.

PD January 2000. **TI** Defaults & Returns on High Yield Bonds: Analysis Through 1999 and Default Outlook for 2000-2002. **AU** Altman, Edward I.; Hukkawala, Naeem; Kishore, Vellore. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/00/10; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New, York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 17. **PR** $5.00 each; $100.00 yearly subscription. **JE** G12, G32, G33, G35. **KW** High Yield Bonds. Corporate Finance. Default Rates.

AB This report documents the high yield bond market's risk and return performance by presenting traditional and mortality default rate statistics and providing a matrix of performance statistics over the relevant periods of the market's evolution. The authors analysis covers the 1971-1999 period for defaults and the 1978-1999 period for returns. In addition, the authors present their annual forecast of expected defaults for the next three years (2000-2002). Their 1999 forecast was for substantially higher defaults than 1998, but they underestimated the record default levels. Default levels and rates were swelled in 1999 due to a number of factors, including the new huge issuance in the 1997-1999 period, a trend toward earlier defaults, deteriorating credit quality of new issues, pockets of industry fragility, and the continued vestige of 1998's flight to quality. For 2000, the authors expect default levels to decline to about $17.5 billion and the default rate to regress to around three percent of the amount outstanding.

PD January 2000. **TI** Market Size, Investment Performance, and Expected New Supply of Defaulted Bonds & Bank Loans: 1987-1999. **AU** Altman, Edward I.; Masset, Pierre. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/00/11; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 13. **PR** $5.00 each; $100.00 yearly subscription. **JE** G12, G21, G32, G33, G35. **KW** Bonds. Bank Loans. Default. Corporate Finance. Asset Pricing.

AB This report presents results and discussion of the investment performance of those bonds and bank loans that have defaulted on their scheduled payments to creditors and continue trading while the issuing firm attempts a financial reorganization. Monthly total return measures are compiled based on the Altman-NYU Salomon Center Indexes of Defaulted Bonds and Defaulted Banks Loans, as well as an index that combines bonds and loans. These returns are compared to the total returns of common stocks and high yield corporate bonds. Returns are based on the authors' market-weighted indexes and presented for the past year (1999), as well as for the last 13 years for bonds and four years for bank loans. The authors also estimate the expected supply of new defaulted debt in the United States for the coming three years. Nineteen ninety-nine was a mixed year for investors in distressed debt securities. Defaulted bank loans did not fare as well. The two "bright" or positive factors related to the defaulted bond and bank loan markets in 1999 were the enormous increase in the supply of new defaulted issues and the record low average market value to face value ratio of the Index at the end of the year.

Alvarez, Fernando

PD August 2000. **TI** Money, Interest Rates, and Exchange Rates With Endogenously Segmented Asset Markets. **AU** Alvarez, Fernando; Atkeson, Andrew; Kehoe, Patrick J. **AA** Alvarez: University of Chicago, Universidad Torcuato Di Tella and NBER. Atkeson and Kehoe: Federal Reserve Bank of Minneapolis, University of Minnesota and NBER. **SR** Federal Reserve Bank of Minneapolis Staff Report: 278; Research Department, Federal Reserve Bank of Minneapolis, 90 Hennepin Ave, Minneapolis, MN 55401. Website: www.minneapolis.frb.org. **PG** 29. **PR** no charge. **JE** E43, E44, E51, E52, F31. **KW** Baumol-Tobin Model. Fixed Costs. Liquidity Effects. Endogenous Participation. Cash-In-Advance.

AB This paper analyzes the effects of money injections on interest rates and exchange rates in a model in which agents must pay a Baumol-Tobin style fixed cost to exchange bonds and money. Asset markets are endogenously segmented because this fixed cost leads agents to trade bonds and money only infrequently. When the government injects money through an open market operation, only those agents that are currently trading absorb these injections. Through their impact on these agents' consumption, these money injections affect real interest rates and real exchange rates. We show that the model generates the observed negative relation between expected inflation and real interest rates. With moderate amounts of segmentation, the model also generates other observed features of the data: persistent liquidity effects in interest rates and volatile and persistent exchange rates. A standard model with no fixed costs can produce none of these features.

Alvarez, Luis J.

PD July 1999. **TI** Underlying Inflation Measures in Spain. **AU** Alvarez, Luis J.; Matea, Maria de los Llanos. **AA** Alvarez: Banco de Espana; Matea: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9911; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 21. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** Core Inflation. Underlying Inflation. Limited-Influence. Estimators. Vector Autoregression. **KW** C32, E31.

AB Applying the concept of underlying inflation can be thought of as an attempt to capture the general trend in inflation more accurately than with readily available data on headline inflation. In this paper a number of approaches to the analysis of underlying inflation are examined from a unifying standpoint, stressing their complementary nature, and empirical results are presented for the Spanish economy. Different measures differ from each other in the information set which is considered to be relevant for estimating the underlying rate of inflation. We first examine the simplest of the procedures that amounts to ignoring price developments in the most volatile sub-components of the CPI and then consider limited-influence estimators that take advantage of the information contained in the cross- sectional distribution of individual prices. Statistical methods of extracting the trend component of inflation are also discussed. Finally, measures that allow for the interplay of other economic variables are considered.

Amat, Oriol

PD March 2000. **TI** The Ethics of Creative Accounting: Some Spanish Evidence. **AU** Amat, Oriol; Blake, John; Oliveras, Ester. **AA** Amat and Oliveras: Universitat Pompeu Fabra. Blake: Central Lancashire University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 455; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 14. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, M41. **KW** Creative Accounting. Ethics. Spain. Social Values.

AB "Creative accounting" involves accountants in making accounting policy choices or manipulating transactions in such a way as to give the impression in the accounts that they prefer. In this paper we take the example of the Barcelona Football Club where the club management made three key accounting policy choices that presented a favorable position, and a supporters' club presented an alternative report choosing three alternative accounting policies that presented an unfavorable position. We presented each of these financial reports to one of two groups of Spanish bank loan offices, with supporting notes making the impact of the accounting policy choices clear. We found that the more favorable set of accounts was significantly more likely to attract a positive response to a loan request. This result undermines the defense for creative accounting, based on the ability of users to identify manipulation.

PD January 1999. **TI** The Ethics of Creative Accounting. **AU** Amat, Oriol; Blake, John; Dowds, Jack. **AA** Amat: Universitat Pompeu Fabra. Blake: Central Lancashire University. Dowds: Massey University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 349; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 12. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, M41. **KW** Accounting. Creative Accounting. Ethics.

AB The term "creative accounting" can be defined in a number of ways. Initially we will offer this definition: "a process whereby accountants use their knowledge of accounting rules to manipulate the figures reported in the accounts of a business". To investigate the ethical issues raised by creative accounting we will: 1) Explore some definitions of creative accounting. 2) Consider the various ways in which creative accounting can be undertaken. 3) Explore the range of reasons for a company's directors to engage in creative accounting. 4) Review the ethical issues that arise in creative accounting. 5) Report on surveys of auditors' perceptions of creative accounting in the UK, Spain and New Zealand.

PD March 1999. **TI** The Struggle Against Creative Accounting: Is "True and Fair View" Part of the Problem or Part of the Solution? **AU** Amat, Oriol; Blake, John; Oliveras, Ester. **AA** Amat: Universitat Pompeu Fabra. Blake and Oliveras: Central Lancashire University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 363; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 26. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** M41. **KW** Creative Accounting. True and Fair View. Accounting Regulation.

AB Creative accounting is a growing issue of interest in Spain. In this article we argue that the concept "true and fair view" can limit or promote the use of creative accounting depending upon its interpretation. We review the range of meanings that "true and fair view" can take at an international level and compare the experience of the United Kingdom with the Australian one by analyzing the use of "true and fair view" to limit creative accounting. Finally, we suggest lines of action to be considered by the Spanish accounting standards-setting institutions.

PD May 1999. **TI** The Case for a New Accounting Research Agenda in Spain. **AU** Amat, Oriol; Blake, John; Oliveras, Ester. **AA** Amat: Universitat Pompeu Fabra. Blake and Oliveras: University of Central Lancashire. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 380; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** G30, M41. **KW** Accounting. Corporate Report. Conceptual Frameworks. Corporate Finance.

AB In Spain both accounting practice and accounting research have been strongly influenced by accounting practices developed in the English speaking world. This paper: 1) Summarizes a seminal English paper, the "Corporate Report", that identified the potential for accounting reports to serve a wide range of users. 2) Identifies the ways in which English language accounting conceptual frameworks have paid lip service to a range of user needs, but in practice have excluded users other than investors and creditors. 3) Argues that for Spain the ideas put forward in the Corporate Report have a particular relevance, and might usefully form the basis for a new research agenda.

PD September 1999. **TI** Dimensions of National Culture and the Accounting Environment -- The Spanish Case. **AU** Amat, Oriol; Blake, John; Wraith, Philip; Oliveras, Ester. **AA** Amat and Oliveras: Universitat Pompeu Fabra. Blake and Wraith: Central Lancashire University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 394; Department of Economics and Business,Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** M41, Z10. **KW** Management Accounting. Spain. Culture.

AB Gray (1988) has put forward a hypothesis on how a national accounting environment might reflect the cultural dimensions identified by Hofstede (1980, 1983). A number of studies have tested Gray's hypothesis, including one by Pourjalali and Meek (1995) which identified a match between changes in cultural dimensions and the accounting environment in Iran following the revolution. In this paper we replicate this work in the context of Spain following the death of Franco in 1975 and the emergence of a democratic constitution in 1978. Specifically, we: 1) Consider how Gray's hypothesis built on Hofstede's cultural dimensions and review some empirical tests of the hypotheses. 2) Building on the work of Hofstede and Gray, we put forward some hypotheses on how we would expect cultural dimensions to change in Spain with the transition to democracy. 3) Review developments in accounting in Spain following the transition to democracy, in order to identify how well these fit with our hypotheses.

PD October 1999. **TI** Spanish Auditors and the 'True and Fair View'. **AU** Amat, Oriol; Blake, John; Oliveras, Ester. **AA** Amat and Oliveras: Universitat Pompeu Fabra. Blake: University of Central Lancashire. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 409; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 17. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** M41. **KW** Auditing. True and Fair View. Accounting. European Union.

AB In 1990 a new Spanish "Plan General de Contabilidad" (PGC) implemented the requirements of the EU 4th and 7th Directives in Spain. Included in the PGC is the requirement, derived from the 4th Directive, that accounts should present a "true and fair view". Where the term has been used in English speaking jurisdictions it has proved to have a variety of shades of meaning, and to have had strikingly different impacts in different countries. In this paper we report on a survey of the views and experience of Spanish auditors. Specifically, we: 1) Review the English language literature on "true and fair view" to identify the key areas of controversy. 2) Consider the significance of the "true and fair view" within the EU 4th Directive. 3) Report on the experience of Spanish auditors in working with this concept.

PD October 1999. **TI** Variations in National Management Accounting Approaches. **AU** Amat, Oriol; Blake, John; Oliveras, Ester. **AA** Amat and Oliveras: Universitat Pompeu Fabra. Blake: University of Central Lancashire. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 415; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** F30, M41. **KW** Management Accounting. Europe. Latin America.
AB During the 1990's studies of management accounting practices in Europe and in Latin America have given us data on 23 countries. In this paper we use this data to identify five distinct aspects of national management accounting culture being: 1) The influence of regulations on official recommendations; 2) The source of management accountants; 3) Influence from one country to another; 4) Variations in the use of specific techniques; 5) Variations in the objectives of the management accounting system. We then identify seven significant implications of the manager operating in the multinational environment.

PD December 1999. **TI** Environmental Factors Giving Rise to Variations in National Management Accounting Practice. **AU** Amat, Oriol; Blake, John; Wraith, Philip. **AA** Amat: Universitat Pompeu Fabra. Blake and Wraith: Central Lancashire University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 432; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 19. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** F30, M41. **KW** Management Accounting. International Accounting.
AB Comparative national management accounting is the least developed aspect in the field of international accounting. Only during the second half of the 1990's some comparisons of national management accounting practice have appeared published but only at the regional level. In this paper a range of factors that give rise to variations in national management accounting practice are postulated. We support this list with examples from a range of analyses of national management accounting practices, drawing particularly on the work of Lizcano (1996) and Bhimani (1996). Finally, twelve key factors are identified as influencing an individual country's approach to management accounting.

Anandarajan, Asokan

PD 2000. **TI** Loan Loss Provision Decisions: A Stochastic Frontier Approach. **AU** Anandarajan, Asokan; Hasan, Iftekhar; Lozano-Vivas, Ana. **AA** Anandarajan: Rutgers University; Hasan: New York University. Lozano-Vivas: Universidad de Malaga. **SR** New York University, Salomon Center Working Paper: S/00/18; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 20. **PR** $5.00 each; $100.00 yearly subscription. **JE** G11, G21, G28, L51, M41. **KW** Banking. Regulation. Accounting. Capital Requirements. Loan Loss Provisions. Stochastic Frontier.
AB Accountants and financial economists have long held concerns that inefficient loan loss accounting may have a material impact on reported earnings and capital especially in the banking industry. Research in the extant literature has examined banks' incentives to manipulate loan loss provisions (LLPs). While much research has focused on the management incentives and determinants of LLP decision, no research to date has examined the underpinnings and relevant factors associated with best- practiced or efficient LLP decision making. In this paper, we develop a stochastic frontier model that helps to examine the "efficiency" of the LLP decisions of bank managers. Further we examine the relationship between efficient LLP decision-making and relevant factors that could potentially explain the inefficiency. Evidence indicates existence of inefficiency in loan loss decision making among the sample institutions.

Anderson, James E.

PD January 1999. **TI** The Mercantilist Index of Trade Policy. **AU** Anderson, James E.; Neary, J. Peter. **AA** Anderson: Boston College and National Bureau of Economic Research. Neary: University College Dublin. **SR** National Bureau of Economic Research Working Paper: 6870; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 28. **PR** $5.00. **JE** F13. **KW** Trade Policy. Tariffs. Indexes. Commercial Policy.
AB This paper develops and characterizes an index of trade policy restrictiveness defined as the uniform tariff equivalent which maintains the same volume of trade as a given set of tariffs, quota, and domestic taxes and subsidies. We relate this volume-equivalent index to the Trade Restrictiveness Index, a welfare-equivalent measure, and relate changes in both indexes to changes in the generalized mean and variance of the tariff schedule. Applications to international cross-section and time-series comparisons of trade policy show that the new index frequently gives a very different picture than do standard indexes.

PD March 1999. **TI** Trade, Insecurity, and Home Bias: An Empirical Investigation. **AU** Anderson, James E.; Marcouiller, Douglas. **AA** Anderson: Boston College and National Bureau of Economic Research. Marcouiller: Boston College. **SR** National Bureau of Economic Research Working Paper: 7000; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 28. **PR** $5.00. **JE** D23, F13, F41, O17. **KW** International Trade. Imports. Corruption. Contract Enforcement. Institutional Quality.
AB Corruption and imperfect contract enforcement dramatically reduce trade. This paper estimates the reduction, using a structural model of import demand in which transactions costs impose a price markup on traded goods. We find that inadequate institutions constrain trade far more than tariffs do. We also find that omitting indexes of institutional quality from the model leads to an underestimate of home bias. Using a broad sample of countries, we find that the traded goods expenditure share declines significantly as income per capita rises, other things equal. Cross-country variation in the

effectiveness of institutions offers a simple explanation of the observed global pattern of trade, in which high-income, capital-abundant countries trade disproportionately with one another.

Anderson, Torben G.

PD February 1999. **TI** The Distribution of Exchange Rate Volatility. **AU** Anderson, Torben G.; Bollerslev, Tim; Diebold, Francis X.; Labys, Paul. **AA** Anderson: Northwestern University. Bollerslev: Duke University and National Bureau of Economic Research. Diebold: University of Pennsylvania and National Bureau of Economic Research. Labys: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 6961; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** F31. **KW** Exchange Rates. Volatility. Correlation. Long Memory.

AB Using high-frequency data on Deutschemark and Yen returns against the dollar, we construct model-free estimates of daily exchange rate volatility and correlation, covering an entire decade. In addition to being model-free, our estimates are also approximately free of measurement error under general conditions, which we delineate. Hence, for all practical purposes, we can treat the exchange rate volatilities and correlations as observed rather than latent. We do so, and we characterize their joint distribution, both unconditionally and conditionally. Noteworthy results include a simple normality-inducing volatility transformation, high contemporaneous correlation across volatilities, high correlation between correlation and volatilities, pronounced and highly persistent temporal variation in both volatilities and correlation, clear evidence of long-memory dynamics in both volatilities and correlation, and remarkably precise scaling laws under temporal aggregation.

Andres, Javier

PD January 2000. **TI** The Role of the Financial System in the Growth-Inflation Link: The OECD Experience. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David. **AA** Andres: Banco de Espana and Universidad de Valencia. Hernando and Lopez-Salido: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9920; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 32. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E31, E44, F43, O16, O40. **KW** Inflation. Growth. Financial Markets. Financial Repression. Open Economy.

AB The main contribution of this paper is to jointly estimate the effects of financial development and inflation on growth. We aim to exploit both the cross-section and the time-series dimension of the data on inflation, growth and some banking and stock market indicators over the period 1961-1993 for a sample of OECD countries. Overall, the results indicate, first, that the long-run costs of inflation are not explained by policies of financial repression, and second, that if inflation affects growth through its interaction with financial market conditions, this is not the only (nor the most important) channel.

PD January 1998. **TI** The Long-Run Effect of Permanent Disinflations. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David. **AA** Andres: Banco de Espana and University of Valencia. Hernando and Lopez-Salido: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9825; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 19. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E31, E32, E52, E58, O40. **KW** Disinflation. Monetary Shocks. Vector Autoregression. Monetary Policy. Unemployment.

AB This paper looks at the long-term output effect of those monetary policies aimed at reducing inflation from its peak in the late seventies, in nine major OECD countries. The estimated effect depends on the way nominal shocks are identified. As an alternative to cross- country regression analysis we estimate a structural VAR model in output, inflation and unemployment. In this model some assumptions turn out to be of crucial importance: inflation is primarily, though not exclusively, a monetary phenomenon and neither permanent inflation nor the natural rate of unemployment are affected by productivity shocks. Under this identification scheme we find that permanent disinflation achieved by means of permanent reductions in money growth display a short-run Phillips curve pattern, but take most economies in our sample onto a higher level of steady state output.

PD February 1999. **TI** The Liquidity Effect in a Small Open Economy Model. **AU** Andres, Javier; Lopez-Salido, J. David; Valles, Javier. **AA** Andres: Banco de Espana and Universidad de Valencia. Lopez-Salido and Valles: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9902; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 40. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E32, E43, E52, F41. **KW** Monetary Policy. Liquidity. Overshooting Effects. Price Rigidity. Capital Adjustment Costs.

AB In this paper a dynamic stochastic general equilibrium model for a small open economy allowing for perfect capital mobility is constructed. The model incorporates price rigidities in monopolistically competitive goods and labor markets and real rigidities in the form of capital adjustment costs. The model matches some nominal and real business cycle features observed in European economies and produces a significant output response to monetary policy shocks. The transmission mechanism of these shocks is nonetheless different from that of conventional Keynesian models used for policy analysis. It takes a strong price inertia to generate a positive response of real balances after a persistent and positive money shock. What is more striking, the liquidity effect and, hence, the exchange rate overshooting effect depend on the existence of a strong intertemporal substitution and consumption smoothing that is only compatible with a small set of parameterizations of preferences.

PD October 1999. **TI** Intertemporal Substitution and the Liquidity effect in a Sticky Price Model. **AU** Andres, Javier; Lopez-Salido, J. David; Valles, Javier. **AA** Andres: Banco de Espana and Universidad de Valencia. Lopez-Salido and Valles: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9919; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website:

www.bde.es. **PG** 33. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E21, E32, E43, E52. **KW** Intertemporal Substitution. Liquidity Effect. Sticky Prices. Capital Adjustment Costs. Business Cycles.

AB The liquidity effect, defined as a decrease in nominal interest rates in response to a monetary expansion, is a major stylized fact of the business cycle. This paper seeks to understand under what conditions such an effect can be explained in a general equilibrium model with sticky prices and capital adjustment costs. The paper first confirms that, with separable preferences, a low degree of intertemporal substitution in consumption is a necessary condition for the existence of the liquidity effect. Contrary to this result, in a model with non-separable preferences and capital accumulation it takes an implausibly high degree of intertemporal substitution to produce a liquidity effect. The robustness of these results to alternative degrees of nominal rigidities, money demand properties and real rigidities is also analyzed.

Angrist, Joshua

TI Instrumental Variables Estimates of the Effect of Subsidized Training on the Quantiles of Trainee Earnings. **AU** Abadie, Alberto; Angrist, Joshua; Imbens, Guido W.

TI How Large are the Social Returns to Education? Evidence from Compulsory Schooling Laws. **AU** Acemoglu, Daron; Angrist, Joshua.

PD November 1999. **TI** Estimation of Limited-Dependent Variable Models with Dummy Endogenous Regressors: Simple Strategies for Empirical Practice. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/31; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 38. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C14, C34, C35, C51, J22. **KW** Instrumental Variables. Semiparametric Methods. Tobit. Sample- Selection. Labor Supply.

AB Applied economists have long struggled with the question of how to accommodate binary endogenous regressors in models with binary and non- negative outcomes. I argue here that much of the difficulty with limited-dependent variables comes from a focus on structural parameters, such as index coefficients, instead of causal effects. Once the object of estimation is taken to be the causal effect of treatment, a number of simple strategies are available. These include conventional two-stage least squares, multiplicative models for conditional means, linear approximation of nonlinear causal models, models for distribution effects, and quantile regression with an endogenous binary regressor. The estimation strategies discussed in the paper are illustrated by using multiple births to estimate the effect of childbearing on employment status and hours of work.

Anton, James J.

PD April 1998. **TI** Strategic Pricing and Entry Under Universal Service and Cross-Market Price Constraints. **AU** Anton, James J.; Weide, James H. Vander; Vettas, Nikolaos. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 99/04; available only on web site. Website: www.econ.duke.edu/ Papers/wpindex.html. **PG** 26. **PR** no charge. **JE** D43, D44, L13, L52, L96. **KW** Entry Auctions. Pricing. Telecommunications. Universal Service. Oligopoly.

AB Recent changes in telecommunications markets raise the issue of how price restrictions across markets impact strategic entry and pricing decisions. The Telecommunications Act of 1996 opens all telecommunications markets to competition and contains a provision for universal service, requiring that advanced services be made available to rural customers at rates comparable to those for urban customers. We develop a simple multi-market model which features an oligopolistic urban market, entry auctions for rural service, and a price restriction across markets, and analyze strategic pricing and entry choices. We show how these price restrictions induce a firm operating in both markets to become a "softer" competitor, thus placing the firm at a strategic disadvantage relative to urban markets competitors. However, once we account for entry incentives and recognize that firms may bid strategically for rural markets, we find that the downstream strategic disadvantage becomes advantageous, leading to higher prices and profits in both markets. We also identify when these price restrictions put outside firms, even relatively inefficient ones, at a strategic advantage in entry auctions.

Aragones, Enriqueta

PD March 1999. **TI** Ambiguity in Election Games. **AU** Aragones, Enriqueta; Postlewaite, Andrew. **AA** Aragones: Universitat Pompeu Fabra. Postlewaite: University of Pennsylvania. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 364; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 34. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D72. **KW** Ambiguity. Elections. Voting Behavior. Political Processes.

AB We construct a model in which the ambiguity of candidates allows them to increase the number of voters to whom they appeal when voters have intense preferences for one of the alternatives available. An ambiguous candidate may offer voters with different preferences the hope that their most preferred alternative will be implemented. We find conditions under which ambiguous strategies are chosen in equilibrium. These conditions include the case in which there is an outcome that is a majority winner against all other outcomes but is not the most preferred outcome for a majority of voters. It is shown that if the number of candidates or parties increases, ambiguity will not be possible in equilibrium, but a larger set of possible policies increases the chance that at least one candidate will choose to be ambiguous in equilibrium.

Arana, Estanislao

PD October 1999. **TI** Validation Procedures in Radiological Diagnostic Models: Neural Network and Logistic Regression. **AU** Arana, Estanislao; Delicado, Pedro; Marti-Bonmati, Luis. **AA** Arana: Hospital Casa de Salud. Delicado: Universitat Pompeu Fabra. Marti-Bonmati: Hospital Universitario Doctor Peset. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 414; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 16. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C13, C14. **KW** Skull. Neoplasms. Logistic Regression. Neural

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

Networks. Resampling.
AB The objective of this paper is to compare the performance of two predictive radiological models, logistic regression (LR) and neural network (NN), with five different resampling methods. One hundred and sixty-seven patients with proven calvarial lesions as the only known disease were enrolled. Clinical and CT data were used for LR and NN models. Both models were developed with cross validation, leave-one-out and three different bootstrap algorithms. The final results of each model were compared with error rate and the area under receiver operating characteristic curves (Az). The neural network obtained statistically higher Az than LR with cross validation. The remaining resampling validation methods did not reveal statistically significant differences between LR and NN rules. The neural network classifier performs better than the one based on logistic regression. This advantage is well detected by three-fold cross-validation, but remains unnoticed when leave-one-out or bootstrap algorithms are used.

Arcidiacono, Peter

PD September 2000. **TI** Finite Mixture Distribution, Sequential Likelihood, and the EM Algorithm. **AU** *Arcidiacono, Peter; Jones, John B.* **AA** *Arcidiacono:* Duke University. Jones: SUNY Albany. **SR** Duke University Department of Economics Working Paper: 00/16; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 15. **PR** no charge. **JE** C13, C61, D90. **KW** Unobserved Heterogeneity. Mixture Distributions. EM Algorithm. Dynamic Discrete Choice.
AB The use of finite mixture distributions to control for unobserved heterogeneity has become increasingly popular among those estimating dynamic discrete choice models. One of the barriers to using mixture models is that parameters that could previously be estimated in stages must now be estimated jointly: using mixture distributions destroys any additive separability of the log likelihood function. The EM algorithm reintroduces additive separability, however, thus allowing the option of estimating parameters sequentially during each maximization step. We show that, relative to full information maximum likelihood, the EM algorithm with sequential maximization (ESM) can generate large computational savings with little loss of efficiency.

PD September 2000. **TI** Search Discrimination, Human Capital Accumulation, and Intergenerational Mobility. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 00/18; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 30. **PR** no charge. **JE** D31, J41, J62, J64, J71. **KW** Discrimination. Search. Intergenerational Mobility. Matching Models. Income Distribution.
AB Unequal outcomes for blacks and whites include earnings inequality, which increases with age, and differences in unemployment rates. I develop a matching model with search discrimination and human capital accumulation. Multiple equilibria exist, one with low unemployment rates and steep earnings profiles and one with high unemployment rates and flat earnings profiles. Hence, two groups of workers that differ on an observable, exogenous characteristic (say, race) can be in two different equilibria. In the high unemployment equilibrium, less vacancies are posted leading to the concept of search discrimination. A quota system can remove the discriminatory outcomes. However, if parents' investment decisions affect the investment decisions of their children, policies which remove the search discrimination through a quota system still lead to unequal results in the short run. In this case, whites may want to subsidize black investment as black investment improves the labor market outcomes for whites.

Arellano, Manuel

TI Learning about Migration Decisions from the Migrants: An Exercise in Endogenous Sampling and Complementary Datasets. **AU** Bover, Olympia; Arellano, Manuel.

Argiles, Josep

PD May 1999. **TI** Regional Diversity in the Fruit Sector in the European Union. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 379; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 15. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** L23, Q14, R12, R58. **KW** Fruit Sector. Agriculture. Cluster Analysis. Regional Economics. European Union.
AB This article aims to identify the key groups of regions with respect to farms oriented to fruit and citrus production.. Twenty variables of fruit and citrus oriented farms corresponding to forty-one regions of the European Union were analyzed. Seven groups emerged from cluster analysis. Only two of them showed good perspectives. Regions in the South of the Community need an important modernization and restructuring process, which entails serious social consequences.

Argimon, Isabel

TI Titularidad y eficiencia relativa en las manufacturas espanolas. **AU** Artola, Concha; Argimon, Isabel.

Arrunyada, Benito

PD March 2000. **TI** The Quasi-Judicial Role of Large Retailers: An Efficiency Hypothesis of Their Relation with Suppliers. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 445; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 29. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** K12, L14, L22, L81, M31. **KW** Retailing. Distribution. Contracts. Efficiency.
AB The paper explores an efficiency hypothesis regarding the contractual process between large retailers, such as Wal-Mart and Carrefour, and their suppliers. The empirical evidence presented supports the idea that large retailers play a quasi-judicial role, acting as "courts of first instance" in their relationships with suppliers. In this role, large retailers adjust the terms of trade to on-going changes and sanction performance failures, sometimes delaying payments. A potential abuse of their position is limited by the need for re-contracting and preserving their reputations. Suppliers renew their confidence in their retailers on a yearly basis, through writing new contracts. This renovation contradicts the alternative hypothesis that suppliers are expropriated by large retailers as a consequence of specific investments.

PD March 2000. **TI** Audit Quality: Attributes, Private

Safeguards and the Role of Regulation. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 452; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** K22, K23, L15, L50, M40. **KW** Auditing. Quality. Self-Enforcement. Regulation. Diversification.

AB This article examines the private mechanisms used to safeguard quality in auditing, with a view to defining rules capable of facilitating the performance of market forces. An outline is given of a general theory of private quality assurance in auditing, based on the use of quasi-rents to self-enforce quality dimensions. Particular attention is paid to the role of fee income diversification as the key ingredient of private incentives for audit quality. The role of public regulation is then situated in the context defined by the presence of these safeguard mechanisms. This helps in defining the content of rules and the function of regulatory bodies in facilitating and strengthening the productive operation of the market. By making sense of the interaction between regulation, quality attributes and private safeguards, the analysis helps to evaluate the relative merits of different regulatory options.

PD January 1999. **TI** Ownership and Performance in Car Distribution. **AU** Arrunyada, Benito; Vazquez, Luis. **AA** Arrunada: Universitat Pompeu Fabra. Vazquez: University of Salamanca. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 348; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** L14, L22, L23, L81. **KW** Car Distribution. Networks. Ownership. Franchises. Management.

AB We compare the financial performance of a sample of 223 car distributors organized either as dealerships or as subsidiaries directly owned by manufacturers. We test if independently owned dealerships, in which there is less separation between ownership and control, provide better incentives for local management. We observe that average profitability of dealerships is over 22.5 percent higher than that of directly owned outlets. Labor productivity is also higher by over 8.6 percent, whereas average labor cost is lower by 16 percent. Controlling for market variables and other possible causes does not change the difference in profitability and only slightly reduces the differences in the other indicators.

PD November 1999. **TI** The Provision of Non-Audit Services by Auditors: Let the Market Evolve and Decide. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 423; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** K22, K23, L84, M40. **KW** Auditing. Professional Services. Non-Audit Services. Multidisciplinary Firms. Accounting.

AB The provision of non-audit services by auditors to their audit clients reduces total costs, increases technical competence and motivates more intense competition. Furthermore, these services do not necessarily damage auditor independence nor the quality of non-audit services. This assessment leads to recommending that legislative policy should aim at facilitating the development and use of the safeguards provided by the free action of market forces. Regulation should thus aim to enable the parties -- audit firms, self-regulatory bodies and audit clients -- to discover through competitive market interaction both the most efficient mix of services and the corresponding quality safeguards, adjusting for the costs and benefits of each possibility. Particular emphasis is placed on the role played by fee income diversification and the enhancement, through disclosure rules, of market incentives to diversify.

PD November 1999. **TI** Contractual Allocation of Decision Rights and Incentives: The Case of Automobile Distribution. **AU** Arrunyada, Benito; Garicano, Luis; Vazquez, Luis. **AA** Arrunyada: Universitat Pompeu Fabra. Garicano: University of Chicago. Vazquez: Universidad de Salamanca. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 424; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 27. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D82, K12, L14, L22, L81. **KW** Franchising. Contracts. Self-Enforcement. Incentives. Automobiles.

AB We analyze empirically the allocation of rights and monetary incentives in automobile franchise contracts. These contracts substantially restrict the decision rights of dealers and grant manufacturers extensive contractual completion and enforcement powers, converting the manufacturers, de facto, in a sort of quasi-judiciary instance. Variation in the allocation of decision rights and incentive intensity is explained by the incidence of moral hazard in the relation. In particular, when the cost of dealer moral hazard is higher and the risk of manufacturer opportunism is lower, manufacturers enjoy more discretion in determining the performance required from their dealers and in using mechanisms such as monitoring, termination and monetary incentives to ensure such performance is provided. We also explore the existence of interdependencies between the different elements of the system and find some complementarities between completion and termination rights, and between monitoring rights and the intensity of incentives.

TI Causes of Subcontracting: Evidence from Panel Data on Construction Firms. **AU** Gonzalez, Manuel; Arrunyada, Benito; Fernandez, Alberto.

Artola, Concha

PD January 2000. **TI** Identifying Labour Market Dynamics Using Labour Force Survey Data. **AU** Artola, Concha; Bell, Una-Louise. **AA** Artola: Banco de Espana. Bell: Universita degli Studi di Roma "Tor Vergata". **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9922; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 32. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C42, C82, J63, J64. **KW** Classification Errors. Survey Data. Labor Market Flows. Unemployment. Employment Flows.

AB Little is known about either the quality of the underlying data or the appropriateness of the standard methodologies frequently used to analyze labor market dynamics in Europe (the retrospective and matched files approaches). This paper is a first attempt to fill these gaps. The results of the authors' survey validation work suggest that, due to problems of recall error and heterogeneous survey design, the retrospective approach tends to result in a considerable number of spurious transitions being recorded. Whilst the use of quasi- longitudinal LFS data should in theory overcome such problems, issues of sample attrition and, more importantly, misclassification error, tend to result once again in significant over-reporting of labor market transitions. These results emphasize the need to allow for the underlying error structure of LFS data in empirical studies of labor market dynamics, and draw into question the findings of existing work which fails to do so. The authors conclude by providing an illustrative example of one of the ways in which the error probability rates estimated in section 2.2 can be used to adjust the underlying data, so as to correct for potential errors arising from the use of the matched files approach.

PD January 1998. **TI** Titularidad y eficiencia relativa en las manufacturas espanolas. **AU** Artola, Concha; Argimon, Isabel. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9824; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 14. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** G32, L32, L33, L60. **KW** Public Firms. Productive Efficiency. Ownership Structure. Technical Efficiency.

AB It tries to isolate the effect of public or private ownership on firms' efficiency. In order to test the impact of the participation of the public sector in a firm's capital, a technical efficiency index, based on labor productivity, is constructed. Using the information provided on Spanish manufacturing firms by the Central Balance Sheet Data Office of the Bank of Spain for the year 1994, it is shown that only when public ownership exceeds 50% is there a significant decrease in efficiency.

Ashenfelter, Orley

PD January 1999. **TI** Schooling, Intelligence, and Income in America: Cracks in the Bell Curve. **AU** Ashenfelter, Orley; Rouse, Cecilia. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6902; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** I21, J24, J31. **KW** Education. Returns to Schooling. Human Capital. Wages. Income.

AB One of the best documented relationships in economics is the link between education and income: higher educated people have higher incomes. Advocates argue that education provides skills, or human capital, that raises an individual's productivity. Critics argue that the documented relationship is not causal. This essay reviews the evidence on the relationship between education and income. The authors focus on recent studies that have attempted to determine the causal effect of education on income by either comparing income and education differences within families or using exogenous determinants of schooling in what are sometimes called "natural experiments." In addition, we assess the potential for education to reduce income disparities by presenting evidence on the return to education for people of differing family backgrounds and measured ability. The results of all these studies are surprisingly consistent: they indicate that the return to schooling is not caused by an omitted correlation between ability and schooling. Moreover, the authors find no evidence that the return to schooling differs significantly by family background or by the measured ability of the student.

PD February 1999. **TI** Do Unemployment Insurance Recipients Actively Seek Work? Randomized Trials in Four U.S. States. **AU** Ashenfelter, Orley; Ashmore, David; Deschenes, Olivier. **AA** Ashenfelter: Princeton University and National Bureau of Economic Research. Ashmore: Ashenfelter & Ashmore. Deschenes: Princeton University. **SR** National Bureau of Economic Research Working Paper: 6982; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** C93, J64, J65. **KW** Unemployment Insurance. Work Effort. Experiments. Job Search.

AB In the last two decades, U.S. policies have moved from the use of incentives to the use of sanctions to promote work effort in social programs. Surprisingly, except for anecdotes, there is very little systematic evidence of the extent to which sanctions applied to the abusive use of social entitlements result in greater work effort. In this paper we report the results of randomized trials designed to measure whether stricter enforcement and verification of work search behavior alone decrease unemployment (UI) claims and benefits. These experiments were designed to explicitly test claims based on non- experimental data, that a prime cause of overpayment is the failure of claimants to actively seek work. Our results provide no support for the view that the failure to actively seek work has been a cause of overpayment in the UI system.

Ashmore, David

TI Do Unemployment Insurance Recipients Actively Seek Work? Randomized Trials in Four U.S. States. **AU** Ashenfelter, Orley; Ashmore, David; Deschenes, Olivier.

Athey, Susan

PD September 1999. **TI** Optimal Collusion With Private Information. **AU** Athey, Susan; Bagwell, Kyle. **AA** Athey: Massachusetts Institute of Technology and National Bureau of Economic Research. Bagwell: Columbia University and National Bureau of Economic Research. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/17; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 57. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C72, C73, D82, L13, L41. **KW** Collusion. Cartel Design. Repeated Games. Private Information. Mechanism Design.

AB The authors consider an infinitely-repeated Bertrand game, in which prices are perfectly observed and each firm receives a privately- observed, i.i.d. cost shock in each period. Productive efficiency is possible only if high-cost firms are willing to relinquish market share. In the most profitable collusive schemes, firms implement productive efficiency, and high-cost firms are favored with higher expected market share in future periods. If types are discrete, there exists a discount factor strictly less than one above which first-best profits can be attained purely through history-dependent reallocation of market share between equally-efficient firms. The authors provide further characterizations and several computational examples. They next examine different institutional features.

They find that firms may find explicit communication about costs beneficial after some histories but not others. They show that if firm-level behavior is not publicly observable, the best collusive scheme sacrifices all productive efficiency. Finally, if firms can make explicit side-payments and these entail any inefficiency, then optimal collusive equilibria are non-stationary and thus involve the use of future market-share favors.

PD October 1999. **TI** Innovation and the Emergence of Market Dominance. **AU** Athey, Susan; Schmutzler, Armin. **AA** Athey: Massachusettts Institute of Technology and National Bureau of Economic Research. Schmutzler: Universitat Zurich. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/18; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 42. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C70, L11, L13, L41, O30. **KW** Oligopoly Games. Strategic Substitutes. Investment. Increasing Dominance. Market Concentration.

AB This paper analyzes a model of oligopolistic competition with ongoing investment. It incorporates the following models as special cases: incremental investment, patent races, learning-by-doing, and network externalities. The authors investigate circumstances under which a firm with low costs or high quality will extend its initial lead through further cost-reducing or quality-improving investments. In many commonly-studied oligopoly games, such investments are strategic substitutes. The authors derive a new comparative statics result that applies to games with strategic substitutes, and they use the result to derive conditions under which leading firms invest more than lagging firms. They show that the conditions are satisfied in a variety of commonly-studied oligopoly models. They also highlight plausible countervailing effects from two distinct sources. First, leading firms may find it more costly than others to achieve the same increment to their state. This force is particularly salient in many models of patent races. Second, countervailing effects may arise in dynamic games with more than two firms, when firms are sufficiently patient.

Atkeson, Andrew

TI Money, Interest Rates, and Exchange Rates With Endogenously Segmented Asset Markets. **AU** Alvarez, Fernando; Atkeson, Andrew; Kehoe, Patrick J.

Atkinson, A. B.

PD August 2000. **TI** A European Social Agenda: Poverty Benchmarking and Social Transfers. **AA** Nuffield College, Oxford. **SR** EUROMOD Working Paper: EM3/00; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 7. **PR** US $10/5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** F42, H50, I32, I38. **KW** Poverty. Social Transfers. Social Inclusion. Children. Microsimulation.

AB Development of the social dimension of Europe was advanced by the Lisbon Summit in March 2000, and this paper considers the future direction of social policy. The first step towards a social agenda could take the form of benchmarking, with Member States learning from best performance in the Union: this step would be parallel to the first phase of the Maastricht process towards macroeconomic convergence. Initially, this benchmarking would focus on financial poverty. The European countries which perform best in terms of reducing poverty tend to have higher social spending. Such statistical performance indicators need however to be accompanied by evaluation of the relationship between policy instruments and poverty reduction, showing the trade-off between poverty reduction and social spending at the level of individual policies. More targeted schemes may allow sizable expenditure savings but at the cost of increased discentives; the design of Europe's social agenda has to confront well-known issues of economic trade-offs: economic and social policy cannot be divorced.

Atkinson, Tony

PD September 1999. **TI** Microsimulation and the Formulation of Policy: A Case Study of Targeting in the European Union. **AU** Atkinson, Tony; Bourguignon, Francois; O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca. **AA** Atkinson: Nuffield College, Oxford. Bourguignon: DELTA, Paris. O'Donoghue and Sutherland: University of Cambridge. Utili: University of Rome "Tor Vergata". **SR** EUROMOD Working Paper: EM2/99; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 15. **PR** US $10/5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** C15, C81, D31, H55, I38. **KW** European Union. Microsimulation. Minimum Pensions. Poverty. Income Distribution.

AB This paper reports results from a prototype European tax-benefit microsimulation model. The model is used to examine the distributional impact of a simulated policy reform: the introduction of a European Minimum Pension. In particular it asks how far such a policy is composition of the bottom of the European income distribution is sensitive to assumptions about the comparability of incomes across countries and between households of different types. The authors conclude that the formulation of policy for the protection of Europe's poorest people requires an appreciation, not only of the composition and location of this group, but also of the assumptions that have been used to identify it.

Auten, Gerald

PD January 1999. **TI** Charitable Giving and Income Taxation in a Life-Cycle Model: An Analysis of Panel Data. **AU** Auten, Gerald; Sieg, Holger; Clotfelter, Charles. **AA** Auten: U.S. Treasury. Sieg: Duke University. Clotfelter: Duke University and NBER. **SR** Duke University Department of Economics Working Paper: 99/03; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 30. **PR** no charge. **JE** C33, D12, D91, H24. **KW** Charitable Donations. Life Cycle Models. Incentive Effects. Taxation. Permanent Income.

AB Recent econometric studies of the effect of taxes on charitable giving have called into question the behavioral parameters derived from cross-section models. These studies imply that taxes affect contributions primarily by influencing their timing, not their long-term levels. This paper seeks to address this issue by modeling charitable giving in a life-cycle model, with special reference to the effect of taxes and income. It employs a simple two-step estimator that provides consistent estimates of both persistent and transitory effects of income and prices on charitable giving. The authors estimate the model using a 12-year panel of individual tax returns collected by the Internal Revenue Service. The empirical findings indicate that persistent income shocks have substantially larger impacts on charitable behavior than transitory shocks. Additionally, there are substantial effects of persistent changes in the tax prices. Estimates of the elasticity with respect to the persistent component of price range from -0.6 to -1.1. While these are indeed smaller than conventional estimates, they would nevertheless imply that tax reforms have long-lasting effects on giving. The authors also estimate the variances of both transitory and persistent shocks.

Azoulay, Pierre

TI Network Effects and Diffusion in Pharmaceutical Markets: Antiulcer Drugs. **AU** Berndt, Ernst R.; Pindyck, Robert S.; Azoulay, Pierre.

Bagwell, Kyle

TI Optimal Collusion With Private Information. **AU** Athey, Susan; Bagwell, Kyle.

Baker, George P.

PD December 1998. **TI** CEO Incentives and Firm Size. **AU** Baker, George P.; Hall, Brian J. **AA** Harvard Business School and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6868; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 32. **PR** $5.00. **JE** J24, J31, J33, J44, M12. **KW** Chief Executive Officers. Incentives. Compensation. Labor Productivity. Firm Size.

AB Confusion exists about how to measure the strength of CEO incentives, and how to reconcile the enormous differences in pay sensitivities between executives in large and small firms. The authors show that while one measure of CEO incentives (the dollar change in CEO wealth per dollar change in firm value) falls by a factor of ten between firms in the smallest and largest deciles in their sample, another measure of CEO incentives (the value of CEO equity stakes) increases by roughly the same magnitude. The authors resolve the confusion about which of these measures better reflects CEO incentives by developing and solving a model that allows CEO productivity to differ for firms of different sizes. The crucial parameter is shown to be the elasticity of CEO productivity with respect to firm size. The empirical results suggest that CEO marginal products rise significantly, and overall CEO incentives are roughly constant or decline slightly with firm size. The authors also show that the appropriate measure of incentives depends on the type of CEO activity being considered. Finally, using a multi-task model, the authors discuss the implication of their findings for the design of control systems.

Baker, Laurence

PD January 1999. **TI** Managed Care and Medical Technology Growth. **AU** Baker, Laurence; Spetz, Joanne. **AA** Baker: Stanford University and National Bureau of Economic Research. Spetz: Public Policy Institute of California. **SR** National Bureau of Economic Research Working Paper: 6894; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** G22, I11, I18, O33. **KW** Technological Change. Health Care. Managed Care. Hospitals.

AB Many questions about technology growth and development in health care call for a broad-based characterization of technology availability. This paper explores the possibility of producing aggregated estimates of technology availability by constructing an index of technology availability in hospitals. The index is based on the number of services provided by a hospital, weighted by how rare those services are. The index is used to examine the relationship between managed care and technology availability in hospitals. The authors find that managed care may have slowed technology growth in the mid 1980s, but in the early 1990s they find little evidence that technology growth in areas with high-HMO market share is any slower than growth in lower market share areas. To the extent that the index captures variation in the costs of new technologies, this finding leaves open the question of whether managed care can help control long term cost growth by slowing technology adoption. The authors also discuss the general strengths and weaknesses of indices of the type we develop. Nonetheless, this exercise shows that it is feasible to develop and analyze hospital technology indices if aggregated information about technologies is appropriate to the research question.

Baker, Michael

PD May 1999. **TI** The Retirement Behavior of Married Couples: Evidence from the Spouse's Allowance. **AA** University of California, Davis and NBER. **SR** National Bureau of Economic Research Working Paper: 7138; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 28. **PR** $5.00. **JE** H55, J22, J26. **KW** Retirement. Public Pensions. Labor Supply. Spouse's Allowance.

AB I examine the effects of the introduction of the Spouse's Allowance to the Canadian Income Security (IS) system on the retirement behavior of couples. This program was effectively targeted at females in couples attempting to live on a single pension. It allowed qualifying spouses to receive the age related benefits of the IS system at age 60, up to five years earlier than other members of the population. This policy intervention provides an excellent opportunity to investigate how income security programs affect the timing of retirement, and how programs targeted at one spouse can affect the behavior of the other. The results indicate that the introduction of the Allowance is associated with a relative increase in the labor force rates of 6 to 7 percentage points among males in eligible couples. Eligible females did not share the rising employment rates over the 1970s experienced by their counterparts (of the same age) who were not eligible for the Spouse's Allowance.

Bakos, Yannis

PD November 1999. **TI** Electronic Commerce in the Retail Brokerage Industry: Trading Costs of Internet Versus Full Service Firms. **AU** Bakos, Yannis; Lucas, Henry C., Jr..; Oh, Wonseok; Viswanathan, Sivakumar; Simon, Gary; Weber, Bruce. **AA** Bakos, Lucas, Jr., Oh, Viswanathan and Simon: New York University. Weber: City University of New York. **SR** New York University, Salomon Center Working Paper: S/00/01; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 29.

PR $5.00 each; $100.00 yearly subscription. **JE** G12, G24. **KW** Electronic Brokerage. Retail Brokerage. Securities. Transparency. Trading Costs.

AB Electronic brokerages on the Internet represent one of the most successful examples of electronic commerce. According to economic theory, prices of commodities like securities should converge to one price in a market with the transparency of the Internet. A review of published commissions for online brokers shows that this "law of one price" does not appear to hold for the commissions charged by retail brokers. This paper explores one possible explanation for these differences in commissions. The authors test whether the total cost of trading, including commissions and savings based on the quality of execution, obeys the law of one price. In a carefully designed experiment, the authors simultaneously purchased or sold 100 share lots of stock using a voice-broker, an expensive online broker and an inexpensive online broker in each trial. They found relatively few price improvements, which are a measure of execution quality. The difference among brokers in obtaining price improvements was not statistically significant. The brokers do exhibit statistically significant differences in total trading costs; at a volume of 100 shares commission costs dominate execution quality. The authors explore the implications of the findings for larger lot sizes.

Balaban, Rita A.

TI U.S. Wages in General Equilibrium: The Effects of Prices, Technology, and Factor Supplies, 1963-1991. **AU** Harrigan, James; Balaban, Rita A.

Baldwin, Richard E.

PD January 1999. **TI** The Core-Periphery Model and Endogenous Growth: Stabilising and De- Stabilising Integration. **AU** Baldwin, Richard E.; Forslid, Rikard. **AA** Baldwin: Graduate Institute of International Studies and National Bureau of Economic Research. Forslid: Lund University. **SR** National Bureau of Economic Research Working Paper: 6899; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** F15, F23, F43, R10, R30. **KW** Economic Geography. Location. Growth. Agglomeration. Economic Integration.

AB We present a model where long-run growth and industrial location are jointly endogenous by introducing Romerian growth into a Krugmanesque economic geography model. We show that growth is a powerful destabilizing force, but inter-regional learning spillovers are a stabilizing force. Moreover, including endogenous growth allows a broader view of integration. While traditionally seen only in terms of trade costs, many aspects of economic integration are more naturally viewed as lowering the cost of trading information rather than goods, i.e. as reducing the extent to which learning externalities are localized. Raising learning spillovers is stabilizing, so integration may encourage geographic dispersion (the traditional result is that integration tends to encourage agglomeration). This may be useful for evaluating real-world regional policies -- e.g. subsidization of universities, technical colleges and high-technology industrial parks in disadvantaged regions -- that are aimed at combating the localization of learning externalities. Finally we show that agglomeration of industry is favorable to growth and that this growth effect can mitigate, but not reverse, losses suffered by residents of the periphery when catastrophic agglomeration occurs.

PD January 1999. **TI** Two Waves of Globalisation: Superficial Similarities, Fundamental Differences. **AU** Baldwin, Richard E.; Martin, Philippe. **AA** Baldwin: Graduate Institute of International Studies and National Bureau of Economic Research. Martin: Graduate Institute of International Studies. **SR** National Bureau of Economic Research Working Paper: 6904; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** F01, F15, F22, F40, R10. **KW** Economic Integration. International Trade. Capital Flows. Commercial Policy. Income Convergence.

AB This paper looks at the two waves of globalization (roughly 1820- 1914 and 1960-present) focusing on key economic facts (trade, investment, migration, capital flows, industrialization/de- industrialization, and income convergence/divergence), economic beliefs and policymaking environments. The two waves are superficially similar but are fundamentally different. Chief similarities include aggregate trade and capital flow ratios, and the importance of reductions in barriers to international transactions. The fundamental difference lies in the impact that these reductions had on trade in goods versus trade in ideas. Initial conditions constitute another important difference. Before the first wave, all the world was poor and agrarian. When the second wave began, it was sharply divided between rich and poor nations.

Baldwin, Robert E.

PD March 1999. **TI** Inferring Relative Factor Price Changes From Quantitative Data. **AA** University of Wisconsin-Madison and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7019; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** E24, F10, F20, F41, J31. **KW** International Trade. Production Functions. Wages. Factor Prices. Skill.

AB This paper considers the appropriateness of using such quantitative measures as changes in the factor content of trade and the behavior of factor proportions within versus among industries to draw inferences about changes in relative factor prices. The conclusion reached is that only under special assumptions are such linkages justified. Using these special assumptions of Cobb-Douglas or CES production functions and preferences, a final section of the paper presents empirical estimates of how trade may have affected the U.S. wage gap between more educated and less educated workers in recent years.

Banerjee, Abhijit V.

PD July 1999. **TI** Reputation Effects and the Limits of Contracting: A Study of the Indian Software Industry. **AU** Banerjee, Abhijit V.; Duflo, Esther. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/14; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 53. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** L14, L22, L86. **KW** Reputation. Contracting. Software. Renegotiation.

AB This paper examines evidence of the role that reputation plays in determining contractual outcomes. We conduct an empirical analysis of the Indian customized software industry. We analyze a data set containing detailed information about

230 projects carried out by 125 software firms that we had previously collected. The evidence supports the view that reputation matters. Ex-ante contracts as well as the outcome after ex-post renegotiation vary with firms' characteristics plausibly associated with reputation. We argue that this pattern is not consistent with optimal risk sharing and propose a model of the industry where reputation determines contractual outcomes, whose predictions are consistent with several facts observed in the data. We argue that there is no obvious alternative explanation to the patterns present in the data.

PD October 1999. **TI** Land Reforms: Prospects and Strategies. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/24; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 40. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** H23, O10, Q15, Q16. **KW** Land Reform. Agency Costs. Agriculture. Redistribution.
AB The paper is in two parts. The first part tries to understand the case for redistributive land reforms. The authors argue that there is relatively persuasive evidence showing that redistributing land may promote equity as well as efficiency. They then suggest that it is, nevertheless, unclear, given that all forms of redistribution cost money as well as bureaucratic and political capital, that redistributing land is the best way to redistribute. The second part of the paper takes as given that it is desirable to redistribute land, and discusses strategies for achieving such redistribution. The authors argue that, for the most part, redistribution should be based on a uniform land ceiling and not discriminate between different types of landlords, but violations of the land ceiling may be permitted if the buyer is willing to pay a high enough price. The authors also argue that land reform programs should be accompanied by agricultural extension programs and emergency income support programs. They argue in favor of allowing renting out redistributed land but restricting sales of such land. Finally they argue that market-assisted land reforms and tenancy reforms are possible alternative strategies.

Barisone, Giacomo

PD February 2000. **TI** Are Our FEERs Justified? **AU** Barisone, Giacomo; Driver, Rebecca L.; Wren-Lewis, Simon. **AA** Barisone and Wren-Lewis: University of Exeter. Driver: Bank of England. **SR** University of Exeter, Department of Economics Discussion Paper: 00/02; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 25. **PR** no charge. **JE** C23, F31. **KW** Exchange Rates. Purchasing Power Parity. Unit Roots. Panel Data. Cointegration.
AB The Fundamental Equilibrium Exchange Rate (FEER) method of calculating an equilibrium real exchange rate is the most widely used alternative to PPP. This paper presents the first comprehensive historical test of FEER calculations for six major economies, using estimates for the last twenty years. We focus on unit root and cointegration techniques both at the individual country level and jointly using panel based estimation. Specifically, we test whether real exchange rates cointegrate with time series for the FEER with a coefficient of unity, so that the difference between the FEER and the real exchange rate is stationary. Even at an individual country level, the results provide support for the FEER, particularly in Canada, the UK and Germany. Panel unit root tests suggest that the real exchange rate and FEER cointegrate. Overall the results suggest that, with the possible exception of the US, the FEER approach represents an improvement over PPP in explaining medium to long term trends in the real exchange rates of the major industrialized countries.

Barrett, Richard

PD January 2000. **TI** A New Approach to Rights in Social Choice Theory Which Incorporates Utilitarianism. **AU** Barrett, Richard; Petron-Brunel, Anne; Salles, Maurice. **AA** Barrett: University of Birmingham. Petron-Brunel and Salles: Universite de Caen. **SR** University of Birmingham, Department of Economics Discussion Paper: 00/01; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 26. **PR** 2 pounds ($4); no charge to academics. **JE** D63, D71. **KW** Rights. Utilitarianism. Social Choice.
AB This paper axiomatizes a modified utilitarian aggregation rule under which different weights are assigned to utilities in different rights categories. The relationship between actions and the allocation of utility to rights categories is investigated. Application is made to two famous examples which appear in the social choice literature.

PD January 1998. **TI** Water Charges and the Cost of Metering. **AU** Barrett, Richard; Sinclair, Peter J. N. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/05; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 20. **PR** 2 pounds ($4); no charge to academics. **JE** H42, Q25, Q28. **KW** Water Consumption. Metering. Renewable Resources. Optimal Pricing.
AB The policy of allowing households to choose whether to have their water consumption metered is investigated. A simple model is constructed, in terms of which it is shown that such a policy is optimal within an appropriate range of parameter values for the demand and supply of water. Outside this range, no households should be metered if supply is sufficiently high, and all households in the opposite case. The optimal price of water and optimal fixed water charges are determined, in the context of the model, and their properties investigated. The results are found to be robust with respect to a two- period extension of the model.

Barth, Marvin J., III.

PD May 2000. **TI** The Cost Channel of Monetary Transmission. **AU** Barth, Marvin J., III..; Ramey, Valerie A. **AA** Barth: Federal Reserve Board of Governors. Ramey: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/08; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 29. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** E31, E32, E44, E51. **KW** Money Supply Shocks. Business Cycles. Inflation.
AB This paper presents evidence that the "cost channel" may be an important part of the monetary transmission mechanism. We argue that if working capital is an essential component of

production and distribution, monetary contractions can affect output through a supply channel as well as the traditional demand-type channels. We specify an industry equilibrium model and use it to interpret the results of a VAR analysis. We find that following a monetary contraction, many industries exhibit periods of falling output and rising price-wage ratios, consistent with a supply shock in our model. We also show that the effects are noticeably more pronounced during the period before 1979.

Basak, Suleyman

PD October 1999. **TI** Value-at-Risk Based Risk Management: Optimal Policies and Asset Prices. **AU** Basak, Suleyman; Shapiro, Alexander. **AA** Basak: University of Pennsylvania. Shapiro: New York University. **SR** New York University, Salomon Center Working Paper: S/99/41; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 27. **PR** $5.00 each; $100.00 yearly subscription. **JE** G11, G12, C61, D51. **KW** Risk Management. Portfolio Choice. Asset Pricing. Volatility. Value- at-Risk.

AB This paper analyzes optimal, dynamic portfolio and wealth/consumption policies of utility maximizing investors who must also manage market- risk exposure using a given risk-management model. We focus on the industry standard, the Value-at-Risk (VaR) based risk management, and find that VaR risk managers often optimally choose a larger exposure to risky assets than non risk managers, and consequently incur larger losses, when losses occur. We suggest an alternative risk management model, based on the expectation of a loss, to remedy the shortcomings of VaR. A general-equilibrium analysis reveals that the presence of VaR risk managers in a pure-exchange economy amplifies the stock-market volatility at times of down markets (and low output) and attenuates the volatility at times of up markets.

Bates, David S.

PD January 1999. **TI** Financial Markets' Assessment of EMU. **AA** University of Iowa and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6874; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** F33, F36. **KW** European Monetary Union. Financial Markets. Interest Rates. Central Banks.

AB This article reviews the assumptions and methodologies underlying "EMU probability calculators," which infer from financial data the probability of specific countries joining the European Monetary Union. Some historical evidence is presented in support of the expectations hypothesis for intra-European interest rate differentials underlying most calculators, while various potential biases are deemed negligible. The various EMU calculators differ primarily in their scenarios for intra-European interest rate differentials conditional upon EMU not occurring. This article also discusses what can be inferred from financial data regarding future policies of the European Central Bank.

Baveja, Alok

PD September 1999. **TI** A Resource-Constrained Optimal Control Model for Crackdown on Illicit Drug Markets. **AU** Baveja, Alok; Feichtinger, Gustav; Hartl, Richard F.; Haunschmied, Josef L.; Kort, Peter M. **AA** Baveja: Rutgers University. Feichtinger and Haunschmied: University of Technology, Austria. Hartl: University of Vienna. Kort: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9985; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 28. **PR** no charge. **JE** C61, K42. **KW** Crackdown Enforcement. Illicit Drug Markets. Optimal Control. Illegal Behavior. Law.

AB In this paper we present a budget-constrained optimal control model aimed at finding the optimal enforcement profile for a street-level, illicit drug crackdown operation. The objective is defined as minimizing the number of dealers dealing at the end of the crackdown operation, using this as a surrogate measure of residual criminal activity. Analytical results show that optimal enforcement policy will invariably use the budget resources completely. Numerical analysis using realistic estimates of parameters shows that crackdowns normally lead to significant results within a matter of a week, and if they do not, it is likely that they will be offering very limited success even if pursued for a much longer duration. We also show that a ramp-up enforcement policy will be most effective in collapsing a drug market if the drug dealers are risk-seeking, and the policy of using maximum enforcement as early as possible is usually optimal in the case when the dealers are risk averse or risk neutral. The work then goes on to argue that the underlying model has some general characteristics that are both reasonable and intuitive, allowing possible applications in focused, local enforcement operations on other similar illegal activities.

Bayard, Kimberly

PD March 1999. **TI** Why are Racial and Ethnic Wage Gaps Larger for Men than for Women? Exploring the Role of Segregation Using the New Worker-Establishment Characteristics Database. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R. **AA** Bayard: University of Maryland. Hellerstein: University of Maryland and National Bureau of Economic Research. Neumark: Michigan State University and National Bureau of Economic Research. Troske: University of Missouri-Columbia. **SR** National Bureau of Economic Research Working Paper: 6997; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** J15, J16, J31, J71. **KW** Wages. Wage Gaps. Segregation. Gender.

AB The authors examine the possible sources of the larger racial and ethnic wage gaps for men than for women in the U.S. Specifically, using a newly created employer-employee matched data set containing workers in essentially all occupations, industries, and regions, the authors examine whether these wage differences can be accounted for by differences between men and women in the patterns of racial and ethnic segregation within occupation, industry, establishments, and occupation- establishment cells. To the best of their knowledge, this is the first paper to examine segregation by race and ethnicity at the level of establishment and job cell. The results indicate that greater segregation between Hispanic men and white men than between Hispanic women and white women accounts for essentially all of the higher Hispanic-white wage gap for men. In addition, the authors' estimates indicate that greater segregation between black and white men than between black and white women accounts for a sizable share (one-third to one-half) of the higher black-white wage gap for men. The results imply that segregation is an important contributor to the lower wages paid to black and Hispanic men than to white men with similar individual characteristics.

PD March 1999. **TI** New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R. **AA** Bayard: University of Maryland. Hellerstein: University of Maryland and National Bureau of Economic Research. Neumark: Michigan State University and National Bureau of Economic Research. Troske: University of Missouri-Columbia. **SR** National Bureau of Economic Research Working Paper: 7003; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 43. **PR** $5.00. **JE** J16, J18, J31. **KW** Gender. Wages. Segregation. Discrimination.

AB We assemble a new matched employer-employee data set covering essentially all industries and occupations across all regions of the U.S. We use this data set to re-examine the question of the relative contributions to the overall sex gap in wages of sex segregation vs. wage differences by sex within occupation, industry, establishment, and occupation-establishment cells. This new data set is especially useful because earlier research on this topic relied on data sets that covered only a narrow range of industries, occupations, or regions. Our results indicate that a sizable fraction of the sex gap in wages is accounted for by the segregation of women into lower-paying occupations, industries, establishments, and occupations within establishments. Nonetheless, a substantial part of the sex gap in wages remains attributable to the individual's sex. This latter finding contrasts sharply with the conclusions of previous research (especially Groshen, 1991), which indicated that sex segregation accounted for essentially all of the sex wage gap. Further research into the sources of within- establishment within-occupation sex wage differences is therefore much more important than previously thought.

Becht, Marco

PD October 1999. **TI** Shareholding Cascades: The Separation of Ownership and Control in Belgium. **AU** Becht, Marco; Chapelle, Ariane; Renneboog, Luc. **AA** Becht: ESCARE and Universite Libre de Bruxelles. Chapelle: Banque Bruzelles Lambert and Universite Libre de Bruxelles. Renneboog: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9996; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 43. **PR** no charge. **JE** G32. **KW** Ownership. Control. Corporate Governance. Belgium.

AB This paper analyzes the control of Belgian listed companies. The analysis reveals that control of listed companies in Belgium is highly concentrated. Business groups, holding companies, and voting pacts, play an important role in bringing about this concentration. The main characteristics of the Belgian corporate ownership and equity market can be summarized as follows: (i) few -- merely 140 -- Belgian companies are listed on the Brussels stock exchange, (ii) there is a high degree of ownership concentration with an average largest direct shareholding of 45%, (iii) holding companies and families, and to a lesser extent industrial companies, are the main investor categories whose share stakes are concentrated into powerful control blocks through business group structures and voting pacts, (iv) control is levered by pyramidal and complex ownership structures, and (v) there is a market for share stakes.

Beetsma, Roel

PD November 1999. **TI** Inflation Targets and Debt Accumulation in a Monetary Union. **AU** Beetsma, Roel; Bovenberg, A. Lans. **AA** Beetsma: University of Amsterdam and CEPR. Bovenberg: Tilburg University and CEPR. **SR** Tilburg CentER for Economic Research Discussion Paper: 99108; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 48. **PR** no charge. **JE** E52, E58, E61, E62, F33. **KW** Monetary Policy. Fiscal Policy. Monetary Union. Inflation Targets. Debt Targets.

AB This paper explores the interaction between centralized monetary policy and decentralized fiscal policy in a monetary union. Discretionary monetary policy suffers from a failure to commit. Moreover, decentralized fiscal policymakers impose externalities on each other through the influence of their debt policies on the common monetary policy. These imperfections can be alleviated by adopting state-contingent inflation targets (to combat the monetary policy commitment problem) and shock-contingent debt targets (to internalize the externalities due to decentralized fiscal policy).

Bekaert, Geert

PD January 1999. **TI** Conditioning Information and Variance Bounds on Pricing Kernels. **AU** Bekaert, Geert; Liu, Jun. **AA** Bekaert: Stanford University and National Bureau of Economic Research. Liu: Stanford University. **SR** National Bureau of Economic Research Working Paper: 6880; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** C22, C32, G11, G12. **KW** Conditioning Information. Asset Pricing. Mutual Funds. Volatility. Consumption Growth.

AB This paper shows how to use conditioning information optimally to construct a sharper unconditional Hansen-Jagannathan (1991) bound. The approach is different from that of Gallant, Hansen and Tauchen (1990), but both approaches yield the same bound when the conditional moments are known. Unlike Gallant, Hansen and Tauchen, the authors' approach is robust to misspecification of the first and second conditional moments. Potential applications include testing dynamic asset pricing models, studying the predictability of asset returns, diagnosing the accuracy of competing models for the first and second conditional moments of asset returns, dynamic asset allocation, and mutual fund performance measurement. The illustration in this article starts with the familiar Hansen-Singleton (1983) setup of an autoregressive model for consumption growth and bond and stock returns. The authors' innovation is to add time-varying volatility to the model. Both an unconstrained version and a version with the restrictions of the standard consumption-based asset pricing model imposed serve as the data- generating processes to illustrate the behavior of the bounds.

Belfield, C. R.

PD January 1999. **TI** Does Job Matching Explain Job Satisfaction? Evidence for UK Graduates. **AU** Belfield, C.

R.; Harris, Richard D. F. **AA** Belfield: University of Birmingham. Harris: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/07; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 20. **PR** no charge. **JE** I21, J23, J24, J28, J41. **KW** Job Matching. Job Satisfaction. Higher Education. Human Capital.

AB This paper builds on recent work describing relative job satisfaction. Using an ordered probit estimation technique we examine the job satisfaction of recent UK graduates. We focus primarily on explaining job satisfaction in terms of individual matching to jobs, with the match depending on reservation returns, information sets and job offer rates. Only limited support can be found for the argument that job matching explains higher job satisfaction. In addition, we stylize graduates as a peer group who form satisfaction levels based on their rankings relative to each other. We then examine whether or not education quality which raises peer group status and increases the job offer rate is systematically related to job satisfaction. A number of proxies for education quality, intensity, achievement and type are examined. The results broadly support the hypothesis that job satisfaction is neutral across graduates of different education qualities.

Bell, Una-Louise

TI Identifying Labour Market Dynamics Using Labour Force Survey Data. **AU** Artola, Concha; Bell, Una-Louise.

Belvaux, Gaetan

PD February 2000. **TI** Modelling Practical Lot-Sizing Problems as Mixed Integer Programs. **AU** Belvaux, Gaetan; Wolsey, Laurence. **AA** Belvaux: Cockerill-Sambre, Flemalle, Belgium. Wolsey: CORE and INMA. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/09; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 20. **PR** $100 per year. **JE** C61, C63, D21, D24, L20. **KW** Lot-Sizing. Production Planning. Mixed Integer Programming. Valid Inequalities. Reformulation.

AB In spite of the remarkable improvements in the quality of general purpose mixed integer programming software, the effective solution of a variety of lot-sizing problems depends crucially on the development of tight formulations for the special problem features occurring in practice. After reviewing some of the basic preprocessing techniques for handling safety stocks and multilevel problems, we discuss a variety of aspects arising particularly in small and large bucket (time period) models such as start-ups, changeovers, minimum batch sizes, choice of one or two set-ups per period, etc. A set of applications are described that contain one or more of these special features, and some indicative computational results are presented. Finally to show the variety of techniques that are needed, a slightly different (supply chain) application is presented, for which the a priori addition of some simple mixed integer inequalities based on aggregation leads to important improvements in the results.

Bende-Nabende, A.

PD June 2000. **TI** Productivity Analysis in Asia-Pacific Economic Cooperation Region: A Multi-Country Translog Comparative Analysis, 1965-97. **AU** Bende-Nabende, A.; Ford, Jim L.; Sen, Somnath. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 00/03; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 37. **PR** 2 pounds ($4); no charge to academics. **JE** C53, E60, F40, O11, O53. **KW** Total Factor Productivity. APEC. Innovation. Technology. Output Growth.

AB We employ the total factor productivity (TFP) index in growth accounting as a proxy for productivity growth to compare patterns and sources of output growth for a group of proximate countries in Asia- Pacific Economic Cooperation region. The estimates indicate that output growth has benefited from both TFP and factor input contributions albeit with differing magnitudes. Whereas TFP and capital are the dominant contributors to output growth in Japan and the Tiger economies, capital and labor emerge as the dominant contributors in the Baby Tiger economies. In addition, Japanese productivity has on the average been growing over the past decade. Moreover, there is an indication that the contribution of TFP is concomitant with the countries' levels of economic development and that the association between TFP and capital is negative indicating that technology is embodied in capital. It also emerges that FDI may be playing a prominent role of promoting the contribution of TFP probably through its new technology spillover effects.

Bennett, Paul

PD November 1999. **TI** Enhancing the Liquidity of U.S. Treasury Securities in an Era of Surpluses. **AU** Bennett, Paul; Garbade, Kenneth; Kambhu, John. **AA** Bennett and Kambhu: Federal Reserve Bank of New York. Garbade: New York University. **SR** New York University, Salomon Center Working Paper: S/00/04; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 40. **PR** $5.00 each; $100.00 yearly subscription. **JE** E62, G12, G13, H63. **KW** Liquidity. Treasury Debt. Bonds. Maturity. Borrowing Costs.

AB This paper presents three proposals intended to enhance liquidity in the market for U.S. Treasury debt: making principal and interest STRIPS maturing on a common date fungible with each other, aligning the maturity of 2-year debt with either bill maturities or the maturities of longer-term debt, and establishing a facility to allow market participants to exchange (with the Department of the Treasury) single- payment securities with similar, but not identical, maturities. The proposals would enhance liquidity by improving the substitutability of identical and very nearly identical Treasury liabilities, and by increasing the integration of the markets for bills, notes, bonds and STRIPS. The proposals would be complementary to, rather than a substitute for, the initiative to buy back outstanding debt announced in August, 1999.

Bentler, Peter M.

TI A Scaled Difference Chi-Square Test Statistic for Moment Structure Analysis. **AU** Satorra, Albert; Bentler, Peter M.

Bentolila, Samuel

TI Will EMU Increase Eurosclerosis? **AU** Saint-Paul, Gilles; Bentolila, Samuel.

PD April 1999. **TI** Explaining Movements in the Labor Share. **AU** Bentolila, Samuel; Saint-Paul, Gilles. **AA** Bentolila: CEMFI and CEPR. Saint-Paul: Universitat Pompeu Fabra and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 374; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 32. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E24, E25, J31. **KW** Labor Share. Capital-Output Ratio. Wages.

AB In this paper we study the evolution of the labor share in the OECD since 1970. We show it is essentially related to the capital-output ratio; that this relationship is shifted by factors like the price of imported materials or the skill mix; and that discrepancies between the marginal product of labor and the real wage (due to, e.g., product market power, union bargaining, and labor adjustment costs) cause departures from it. We provide estimates of the model with panel data on 14 industries and 14 countries for 1973-93 and use them to compute the evolution of the wage gap in Germany and the US.

Bergin, Paul R.

PD March 1999. **TI** Pricing to Market, Staggered Contracts, and Real Exchange Rate Persistence. **AU** Bergin, Paul R.; Feenstra, Robert C. **AA** Bergin: University of California, Davis. Feenstra: University of California, Davis and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7026; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** F31, F41. **KW** Exchange Rates. Pricing to Market. Contracts. Open Economy. Translog Preferences.

AB This paper offers an explanation for the persistence observed in real exchange rate movements. The model combines pricing to market behavior with sticky prices generated by staggered contracts. A translog preference structure is used to enhance both features. The paper finds that openness limits the degree of endogenous persistence. Nevertheless, the model under reasonable parameter values can replicate the serial correlation of real exchange rate data. Further, significant exchange rate volatility can be generated, and this is amplified by the presence of endogenous persistence.

Berk, Jonathan B.

PD January 1999. **TI** Statistical Discrimination in a Competitive Labor Market. **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6871; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 36. **PR** $5.00. **JE** E24, J23, J24, J31, J71. **KW** Job Selection. Discrimination. Labor Markets. Wages. Employment Determination.

AB This paper studies the effect of employee job selection in a model of statistical discrimination in a competitive labor market. In an economy in which there are quality differences between groups, a surprisingly strong condition is required to guarantee discrimination against the worse qualified group -- MLRP must hold. In addition, because of the self-selection bias induced by competition, the resulting discrimination is small when compared to the magnitude of the underlying quality differences between groups. In cases in which the discrimination results because employers' ability to measure qualifications differs from one group to another, the conditions under which one group is discriminated against are much weaker. In general, the group employers know least about is always favored. The economic impact of discrimination that is derived from quality differences between groups is shown to be quite different to the economic impact of discrimination that derives from differences in employer familiarity between groups. In the latter case, for a set of equally qualified employees, it is possible for members of the group that is discriminated against to have higher wages.

Bermin, Hans-Peter

PD November 1999. **TI** Local Volatility Changes in the Black-Scholes Model. **AU** Bermin, Hans-Peter; Kohatsu-Higa, Arturo. **AA** Bermin: Lund University. Kohatsu-Higa: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 416; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 39. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** G13. **KW** Contingent Claims. Hedging. Local Vega Index. Malliavin Calculus. Stochastic Flows.

AB In this paper we address a problem arising in risk management; namely the study of price variations of different contingent claims in the Black-Scholes model due to anticipating future events. The method we propose to use is an extension of the classical Vega index, i.e. the price derivative with respect to the constant volatility, in the sense that we perturb the volatility in different directions. This directional derivative, which we denote the local Vega index, will serve as the main object in the paper and one of the purposes is to relate it to the classical Vega index. We show that for all contingent claims studied in this paper the local Vega index can be expressed as a weighted average of the perturbations in volatility. In the particular case where the interest rate and the volatility are constant and the perturbation is deterministic, the local Vega index is an average of this perturbation multiplied by the classical Vega index. We also study the well-known goal problem of maximizing the probability of a perfect hedge and show that the speed of convergence is in fact dependent on the local Vega index.

Bernard, Andrew B.

PD May 1999. **TI** Exporting and Productivity. **AU** Bernard, Andrew B.; Jensen, J. Bradford. **AA** Bernard: Yale School of Management and NBER. Jensen: Carnegie Mellon University. **SR** National Bureau of Economic Research Working Paper: 7135; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** F10, F43, L60, O47. **KW** Exports. Productivity Growth. Manufacturing. International Trade. Open Economy.

AB Exporting is often touted as a way to increase economic growth. This paper examines whether exporting has played any role in increasing productivity growth in U.S. manufacturing. Contemporaneous levels of exports and productivity are indeed positively correlated across manufacturing industries. However, tests on industry data show causality from productivity to exporting but not the reverse. While exporting plants have substantially higher productivity levels, the authors find no evidence that exporting increases plant productivity growth rates. However, within the same industry, exporters do grow faster than non- exporters in terms of both shipments and employment. The authors show that exporting is associated with the reallocation of resources from less efficient to more efficient plants. In the aggregate, these reallocation effects are quite large, making up over 40% of total factor productivity growth in the manufacturing sector. Half of this reallocation to more productive plants occurs within industries and the direction of the reallocation is towards exporting plants. The positive contribution of exporters even shows up in import-competing industries and non-tradable sectors.

Berndt, Ernst R.

PD March 1999. **TI** Network Effects and Diffusion in Pharmaceutical Markets: Antiulcer Drugs. **AU** Berndt, Ernst R.; Pindyck, Robert S.; Azoulay, Pierre. **AA** Berndt and Pindyck: Massachusetts Institute of Technology and National Bureau of Economic Research. Azoulay: Massachusetts Institute of Technology. **SR** National Bureau of Economic Research Working Paper: 7024; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** D12, I11, L65. **KW** Network Effects. Pharmaceuticals. Herd Behavior. Market Diffusion. Brand Valuation.

AB We examine the role of network effects in the demand for pharmaceuticals at both the brand level and for a therapeutic class of drugs. These effects emerge when use of a drug by others conveys information about its efficacy and safety to patients and physicians. This can lead to herd behavior where a particular drug -- not necessarily the most efficacious or safest -- can come to dominate the market despite the availability of close substitutes, and can also affect the rate of market diffusion. Using data for H2-antagonist antiulcer drugs, we examine two aspects of these effects. First, we use hedonic price procedures to estimate how the aggregate usage of a drug affects brand valuation. Second, we estimate discrete-time diffusion models at both the industry and brand levels to measure the impact on rates of diffusion and market saturation.

Bernstein, Jeffrey I.

PD January 1999. **TI** Factor Adjustment, Quality Change, and Productivity Growth for U.S. Manufacturing. **AU** Bernstein, Jeffrey I.; Mamuneas, Theofanis P.; Pashardes, Panos. **AA** Bernstein: Carleton University and National Bureau of Economic Research. Mamuneas and Pashardes: University of Cyprus. **SR** National Bureau of Economic Research Working Paper: 6877; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 25. **PR** $5.00. **JE** D24, J24, L60, O47. **KW** Manufacturing. Adjustment Costs. Quality. Factor Prices. Productivity.

AB This paper accounts for quality improvements and adjustment costs in all inputs to U.S. manufacturing production. Adjustment processes for non-capital inputs are slower than previously recognized. Annual adjustment percentages are: labor 77, capital 30, energy 20, and materials 21. Factor prices should be adjusted for quality improvements to reflect higher marginal products. The percentage increases in marginal products from quality improvements are: labor 0.25, capital 0.30, energy 2.13, and materials 0.92. Observed input growth should be adjusted for quality improvements. Unadjusted input growth causes efficiency-based productivity growth rates to exceed observed productivity growth in the slowdown period of 1974-1995.

Bertail, Patrice

PD January 2000. **TI** A Subsampling Approach to Estimating the Distribution of Diverging Statistics with Applications to Assessing Financial Market Risks. **AU** Bertail, Patrice; Haefke, Christian; Politis, Dimitris N.; White, Halbert. **AA** Bertail: INRA-CORELA. Haefke, Politis and White: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/01; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 24. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C14, C49, G11. **KW** Resampling Methods. Extreme Value Statistics. Value at Risk. Portfolio Selection.

AB In this paper we propose a subsampling estimator for the distribution of statistics diverging at either known or unknown rates when the underlying time series is strictly stationary and strong mixing. Based on our results we provide a detailed discussion of how to estimate extreme order statistics with dependent data and present two applications to assessing financial market risk. Our method performs well in estimating Value at Risk and provides a superior alternative to Hill's estimator in operationalizing Safety First portfolio selection.

Bertrand, Marianne

PD January 1999. **TI** From the Invisible Handshake to the Invisible Hand? How Import Competition Changes the Employment Relationship. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6900; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 36. **PR** $5.00. **JE** E24, F41, G30, J31, J41. **KW** Implicit Contracts. Wages. Open Economy. Corporate Finance. Employment.

AB There is a popular perception that increased competitive pressures in U.S. product markets are turning the employment relationship from one governed by implicit agreements into one governed by the market. This paper examines whether changes in import competition indeed affect the use of implicit agreements between employers and workers in a key aspect of their relationship, wage setting. The author focuses on the extent to which employers, after negotiating workers' wages upon hire, subsequently shield those wages from external labor market conditions. If increased competition induces a switch from these implicit agreements to spot market wage setting, then: (1) the sensitivity of workers' wages to the current unemployment rate should increase as competition increases; and (2) the sensitivity of workers' wages to the unemployment rate prevailing upon hire should decrease as competition increases. The author finds evidence supporting both of these predictions. She then shows more directly that increased financial pressure on employers is one mechanism behind these effects. Moreover, declines in corporate returns following increased competition directly increase the sensitivity of wages to the current unemployment rate.

Bessen, James

PD January 2000. **TI** Sequential Innovation, Patents, and Imitation. **AU** Bessen, James; Maskin, Eric. **AA** Bessen: Research on Innovation. Maskin: Harvard University and Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/01; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 26. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** O31, O32, O34, O38. **KW** Innovation. Patents. Imitation. Research and Development.

AB How could such industries as software, semiconductors, and computers have been so innovative despite historically weak patent protection? We argue that if innovation is both sequential and complementary -- as it certainly has been in those industries -- competition can increase firms' future profits thus offsetting short-term dissipation of rents. A simple model also shows that in such a dynamic industry, patent protection may reduce overall innovation and social welfare. The natural experiment that occurred when patent protection was extended to software in the 1980s provides a test of this model. Standard arguments would predict that R&D intensity and productivity should have increased among patenting firms. Consistent with our model, however, these increases did not occur. Other evidence supporting our model includes a distinctive pattern of cross-licensing in these industries and a positive relationship between rates of innovation and firm entry.

Betts, Julian R.

PD May 2000. **TI** The Impact of School Resources on Women's Earnings and Educational Attainment: Findings from the National Longitudinal Survey of Young Women. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 96/24R; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 25. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** I20, J24, J31. **KW** Earnings. Education. Human Capital. School Quality. Wages.

AB The paper measures the impact of high school resources on women's educational attainment and earnings. No link emerges between education and school resources -- as measured by the pupil-teacher ratio, spending per pupil, teachers' starting salaries or books per student. For white women, no significant connection between school resources and wages is found. But school inputs are in several cases significantly and positively related to black women's wages. Wage elasticities with respect to school inputs are uniformly larger for black women. Finally, the impact of school resources on earnings remains constant or in some cases weakens as workers grow older.

Bisin, Alberto

TI Optimal Financial Integration and Security Design. **AU** Acharya, Viral V.; Bisin, Alberto.

PD May 1999. **TI** A Note on the Convergence to Competitive Equilibria in Economies with Moral Hazard. **AU** Bisin, Alberto; Gottardi, Piero; Guaitoli, Danilo. **AA** Bisin: New York Unviersity. Gottardi: Universita' di Venezia and Yale Unviersity. Guaitoli: Universitat Pompeu Fabra and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 381; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 22. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D82, D50, G20. **KW** Asymmetric Information. Exclusivity. Competitive Equilibrium. General Equilibrium. Nash Equilibrium.

AB In a simple economy with moral hazard we consider different assumptions on the observability of agents' trades and examine, for each of them, whether the associated competitive equilibria can be obtained as the limit, as the number of intermediaries gets large, of the Nash equilibria of the economy where strategic financial intermediaries compete by issuing contracts. While with symmetric information and with complete observability of trades convergence always holds, we show that the same is not true when the observability of agents' trades is more limited.

Bjxrndal, Endre

PD September 1999. **TI** Weighted Allocation Rules for Standard Fixed Tree Games. **AU** Bjxrndal, Endre; Koster, Maurice; Tijs, Stef. **AA** Bjxrndal: Norwegian School of Economics and Business Administration. Koster and Tijs: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9979; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 31. **PR** no charge. **JE** C71. **KW** Cooperative Games. Tree Games. Core. Weighted Shapley Values. Nucleolus.

AB In this paper we consider the case of standard fixed tree games, where each vertex unequal to the root is inhabited by exactly one player. We present two weighted allocation rules, the weighted down-home allocation and the weighted neighbor-home allocation, both inspired by the painting story in Maschler et al. (1995). We show, in a constructive way, that the core equals both the set of weighted down-home allocations and the set of weighted neighbor allocations. Since every weighted down- home allocation specifies a weighted Shapley value (Kalai and Samet (1988)) in a natural way, and vice versa, our results provide an alternative proof, which is constructive, of the fact that the core of a standard fixed tree game equals the set of weighted Shapley values. The class of weighted neighbor allocations is a generalization of the nucleolus, in the sense that the latter is in this class as the special member where players have all equal weights.

Blake, John

TI The Ethics of Creative Accounting: Some Spanish Evidence. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI The Ethics of Creative Accounting. **AU** Amat, Oriol; Blake, John; Dowds, Jack.

TI The Struggle Against Creative Accounting: Is "True and Fair View" Part of the Problem or Part of the Solution? **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI The Case for a New Accounting Research Agenda in Spain. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI Dimensions of National Culture and the Accounting Environment -- The Spanish Case. **AU** Amat, Oriol; Blake, John; Wraith, Philip; Oliveras, Ester.

TI Spanish Auditors and the 'True and Fair View'.

AU Amat, Oriol; Blake, John; Oliveras, Ester.

TI Variations in National Management Accounting Approaches. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI Environmental Factors Giving Rise to Variations in National Management Accounting Practice. **AU** Amat, Oriol; Blake, John; Wraith, Philip.

Blank, Rebecca M.

PD March 1999. **TI** Financial Incentives for Increasing Work and Income Among Low-Income Families. **AU** Blank, Rebecca M.; Card, David; Robins, Philip K. **AA** Black: Northwestern University and National Bureau of Economic Research. Card: University of California, Berkeley and National Bureau of Economic Research. Robins: University of Miami. **SR** National Bureau of Economic Research Working Paper: 6998; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 42. **PR** $5.00. **JE** I38, H53, J22. **KW** Financial Incentives. Welfare. Poverty. Labor Supply. Employment.

AB This paper investigates the impact of financial incentive programs, which have become an increasingly common component of welfare programs. The authors review experimental evidence from several such programs. Financial incentive programs appear to increase work and raise income (lower poverty), but cost somewhat more than alternative welfare programs. In particular, windfall beneficiaries -- those who would have been working anyway -- can raise costs by participating in the program. Several existing programs limit this effect by targeting long-term welfare recipients or by limiting benefits to full-time workers. At the same time, because financial incentive programs transfer support to working low-income families, the increase in costs due to windfall beneficiaries makes these programs more effective at alleviating poverty and raising incomes. Evidence also indicates that combining financial incentive programs with job search and job support services can increase both employment and income gains. Non-experimental evidence from the Earned Income Tax Credit (EITC) and from state Temporary Assistance to Needy Families (TANF) programs with enhanced earnings disregards also suggests that these programs increase employment.

Blonigen, Bruce A.

PD June 1999. **TI** In Search of Substitution Between Foreign Production and Exports. **AA** University of Oregon and NBER. **SR** National Bureau of Economic Research Working Paper: 7154; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** F21, F23, F41. **KW** Multinational Firms. Exports. International Trade. Foreign Direct Investment. Automobiles.

AB Are foreign production and exports substitutes or complements? The continuing globalization of production makes the question of the relationship between trade and foreign direct investment ever more important. Standard theory of the multinational corporation (MNC) assumes substitution, while previous empirical work examining the relationship has generally found strong evidence of complementarity. This study examines product-level data, which more closely fits the assumption of a single-product firm often used in MNC theory, and finds substantial evidence for both a substitution and a complementarity effect between affiliate production and exports with Japanese automobile parts for the U.S. market. The author also tests for and finds evidence of substitution using product-level data on a set of Japanese-produced final consumer goods. Thus, product-level data allows one to separately identify substitution from complementarity effects (here from vertical production relationships), rather than try to infer them from estimates using more aggregate data. In this sense, the paper highlights the importance of matching the level of data aggregation with the hypotheses being tested.

Bohn, Henning

PD March 1999. **TI** Social Security and Demographic Uncertainty: The Risk Sharing Properties of Alternative Policies. **AA** University of California, Santa Barbara. **SR** National Bureau of Economic Research Working Paper: 7030; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 40. **PR** $5.00. **JE** G23, H55, J14, J26. **KW** Social Security. Pensions. Retirement. Demographics. Mortality.

AB As the U.S. population ages, the growing retiree-worker ratio increases the burden of public retirement systems. Is it efficient to maintain a defined benefit social security system? Should PAYGO benefits and private retirement savings be encouraged? The paper examines these questions in a neoclassical growth model with overlapping generations and demographic uncertainty. In case of shocks to the birth rate, the author finds that a defined-benefits social security system is more efficient ex-ante than a defined-contribution or privatized system. This is because small cohorts generally enjoy favorable wage and interest rate movements. They are in the labor force when the capital-labor ratio is high and they earn capital income when the capital-labor ratio is low. A defined benefit system helps to offset the effect of these factor price movements by imposing higher taxes on small cohorts. Neither defined-benefits nor its main alternative are fully efficient, however, because they all fail to adjust current retiree benefits in response to anticipated future demographic changes. In case of changes in life- expectancy, the efficient policy response depends on the predictability of deaths at the individual level and on the availability of annuities.

Bollerslev, Tim

TI The Distribution of Exchange Rate Volatility. **AU** Anderson, Torben G.; Bollerslev, Tim; Diebold, Francis X.; Labys, Paul.

Bolton, Patrick

PD September 1999. **TI** Predatory Pricing: Strategic Theory and Legal Policy. **AU** Bolton, Patrick; Brodley, Joseph F.; Riordan, Michael H. **AA** Bolton: Princeton University. Brodley: Boston University. Riordan: Columbia University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9982; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 137. **PR** no charge. **JE** K20, L13, L14, L40. **KW** Predatory Pricing. Law. Antitrust. Brooke Decision. Predation.

AB The authors begin in Part I by describing the uncertain foundations of present policy based on the judicial belief that predatory pricing is extremely rare or even economically irrational conduct and the tension this creates with modern economic analysis. Part II discusses current enforcement policy, its evolution and culmination in the Supreme Court's Brooke decision and, most recently, in proposed government Guidelines for airline predation. Part III outlines the authors' proposed strategic approach, setting forth elements to guide analysis in predatory pricing cases, including rules for prima facie liability and an expanded efficiencies defense. Parts IV through VI develop criteria for identifying predatory strategies, which the authors then apply to financial market predation in Part IV, to reputation effect predation in Part V, and to cost and demand signalling in Part VI. In Part VII the authors evaluate possible objections and counterstrategies.

Boone, Jan

PD August 1999. **TI** The Trade Off Between Sclerosis and Hold Up Problems: Rhenish vs. Anglosaxon Economies. **AU** Boone, Jan; Smulders, Sjak. **AA** Boone: Tilburg University and CPB Netherlands Bureau of Economic Policy Analysis. Smulders: Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9970; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 26. **PR** no charge. **JE** J41, J63, L14, L22, P51. **KW** Corporate Governance. Long Term Relationships. Deregulation. Firm Organization. Market Structure.

AB This paper presents a simple model to explain the relative advantages of market economies with high turnover of firms and those with low turnover rates but long-term relationships. The two types of economies, labeled Anglosaxon and Rhenish respectively, arise as two equilibria that can simultaneously exist in the model. We show that welfare is not necessarily higher in one of the two. A trade off exists between sclerosis and a hold up problem. Our main result is that deregulation in a Rhenish economy yields smaller effects on output than in an Anglosaxon economy.

Bordo, Michael D.

PD December 1998. **TI** What if Alexander Hamilton Had Been Argentinean? A Comparison of the Early Monetary Experiences of Argentina and the United States. **AU** Bordo, Michael D.; Vegh, Carlos A. **AA** Bordo: Rutgers University and National Bureau of Economic Research. Vegh: UCLA and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6862; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 41. **PR** $5.00. **JE** E52, E62, F41, N16, N26. **KW** Economic History. Fiscal Policy. Taxation. Inflation. War.

AB The contrast between the early nineteenth century Argentinean experience of high inflation and the American experience of low inflation is interpreted in terms of a dynamic monetary model of optimal taxation. It is argued that the two countries' experiences diverged because of the different constraints they faced in financing wartime government expenditures. In the presence of frequent wars, ever-tightening access to foreign capital, and an inadequate tax base, Argentina's use of the inflation tax may be viewed as an optimal solution to its wartime problems. By contrast, with the exception of the Revolutionary War, the absence of such constraints in the United States required full-tax smoothing, with only a temporary use of the inflation tax during wartime. Such policies were embodied in Alexander Hamilton's fiscal package of 1790, which allowed the United States to bond-finance most subsequent wartime expenditures.

Borjas, George J.

PD July 2000. **TI** Market Responses to Interindustry Wage Differentials. **AU** Borjas, George J.; Ramey, Valerie A. **AA** Borjas: Harvard University. Ramey: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/18; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 26. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** E24, J24, J31, J41, L16. **KW** Wage Differentials. Efficiency Wage Models. Interindustry Differences. Growth. Employment.

AB This paper examines the link between interindustry wage differentials and subsequent growth of industry variables such as employment, GDP and labor productivity. We find that industries that paid higher than average wages in 1959 experienced significantly lower employment growth and GDP growth in the subsequent 30 to 40 years, while at the same time experiencing higher-than-average growth in the capital-labor ratio and in labor productivity. We argue that the evidence is best explained by a non-competitive model of the interindustry wage structure, as both firms and the market respond to the wage rigidity implied by the long-run persistence of the interindustry wage structure.

Borm, Peter

PD June 1999. **TI** On the Convexity of Games Corresponding to Sequencing Situations with Due Dates. **AU** Borm, Peter; Fiestras-Janeiro, Gloria; Hamers, Herbert; Sanchez, Estela; Voorneveld, Mark. **AA** Borm, Hamers, and Voorneveld: CentER and Tilburg University. Fiestras-Janeiro and Sanchez: University of Vigo. **SR** Tilburg CentER for Economic Research Discussion Paper: 9949; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 25. **PR** no charge. **JE** C71. **KW** Sequencing Situations. Due Date Criteria. Cooperative Games. Convexity. Game Theory.

AB This paper considers sequencing situations with due date criteria. Three different types of criteria are considered: the weighted penalty criterion, the weighted tardiness criterion and the completion time criterion. The main focus is on convexity of the associated cooperative games.

TI Inventory Games. **AU** Meca, Ana; Timmer, Judith; Garcia-Jurado, Ignacio; Borm, Peter.

TI Congestion Games and Potentials Reconsidered. **AU** Voorneveld, Mark; Borm, Peter; Van Megen, Freek; Tijs, Stef; Facchini, Giovanni.

Bornstein, Gary

PD September 1999. **TI** The Effect of Intergroup Competition on Group Coordination: An Experimental Study. **AU** Bornstein, Gary; Gneezy, Uri; Nagel, Rosemarie. **AA** Bornstein: The Hebrew University of Jerusalem. Gneezy: University of Haifa. Nagel: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 393; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu.

PG 21. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE C72, C91, C92. KW Noncooperative Games. Coordination. Minimum Effort Game. Intergroup Competition. Experiments.

AB We report an experiment on the effect of intergroup competition on group coordination in the minimal-effort game (Van Huyck et al., 1990). The competition was between two 7-person groups. Each player in each group independently chose an integer from 1 to 7. The group with the higher minimum won the competition and each of its members was paid according to the game's original payoff matrix. Members of the losing group were paid nothing. In case of a tie, each player was paid half the payoff in the original matrix. This treatment was contrasted with two control treatments where each of the two groups played an independent coordination game, either with or without information about the minimum chosen by the outgroup. Although the intergroup competition does not change the set of strict equilibria, we found that it improved collective rationality by moving group members in the direction of higher-payoff equilibria. Merely providing group members with information about the minimal-effort level in the other group was not sufficient to generate this effect.

Bosch-Domenech, Antoni

TI One, Two, (Three), Infinity: Newspaper and Lab Beauty-Contest Experiments. AU Nagel, Rosemarie; Bosch-Domenech, Antoni; Satorra, Albert; Garcia-Montalvo, Jose.

PD January 1999. TI Credit Cycles in Theory and Experiment. AU Bosch-Domenech, Antoni; Saez-Marti, Maria. AA Bosch-Domenench: Universitat Pompeu Fabra. Saez-Marti: Stockholm School of Economics. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 351; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 32. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE C73, C78, C90, D82, E32. KW Cycles. Evolutionary Dynamics. Games. Experiments.

AB We test in the laboratory the potential of evolutionary dynamics as a predictor of actual behavior. To this end, we propose an asymmetric game -- which we interpret as a borrowerlender relation, study its evolutionary dynamics in a random matching set-up, and test its predictions. The model provides conditions for the existence of credit markets and credit cycles. The theoretical predictions seem to be good approximations of the experimental results.

PD March 1999. TI Does Risk Aversion or Attraction Depend on Income? An Experiment. AU Bosch-Domenech, Antoni; Silvestre, Joaquim. AA Bosch-Domenech: Universitat Pompeu Fabra. Silvestre: University of California. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 361; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 11. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE C90, D80. KW Experimental Economics. Risk Aversion. Risk Attraction. Income Risks.

AB Does risk attitude (aversion or attraction) vary with the level of the income at risk? About half of our subjects chose to insure all levels, whereas another half chose instead not to insure low levels, but to insure high levels.

Bourguignon, Francois

TI Microsimulation and the Formulation of Policy: A Case Study of Targeting in the European Union. AU Atkinson, Tony; Bourguignon, Francois; O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca.

Bovenberg, A. Lans

TI Inflation Targets and Debt Accumulation in a Monetary Union. AU Beetsma, Roel; Bovenberg, A. Lans.

Bover, Olympia

PD February 1999. TI Another Look at Unemployment Duration: Long-Term Unemployment and Exit to a Permanent Job. AU Bover, Olympia; Gomez, Ramon. AA Bover: Banco de Espana. Gomez: Banco de Espana and European Central Bank. SR Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9903; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. PG 66. PR single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. JE E24, E32, J64, J65. KW Unemployment Duration. Permanent Employment. Temporary Jobs. Long- Term Unemployed. Hazard Rates.

AB This paper studies first the determinants of unemployment duration distinguishing between exits to temporary and permanent jobs. Second, it studies the determinants of unemployment duration for long-term unemployed, allowing for exits to inactivity or study in addition to exits to employment. Multiple-exit discrete duration models are estimated by maximum likelihood and alternative models and estimation methods are compared. It is found that hazard rates to temporary employment are much higher than the ones to a permanent job. In both cases receiving unemployment benefits has an important negative effect. Business cycle effects are also significant. In the case of exits to permanent jobs, their magnitude is similar (but of opposite sign) to that of unemployment benefits, but it is smaller in the case of temporary jobs. As for the long-term unemployed, their hazard rates to employment are much higher than the ones to inactivity or study, except for very specific groups. Individual characteristics have a very important effect on hazard rates from long-term unemployment and the effect of receiving benefits loses significance relative to the influence of the macroeconomic conditions.

PD May 1999. TI Learning about Migration Decisions from the Migrants: An Exercise in Endogenous Sampling and Complementary Datasets. AU Bover, Olympia; Arellano, Manuel. AA Bover: Banco de Espana. Arellano: Centro de Estudios Monetarios y Financieros (CEMFI). SR Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9908; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. PG 43. PR single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. JE C25, J61, R23. KW Intra-Regional Migration. Employment in Services. Discrete Choice. Endogenous Sampling. Unemployment.

AB The determinants of the remarkable increase in intra-regional migrations since the 1980's in Spain, using a large administrative micro dataset on migrants, are investigated. Conditional migration probabilities are identified by comparing the migrants' joint distribution of characteristics to the corresponding distribution from the Spanish Labour Force Survey. The proportion of employment in the service industry, unemployment, house prices and education, all have an important positive effect on the individual probabilities of intra-regional migration.

PD May 1999. **TI** Migrations in Spain : Historical Background and Current Trends. **AU** Bover, Olympia; Velilla, Pilar. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9909; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 40. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** F22, J61, R23. **KW** Migration. Empirical Results. Immigration. Regional Migration. Services Sector.

AB The authors review the different migration episodes in Spain since the beginning of the 20th century, with special emphasis on the pieces of empirical work that have tried to identify the factors behind them. Migrations abroad for the 1900-1950 and 1950-1973 periods are considered. Foreign immigration is also discussed. Special attention is devoted to internal migration, both to inter-regional and intra- regional flows. Since the early 1980's net inter-regional flows have fallen and, following the expansion of the welfare state, the traditionally poor and high unemployment regions have become net immigration regions, while the reverse has happened with the better off ones. Intra-regional migration, which has not received much attention so far, is also analyzed to understand its spectacular increase in all regions since 1982. This is associated with the increased employment opportunities in the services sector that has prompted moves (mainly within regions), mostly of skilled workers, towards larger towns where the new jobs are.

Brandts, Jordi

PD January 2000. **TI** Retribution in a Cheap-Talk Experiment. **AU** Brandts, Jordi; Charness, Gary. **AA** Brandts: Instituto de Analisis Economico (CSIC). Charness: Universitat Pompeu Fabra and University of California. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 437; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, C70, C91, D81, M14. **KW** Deception. Experiments. Fair Process. Punishment. Reciprocity.

AB We use a two-person 3-stage game to investigate whether people choose to punish or reward another player by sacrificing money to increase or decrease the other person's payoff. One player sends a message indicating an intended play, which is either favorable or unfavorable to the other player in the game. After the message, the sender and the receiver play a simultaneous two-by-two game. A deceptive message may be made, in an effort to induce the receiver to make a play favorable to the sender. Our focus is on whether receivers' rates of monetary sacrifice depend on the process and the perceived sender's intention, as is suggested by the literature on deception and procedural satisfaction. Models such as Rabin (1993), Sen (1997), and Charness and Rabin (1999) also permit rates of sacrifice to be sensitive to the sender's perceived intention, while outcome-based models such as Fehr and Schmidt (1999) and Bolton and Ockenfels (1997) predict otherwise. We find that deception substantially increases the punishment rate as a response to an action that is unfavorable to the receiver. We also find that a small but significant percentage of subjects choose to reward a favorable action choice made by the sender.

Brekelmans, Ruud

PD July 1999. **TI** Cancelling of Insurance Contracts. **AU** Brekelmans, Ruud; De Waegenaere, Anja. **AA** Brekelmans: Tilburg University. De Waegenaere: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9960; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 24. **PR** no charge. **JE** C11, C61, G22. **KW** Insurance. Claim Frequency. Canceling. Dynamic Programming. Bayesian Updating.

AB In this paper we consider an insurer who has incomplete information about the claim frequency of the risk process. He therefore calculates the premium on the basis of a prior distribution for the claim frequency. Future information might then reveal that it is no longer optimal for the insurer to continue to offer the insurance under the current conditions. We consider a model where, at certain points in time, the insurer can decide to cancel the insurance, possibly at the expense of canceling costs. The model is applicable to long-period, client tailored insurance contracts as well as insurance offered to large groups of insureds on a single period basis. We derive the optimal canceling policy and analyze the influence of the different model parameters on the expected lifetime of the insurance, the insurer's expected surplus, and the safety loading.

Bresnahan, Timothy F.

PD May 1999. **TI** Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence. **AU** Bresnahan, Timothy F.; Brynjolfsson, Erik; Hitt, Lorin M. **AA** Bresnahan: Stanford University and NBER. Brynjolfsson: Massachusetts Institute of Technology. Hitt: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 7136; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 25. **PR** $5.00. **JE** J23, J24, L20, M10, O30. **KW** Labor Demand. Skill. Technological Change. Information Technology. Production Organization.

AB Recently, the relative demand for skilled labor has increased dramatically. The authors investigate one of the causes, skill-biased technical change. Employers who use information technology (IT) often make complementary innovations in their organizations and in the services they offer. The authors hypothesis is that these co-inventions by IT users change the mix of skills that employers demand. Specifically, they test the hypothesis that it is a cluster of complementary changes involving IT, workplace organization and services that is the key skill-biased technical change. The authors examine new firm-level data linking several indicators of IT use, workplace organization, and the demand for skilled labor. In both a short-run factor demand framework and a production function framework, they find evidence for complementarity. IT use is complementary to a new workplace organization which includes broader job responsibilities for line workers, more decentralized decision-making, and more self-managing teams. In turn, both IT and that new organization are complements with worker skill, measured in a variety of ways. Further, the managers in the authors' survey believe that IT increases skill requirements and autonomy among workers in their firms.

Brodley, Joseph F.

TI Predatory Pricing: Strategic Theory and Legal Policy.
AU Bolton, Patrick; Brodley, Joseph F.; Riordan, Michael H.

Broseta, Bruno

TI Cognition and Behavior in Normal-Form Games: An Experimental Study. **AU** Costa-Gomes, Miguel; Crawford, Vincent P.; Broseta, Bruno.

Brown, Jeffrey R.

PD March 1999. **TI** The Role of Real Annuities and Indexed Bonds in an Individual Accounts Retirement Program. **AU** Brown, Jeffrey R.; Mitchell, Olivia S.; Poterba, James M. **AA** Brown: National Bureau of Economic Research. Mitchell: University of Pennsylvania and National Bureau of Economic Research. Poterba: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7005; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** G23, H55, J26. **KW** Retirement. Individual Accounts. Real Annuities. Social Security. Inflation.

AB This paper explores four issues concerning annuitization options that retirees might use in the decumulation phase of an "individual accounts" retirement saving system. First, the authors investigate the operation of both real and nominal annuity individual annuity markets in the United Kingdom. The widespread availability of real annuities in the U.K. dispels the argument that private insurance markets could not, or would not, provide real annuities to retirees. Second, the authors consider the current structure of two inflation-linked insurance products available in the United States, only one of which proves to be a real annuity. Third, they evaluate the potential of assets such as stocks, bonds, and bills, to provide retiree protection from inflation. Because equity real returns have been high over the last seven decades, a retiree who received income linked to equity returns would have fared very well on average. Nevertheless the authors cast doubt on the "inflation insurance" aspect of equity, since this is mainly due to stocks' high average return. Finally, they use a simulation model to assess potential retiree willingness to pay for real, nominal, and variable payout equity-linked annuities. For plausible degrees of risk aversion, inflation protection appears to have only modest value.

Brynjolfsson, Erik

TI Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence. **AU** Bresnahan, Timothy F.; Brynjolfsson, Erik; Hitt, Lorin M.

Buchmueller, Thomas

PD January 1999. **TI** Did Community Rating Induce an Adverse Selection Death Spiral? Evidence from New York, Pennsylvania and Connecticut. **AU** Buchmueller, Thomas; DiNardo, John. **AA** Buchmueller: University of California, Irvine. DiNardo: University of California, Irvine and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6872; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** G22, I11, I18. **KW** Health Care. Health Insurance. Community Rating. Adverse Selection. Government Policy.

AB Using data from the 1987 to 1996 March Current Population Surveys we find no evidence for the "conventional wisdom" that the imposition of pure community rating leads to an "adverse selection death spiral." Specifically, the percentage of individuals in small groups covered by health insurance did not fall in New York (which enacted community rating legislation in 1993) relative to either Pennsylvania (which enacted no insurance reform) or Connecticut (which enacted moderate insurance reform without imposing community rating). Consistent with the predictions of the simple Rothschild and Stiglitz (1975) framework, however, we find that the New York reforms appear to have had a significant impact on the structure of the New York insurance market. Specifically, New York has experienced a dramatic shift away from indemnity insurance toward HMOs. While this shift took place during a period of nationwide increases in the percentage with managed care, the increase in HMO penetration in New York's small group and individual markets was significantly greater than in Pennsylvania or Connecticut.

Bull, Jesse

PD June 2000. **TI** Evidence Disclosure and Verifiability. **AU** Bull, Jesse; Watson, Joel. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/16; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 19. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C70, D74, K10. **KW** *Contracting. Renegotiation. Side Contracts.* Coalition Proofness. Contract Enforcement.

AB We explore the conceptual basis of "verifiability" by explicitly modeling the process of evidence production in contractual relationships of complete information. Evidence is represented by documents, on the submission of which an enforcement authority conditions transfers between the contracting parties. Our analysis includes the opportunity for parties to engage in side-dealing and renegotiation during the enforcement phase. The central contracting problem involves determining whether a contract can be designed to induce given transfers as a function of the outcome of productive interaction. We study how this objective is constrained by the need to motivate parties to disclose documents during the enforcement phase. We prove the Full Disclosure Principle, justifying constraining attention to equilibria in which all documents are disclosed in every contingency. We also obtain insights on the implications of "positive" and "negative" evidence and we briefly discuss the relevance of our results to the design of legal institutions.

Burnside, Craig

PD May 1999. **TI** Hedging and Financial Fragility in Fixed Exchange Rate Regimes. **AU** Burnside, Craig; Eichenbaum, Martin; Rebelo, Sergio. **AA** Burnside: The World Bank. Eichenbaum and Rebelo: Northwestern University and NBER. **SR** National Bureau of Economic Research Working Paper: 7143; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** E44, F31, F41, G15, G21. **KW** Currency Crises. Banking Crises. Financial Markets. International Finance. Foreign Exchange.

AB Currency crises that coincide with banking crises tend to share four elements. First, governments provide guarantees to domestic and foreign bank creditors. Second, banks do not hedge their exchange rate risk. Third, there is a lending boom before the crises. Finally, when the currency/banking collapse occurs, interest rates rise and there is a persistent decline in output. This paper proposes an explanation for these regularities. We show that government guarantees lower interest rates and generate an economic boom. They also lead to a more fragile banking system; banks choose not to hedge exchange rate risk. When the fixed exchange rate is abandoned in favor of a crawling peg, banks go bankrupt, the domestic interest rate rises, real wages fall, and output declines.

Butcher, Kristin F.

PD February 1999. **TI** The Role of Deportation in the Incarceration of Immigrants. **AU** Butcher, Kristin F.; Piehl, Anne Morrison. **AA** Butcher: Boston College. Piehl: University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6974; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** $5.00. **JE** H79, J18, J61, K42. **KW** Immigration. Deportation. Law Enforcement. Incarceration.

AB Using data on all new admissions to California state prisons in 1986, 1990, and 1996, we find that the foreign born have a very different offense mix from native-born inmates, with foreigners much more likely to be serving time for drug offenses. We document and discuss many of the substantial changes in the enforcement environment over this period, including the war on drugs, changes in public law expanding the classes eligible for deportation, and increases in the level of resources appropriated for enforcement activities targeting deportable aliens. These developments have resulted in much greater attention by the Immigration and Naturalization Service (INS) to the incarceration of the foreign born. By 1996, the definition of "deportable" was such that it covered essentially all noncitizens in the California prison system. Throughout the period, those foreign-born inmates designated by the California Department of Corrections to be released to INS custody serve substantially (6-12 percent) longer terms (conditional upon sentence length) than natives or other "similar" foreigners. These longer terms of incarceration impose substantial costs on the state.

Butler, Monika

PD April 1999. **TI** Aging Anxiety: Much Ado About Nothing? **AU** Butler, Monika; Kirchsteiger, Georg. **AA** Butler: CentER and Tilburg University. Kirchsteiger: University of Vienna. **SR** Tilburg CentER for Economic Research Discussion Paper: 9937; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 31. **PR** no charge. **JE** H55, J14, J18, O30, O40. **KW** Social Security. Aging. Technological Progress. Public Pensions. Retirement.

AB Social security systems in most industrialized countries face severe financial problems due to adverse demographic changes. The increase in old-age dependency, however, will be spread over a period of approximately 50 years. The degree of technological progress necessary to offset the negative effects of aging might therefore be small. Using models with endogenous labor supply and with capital accumulation, we demonstrate that under plausible assumptions, current living standards can be maintained with a moderate rate of technological progress. The necessary rate of growth increases both in the size of the program and in the fraction of agents who exclusively depend on public pensions in retirement.

Caballero, Ricardo J.

PD May 2000. **TI** International Liquidity Management: Sterilization Policy in Illiquid Financial Markets. **AU** Caballero, Ricardo J.; Krishnamurthy, Arvind. **AA** Caballero: Massachusetts Institute of Technology and National Bureau of Economic Research. Krishnamurthy: Northwestern University. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/04; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 46. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E59, F31, F32, F34, G38. **KW** Capital Flows. Sterilization Policy. Monetary Policy. Balance Sheets. Sovereign Risk.

AB During the booms that precede crises in emerging economies, policy makers struggle to limit capital flows and their expansionary consequences. The main policy tool for this task is sterilizations. However, many argue that this policy may be counterproductive once the (over-) reaction of the private sector is considered. But what forces account for the private sector's reaction remain largely unexplained. This paper provides a model to discuss these issues. The authors emphasize the international liquidity management aspect of sterilization over the traditional monetary one. They demonstrate that policies to smooth expansions in anticipation of downturns can be Pareto improving in economies where domestic financial markets are underdeveloped. However, the greatest risk of policy arises in situations where policy is most needed -- that is, when financial markets are illiquid. The authors' mechanism is akin to the "implicit bailout" problem, although the central bank acts non-selectively and only intervenes through open markets in their model. The private sector's reaction to sterilization may lead to an expansion rather than the desired contraction in aggregate demand and to a bias toward short term capital inflows.

PD June 2000. **TI** Institutions, Restructuring, and Macroeconomic Performance. **AU** Caballero, Ricardo J.; Hammour, Mohamad L. **AA** Caballero: Massachusetts Institute of Technology and National Bureau of Economic Research. Hammour: DELTA and Centre for Economic Performance. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/02; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 39. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E24, E32, E44, G32, G33. **KW** Creative Destruction. Contracts. Labor Market Frictions. Liquidations. Business Cycles.

AB A growing body of new research has emphasized the macroeconomic consequences of transactional impediments in factor markets, and their role in the recurrent restructuring requirements of modern economies. We first review the

function institutional arrangements play in facilitating transactions and explore the macroeconomic consequences of poor institutions. As an application, we discuss the lessons that can be learnt from observed changes in the nature of unemployment in Europe. We then analyze the effect the institutional environment can have on macroeconomic restructuring. In light of this framework, we revisit the question of the relationship between recessions and restructuring activity, and review the recent evidence of reduced restructuring following recessions. We also discuss corroborating evidence from "merger waves" in the restructuring of corporate assets.

PD October 1999. **TI** The Cost of Recessions Revisited: A Reverse-Liquidationist View. **AU** Caballero, Ricardo J.; Hammour, Mohamad L. **AA** Caballero: Massachusetts Institute of Technology. Hammour: DELTA. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/22; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 37. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E24, E32, E44, G33, G34. **KW** Business Cycles. Unemployment. Job Creation. Restructuring. Liquidation.

AB The observation that liquidations are concentrated in recessions has long been the subject of controversy. One view holds that liquidations are beneficial in that they result in increased restructuring. Another view holds that liquidations are privately inefficient and essentially wasteful. This paper proposes an alternative perspective. Based on a combination of theory with empirical evidence on gross job flows and on financial and labor market rents, we find that, cumulatively, recessions result in reduced restructuring, and that this is likely to be socially costly once we consider inefficiencies on both the creation and destruction margins.

PD October 1999. **TI** Emerging Market Crises: An Asset Markets Perspective. **AU** Caballero, Ricardo J.; Krishnamurthy, Arvind. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. Krishnamurthy: Northwestern University. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/23; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 51. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E44, F31, G21, G31, O16. **KW** Capital Flows. Fire Sales. Financial Crises. Contracts. Corporate Governance.

AB The whole difference between a mild downturn and a deep crisis is the occurrence of sharp fire sales of domestic assets and possibly exchange rates, and the ensuing collapse in the balance sheets of both the financial and non-financial sectors. Why and how do such crises materialize? And why doesn't the private sector take appropriate precautions to avoid the dire consequences of crises? In this paper we argue that a poor contractual environment offers a parsimonious account of these and related phenomena present in emerging markets. The lack of precautions, on the other hand, is a consequence of weak domestic collateral, or underdeveloped domestic financial markets, which drive a wedge between the private and social valuation of assets appealing to foreign investors. Moreover, domestic banks are the mechanism by which firms with purely domestic collateral are able to access international markets. Thus, the banks' endogenous collapse as domestic assets depreciate, sharply reduces access to international financial markets and in so doing may trigger a feedback process with multiple equilibria features.

Cadle, P. J.

TI Portfolio Behaviour of Islamic Banks: A Case Study for Iran, 1984- 1994. **AU** Kagigi, K. A.; Ford, Jim L.; Cadle, P. J.; Makiyan, S. N.

Calvo, Guillermo A.

PD June 1999. **TI** Rational Contagion and the Globalization of Securities Markets. **AU** Calvo, Guillermo A.; Mendoza, Enrique G. **AA** Calvo: University of Maryland and NBER. Mendoza: Duke University and NBER. **SR** National Bureau of Economic Research Working Paper: 7153; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** F32, F34, F36, G11, G15. **KW** Financial Markets. Economic Integration. Contagion. Portfolio Choice. International Finance.

AB This paper argues that the globalization of securities markets may promote contagion among investors by weakening incentives for gathering costly country-specific information and by strengthening incentives for imitating arbitrary market portfolios. In the presence of short-selling constraints, the utility gain of gathering information at a fixed cost converges to a constant level and may diminish as securities markets grow. Moreover, if a portfolio manager's marginal cost for yielding below-market returns exceeds the marginal gain for above-market returns, there is a range of optimal portfolios in which all investors imitate arbitrary market portfolios and this range widens as the market grows. Numerical simulations suggest that these frictions can have significant quantitative implications and they may induce large capital flows in emerging markets.

Campbell, John Y.

PD March 1999. **TI** Investing Retirement Wealth: A Life-Cycle Model. **AU** Campbell, John Y.; Cocco, Joao F.; Gomes, Francisco J.; Maenhout, Pascal J. **AA** Campbell: Massachusetts Institute of Technology and National Bureau of Economic Research. Cocco, Gomes and Maenhout: Harvard University. **SR** National Bureau of Economic Research Working Paper: 7029; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** D91, G11, H55, J26. **KW** Saving. Retirement. Portfolio Choice. Life Cycle. Social Security.

AB If household portfolios are constrained by borrowing and short-sales restrictions, or by fixed costs of participating in risky asset markets, then alternative retirement savings systems may affect household welfare by relaxing these constraints. This paper uses a calibrated partial- equilibrium model of optimal life-cycle portfolio choice to explore the empirical relevance of these issues. In a benchmark case, we find ex- ante welfare gains equivalent to a 3.7% increase in consumption from the investment of half of retirement wealth in the equity market. The main channel through which these gains are realized is that the higher average return on equities permits a lower Social Security tax rate on younger households, which helps households smooth their consumption over the life cycle. There is a smaller welfare gain of 0.5% of consumption when Social Security tax rates are held constant. We also find that realistic heterogeneity of risk aversion and labor income risk can strongly affect optimal portfolio choice over the life cycle, which provides one argument for a privatized Social Security system with an element of personal portfolio choice.

PD May 1999. **TI** Dispersion and Volatility in Stock Returns: An Empirical Investigation. **AU** Campbell, John Y.; Lettau, Martin. **AA** Campbell: Harvard University and NBER. Lettau: Federal Reserve Bank of New York. **SR** National Bureau of Economic Research Working Paper: 7144; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** E32, G11, G12. **KW** Stock Returns. Dispersion. Volatility. Asset Pricing. Business Cycles.

AB This paper studies three different measures of monthly stock market volatility: the time-series volatility of daily market returns within the month; the cross-sectional volatility or "dispersion" of daily returns on industry portfolios, relative to the market, within the month; and the dispersion of daily returns on individual firms, relative to their industries, within the month. Over the period 1962-97 there has been a noticeable increase in firm-level volatility relative to market volatility. All the volatility measures move together in a countercyclical fashion. While market volatility tends to lead the other volatility series, industry-level volatility is a particularly important leading indicator for the business cycle.

Canova, Fabio

PD March 2000. **TI** The Macroeconomic Effects of German Unification: Real Adjustments and the Welfare State. **AU** Canova, Fabio; Ravn, Morten O. **AA** Canova: Universitat Pompeu Fabra, University of Southampton and CEPR. Ravn: London Business School, CEF, Universitat Pompeu Fabra and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 442; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 34. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** B41, E22, E32, F22, H23. **KW** Unification. Redistribution. Tax Distorsions. Welfare. Capital.

AB We study the effects of German unification in a model with capital accumulation, skill differences and a welfare state. We argue that this event is similar to a mass migration of low-skilled agents holding no capital into a foreign country. Absent a welfare state, we observe an investment boom, depressed output and employment conditions. Capital owners and high-skilled agents are willing to give up to 4% of per- capita consumption to favor unification. When a welfare state exists the investment boom disappears and the recession is prolonged. Now, with unification, capital owners and high-skilled agents lose 4% of per- capita consumption.

PD March 2000. **TI** Forecasting and Turning Point Predictions in a Bayesian Panel VAR Model. **AU** Canova, Fabio; Ciccarelli, Matteo. **AA** Canova: Universitat Pompeu Fabra, University of Southampton and CEPR. Ciccarelli: Universitat d'Alacant. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 443; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 24. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C11, C15, C53, E32, E37. **KW** Forecasting. Turning Points. Bayesian Methods. Vector Autoregressions. Monte Carlo Methods.

AB We provide methods for forecasting variables and predicting turning points in panel Bayesian VARs. We specify a flexible model which accounts for both interdependencies in the cross section and time variations in the parameters. Posterior distributions for the parameters are obtained for a particular type of diffusion, for Minnesota-type and for hierarchical priors. Formulas for multistep, multiunit point and average forecasts are provided. An application to the problem of forecasting the growth rate of output and of predicting turning points in the G-7 illustrates the approach. A comparison with alternative forecasting methods is also provided.

PD March 2000. **TI** On the Sources of Business Cycles in the G-7. **AU** Canova, Fabio; de Nicolo, Gianni. **AA** Canova: Universitat Pompeu Fabra. De Nicolo: Federal Reserve System. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 459; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 17. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C68, E32, F11. **KW** Structural Shocks. Business Cycles. Demand Disturbances. Dynamic Correlations. Impulse Responses.

AB This paper examines sources of cyclical movements in output, inflation and the term structure of interest rates. It employs a novel identification approach which uses the sign of the cross correlation function in response to shocks to catalog orthogonal disturbances. We find that demand shocks are the dominant source of output, inflation and term structure fluctuations in six of the G-7 countries. Within the class of demand disturbances, nominal shocks are dominant, but their importance declined after 1982. Furthermore, there are no significant differences in the proportion of term structure variability explained by different structural sources at different horizons.

PD October 1999. **TI** Testing for Convergence Clubs in Income Per-Capita: A Predictive Density Approach. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 404; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 24. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C11, C23, D31, D90, O47. **KW** Heterogeneities. Panel Data. Predictive Density. Income Inequality. Growth.

AB The paper proposes a technique to jointly test for groupings of unknown size in the cross-sectional dimension of a panel and estimates the parameters of each group, and applies it to identifying convergence clubs in income per-capita. The approach uses the predictive density of the data, conditional on the parameters of the model. The steady state distribution of European regional data clusters around four poles of attraction with different economic features. The distribution of income per-capita of OECD countries has two poles of attraction and each group has clearly identifiable economic characteristics.

PD November 1999. **TI** Implementing Interactive Computing in an Object-Oriented Environment. **AU** Canova, Fabio; Pires Pina, Joaquim. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 420; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 30. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C32, C68, E32, E52. **KW** General Equilibrium. Monetary Policy. Identification. Vector Autoregression. Misspecification.

AB We examine the effects of extracting monetary policy disturbances with semi-structural and structural VARs, using data generated by a limited participation model under partial accommodative and feedback rules. We find that, in general, misspecification is substantial: short run coefficients often have wrong signs; impulse responses and variance decompositions give misleading representations of the dynamics. Explanations for the results and suggestions for macroeconomic practice are provided.

Canton, Eric J. F.

PD November 1999. **TI** Vested Interests and Resistance to Technology Adoption. **AU** Canton, Eric J. F.; de Groot, Henri L. F.; Nahuis, Richard. **AA** Canton: CPB, Netherlands Bureau for Economic Policy Analysis. De Groot: Free University. Nahuis: Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99106; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 40. **PR** no charge. **JE** O14, O33, O41. **KW** Technological Change. Resistance. Vested Interests. Overlapping Generations. Competition.

AB Employed technologies differ vastly across countries. Within countries many technologies that would obviously improve firms' efficiency are not adopted. This paper explains these observations by emphasizing that a new technology positively affects workers by lowering prices and increasing their real income, but also negatively by costs of getting acquainted with the new technology. If the costs of adoption for workers exceed the benefits, they will aim at keeping the old technology in place. We formalize the trade-off in a simple OLG model with majority voting. Age groups that lose from adopting resist. Successful resistance blocks adoption and hence lowers growth. Finally, we analyze the effects of tougher competition. Provided that consumption and leisure are relatively good substitutes, tougher competition mitigates resistance and thus favors economic growth as it increases the share of the rent associated with the new technology that is being captured by the workers.

Caplin, Andrew

PD February 1999. **TI** Durable Goods Cycles. **AU** Caplin, Andrew; Leahy, John. **AA** Caplin: New York University and National Bureau of Economic Research. Leahy: Boston University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6987; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** D40, E21, E23, E32. **KW** Durable Goods. Business Cycles. Demand. Supply. Market Structure.

AB We show that a straight forward approximation of the distribution of durable goods holdings gives rise to a tractable equilibrium (S,s) model of durable demand. We analyze both competitive and monopoly supply. We show that equilibrium interactions lead to elongated impulse responses in demand, to procyclical markups in response to demand shocks, and to countercyclical markups in response to cost shocks.

Card, David

TI Financial Incentives for Increasing Work and Income Among Low-Income Families. **AU** Blank, Rebecca M.; Card, David; Robins, Philip K.

Carson, Richard T.

PD March 2000. **TI** Contingent Valuation: Controversies and Evidence. **AU** Carson, Richard T.; Flores, Nicholas E.; Meade, Norman F. **AA** Carson: University of California, San Diego. Flores: University of Colorado, Boulder. Meade: National Oceanic and Atmospheric Administration. **SR** University of California, San Diego, Department of Economics Working Paper: 96/36R; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 41. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C80, D61, H43, Q26. **KW** Surveys. Non-Market Valuation. Passive Use Value. Cost-Benefit Analysis. Environmental Assessment.

AB Contingent valuation (CV) has become one of the most widely used non- market valuation techniques. CV's prominence is due to its flexibility and ability to estimate total value, including passive use value. Its use and the inclusion of passive use value in benefit-cost analyses and environmental litigation are the subject of a contentious debate. This paper discusses key areas of the debate over CV and the validity of passive use value. We conclude that many of the alleged problems with CV can be resolved by careful study design and implementation. We further conclude that claims that empirical CV findings are theoretically inconsistent are not generally supported by the literature. The debate over CV, however, has clarified several key issues related to non-market valuation and can provide useful guidance both to CV practitioners and the users of CV results.

PD December 1999. **TI** Contingent Valuation: A User's Guide. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 99/26; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 17. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C80, D61, H43, Q26. **KW** Nonmarket Valuation. Passive Use Value. Benefit-Cost Analysis. Environmental Assessment.

AB Contingent valuation (CV) is a survey-based method frequently used for placing monetary values on environmental goods and services not bought and sold in the marketplace. CV is usually the only feasible method for including passive use considerations in an economic analysis, a practice that has engendered considerable controversy. The issue of what a CV study tries to value is first addressed from the perspective of a policymaker and then the controversy over the inclusion of passive use is taken up in more detail. The major issues and positions taken in the technical debate over the use of CV are summarized from a user's perspective. Key design and implementation issues involved in undertaking a CV survey are examined and the reader is provided with a set of factors to examine in assessing the quality of a CV study.

Cassiman, Bruno

TI Importance of International Linkages for Local Know-

How Flows. Some Econometric Evidence from Belgium. **AU** Veugelers, Reinhilde; Cassiman, Bruno.

PD March 2000. **TI** External Technology Sources: Embodied or Disembodied Technology Acquisition. **AU** Cassiman, Bruno; Veugelers, Reinhilde. **AA** Cassiman: Universitat Pompeu Fabra. Veugelers: Katholieke Universiteit Leuven and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 444; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 17. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** L22, L23, O31, O32, O33. **KW** Technology Acquisition. Innovation. Appropriability. Absorptive Capacity. Technological Choice.

AB This paper analyzes the choice between different innovation activities of a firm. In particular, we study the technology acquisition decision of the firm, i.e. its technology BUY decision as part of the firm's innovation strategy. We take a closer look at the different types of external technology acquisition where we distinguish two broad types of technology buy decisions. On the one hand, the firm can acquire new technology which is embodied in an asset that is acquired such as new personnel or (parts of) other firms or equipment. On the other hand, the firm can obtain new technology disembodied through a licensing agreement or by outsourcing the technology development from an R&D contractor or consulting agency. Through a series of Probit regressions, we discuss variables that might affect external technology acquisition choices of the firm and pay special attention to the firm's abilities to scan the market for technology and to absorb the technology acquired. Furthermore, we analyze the effect of different appropriation regimes on the decision of the firm to source technology.

Cattoir, Philippe

PD January 2000. **TI** Debt-Sharing and Secession: A Generational Accounting Approach. **AU** Cattoir, Philippe; Docquier, Frederic. **AA** Cattoir: Cabinet du Ministre-President du Gouvernement de la Region de Bruxelles-Capitale and CORE. Docquier: University of Lille. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/03; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 14. **PR** $100 per year. **JE** F34, H63, H77, H87. **KW** Debt Sharing. Public Debt. Secession. Generational Accounting. Distributive Neutrality.

AB This paper investigates one of the most important financial issues arising from a secession or a country partioning, namely the sharing of the national public debt. Extending Dreze's distributive neutrality condition, we use the generational accounting technique and propose a dynamic debt-sharing criterion which takes into account both the true debt future generations inherit and their contributive capacity. The equivalence with Dreze's static rule is only obtained in the steady growth framework in the absence of initial regional debt. An application of our criterion to the Belgian case offers striking results.

Cecchetti, Stephen G.

PD June 1999. **TI** Legal Structure, Financial Structure, and the Monetary Policy Transmission Mechanism. **AA** Federal Reserve Bank of New York and NBER. **SR** National Bureau of Economic Research Working Paper: 7151; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** E52, E58, F33, G20, G30. **KW** Monetary Policy. Central Banks. European Monetary Union. Corporate Finance. International Finance.

AB Among the many challenges facing the new Eurosystem is the possibility that the regions of the euro area will respond differently to interest rate changes. In this essay, I provide evidence that differences in financial structure are the proximate cause for these national asymmetries in the monetary policy transmission mechanism, and that these differences in financial structure are a result of differences in legal structure. My conclusion is that unless legal structures are harmonized across Europe, the financial structures and monetary transmission mechanisms of the European union countries will remain diverse.

Celentani, Marco

PD May 1999. **TI** Corruption and the Hadleyburg Effect. **AU** Celentani, Marco; Ganuza, Juan-Jose. **AA** Celentani: Universidad Carlos III. Ganuza: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 382; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 48. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C73, D73, K42. **KW** Corruption Dynamics. Dynamic Games. Illegal Behavior.

AB We study the dynamics of corruption relying on two fundamental observations: (a) Given agents detected as corrupt are typically fired and replaced, the historical levels of corruption have an impact on current corruption through the distribution of corruption costs of old agents; (b) Institutions negatively affected by their agents' corrupt activities are likely to respond optimally to it thereby decreasing the payoff from being corrupt. We find that (i) A unique steady state level of corruption exists; (ii) Regardless of the initial distribution, apart from an initial period, equilibrium sequences are decreasing and converge to the steady state, a result we term the "Hadleyburg effect". We use these findings to study the dynamic response of corruption to both permanent and exogenous shocks to the excess profitability of corruption and we find that the "Hadleyburg effect" implies some counterintuitive results.

Cesa-Bianchi, Nicola

PD November 1999. **TI** Worst-Case Bounds for the Logarithmic Loss of Predictors. **AU** Cesa-Bianchi, Nicola; Lugosi, Gabor. **AA** Cesa-Bianchi: University of Milan. Lugosi: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 418; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 15. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C13, C14. **KW** Universal Prediction. Universal Coding. Empirical Processes. On-Line Learning. Metric Entropy.

AB We investigate on-line prediction of individual sequences. Given a class of predictors, the goal is to predict as well as the best predictor in the class, where the loss is measured by the self information (logarithmic) loss function.

The excess loss (regret) is closely related to the redundancy of the associated lossless universal code. Using Shtarkov's theorem and tools from empirical process theory, we prove a general upper bound on the best possible (minimax) regret. The bound depends on certain metric properties of the class of predictors. We apply the bound to both parametric and nonparametric classes of predictors. Finally, we point out a suboptimal behavior of the popular Bayesian weighted average algorithm.

Chapelle, Ariane

TI Shareholding Cascades: The Separation of Ownership and Control in Belgium. **AU** Becht, Marco; Chapelle, Ariane; Renneboog, Luc.

Chari, V. V.

PD January 1999. **TI** Optimal Fiscal and Monetary Policy. **AU** Chari, V. V.; Kehoe, Patrick J. **AA** Chari: Federal Reserve Bank of Minneapolis. Kehoe: Federal Reserve Bank of Minneapolis and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6891; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 107. **PR** $5.00. **JE** E61, E62, E63, H21. **KW** Fiscal Policy. Monetary Policy. Optimal Taxation. Money. Income Taxes.

AB We provide an introduction to optimal fiscal and monetary policy using the primal approach to optimal taxation. We use this approach to address how fiscal and monetary policy should be set over the long run and over the business cycle. We find four substantive lessons for policymaking: Capital income taxes should be high initially and then roughly zero; tax rates on labor and consumption should be roughly constant; state-contingent taxes on assets should be used to provide insurance against adverse shocks; and monetary policy should be conducted so as to keep nominal interest rates close to zero. We begin optimal taxation in a static context. We then develop a general framework to analyze optimal fiscal policy. Finally, we analyze optimal monetary policy in three commonly used models of money: a cash-credit economy, a money-in-the-utility-function economy, and a shopping-time economy.

Charness, Gary

PD January 2000. **TI** Relative Payoffs and Happiness: An Experimental Study. **AU** Charness, Gary; Grosskopf, Brit. **AA** Charness: Universitat Pompeu Fabra and University of California. Grosskopf: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 436; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 28. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, C72, C91, D63. **KW** Relative Payoffs. Social Preferences. Happiness. Experiments.

AB Are people concerned with their relative standing in a reference group? Do certain types care more about this than others? Little work has been done to identify underlying determinants for an inclination to make social comparisons and to explain variation across individuals. We investigate whether a person's level of happiness influences her taste for social comparisons and offer subjects choices in decision tasks where there is little or no difference in their monetary reward across choices, but where the material payoff for another person is strongly impacted. These decision tasks are calibrated to distinguish between a person's pure taste for achieving the social optimum, equality or preferences for advantageous relative standing. Self-reported happiness, as measured by scales derived from subjects' responses to questionnaires, is correlated with individual choices. Somewhat surprisingly, we find that most people appear to disregard relative payoffs, instead typically making choices resulting in higher social payoffs. While we do not find a strong correlation between happiness and difference aversion, we do observe that a willingness to lower another person's payoff below one's own (competitive preferences) seems correlated with unhappiness.

TI Retribution in a Cheap-Talk Experiment. **AU** Brandts, Jordi; Charness, Gary.

PD March 2000. **TI** Social Preferences: Some Simple Tests and a New Model. **AU** Charness, Gary; Rabin, Matthew. **AA** Charness: Universitat Pompeu Fabra and University of California. Rabin: University of California, Berkeley. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 441; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 59. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A12, A13, C70, C91, D63. **KW** Difference Aversion. Inequality Aversion. Non-Ultimatum Games. Reciprocal Fairness. Social Preferences.

AB Departures from pure self interest in economic experiments have recently inspired models of "social preferences". The authors conduct experiments on simple two-person and three-person games with binary choices that test these theories. Their experiments show strong support for the prevalence of "quasi-maximin" preferences: People sacrifice to increase the payoffs for all recipients, but especially for the lowest- payoff recipients. People are also motivated by reciprocity: While people are reluctant to sacrifice to reciprocate good or bad behavior beyond what they would sacrifice for neutral parties, they withdraw willingness to sacrifice to achieve a fair outcome when others are themselves unwilling to sacrifice. Some participants are averse to getting different payoffs than others, but the authors argue that behavior that has been presented as "difference aversion" in recent papers is actually a combination of reciprocal and quasi-maximin motivations. The authors formulate a model in which each player is willing to sacrifice to allocate the quasi-maximin allocation only to those players also believed to be pursuing the quasi-maximin allocation, and may sacrifice to punish unfair players.

PD April 1999. **TI** Altruism, Equity, and Reciprocity in a Gift-Exchange Experiment: An Encompassing Approach. **AU** Charness, Gary; Haruvy, Ernan. **AA** Charness: Universitat Pompeu Fabra. Haruvy: University of Texas. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 368; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 26. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, C70, C91, D21, D64. **KW** Altruism. Experiments. Fairness. Inequality Aversion. Reciprocity.

AB Considerable experimental evidence suggests that non-pecuniary motives must be addressed when modeling behavior in economic contexts. Recent theories of non-pecuniary motives can be classified as altruism- based, equity-based, or reciprocity-based. We outline the qualitative differences in predictions, these alternative explanations yield. We estimate and compare leading approaches in these categories, using experimental data. We then offer a flexible approach that nests the above three approaches, thereby allowing for nested hypothesis testing and for determining the relative strength of each of the competing theories. In addition, the encompassing approach provides a functional form for utility in different settings without the restrictive nature of the approaches nested within it. Using this flexible form for nested tests, we find that intentional reciprocity, distributive concerns, and altruistic considerations all play a significant role in players' decisions.

PD April 1999. **TI** When Are Layoffs Acceptable? Evidence from a Quasi-Experiment. **AU** Charness, Gary; Levine, David I. **AA** Charness: Universitat Pompeu Fabra. Levine: University of California. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 369; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, C93, J41, J50, L14. **KW** Employment Contracts. Fairness. Justifications. Layoffs. Survey.

AB Many authors have discussed a decline in internal labor markets and an apparent shift to a new employment contract, characterized by less commitment between employer and employee and more portable skills. We performed quasi-experimental surveys to study when employees in the U.S. and Canada feel that layoffs are fair. Layoffs were perceived as more fair if they were due to lower product demand than if they were the result of employee suggestions. This result appears to be due to norms of reciprocity, rather than norms of sharing rents, as new technology was also considered a justification for layoffs. Consistent with theories of equity, layoffs were perceived as more fair if the CEO voluntarily shared the pain. CEO bonuses due to layoffs lowered their reported fairness only slightly. Respondents in Silicon Valley were not more accepting of layoffs than were those in Canada on average, although the justifications considered valid differed slightly.

PD April 1999. **TI** Self-Serving Biases: Evidence from a Simulated Labor Relationship. **AU** Charness, Gary; Haruvy, Ernan. **AA** Charness: Universitat Pompeu Fabra. Haruvy: University of Texas. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 370; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 5. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C70, C91, D21, J30, J53. **KW** Experiments. Fairness. Labor Relations. Self-Serving Bias.

AB Considerable experimental evidence suggests that non-pecuniary motives must be addressed when modeling behavior in economic contexts. However, such motives, by nature, are susceptible to self-serving references. We test whether subjects' roles in a gift-exchange experiment affected their judgement in a manner resulting in persistent non-optimal behavior by both players.

Chiappori, Pierre-Andre

PD March 2000. **TI** The Identification of Preferences from Equilibrium Prices. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M. **AA** Chiappori: University of Chicago. Ekeland: Universite de Paris IX- Dauphine. Kubler: Stanford University. Polemarchakis: CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/24; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 17. **PR** $100 per year. **JE** D10, D51. **KW** Aggregation. General Equilibrium. Identification. Testability. Preferences.

AB The fundamentals of an exchange economy, the preferences of individuals, can be identified from the competitive equilibrium correspondence, which associates equilibrium prices of commodities to allocations of endowments; the argument extends to production economies. The essential step is the identification of fundamentals from aggregate demand as a function of the prices of commodities and the distribution of income. The graph of the equilibrium correspondence or of the aggregate demand function satisfy non-trivial restrictions. The identification of fundamentals allows for the prediction of the response of individuals and the economy to changes in the organization of production and exchange, while restrictions on the equilibrium correspondence or the aggregate demand function imply that general equilibrium theory has testable implications.

PD March 2000. **TI** The Identification of Preferences from Equilibrium Prices Under Uncertainty. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M. **AA** Chiappori: University of Chicago. Ekeland: Universite de Paris IX- Dauphine. Kubler: Stanford University. Polemarchakis: CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/25; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 14. **PR** $100 per year. **JE** D10, D51, D52. **KW** Uncertainty. Identification. General Equilibrium. Preferences.

AB The competitive equilibrium correspondence, which associates equilibrium prices of commodities and assets with allocations of endowments, identifies the preferences and beliefs of individuals under uncertainty; this is the case even if the asset market is incomplete.

Christiano, Lawrence J.

PD March 1999. **TI** Taylor Rules in a Limited Participation Model. **AU** Christiano, Lawrence J.; Gust, Christopher J. **AA** Christiano: Northwestern University and National Bureau of Economic Research. Gust: Federal Reserve Board of Governors. **SR** National Bureau of Economic Research Working Paper: 7017; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 17. **PR** $5.00. **JE** E10, E40, E52, E58. **KW** Limited Participation. Interest Rates. Taylor Rules. Inflation. Monetary Policy.

AB We use the limited participation model of money as a laboratory for studying the operating characteristics of Taylor rules for setting the rate of interest. Rules are evaluated according to their ability to protect the economy from bad outcomes such as the burst of inflation observed in the 1970s. Based on our analysis, we argue for a rule which: (i) raises the nominal interest rate more than one-for-one with a rise in inflation; and (ii) does not change the interest rate in response to a change in output relative to trend.

PD March 1999. **TI** Maximum Likelihood in the Frequency Domain: A Time to Build Example. **AU** Christiano, Lawrence J.; Vigfusson, Robert J. **AA** Christiano: Northwestern University and National Bureau of Economic Research. Vigfusson: Northwestern University. **SR** National Bureau of Economic Research Working Paper: 7027; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 12. **PR** $5.00. **JE** C12, C32, C52, E22, E32. **KW** Maximum Likelihood. Likelihood Ratio. Estimation. Model Testing. Business Cycles.
AB A well known result is that the Gaussian log-likelihood can be expressed as the sum over different frequency components. This implies that the likelihood ratio statistic has a similar linear decomposition. We exploit these observations to devise diagnostic methods that are useful for interpreting maximum likelihood parameter estimates and likelihood ratio tests. We apply the methods to the estimation and testing of two real business cycle models. The standard real business cycle model is rejected in favor of an alternative in which capital investment requires a planning period.

Ciccarelli, Matteo

TI Forecasting and Turning Point Predictions in a Bayesian Panel VAR Model. **AU** Canova, Fabio; Ciccarelli, Matteo.

Ciccone, Antonio

PD June 1999. **TI** Capital, Wages, and Growth: Theory and Evidence. **AU** Ciccone, Antonio; Peri, Giovanni; Almond, Douglas. **AA** Ciccone: University of California, Berkeley and Universitat Pompeu Fabra. Peri: Bocconi University and IGIER. Almond: University of California, Berkeley. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 389; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 39. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E24, J24, J31, O40, R10. **KW** Returns to Scale. Human Capital. Capital Externalities. Complementarities. Scale Effects.
AB Returns to scale to capital and the strength of capital externalities play a key role for the empirical predictions and policy implications of different growth theories. We show that both can be identified with individual wage data and implement our approach at the city-level using US Census data on individuals in 173 cities for 1970, 1980, and 1990. Estimation takes into account fixed effects, endogeneity of capital accumulation, and measurement error. We find no evidence for human or physical capital externalities and decreasing aggregate returns to capital. Returns to scale to physical and human capital are around 80 percent. We also find strong complementarities between human capital and labor and substantial total employment externalities.

Clarida, Richard

PD January 1999. **TI** Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark. **AA** Clarida: Columbia University. Gali: Universitat Pompeu Fabra. Gertler: New York Unviersity. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 350; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 29. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E32, E52, E63. **KW** Monetary Policy Rules. Business Cycles. Taylor Rules. Sunspot Fluctuations. Inflation.
AB We estimate a forward-looking monetary policy reaction function for the postwar United States economy, before and after Volcker's appointment as Fed Chairman in 1979. Our results point to substantial differences in the estimated rule across periods. In particular, interest rate policy in the Volcker-Greenspan period appears to have been much more sensitive to changes in expected inflation than in the pre-Volcker period. We then compare some of the implications of the estimated rules for the equilibrium properties of inflation and output, using a simple macroeconomic model, and show that the Volcker-Greenspan rule is stabilizing.

PD February 1999. **TI** The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark. **AA** Clarida: Columbia University. Gali: Universitat Pompeu Fabra. Gertler: New York University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 356; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 103. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E52, E58, E61. **KW** Monetary Policy. Credibility. Stabilization. New Keynesian Models. Inflation Targeting.
AB This paper reviews the recent literature on monetary policy rules. We expose the monetary policy design problem within a simple baseline theoretical framework. We then consider the implications of adding various real world complications. Among other things, we show that the optimal policy implicitly incorporates inflation targeting. We also characterize the gains from making credible commitments to fight inflation. In contrast to conventional wisdom, we show that gains from commitment may emerge even if the central bank is not trying to inadvisedly push output above its natural level. We also consider the implications of frictions such as imperfect information.

PD May 1999. **TI** The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark. **AA** Clarida: Columbia University and NBER. Gali: Universitat Pompeu Fabra and NBER. Gertler: New York University and NBER. **SR** National Bureau of Economic Research Working Paper: 7147; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 65. **PR** $5.00. **JE** E52, E61. **KW** Monetary Policy. Inflation Targeting. Policy Design. Commitment.
AB See the abstract for Clarida, Richard; Gali, Jordi; Gertler, Mark. February 1999, "The Science of Monetary Policy: A New Keynesian Perspective". Universitat Pompeu Fabra, Economics and Business Working Papers Series: 356; Department of Economics and Business, Ramon Trias Fargas, 25- 27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu.

Clark, Robert L.

TI Has Job Security Vanished in Large Corporations?

AU Allen, Steven G.; Clark, Robert L.; Schieber, Sylvester J.

Clotfelter, Charles

TI Charitable Giving and Income Taxation in a Life-Cycle Model: An Analysis of Panel Data. AU Auten, Gerald; Sieg, Holger; Clotfelter, Charles.

Cocco, Joao F.

TI Investing Retirement Wealth: A Life-Cycle Model. AU Campbell, John Y.; Cocco, Joao F.; Gomes, Francisco J.; Maenhout, Pascal J.

Cockburn, Iain

PD January 1999. TI Balancing Incentives: The Tension Between Basic and Applied Research. AU Cockburn, Iain; Henderson, Rebecca; Stern, Scott. AA Cockburn: University of British Columbia and National Bureau of Economic Research. Henderson and Stern: MIT Sloan School and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 6882; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 26. PR $5.00. JE D23, G31, J41, L65, O32. KW Effort. Pharmaceuticals. Research and Development. Contracts. Capital Budgeting.

AB This paper presents empirical evidence that the intensity of research workers' incentives for the distinct tasks of basic and applied research are positively associated with each other. The authors relate this finding to the prediction of the theoretical literature that when effort is multi-dimensional, firms will "balance" the provision of incentives; when incentives are strong along one dimension, firms will set high-powered incentives for effort along other dimensions which compete for the worker's effort and attention (Holmstrom and Milgrom, 1991). The authors test for this effect in the context of pharmaceutical research using detailed data on individual research programs financed by private firms. Consistent with the complementarity hypothesis, the authors find strong evidence that firms who provide strong promotion-based incentives for individuals to invest in fundamental or "basic" research also provide more intense incentives for success in applied research through the capital budgeting process. The intensity of these "bonus" incentives is weaker in firms who use a more centralized research budgeting process.

Collie, David

PD June 1999. TI Trade, FDI, and Unions. AU Collie, David; Vandenbussche, Hylke. AA Collie: Cardiff University. Vandenbussche: University of Antwerp and CEPR. SR Tilburg CentER for Economic Research Discussion Paper: 9942; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. PG 30. PR no charge. JE F13, F23, F41, L13. KW Monopoly Union. Trade Policy. Cournot Competition. Foreign Direct Investment. International Trade.

AB In this paper we study the location behavior of a foreign and a domestic multinational (MNE) competing a la Cournot in the domestic product market both under free trade and under the optimal domestic trade policy. Both firms produce a homogeneous good using a labor intensive technology. While the domestic country is unionized, the foreign country is not. We find that when foreign wage levels are relatively low, both firms agglomerate in the South (North-South FDI) and the optimal government intervention is a zero tariff on imports. For intermediate wage levels abroad, no FDI occurs and the optimal government intervention is a tariff either lower or equal to the rent extracting tariff a la Brander and Spencer (1984). For relatively high foreign wage levels, the optimal tariff is such that both firms agglomerate in the domestic country (North-North FDI). At least three important insights evolve from this paper. Firstly, when the labor market is unionized, trade and FDI are clearly not substitutes. Secondly, when firms are footloose, the optimal domestic tariff is always lower or equal to the tariff policy in the absence of relocation possibilities. Thirdly, a tariff, deterring outward FDI or inducing inward FDI can improve domestic welfare.

Collins, William J.

PD May 1999. TI Capital Goods Prices, Global Capital Markets and Accumulation: 1870- 1950. AU Collins, William J.; Williamson, Jeffrey G. AA Collins: Vanderbilt University and NBER. Williamson: Harvard University and NBER. SR National Bureau of Economic Research Working Paper: 7145; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 23. PR $5.00. JE E22, F21, F36, N10, N20. KW Capital. Financial Markets. International Investment. Economic Integration. Economic History.

AB Conventional wisdom has it that global financial markets were as well integrated in the 1890s as in the 1990s, but that it took several post- war decades to regenerate the connections that existed before 1914. This view has emerged from a variety of tests for world financial capital market integration ranging from the correlation of saving and investment aggregates to the dispersion of security prices and real interest rates. Presumably, we care about global capital market integration because it can have an impact on accumulation performance and the global distribution of the capital stock. Oddly enough, however, the relative price of capital goods, an important component of the user cost of capital, has never been incorporated into studies of capital market integration and almost never in comparative studies of pre-1950 economic growth. This could be an important omission. This paper explores the issue with a panel data base 1870-1950 for eleven OECD countries. It turns out that capital goods prices have been central to accumulation, and therefore to growth and convergence. They have also been as important to the evolution of global capital markets as have been interest rates and other financial costs.

Conforti, Michele

PD February 2000. TI On The Cut Polyhedron. AU Conforti, Michele; Rinaldi, Giovanni; Wolsey, Laurence. AA Conforti: Universita di Padova, Italy. Rinaldi: IASI-CNR, Italy. Wolsey: CORE. SR Universite Catholique de Louvain CORE Discussion Paper: 2000/05; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. PG 9. PR $100 per year. JE C61, D20. KW Polyhedra. Cut Polyhedron. Undirected Graphs. Inequalities. Programming.

AB The cut polyhedron cut(G) of an undirected graph G = (V, E) is the dominant of the convex hull of all of its nonempty edge cutsets. After examining various compact extended formulations for cut(G), we study some of its polyhedral properties. In particular, we characterize all of the facets

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

induced by inequalities with right-hand side at most 2. These include all of the rank facets of the polyhedron.

Connolly, Michelle

PD April 1999. **TI** North-South Technological Diffusion: A New Case for Dynamic Gains From Trade. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 99/08; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 23. **PR** no charge. **JE** F43, O14, O19, O31, O40. **KW** International Trade. Innovation. Imitation. Growth. Technological Change.

AB This paper studies the transitional dynamics in a quality ladder model of endogenous growth in which North-South trade leads to technological diffusion through reverse engineering of intermediate goods. The concept of learning-to-learn is incorporated into both imitative and innovative processes, which in turn drive domestic technological progress. International trade with imitation leads to feedback effects between Southern imitators and Northern innovators who compete for the world market. As a result, both regions face transition paths dependent on their relative technologies. For reasonable parameter values, the rates of innovation and imitation fall in transition to steady-state but remain above those under autarky. Increased interaction between the North and the South, through increased openness to imports of Northern intermediate goods, leads to higher world growth, demonstrating dynamic benefits to the South of increased trade with a more developed region. The fall in the rate of innovation in the North as the technology gap between the two regions is reduced, may explain the apparent recent slowdown of measured total factor productivity growth in OECD countries over the last 30 years.

PD November 1999. **TI** Industrial Revolutions and Demographic Transitions. **AU** Connolly, Michelle; Peretto, Pietro F. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 99/11; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 42. **PR** no charge. **JE** E10, J10, L16, O31, O40. **KW** Endogenous Growth. Innovation. Fertility. Market Structure. Demographic Transition.

AB We generalize the class of growth models in which the scale of the economy has level rather than growth effects, and study the implications of different demographic and research policies when both fertility choice and research effort are endogenous. The model incorporates two dimensions of technological progress: vertical (quality of goods) and horizontal (variety of goods). Both dimensions contribute to productivity growth but are driven by different processes and hence react differently to specific policies. For example, while unbounded vertical progress is feasible, the scale of the economy limits the variety of goods. Incorporating Jones' (1998) suggestion of a natural linearity in reproduction generates steady-state population growth and variety expansion. We thus have two engines of growth generating dynamics that we compare with observed changes in demographics, market structure, and patterns of growth. This allows us to study industrial revolutions and demographic transitions as two interdependent forces driving a country's process of economic transformation.

Cook, Phillip J.

PD January 1999. **TI** Alcohol. **AU** Cook, Phillip J.; Moore, Michael J. **AA** Duke University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6905; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 63. **PR** $5.00. **JE** A13, D10, I10, J24, L50. **KW** Alcohol. Consumption. Productivity. Excise Taxes. Consumer Choice.

AB Economists have contributed to the evaluation of alcohol policy through empirical work on the effects of alcohol-control measures on consumption and its consequences. Economics has also provided an accounting framework for defining and comparing costs and benefits of interventions, including excise taxes. Outside of the policy arena, economists have analyzed alcohol consumption in the context of stretching the standard model of consumer choice to include intertemporal effects and social influence. Nonetheless, perhaps the most important contribution by economists has been the repeated demonstration that there is nothing unusual about alcohol in at least one essential respect: consumers drink less ethanol (and have fewer alcohol-related problems) when alcohol-beverage prices are increased. Important econometric challenges remain, including the search for a satisfactory resolution to the conflicting results on the effect of price changes on consumption by consumers who tend to drink heavily. There are also unresolved puzzles about the relationship between drinking and productivity; for example, drinkers tend to have higher earnings than abstainers.

Cooper, Russell

PD January 1999. **TI** Learning by Doing and Aggregate Fluctuations. **AU** Cooper, Russell; Johri, Alok. **AA** Cooper: Boston University and National Bureau of Economic Research. Johri: McMaster University. **SR** National Bureau of Economic Research Working Paper: 6898; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** D83, E32, E37, O40. **KW** Business Cycles. Learning By Doing. Propagation Mechanisms.

AB A major unresolved issue in business cycle theory is the construction of an endogenous propagation mechanism capable of capturing the amount of persistence displayed in the data. In this paper we explore the quantitative implications of one propagation mechanism: learning by doing. Estimation of the parameters characterizing learning by doing is based both on aggregate 2-digit data and plant level observations in the US. The estimated learning by doing function is then integrated into a stochastic growth model in which fluctuations are driven by technology shocks. We conclude that learning by doing can be a powerful mechanism for generating endogenous persistence.

Coppejans, Mark

PD March 2000. **TI** Flexible But Parsimonious Demand Designs: The Case of Gasoline. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 00/07; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 25. **PR** no charge. **JE** C51, D12, Q31, Q41. **KW** Gasoline Demand. Splines. Consumer Economics.

AB In this paper, the authors consider expectations of the form E[log(y)|x] = Sum from j equals 1 to d over [alpha sub j times log(x-sub j)] as a good starting point for a more general analysis. They show why this naturally leads to the following flexible functional form E[y|x] = Sum from j equals 1 to d over

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

[h-sub j(x-sub j)] where f(.) and h-sub j(.) are estimated by cubic splines. One of the main goals is to show that this estimator is straightforward to implement. The authors demonstrate the usefulness of the methods given in the paper by estimating gasoline demand from the 1994 RTECS data set, and in doing so, uncover interesting relationships of income and age on expected gasoline use.

Coronado, Julia Lynn

PD March 1999. **TI** Distributional Impacts of Proposed Changes to the Social Security System. **AU** Coronado, Julia Lynn; Fullerton, Don; Glass, Thomas. **AA** Coronado: Board of Governors of the Federal Reserve System. Fullerton: University of Texas at Austin and National Bureau of Economic Research. Glass: University of Texas at Austin. **SR** National Bureau of Economic Research Working Paper: 6989; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** H23, H55, I30. **KW** Social Security. Redistribution. Taxation.

AB In this paper we assess the degree to which the current social security system redistributes income from rich to poor. We then estimate the impact of various proposed changes to social security on the overall redistributive effect of the system. Our analysis takes a steady state approach in which we assume participants work their entire lives and retire under a given system. Redistribution is measured on a lifetime basis using estimated earnings profiles for a sample of people taken from the PSID. We account for differential mortality, not only by gender and race, but also be lifetime income. Our results indicate that the current social security system redistributes less than is generally perceived, mainly because people with higher lifetime income live longer and therefore draw benefits longer. Remaining progressivity is reduced and even reversed by an increase in the assumed discount rate, since regressive taxes become more important relative to later progressive benefits. We find that many of the proposed changes to social security have surprisingly little effect on the redistribution inherent in the system.

Corsetti, Giancarlo

PD January 1999. **TI** Competitive Devaluations: A Welfare-Based Approach. **AU** Corsetti, Giancarlo; Pesenti, Paolo; Roubini, Nouriel; Tille, Cedric. **AA** Corsetti: Yale University. Pesenti: Federal Reserve Bank of New York and National Bureau of Economic Research. Roubini: New York University and National Bureau of Economic Research. Tille: Federal Reserve Bank of New York. **SR** National Bureau of Economic Research Working Paper: 6889; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** E58, F31, F32, F41, F42. **KW** Exchange Rates. Devaluations. International Trade. Welfare. Foreign Exchange.

AB This paper studies the mechanism of international transmission of exchange rate shocks within a 3-country Center-Periphery model, providing a choice-theoretic framework for the policy analysis and empirical assessment of competitive devaluations. If relative prices and terms of trade exhibit some flexibility conforming to the law of one price, a devaluation by one country is beggar-thy-neighbor to another country through its effects on cost-competitiveness in a third market. Yet, due to direct bilateral trade among the two countries, there is a large range of parameter values for which a country is better off by maintaining a peg in response to its partner's devaluation. If instead deviations from the law of one price are to be considered the dominant empirical paradigm, then the beggar-thy- neighbor effect based on competition in a third market may disappear. However, a country's devaluation has a negative welfare impact on the economies of its trading partners based on the deterioration of their export revenues and profits and the increase in disutility from higher labor effort for any level of consumption.

Costa, Dora L.

PD May 1999. **TI** American Living Standards: Evidence from Recreational Expenditures. **AA** Massachusetts Institute of Technology and NBER. **SR** National Bureau of Economic Research Working Paper: 7148; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 35. **PR** $5.00. **JE** D12, D63, I31, N31, N32. **KW** Recreational Expenditures. Inequality. Living Standards. Economic History. Income.

AB The author uses consumer expenditure surveys from 1888-1890, 1917- 1919, 1935-1936, 1972-1973, and 1991 to determine whether trends in real income per capita are consistent with trends in recreational budget shares and to establish trends in inequality in recreational expenditures. The author finds that changes in real total expenditures per capita are likely to underestimate the increase in living standards, particularly during times of innovation in consumer goods and reductions in hours such as in the 1920s and the 1970s and 1980s. Real per capita total expenditures fell by 1.2 percent per year between 1919 and 1935 and rose by 1.8 percent per year between 1972 and 1991. In contrast, trends in recreational expenditure shares imply that between 1919 and 1935 real per capita total expenditures rose by 1.2 percent per year and between 1972 and 1991 by 3.6 percent per year. The bias in conventional measures of per capita real total expenditures may therefore have been 2.4 percentage points per year between 1919 and 1935 and 1.8 percentage points per year between 1972 and 1991. The author also finds that lower income households experienced a larger increase in living standards than higher income households.

Costa-Gomes, Miguel

PD January 2000. **TI** Cognition and Behavior in Normal-Form Games: An Experimental Study. **AU** Costa-Gomes, Miguel; Crawford, Vincent P.; Broseta, Bruno. **AA** Costa-Gomes: Harvard Business School. Crawford: University of California, San Diego. Broseta: University of Arizona and Organismo Publico Valenciano de Investigacion. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/02; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 42. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C51, C72, C92. **KW** Noncooperative Games. Experimental Economics. Strategic Sophistication. Cognition.

AB This paper reports experiments designed to study strategic sophistication, the extent to which behavior in games reflects attempts to predict others' decisions, taking their incentives into account. Subjects played normal-form games with various patterns of iterated dominance and unique pure-strategy equilibria without dominance, using a computer interface that allowed them to look up hidden payoffs as often as desired, one at a time, while recording their look-up sequences. Monitoring subjects' information searches along with their decisions allows us more precisely to identify their decision rules, and subjects' deviations from the search patterns suggested by equilibrium analysis help to predict their deviations from equilibrium decisions.

Costain, James S.

PD October 1999. **TI** A Simple Model of Multiple Equilibria Based on Risk. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 407; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 37. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E21, E32, G11, J41, J65. **KW** Multiple Equilibria. Imperfect Insurance. Matching. Prudence. Portfolio Choice.

AB This paper shows how risk may aggravate fluctuations in economies with imperfect insurance and multiple assets. A two period job matching model is studied, in which risk averse agents act both as workers and as entrepreneurs. They choose between two types of investment: one type is riskless, while the other is a risky activity that creates jobs. Equilibrium is unique under full insurance. If investment is fully insured but unemployment risk is uninsured, the precautionary saving behavior dampens output fluctuations. However, if both investment and employment are uninsured, then an increase in unemployment gives agents an incentive to shift investment away from the risky asset, further increasing unemployment. This positive feedback may lead to multiple Pareto ranked equilibria. An overlapping generations version of the model may exhibit poverty traps or persistent multiplicity. Greater insurance is doubly beneficial in this context since it can both prevent multiplicity and promote risky investment.

Crama, Yves

PD October 1999. **TI** Corporate Governance Structures, Control and Performance in European Markets: A Tale of Two Systems. **AU** Crama, Yves; Leruty, Luc; Renneboog, Luc; Urbain, Jean-Pierre. **AA** Crama: University of Liege. Leruth: University of Liege, CORE and International Monetary Fund. Renneboog: CentER and Tilburg University. Urbain: University of Maastricht. **SR** Tilburg CentER for Economic Research Discussion Paper: 9997; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 28. **PR** no charge. **JE** G10, G32, G34. **KW** Corporate Governance. Voting Rights. Shareholder Coalitions. Corporate Performance. Asset Pricing.

AB In traditional models of share price returns and their variances, the institutional environment in terms of concentration and nature of voting rights, bank debt dependence and corporate and legal mechanisms to change control have rarely been included. This paper has a dual objective. The authors first highlight the large discrepancies among corporate governance environments. They conclude that there is a need for a theoretically well-grounded measure of corporate control applicable to all systems and they define such a measure. Secondly, the impact of ownership structure on the share price performance and corporate risk is empirically analyzed for companies listed on the London Stock Exchange. Within Europe, the UK corporate landscape is particularly interesting because of its widely held nature and the liquidity of the market for controlling rights. The authors show that financial performance increases with the level of control held by the second largest shareholder. They hope to have conveyed the message that there exists a link between corporate governance and financial performance and that a sound index, based on game-theoretic arguments, is the appropriate instrument for researchers in the field.

Crawford, Vincent P.

TI Cognition and Behavior in Normal-Form Games: An Experimental Study. **AU** Costa-Gomes, Miguel; Crawford, Vincent P.; Broseta, Bruno.

PD January 2000. **TI** John Nash and the Analysis of Strategic Behavior. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/03; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 5. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** B20, B31, C70. **KW** Game Theory. Strategic Behavior. Economic Thought.

AB This essay describes one economist's view of how Nash's work influenced the development of game theory as a tool for analyzing strategic behavior.

PD June 2000. **TI** A Dual Dutch Auction in Taipei: The Choice of Numeraire and Auction Form in Multi-Object Auctions with Bundling. **AU** Crawford, Vincent P.; Kuo, Ping-Sing. **AA** Crawford: University of California, San Diego. Kuo: Academia Sinica. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/10; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 20. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C72, D44, D82. **KW** Dutch Auctions. English Auctions. Revenue-Equivalence. Multi-Object Auctions. Bundling.

AB In Taipei we observed a dual Dutch fish auction, like a conventional Dutch auction with bundling but with the roles of quantity and price reversed, and fish the numeraire rather than money. This paper uses a symmetric independent private values framework to study how duality interacts with auction form when agents' utility functions are linear in money but strictly concave in fish. With known buyers' values, conventional and dual auctions, English or Dutch, are equivalent. With values known to buyers but not the seller, the seller prefers conventional to dual auctions. With privately known values, the seller can prefer either a dual Dutch auction or a conventional English or Dutch auction, but he prefers all three to a dual English auction.

Cukierman, Alex

PD October 1999. **TI** Establishing a Reputation for Dependability by Means of Inflation Targets. **AA** Tel Aviv University, CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9999; CentER for Economic Research, Tilburg University, P.O. Box

90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 36. **PR** no charge. **JE** E31, E52, E53, E63. **KW** Inflation Targets. Establishing Credibility. Inflation Control. Monetary Policy. Reputation.

AB This paper develops a simple intertemporal model of inflation targets within a framework in which the public is uncertain about the dependability of policymakers, and in which policymakers do not perfectly control inflation. The framework is used to evaluate the effects of various parameters like the rate of time preference, initial reputation, and transparency (or precision of inflation control) on planned inflation, announced targets and the evolution of reputation and of inflationary expectations.

PD October 1999. **TI** Labor Markets and Monetary Union: A Strategic Analysis. **AU** Cukierman, Alex; Lippi, Francesco. **AA** Cukierman: Tel Aviv University, CentER and Tilburg University. Lippi: Banca d'Italia. **SR** Tilburg CentER for Economic Research Discussion Paper: 99100; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 41. **PR** no charge. **JE** E52, E58, F33, F41, J51. **KW** Monetary Union. Inflation. Unemployment. Labor Unions. Monetary Policy.

AB This paper analyzes the macroeconomic consequences of the establishment of a monetary union in the presence of unionized labor markets. It is shown that the effects of the formation of a monetary union depend on several labor market features, such as the degree of centralization of wage bargaining, labor unions' inflation aversion and the degree of substitutability between the labor of different unions. In particular, the switch from national monetary policies to a unified monetary policy usually affects both inflation and unemployment, even when all structural parameters of the economy and of unions' and policymakers' preferences remain the same. The benchmark case of a monetary union between identical countries suggests that the switch to a monetary union is likely to make labor unions more aggressive, increasing unemployment. Qualifications to this result are provided and their robustness is investigated under alternative structural assumptions, like cross-country asymmetries, (pre-union) ERM membership and wage leadership.

Currie, Janet

PD March 1999. **TI** Is the Impact of Health Shocks Cushioned by Socioeconomic Status? The Case of Low Birthweight. **AU** Currie, Janet; Hyson, Rosemary. **AA** Currie: University of California, Los Angeles and National Bureau of Economic Research. Hyson: Michigan State University. **SR** National Bureau of Economic Research Working Paper: 6999; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** I12, I21, J23, J31. **KW** Birth Weight. Health. Educational Attainment. Employment. Wages.

AB This paper examines the long-term effects of low birth weight (LBW) on educational attainments, labor market outcomes, and health status using data from the National Child Development Study. The study has followed the cohort of children born in Great Britain during one week in 1958 through age 33. We pay particular attention to possible interactions between LBW and socio-economic status (SES), asking to what extent the deleterious effects of LBW are mitigated by higher SES. We find that LBW has significant long-term effects on self-reported health status, educational attainments, and labor market outcomes. However, there is little evidence of variation in the effects of LBW by SES. An important exception is that high SES women of LBW are less likely to report that they are in poor or fair health than other LBW women.

Cutler, David M.

PD December 1998. **TI** Demographics and Medical Care Spending: Standard and Non-Standard Effects. **AU** Cutler, David M.; Sheiner, Louise. **AA** Cutler: Harvard University and National Bureau of Economic Research. Sheiner: Board of Governors of the Federal Reserve System. **SR** National Bureau of Economic Research Working Paper: 6866; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 33. **PR** $5.00. **JE** H51, I11, I12, J14, O33. **KW** Health Care. Elderly. Life Expectancy. Disability. Medical Expenditures.

AB In this paper, we examine the effects of likely demographic changes on medical spending for the elderly. Standard forecasts highlight the potential for greater life expectancy to increase costs: medical costs generally increase with age, and greater life expectancy means that more of the elderly will be in the older age groups. Two factors work in the other direction, however. First, increases in life expectancy mean that a smaller share of the elderly will be in the last year of life, when medical costs generally are very high. Furthermore, more of the elderly will be dying at older ages, and end-of-life costs typically decline with age at death. Second, disability rates among the surviving population have been declining in recent years by 0.5 to 1.5 percent annually. Reductions in disability, if sustained, will also reduce medical spending. Thus, changes in disability and mortality should, on net, reduce average medical spending on the elderly. However, these effects are not as large as the projected increase in medical spending stemming from increases in overall medical costs. Technological change in medicine at anywhere near its historic rate would still result in a substantial public sector burden for medical costs.

PD January 1999. **TI** Your Money and Your Life: The Value of Health and What Affects It. **AU** Cutler, David M.; Richardson, Elizabeth. **AA** Cutler: Harvard University and National Bureau of Economic Research. Richardson: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6895; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 49. **PR** $5.00. **JE** I11, I12, I18, O31, O38. **KW** Medical Care. Health Production. Health Care. Technological Change.

AB This paper examines the role of medical care in improving health and compares that value of better health produced by medical care with the costs of that care. Valuing medical care requires measuring the health of the population. The authors start by developing a measure of the nation's health capital -- the dollar value of health a person will have over the course of their remaining life. The authors estimate health capital empirically using data on the length of life, the prevalence of adverse conditions for those alive, and the quality of life conditional on having an adverse condition. Comparing the change in health capital with the increase in medical spending, the authors estimate that, for most plausible assumptions, increased medical technology has been worth its cost. In their preferred specification, only about 30 percent of the improvement in health capital in the past 40 years would need to result from medical care advances for the improvement of medical technology to justify its cost. While the authors find that on average the value of medical technology is high, they discuss other evidence that substantial amounts of medical care is provided in situations where its value is low. They thus suggest a fundamental repositioning of the public debate about medical spending.

Cuxart Jardi, Anna

PD November 1999. **TI** Modelos Estadisticos Aplicados a la Evaluacion Educativa: Las Pruebas de Acceso a la Universidad. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 421; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 23. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C89, C99, I29. **KW** Admissions Process. Random Coefficients. Variance Components. Rater Reliability. Education.

AB The educational system in Spain is undergoing a reorganization. At present, high-school graduates who want to enroll at a public university must take a set of examinations, Pruebas de Aptitud para el Acceso a la Universidad (PAAU). A "new formula" (components, weights, type of exam,...) for university admission is been discussed. The present paper summarizes the research done by the author in her PhD. The context for this thesis is the evaluation of large-scale and complex systems of assessment. The main objectives were: to achieve a deep knowledge of the entire university admissions process in Spain, to discover the main sources of uncertainty and to promote empirical research in a continual improvement of the entire process. Focusing on the suitable statistical models and strategies which allow for the highlighting of the imperfections of the system and the reduction of them, the paper develops, among other approaches, some applications of multilevel modeling. This paper is written in Spanish.

Dardanoni, Valentino

PD December 1999. **TI** A Pedagogical Proof of Arrow's Impossibility Theorem. **AA** Universita di Palermo. **SR** University of California, San Diego, Department of Economics Working Paper: 99/25; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 4. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** A22, D71. **KW** Impossibility Theorem. Simple Proof. Preferences. Social Choice. Welfare.

AB In this note I consider a simple proof of Arrow's Impossibility Theorem (Arrow 1963). I start with the case of three individuals who have preferences on three alternatives. In this special case there are 13-cubed=2197 possible combinations of the three individuals' rational preferences. However, by considering the subset of linear preferences, and employing the full strength of the Independence of Irrelevant Alternatives axiom, I reduce the number of cases necessary to completely describe the Social Welfare Function to a small number, allowing an elementary proof suitable for most undergraduate students. This special case conveys the nature of Arrow's result. It is well known that the restriction to three options is not really limiting (any larger set of alternatives can be broken down into triplets, and any inconsistency within a triplet implies an inconsistency on the larger set). However, the general case of n greater than or equal to 3 individuals can be easily considered in this framework, by building on the proof of a simpler case. I hope that a motivated student, having mastered the simple case of three individuals, will find this extension approachable and rewarding.

Day, Alexander

PD December 1998. **TI** A Note on the Determinants of UK Business Cycles. **AU** Day, Alexander; Leith, Campbell; Wren-Lewis, Simon. **AA** Day and Wren-Lewis: University of Exeter. Leith: University of Glasgow and University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/12; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 8. **PR** no charge. **JE** E32, E44, E51, E52. **KW** Business Cycles. Monetary Policy. Financial Liberalization. Credit Availability.

AB In their empirical analysis of Real Business Cycle models for the UK, Holland and Scott (1998) find that they cannot reject the proposition that movements in output are largely determined by "productivity shocks" which are independent of demand side variables, such as interest rates. In this note we extend their work to allow for the impact of financial liberalization and credit availability. We find that credit availability has had a significant impact on movements in output, and that, when these effects are controlled for, monetary policy variables, including interest rates, also cause output. This is consistent with the conventional view that demand-expansion was the cause of the boom of the late 1980s and appears to reject a RBC interpretation of output movements.

De Arcangelis, Giuseppe

PD March 2000. **TI** Monetary Policy Shocks and Transmission in Italy: a VAR Analysis. **AU** De Arcangelis, Giuseppe; Di Giorgio, Giorgio. **AA** De Arcangelis: Universita di Bari and Ministero del Tesoro. Di Giorgio: Universita degli Studi di Roma "La Sapienza" and Universita LUISS Guido Carli. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 446; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E52, E58. **KW** Monetary Policy. Interbank Loans. Vector Autoregressions. Central Banks.

AB This paper provides updated empirical evidence about the real and nominal effects of monetary policy in Italy, by using structural VAR analysis. We discuss different empirical approaches that have been used in order to identify monetary policy exogenous shocks. We argue that the data support the view that the Bank of Italy, at least in the recent past, has been targeting the rate on overnight interbank loans. Therefore, we interpret shocks to the overnight rate as purely exogenous monetary policy shocks and study how different macroeconomic variables react to such shocks.

De Brito, Jose Brandao

PD June 1999. **TI** The Anatomy of the East Asian Crisis: An Alternative Model of Currency Crises. **AA** University of Birmingham. **SR** University of Birmingham, Department of

Economics Discussion Paper: 99/16; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 24. **PR** 2 pounds ($4); no charge to academics. **JE** E44, E52, F31, F32, F41. **KW** Asian Crisis. Currency Crises. Macroeconomic Models. Monetary Policy. Open Economy.

AB Following the East Asian crisis two core ideas seemed to gather considerable support amongst researchers, namely that previous models of currency crisis are not fully suitable to examine this particular set of events and that the Asian crisis ensued from a financial plight. The analysis presented here attempts to contribute to remedy the former while challenging the latter on the grounds that it tells only part of the story. This paper employs a macro dynamic model to examine how the increase in the money supply that predictably follows financial liberalization renders a country vulnerable to a currency crisis in the presence of uncertainty on the timing of the monetary expansion reversal that may eventually lead to a fully-fledged crisis. The model predicts that after money expansion, output increases while the current account deteriorates and a situation of excess-capacity and bubbles in the asset markets develops. Therefore the authorities face a tough policy trade- off between long-run sustainability and short-term prosperity. If authorities fail to correct those imbalances, eventually investors launch a speculative attack. It turns out that the model's result provides a quite faithful description of the Asian crisis' overall picture. The model also suggests that the crisis will have a long term impact.

De Donder, Philippe

PD June 1999. **TI** Voting Over Social Security with Uncertain Lifetimes. **AU** De Donder, Philippe; Hindriks, Jean. **AA** De Donder: GREMAQ, Universit de Toulouse. Hindriks: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/21; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 17. **PR** no charge. **JE** D72, D78, H55. **KW** Social Security. Public Pensions. Majority Voting. Redistribution.

AB This paper examines the intragenerational redistribution aspect of social security. The level of social security is determined by majority voting between individuals who differ (ex-ante) in their earning ability and life expectancy. Given incentive effects, the voting equilibrium depends on balancing the redistributive gains that social security provides to a majority against the efficiency costs of distorting economic behavior. The impact of alternative benefit structures on the equilibrium level of social security is analyzed. It is shown that the conventional wisdom stating that "tightening the link" between benefits and contributions will reduce the distortionary effect of social security does not survive the introduction of political economy considerations. We also show that the introduction of means-testing does not necessarily lead to a decrease in the size of social security. The impact on the equilibrium level of social security of a correlation between productivity and the probability of receiving benefits is also analyzed.

de Groot, Henri L. F.

TI Vested Interests and Resistance to Technology Adoption. **AU** Canton, Eric J. F.; de Groot, Henri L. F.; Nahuis, Richard.

de Mello Sampayo, Felipa

PD July 2000. **TI** The Location of the United States' FDI Under the Share Gravity Model. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 00/04; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 47. **PR** 2 pounds ($4); no charge to academics. **JE** C23, F21, F23. **KW** Foreign Direct Investment. Multinational Enterprises. Gravity Model. Dynamic Panel Data. International Business.

AB This paper examines how United States' multinational enterprises (MNEs) spread their foreign activities among concurrent destinations. An econometric estimation of the share gravity model is presented to show that, unlike previous applications of the gravity model to the study of foreign direct investment (FDI), the share of FDI pertaining to a particular location is determined not only by its own characteristics but also by the characteristics of competing locations. The share gravity model adds a competition factor to the classical gravity formulation in order to analyze how the interactions between a specific origin and the set of destinations available affect the FDI flows towards each destination. The United States' MNEs FDI is portrayed in five different measures: total assets, capital stock, total sales, employment compensation and number of employees. A dynamic share gravity model is estimated for a panel of both industrialized and developing countries. The results suggest that the distribution of United States' MNEs FDI exhibits a strong degree of persistence, depends positively on the attractiveness of any particular foreign location and on transport costs and negatively on the competition factors affecting that location.

De Meza, David

PD March 1999. **TI** Outside Options, Ownership and Incentives Revisited. **AU** De Meza, David; Lockwood, Ben. **AA** De Meza: London School of Economics and University of Exeter. Lockwood: University of Warwick and CEPR. **SR** University of Exeter, Department of Economics Discussion Paper: 99/10; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 11. **PR** no charge. **JE** C78, D23, J33, J41. **KW** Property Rights. Outside Options. Inside Options. Incentives. Bargaining Theory.

AB Previous work on the property rights theory of the firm suggests that in the presence of outside options, ownership may be counter productive in motivating managers. This paper shows that this conclusion depends on the assumption that a manager's outside option only depends on her own investments. In many cases, an owner has the right to continue with a project even if the team breaks up. The efforts of non-owners to enhance productivity may then be devalued, but are typically not wholly lost on the project. This weakens the bargaining power of the non-owner, considerably enlarging the circumstances under which outside options are consistent with ownership motivating. In addition, our analysis identifies the possibility that when the right agent owns not only do they put more effort into the enterprise, so does everyone else.

De Michelis, Stefano

PD February 2000. **TI** On Knots and Dynamics in Games. **AU** De Michelis, Stefano; Germano, Fabrizio. **AA** De Michelis: Universita degli Studi di Pavia, Italy and CORE. Germano: Tel Aviv University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/10; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 11. **PR** $100 per year. **JE** C61, C72, C73. **KW** Dynamics. Game Theory. Nash Equilibrium. Structure Theorem. Knots.

AB We extend Kohlberg and Mertens' (1986) structure theorem concerning the Nash equilibrium and correspondence to show that its graph is not only homeomorphic to the underlying space of games but that it is also unknotted. This is then shown to have some basic consequences for dynamics whose rest points are Nash equilibria.

PD March 2000. **TI** On the Indices of Zeros of Nash Fields. **AU** De Michelis, Stefano; Germano, Fabrizio. **AA** De Michelis: Universita degli Studi di Pavia, Italy and CORE. Germano: Tel Aviv University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/17; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 22. **PR** $100 per year. **JE** C61, C73. **KW** Game Theory. Nash Equilibrium. Dynamics. Asymptotic Stability. Component of Zeros.

AB Given a game and a dynamics on the space of strategies, it is possible to associate to any component of Nash equilibria, an integer, this is the index, see Ritzberger (1994). This number gives useful information on the equilibrium set and in particular on its stability properties under the given dynamics. We prove that indices of components always coincide with their local degrees for the projection map from the Nash equilibrium correspondence to the underlying space of games, so that essentially all dynamics have the same indices. This implies that in many cases the asymptotic properties of equilibria do not depend on the choice of dynamics, a question often debated in recent literature. In particular many equilibria are asymptotically unstable for any dynamics. Thus the result establishes a further link between the theory of learning and evolutionary dynamics, the theory of equilibrium refinements and the geometry of Nash equilibria. The proof holds for very general situations that include not only any number of players and strategies but also general equilibrium settings and games with a continuum of pure strategies such as Shapley-Shubik type games, this case will be studied in a forthcoming paper.

PD March 2000. **TI** On the Index and Asymptotic Stability of Dynamics. **AA** Universita degli Studi di Pavia, Italy and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/18; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 4. **PR** $100 per year. **JE** C61, C73. **KW** Asymptotic Stability. Component of Zeros. Game Theory. Nash Equilibrium. Vector Fields.

AB Given a compact connected component of zeros of a vector field, we give a necessary condition for its asymptotic stability in terms of its index and Euler characteristic.

de Nicolo, Gianni

TI On the Sources of Business Cycles in the G-7. **AU** Canova, Fabio; de Nicolo, Gianni.

de Vos, Aart F.

TI Macro Accounts Estimation Using Indicator Ratios. **AU** Magnus, Jan R.; van Tongeren, Jan W.; de Vos, Aart F.

de Vos, Klaas

TI Child Poverty and Child Benefits in the European Union. **AU** Immervoll, Herwig; Sutherland, Holly; de Vos, Klaas.

De Waegenaere, Anja

TI Effects of Tax Depreciation on Optimal Firm Investments. **AU** Wielhouwer, Jacco; Kort, Peter M.; De Waegenaere, Anja.

TI Optimal Dynamic Investment Policy Under Different Rates for Tax Depreciation and Economic Depreciation. **AU** Wielhouwer, Jacco; De Waegenaere, Anja; Kort, Peter M.

TI Cancelling of Insurance Contracts. **AU** Brekelmans, Ruud; De Waegenaere, Anja.

De Young, Robert

PD 2000. **TI** The Determinants of De Novo Bank Survival. **AU** De Young, Robert; Hasan, Iftekhar; Hunter, William. **AA** De Young and Hunter: Federal Reserve Bank of Chicago. Hasan: New York University. **SR** New York University, Salomon Center Working Paper: S/00/22; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 27. **PR** $5.00 each; $100.00 yearly subscription. **JE** G21. **KW** Commercial Banks. Banking. Bank Failure.

AB To investigate the long-run financial viability of newly chartered, or "de novo", commercial banks, the authors estimate a "split- population" duration model for the 656 commercial banks chartered in 1984 and 1985. To provide a benchmark, they estimate a similar model for 1,288 small established banks located in the same geographic markets. Their results are consistent with a "life-cycle" theory of bank failure. Because new banks are heavily capitalized and hold portfolios of unseasoned loans, they are initially less likely to fail than established banks. But rapid asset growth, subpar profitability, and declining loan quality gradually erode their capital stocks. De novo failure rates catch up with, and then surpass, established bank failure rates within five years. The authors find similar determinants of failure for de novo and established banks. For de novo banks that eventually fail, they find that failure is accelerated by concentrations of business loans, large amounts of purchased funds, low capital ratios, and excess overhead spending; failure was delayed by fast asset growth, holding company affiliation, and holding a federal charter. They find no significant evidence that de novo national banks were more likely to fail than de novo state chartered banks.

Deaton, Angus

PD May 1999. **TI** Mortality, Education, Income, and Inequality Among American Cohorts. **AU** Deaton, Angus; Paxson, Christina. **AA** Princeton and NBER. **SR** National Bureau of Economic Research Working Paper: 7140; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 34. **PR** $5.00. **JE** D63, I12, I30. **KW** Health. Mortality. Income. Inequality.

AB People whose family income was less than $5,000 in 1980 could expect to live about 25 percent fewer years than people whose family income was greater than $50,000. We explore this finding using both individual data and a panel of aggregate birth cohorts observed from 1975 to 1995. We assume that health status is determined by social status, defined as income relative to the mean income of a reference group. When reference groups are not observed, health is a function of income whose slope (the gradient) depends on the ratio of within to between-group inequality. We derive results on how this relationship changes at different levels of aggregation. Our results on individuals show that income reduces the risk of death, and does so even controlling for education. Only some of the effect of income can plausibly be attributed to the reduction in earnings of those about to die. The panel of cohorts also shows a strongly protective effect of income, but there is evidence that cyclical increases in income may raise mortality, even when the long-run effects of income are in the opposite direction. There is no evidence that recent increases in inequality raised mortality beyond what it would otherwise have been.

PD May 1999. **TI** Inequalities in Income and Inequalities in Health. **AA** Princeton University and NBER. **SR** National Bureau of Economic Research Working Paper: 7141; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 30. **PR** $5.00. **JE** D31, D63, I12. **KW** Health. Income. Inequality. Mortality.

AB What is inequality in health? Are economists' standard tools for measuring income inequality relevant or useful for measuring it? Does income protect health and does income inequality endanger it? The author discusses two different concepts of health inequality and relates each of them to the literature on the inequality in income. He proposes a model in which each individual's health is related to his or her status within a reference group as measured by income relative to the group mean. Income inequality, whether within groups or between them, has no effect on average health. Even so, the slope of the relationship between health and income, the "gradient," depends on the ratio of between to within-group inequality. The model is extended to allow income inequality to play a direct role in determining health status. Empirical evidence on cross-country income inequality and life expectancy within the OECD, and on time series for the U.S., Britain, and Japan, provides little support for the idea that inequality is a health hazard at the national level. Birth cohorts in the US between 1981 and 1993 show no relationship between mortality and income inequality. However, there is a well-defined health gradient in these data.

del Rio, Manuel

TI A Generalization of Histogram Type Estimators. **AU** Delicado, Pedro; del Rio, Manuel.

Delicado, Pedro

TI Validation Procedures in Radiological Diagnostic Models: Neural Network and Logistic Regression. **AU** Arana, Estanislao; Delicado, Pedro; Marti-Bonmati, Luis.

PD November 1999. **TI** A Generalization of Histogram Type Estimators. **AU** Delicado, Pedro; del Rio, Manuel. **AA** Delicado: Universitat Pompeu Fabra. del Rio: Universidad Complutense de Madrid. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 422; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 27. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C13, C14. **KW** Convolution. Frequency Polygons. Nonparametric Methods. Density Estimation. Smoothing Techniques.

AB We introduce simple nonparametric density estimators that generalize the classical histogram and frequency polygon. The new estimators are expressed as linear combinations of density functions that are piecewise polynomials, where the coefficients are optimally chosen in order to minimize the integrated square error of the estimator. We establish the asymptotic behavior of the proposed estimators, and study their performance in a simulation study.

den Haan, Wouter J.

PD June 2000. **TI** Robust Covariance Matrix Estimation with Data-Dependent VAR Prewhitening Order. **AU** den Haan, Wouter J.; Levin, Andrew T. **AA** den Haan: University of California, San Diego. Levin: Federal Reserve Board of Governors. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/11; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 24. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C15, C22. **KW** Hypothesis Testing. Monte Carlo Methods. HAC Covariance Matrix. Estimation. Time Series.

AB This paper analyzes the performance of heteroskedasticity-and- autocorrelation-consistent (HAC) covariance matrix estimators in which the residuals are prewhitened using a vector autoregressive (VAR) filter. We highlight the pitfalls of using an arbitrarily fixed lag order for the VAR filter, and we demonstrate the benefits of using a model selection criterion (either AIC or BIC) to determine its lag structure. Furthermore, once data-dependent VAR prewhitening has been utilized, we find negligible or even counter-productive effects of applying standard kernel-based methods to the prewhitened residuals; that is, the performance of the prewhitened kernel estimator is virtually indistinguishable from that of the VARHAC estimator.

PD February 1999. **TI** Contract-Theoretic Approaches to Wages and Displacement. **AU** den Haan, Wouter J.; Ramey, Garey; Watson, Joel. **AA** den Haan: University of California, San Diego and National Bureau of Economic Research. Ramey and Watson: University of California, San Diego. **SR** National Bureau of Economic Research Working Paper: 6972; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** C78, E24, J31, J41. **KW** Contracting. Employment. Wages. Enforceability. Worker Liquidity.

AB This paper develops a theoretical framework for analyzing contracting imperfections in long-term employment relationships. We focus chiefly on limited enforceability and limited worker liquidity. Inefficient severance of employment relationships, payment of efficiency wages, the relative response of wages and employment to business cycle shocks, and the propagation of these shocks are linked to the nature of contracting imperfections.

Deschenes, Olivier

TI Do Unemployment Insurance Recipients Actively Seek Work? Randomized Trials in Four U.S. States. **AU** Ashenfelter, Orley; Ashmore, David; Deschenes, Olivier.

Devereux, Michael B.

PD December 1998. **TI** Fixed vs. Floating Exchange Rates: How Price Setting Affects the Optimal Choice of Exchange-Rate Regime. **AU** Devereux, Michael B.; Engel, Charles. **AA** Devereux: Hong Kong University of Science and Technology. Engel: University of Washington and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6867; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 39. **PR** $5.00. **JE** E42, F31, F41. **KW** Exchange Rates. International Trade. Currency. Open Economies. Consumption.
AB We investigate the welfare properties of fixed and floating exchange rate regimes in a two-country, dynamic, infinite-horizon model with agents optimizing in an environment of uncertainty created by monetary shocks. The optimal exchange rate regime may depend on whether prices are set in the currency of producers or the currency of consumers. When prices are set in consumers' currency, the variance of home consumption is not influenced by foreign monetary variance under floating exchange rates, while there is transmission of foreign disturbances under floating rates if prices are set in producers' currencies, or under fixed exchange rates. An important feature of the model is the exchange rate regime affects not just the variance of consumption and output, but also their average levels. When prices are set in producers' currency, as in the traditional framework, we find that there is a trade-off between floating and fixed exchange rates. Exchange rate adjustment under floating rates allows for a lower variance of consumption, but exchange rate volatility itself leads to a lower average level of consumption. When prices are set in consumers' currency, floating exchange rates always dominate fixed exchange rates.

PD March 1999. **TI** The Optimal Choice of Exchange-Rate Regime: Price-Setting Rules and Internationalized Production. **AU** Devereux, Michael B.; Engel, Charles. **AA** Devereux: Hong Kong University of Science and Technology. Engel: University of Washington and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6992; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** F23, F31, F41. **KW** Exchange Rates. International Finance. Price Setting. Multinational Firms. Open Economy.
AB We investigate the choice of exchange-rate regime -- fixed or floating -- in a dynamic, intertemporal general equilibrium framework. Our framework extends Devereux and Engel (1998) by investigating the implications of internationalized production. We examine the role of price-setting -- whether prices are set in the currency of producers or the currency of consumers -- in determining the optimality of exchange- rate regimes in an environment of uncertainty created by monetary shocks. We find that, when prices are set in producers' currencies, floating exchange rates are preferred when the country is large enough, or not too risk averse. On the other hand, floating exchange rates are always preferred when prices are set in consumers' currencies because floating exchange rates allow domestic consumption to be insulated from foreign monetary shocks. The gains from floating exchange rates are greater when there is internationalized production in this case.

Di Giorgio, Giorgio

TI Monetary Policy Shocks and Transmission in Italy: a VAR Analysis. **AU** De Arcangelis, Giuseppe; Di Giorgio, Giorgio.

PD October 1999. **TI** Financial Intermediation and Equity Investment with Costly Monitoring. **AA** Universita degli Studi di Roma 'La Sapienza' and Universita 'Luiss Guido Carli'. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 410; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 18. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E44, E62, G20. **KW** Financial Intermediation. Costly State Verification. Pareto Optimality. Overlapping Generations.
AB This paper studies the efficiency of equilibria in a productive OLG economy where the process of financial intermediation is characterized by costly state verification. Both competitive equilibria and Constrained Pareto Optimal allocations are characterized. It is shown that market outcomes can be socially inefficient, even when a weaker notion than Pareto optimality is considered.

TI Should Banking Supervision and Monetary Policy Tasks Be Given to Different Agencies? **AU** Di Noia, Carmine; Di Giorgio, Giorgio.

Di Noia, Carmine

PD October 1999. **TI** Should Banking Supervision and Monetary Policy Tasks Be Given to Different Agencies? **AU** Di Noia, Carmine; Di Giorgio, Giorgio. **AA** Di Noia: Commissione Nazionale per la Societ. e la Borsa. Di Giorgio: Universita degli Studi di Roma 'La Sapienza' and Universita 'Luiss Guido Carli'. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 411; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 28. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E58, E61, G21, G28. **KW** Banking Supervision. Financial Stability. Regulatory Arrangements. Central Banks. Inflation.
AB This paper adds some new arguments to the thesis that the responsibility for banking supervision should be assigned to an agency formally separated from the Central Bank. We also provide some additional evidence on the macro- and microeconomic performance of OECD countries whose banking systems are classified according to the regulatory regime in place. We find that the inflation rate is considerably higher and more volatile in countries where the Central Bank acts as a monopolist in banking supervision. Besides, although banks seem to be more profitable when Central Banks supervise them, they incur higher costs and rely more on deposits with respect to more sophisticated liabilities as a funding source.

Diamond, Peter

PD January 2000. **TI** Quasi-Hyperbolic Discounting and Retirement. **AU** Diamond, Peter; Koszegi, Botond. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/03; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 29. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D91, E21, J22, J26. **KW** Retirement. Saving. Consumption. Discounting. Intertemporal Choice.

AB There is overwhelming psychological evidence that some people run into self-control problems regularly, yet the effect of these findings on major life-cycle decisions hasn't been studied in detail. This paper extends Laibson's quasi-hyperbolic discounting savings model, in which each intertemporal self realizes that her time discount structure will lead to preference changes, and thus plays a game with her future selves. By making retirement endogenous, savings affect both consumption and work in the future. From earlier selves' points of view, the deciding self tends to retire too early, and, so it is possible that the self before saves less to induce her to work. However, still earlier selves think the pre-retirement self may do this too much, leading to possible higher saving on their part and eventual early retirement. Thus, the consumption path exhibits observational non-equivalence with exponential discounting. Observational non- equivalence also obtains on a number of comparative statics questions. For example, a self could have a negative marginal propensity to consume out of changes in future income. The outcome with naive agents, who fail to realize their self-control problem, is also briefly discussed.

Diao, Xinshen

PD July 1998. **TI** Challenges and Choices in Post-Crisis East-Asia: Simulations of Investment Policy Reform in an Intertemporal, Global Model. **AU** Diao, Xinshen; Li, Wenli; Yeldan, Erinc. **AA** Diao: University of Minnesota. Li: Federal Reserve Bank of Richmond. Yeldan: Bilkent University, Ankara. **SR** Federal Reserve Bank of Richmond Working Paper: 98/07; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 43. **PR** no charge. **JE** C68, F11, G30, O41, O53. **KW** East Asian Crisis. Investment Policy. General Equilibrium. Growth. Financial Crises.

AB The East Asian financial crisis exposed the problems of excessive government intervention in credit allocation and poor supervision of the banking system. We argue that the crisis is an opportunity to reformulate the strategies of growth by way of eliminating politicized intervention on investment. In an intertemporal general equilibrium model, we examine the adjustment processes of the crisis-hit region and the world economies, and investigate the removal of the investment subsidies. Our results suggest that the immediate impact of the crisis on the Asian economies is a contraction of GDP and investment. We also find significant welfare gains in the crisis-hit economies in response to elimination of the subsidies to firm's investment.

Diaz, Aida

PD October 1999. **TI** Catalan Government Popularity. An Example of Economic Effects on Sub- National Government Support. **AU** Diaz, Aida; Riba, Clara. **AA** Diaz: Universitat Autonoma de Barcelona. Riba: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 406; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 25. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D72, F40, H70. **KW** Economic Vote. Popularity Functions. Responsibility Attribution. Grievance Asymmetry. Voting Behavior.

AB The aim of this essay is to deal with economic voting in contexts of multilevel governance and to be a contribution to the debate on attribution of responsibilities in popularity functions literature. We use aggregate and individual data from Catalonia in order to analyze the relation between the state of the economy and the support for a sub- state government. The empirical analysis shows that the responsibility hypothesis works in regional governments without explicit macroeconomic competencies. We have also considered the evaluations of government performance on certain specific policies in order to clarify and determine the factors that drive Catalan government support. The article considers the implications of the findings for future attempts to model party support in a context of the European Union.

Diebold, Francis X.

TI The Distribution of Exchange Rate Volatility. **AU** Anderson, Torben G.; Bollerslev, Tim; Diebold, Francis X.; Labys, Paul.

TI The Distribution of Exchange Rate Volatility. **AU** Anderson, Torben G.; Bollerslev, Tim; Diebold, Francis X.; Labys, Paul.

DiNardo, John

TI Did Community Rating Induce an Adverse Selection Death Spiral? Evidence from New York, Pennsylvania and Connecticut. **AU** Buchmueller, Thomas; DiNardo, John.

Ding, Hua

PD November 1998. **TI** Effects of Rationing on Consumer Behaviour in Chinese Urban Households. **AU** Ding, Hua; Hadri, Kaddour. **AA** Ding: Nanjing University and University of Exeter. Hadri: City University, London. **SR** University of Exeter, Department of Economics Discussion Paper: 99/02; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 13. **PR** no charge. **JE** D12, O12, R21, R22. **KW** Consumer Behavior. Rationing. Linear Expenditure Systems. Housing. China.

AB This paper examines the consequences of housing rationing on the consumption behavior of Chinese urban households in Jiangsu province during the years 1992 - 1993. The results, confirming previous findings, show that rationing of housing has an impact on the demand for unrationed goods. In particular, Chinese urban households would continue to increase their demand for nonstaple foods. An effort to alleviate housing rationing would certainly reduce the distortion to market efficiency. But, in the short term, it means some hardship for low income households.

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

Dittmann, Ingolf

PD May 2000. **TI** Properties of Nonlinear Transformations of Fractionally Integrated Processes. **AU** Dittmann, Ingolf; Granger, Clive W. J. **AA** Dittmann: University of Dortmund. Granger: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/07; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 21. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C22. **KW** Nonlinear Transformations. Long Memory. Fractional Integration. Antipersistence. Nonstationarity.

AB This paper shows that the properties of nonlinear transformations of a fractionally integrated process depend strongly on whether the initial series is stationary or not. Transforming a stationary Gaussian I(d) process with d > 0 leads to a long-memory process with the same or a smaller long-memory parameter depending on the Hermite rank of the transformation. Any nonlinear transformation of an antipersistent Gaussian I(d) process is I(0). For non-stationary I(d) processes, every integer power transformation is non-stationary and exhibits a deterministic trend in mean and in variance. In particular, the square of a non-stationary Gaussian I(d) process still has long memory with parameter d, whereas the square of a stationary Gaussian I(d) process shows less dependence than the initial process. Simulation results for other transformations are also discussed.

Docquier, Frederic

TI Debt-Sharing and Secession: A Generational Accounting Approach. **AU** Cattoir, Philippe; Docquier, Frederic.

Dowds, Jack

TI The Ethics of Creative Accounting. **AU** Amat, Oriol; Blake, John; Dowds, Jack.

Dreze, Jacques H.

PD February 2000. **TI** State-Dependent Utility and Decision Theory. **AU** Dreze, Jacques H.; Rustichini, Aldo. **AA** Dreze: CORE. Rustichini: CentER, Tilburg University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/07; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 52. **PR** $100 per year. **JE** C70, D81. **KW** Utility. Decision-Making. Uncertainty. Expected Utility. Preferences.

AB This survey paper prepared for the Handbook of Utility Theory covers the axiomatic foundations of decision making under uncertainty when conditional preferences are allowed to be state dependent, leading to an expected state-dependent utility representation. In the context of games against nature, subjective probabilities are not identified from observable choices among games, suggesting recourse to hypothetical preferences. In the context of one-person games with moral hazard, a generalized representation theorem (proved in the Appendix) asserts the existence of a closed convex set O of probabilities in the state space. Choices among games, with associated unobservable strategies, correspond to expected state-dependent utility maximization, with probabilities chosen in the set O. When that set is full-dimensional, it is uniquely identified. Otherwise, identification is partial, suggesting again recourse to hypothetical preferences, as per a revised version of "conditional expected utility theory". The extent to which the state- dependent utility is identified is the same as that prevailing for the probabilities. The paper includes a discussion of risk aversion with state-dependent preferences.

PD March 2000. **TI** Economic and Social Security in the Twenty-First Century, With Attention to Europe. **AA** CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/15; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 28. **PR** $100 per year. **JE** D82, E61, E62, H23, H24. **KW** Social Insurance. Moral Hazard. Fiscal Competition. Risk Sharing. International Risk Sharing.

AB A partly heuristic attempt at exploring long-run policies aimed at a second-best compromise between ex ante risk-sharing efficiency and ex post productive efficiency. Wage subsidies for low-skilled workers financed by taxes on high wages are advocated, together with imposed risk sharing between capital and labor, between generations and between the countries belonging to EMU. The scope of the advocated policies is limited by considerations of moral hazard, time consistency and fiscal competition. Also, estimates of some key economic parameters remain very imprecise. Several avenues of further research are identified.

Driessen, Joost

PD September 1999. **TI** Testing Affine Term Structure Models in Case of Transaction Costs. **AU** Driessen, Joost; Melenberg, Bertrand; Nijman, Theo. **AA** Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9984; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 34. **PR** no charge. **JE** G12, E43. **KW** Interest Rates. Market Frictions. Transaction Costs. Model Misspecification. Asset Pricing.

AB In this paper we empirically analyze the impact of transaction costs on the performance of affine interest rate models. We test the implied (no arbitrage) Euler restrictions, and we calculate the specification error bound of Hansen and Jagannathan to measure the extent to which a model is misspecified. Using data on T-bill and bond returns we find, under the assumption of frictionless markets, strong evidence of misspecification of one- and two factor affine interest rate models. This is in line with earlier research. However, we show that the pricing errors of these models are reduced considerably, if relatively small transaction costs are taken into account. The average transaction costs for T-bills, due to the bid-ask spread, are around 1.5 basis points. At this size of transaction costs and for monthly holding periods, the misspecification of one- and two-factor affine interest rate models becomes statistically insignificant and economically very small. For quarterly holding periods, higher transaction costs of around 3 basis points are required to avoid misspecification.

Driver, Rebecca L.

TI Are Our FEERs Justified? **AU** Barisone, Giacomo; Driver, Rebecca L.; Wren-Lewis, Simon.

PD June 2000. **TI** Evaluating Alternative Exchange Rate

Regimes: Time Consistency, Inertia and the Identification of Shocks in a New Keynesian Model. **AA** Bank of England. **SR** University of Exeter, Department of Economics Discussion Paper: 00/03; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 32. **PR** no charge. **JE** C32, E61, F33, F41, F42. **KW** Exchange Rate Regimes. VAR Decompositions. Time Consistency. Shocks. Inertia.

AB An ability to adequately assess the functioning of exchange rate regimes is crucial. Such an assessment will be based on a priori beliefs about how different regimes react to shocks and therefore which regime will be appropriate for a given economy. This paper contributes to this literature by examining how a wide variety of potential exchange rate regimes operate in the face of demand and supply shocks. The results show that the choice of exchange rate regime can significantly affect the transmission mechanism, particularly for supply shocks. This therefore has important implications for any methodology which uses VAR decompositions to judge the compatibility of economies to participate in fixed exchange rate regimes. In particular, when preexisting differences in exchange rate regimes are not accounted for, the results may be highly misleading. The constraint that policies are time consistent plays a significant role in determining the welfare costs associated with different regimes, particularly for supply shocks where a free float no longer dominates possible alternatives. Another important aspect is the degree of nominal inertia, which has a strong bearing on the costs associated with each regime.

PD April 1999. **TI** New Trade Theory and Aggregate Export Equations: An Application of Panel Cointegration. **AU** Driver, Rebecca L.; Wren-Lewis, Simon. **AA** Driver: Bank of England. Wren-Lewis: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/17; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 29. **PR** no charge. **JE** C23, F12, F14. **KW** New Trade Theory. Innovation. Exports. Panel Cointegration. International Trade.

AB New trade theory suggests that improvements in the variety and quality of products may be as important as price competitiveness as an explanation of trade flows. This paper tests this proposition for export volumes for the G7 using relative cumulated investment as a proxy for innovation. Positive results are obtained using new panel cointegration techniques as well as more traditional methodologies.

Droste, Edward

PD June 1999. **TI** Habit Formation and the Evolution of Social Communication Networks. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9950; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 16. **PR** no charge. **JE** C72, C73. **KW** Stochastic Learning. Game Theory. Network Formation. Social Communication. Replicator Dynamics.

AB This paper analyzes a finite normal-form game, where the players' pure strategies consist of establishing links with the other players. The payoffs result from social communication between the players. We identify a social communication network with a mixed-strategy profile and we model the evolution of networks using a stochastic process of habit formation in discrete time. Borgers and Sarin [5] show that at every finite period of time, assuming frequent communication and slow adjustment, the stochastic process can be approximated by the continuous-time replicator dynamics. Using this result we are able to specify an asymptotically stable set of social communication networks which consists of Nash equilibria of the corresponding game. Furthermore, in the 3-player case this set reduces to the set consisting of the two efficient 'cyclic' social communication networks.

Duflo, Esther

PD May 2000. **TI** Grandmother and Granddaughters: The Effects of Old Age Pension on Child Health in South Africa. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/05; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 35. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** I12, I38, J24, O15, O20. **KW** Redistribution. Human Capital. Health Production. Development. Welfare Programs.

AB The idea that redistribution can be efficiency-enhancing if it has positive effects on human capital accumulation is often invoked to support redistribution policies in developing countries. Yet there is little evidence on whether income transfers improve human capital outcomes. This paper studies the impact of a cash transfer program on child health in South Africa. In the early 1990s, the benefits and coverage of the South African social pension program were expanded for the black population. About one-third of black South African children under age 5 live with an elderly person. This reform provides a unique opportunity to estimate the impact of an increase in cash transfers on child health, as well as the differences in impact due to the gender of the transfer recipient. Estimates suggest that pensions received by the maternal grandmother had a large impact on the anthropometric status of children, girls in particular. In contrast, I found no similar effect when a man is the pension recipient, or when it is received by the paternal grandmother.

PD June 2000. **TI** Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 00/06; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 35. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** I21, I28, J31, O15, O22. **KW** Education. Wages. Human Capital. Development. Returns to Schooling.

AB Between 1973 and 1978, the Indonesian Government constructed over 61,000 primary schools throughout the country. This is one of the largest school construction programs on record. I evaluate the effect of this program on education and wages by combining differences across regions in the number of schools constructed with differences across cohorts induced by the timing of the program. The estimates suggest that the construction of primary schools led to an increase in education and earnings. Children aged 2 to 6 in 1974 received 0.12 to 0.19 more years of education for each school constructed per

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

1,000 children in their region of birth. Using the variations in schooling generated by this policy as instrumental variables for the impact of education on wages generates estimates of economic returns to education ranging from 6.8 percent to 10.6 percent.

TI Reputation Effects and the Limits of Contracting: A Study of the Indian Software Industry. **AU** Banerjee, Abhijit V.; Duflo, Esther.

Dumas, Bernard

PD March 1999. **TI** Global Diversification, Growth and Welfare with Imperfectly Integrated Markets for Goods. **AU** Dumas, Bernard; Uppal, Raman. **AA** Dumas: HEC School of Management. Uppal: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6994; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** F36, F41, G15. **KW** International Finance. Economic Integration. Financial Markets. Welfare. International Trade.

AB In this article, we examine the effect of the imperfect mobility of goods on international risk sharing and, through that, on the investment in risky projects, welfare and growth. We find that the welfare gain of financial market openness is not monotonic with respect to investors' risk aversion and the aggregate volatility of output growth. Our main result is that the welfare gain from integration is not drastically reduced by the presence of goods market imperfections, modeled as a cost of transferring goods from one country to the other. The policy implication to be drawn is that financial market integration is a worthwhile goal to pursue even at a time when full goods mobility has not been achieved.

Dustmann, Christian

PD June 1999. **TI** Parametric and Semiparametric Estimation in Models with Misclassified Categorical Dependent Variables. **AU** Dustmann, Christian; van Soest, Arthur. **AA** Dustmann: University College London and Institute for Fiscal Studies. van Soest: Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9951; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 29. **PR** no charge. **JE** C13, C14, C35, J15, J61. **KW** Immigrants. Speaking Fluency. Measurement Error. Classification Error. Ordered Response.

AB We consider both a parametric and a semiparametric method to account for classification errors on the dependent variable in an ordered response model. The methods are applied to the analysis of self-reported speaking fluency of male immigrants in Germany. We find some substantial differences in parameter estimates between parametric and semiparametric models, and between predictions of true and reported fluency. We compare the predictions of the three models, and perform a graphical test of the parametric models against semiparametric alternatives.

Efraim, Sadka

TI Unskilled Migration: A Burden or a Boon for the Welfare State. **AU** Razin, Assaf; Efraim, Sadka.

Ehrenberg, Ronald G.

PD February 1999. **TI** Do Indirect Cost Rates Matter? **AU** Ehrenberg, Ronald G.; Mykula, Jaroslava K. **AA** Ehrenberg: Cornell University and National Bureau of Economic Research. Mykula: Cornell University. **SR** National Bureau of Economic Research Working Paper: 6976; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** G30, I20, L31. **KW** Indirect Cost Rates. Research Funding. Universities. Federal Research Funding. Grants.

AB This study addresses the relationship between a university's indirect cost rate and its level of federal research funding. Both direct and indirect costs funding are examined. The data used in the analyses include unpublished institutional level data for all doctoral and research universities on funding and indirect cost rates obtained from the National Science Foundation for the fiscal years 1988 to 1997 period. The major finding is that higher indirect cost rates are associated with higher levels of direct and indirect cost funding for institutions that initially are among the largest recipients of federal funding. In contrast, for universities initially in the lower tail of funding recipients, higher indirect cost rates are associated with lower levels of direct and indirect cost funding. This pattern of results is hypothesized to be based upon an institution's indirect cost rate serving primarily as a "price" of research for lesser institutions but serving primarily as a proxy for the quality of the institution's research infrastructure for the major recipients of federal funds. The findings are consistent with the observation that since 1990 both indirect cost rates and shares of research funding for major private research universities have tended to decline.

Eichberger, Jurgen

TI Free Riders Do Not Like Uncertainty. **AU** Kelsey, David; Eichberger, Jurgen.

PD December 1999. **TI** Uncertainty and Strategic Interaction in Economics. **AU** Eichberger, Jurgen; Kelsey, David. **AA** Eichberger: Universitat des Saarlandes. Kelsey: University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/26; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 37. **PR** 2 pounds ($4); no charge to academics. **JE** C72, D43, D62, D81. **KW** Choquet Expected Utility. Strategic Complements. Strategic Substitutes. Uncertainty. Decision Making.

AB The endogeneity of equilibrium strategies makes modeling uncertainty about the behavior of other economic players difficult. Recent developments in decision and game theory offer an opportunity to include strategic uncertainty as an explanatory variable in economic analysis. This paper introduces a new concept of decision making under uncertainty and an adapted notion of strategic equilibrium. With these tools, several well-known economic models of strategic interaction are reexamined. These applications provide an opportunity to assess the contribution of uncertainty for a better understanding of strategic interaction in economics.

Eichenbaum, Martin

TI Hedging and Financial Fragility in Fixed Exchange Rate Regimes. **AU** Burnside, Craig; Eichenbaum, Martin; Rebelo, Sergio.

Eijffinger, Sylvester

PD April 1999. **TI** A Theory of Interest Rate Stepping: Inflation Targeting in a Dynamic Menu Cost Model. **AU** Eijffinger, Sylvester; Schaling, Eric; Verhagen, Willem. **AA** Eijffinger: CentER, Tilburg University, College of Europe, and Humboldt University of Berlin. Schaling: RAU, Republic of South Africa. Verhagen: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9971; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 48. **PR** no charge. **JE** E31, E52, E58. **KW** Inflation Targeting. Dynamic Menu Costs. Uncertainty. Monetary Policy. Interest Rates.

AB A stylized fact of monetary policy making is that central banks do not immediately respond to new information but rather seem to prefer to wait until sufficient 'evidence' to warrant a change has accumulated. However, theoretical models of inflation targeting imply that an optimizing central bank should continuously respond to shocks. This paper attempts to explain this stylized fact by introducing a small menu cost which is incurred every time the central bank changes the interest rate. It is shown that this produces a relatively large range of inaction since action is costly the central bank will have an incentive to wait and see whether or not the economy will move closer to the inflation target of its own accord. Next, the paper analyzes the implications for the time series properties of interest rates. In particular, the authors examine the effect of the interest rate sensitivity of aggregate demand, the slope of the Lucas supply function and the variance of demand shocks on the size of the interest rate step and the expected length of the time period till the next interest rate step. Finally, the authors analyze the effect of menu costs on inflationary expectations.

Ekeland, Ivar

TI The Identification of Preferences from Equilibrium Prices. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

TI The Identification of Preferences from Equilibrium Prices Under Uncertainty. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

Ellickson, Paul

PD January 1999. **TI** Patient Welfare and Patient Compliance: An Empirical Framework for Measuring the Benefits from Pharmaceutical Innovation. **AU** Ellickson, Paul; Stern, Scott; Trajtenberg, Manuel. **AA** Ellickson: Massachusetts Institute of Technology. Stern: MIT Sloan School and National Bureau of Economic Research. Trajtenberg: Tel Aviv University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6890; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** C51, C81, I11, I12, O33. **KW** Pharmaceuticals. Innovation. Health. Welfare. Prescription Drugs.

AB The main goal of this paper is to develop an empirical framework for evaluating the patient welfare benefits arising from pharmaceutical innovation. Extending previous studies of the welfare benefits from innovation (Trajtenberg, 1990; Hausman, 1996), this paper unpacks the separate choices made by physicians and patients in pharmaceutical decision making and develops an estimable econometric model which reflects these choices. The proposed estimator for patient welfare depends on (a) whether patients comply with the prescriptions they receive from physicians and (b) the motives of physicians in their prescription behavior. By focusing on compliance behavior, the proposed welfare measure reflects a specific economic choice made by patients. The authors review evidence that the rate of noncompliance ranges up to 70%, suggesting an important gulf between physician prescription behavior and realized patient welfare. Since physicians act as imperfect but interested agents for their patients, the welfare analysis based on compliance must account for the nonrandom selection of patients into drugs by their physicians.

Elliott, Graham

PD May 2000. **TI** Testing for Unit Roots with Stationary Covariates. **AU** Elliott, Graham; Jansson, Michael. **AA** Elliott: University of California, San Diego. Jansson: University of Aarhus. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/06; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 15. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C22, C30. **KW** Unit Roots. Structural VAR. Vector Autoregression. Hypothesis Testing. Cointegration.

AB We derive the family of tests for a unit root with maximal power against a point alternative when an arbitrary number of stationary covariates are modeled with the potentially integrated series. We show that very large power gains are available when such covariates are available. We then derive tests which are simple to construct (involving the running of vector autoregressions) and achieve at a point the power envelopes derived under very general conditions. These tests have excellent properties in small samples. We also show that these are obvious and internally consistent tests to run when identifying structural VAR's using long run restrictions.

Ellman, Matthew

PD August 1999. **TI** Electoral Competition under the Threat of Political Unrest. **AU** Ellman, Matthew; Wantchekon, Leonard. **AA** Ellman: Universitat Pompeu Fabra. Wantchekon: Yale University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 457; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 36. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D72, D82. **KW** Electoral Competition. Political Unrest. Asymmetric Information. Platform Divergence. Credibility.

AB We study elections in which one party (the strong party) controls a source of political unrest; e.g., this party could instigate riots if it lost the election. We show that the strong party is more likely to win the election when there is less information about its ability to cause unrest. This is because when the weak party is better informed, it can more reliably prevent political unrest by implementing a "centrist" policy. When there is uncertainty over the credibility of the threat, "posturing" by the strong party leads to platform divergence.

Engel, Charles

TI Fixed vs. Floating Exchange Rates: How Price Setting Affects the Optimal Choice of Exchange-Rate Regime. **AU** Devereux, Michael B.; Engel, Charles.

TI The Optimal Choice of Exchange-Rate Regime: Price-Setting Rules and Internationalized Production. **AU** Devereux, Michael B.; Engel, Charles.

Engel, Eduardo M. R. A.

PD January 1999. **TI** Understanding Tax Evasion Dynamics. **AU** Engel, Eduardo M. R. A.; Hines, James R., Jr.. **AA** Engel: Universidad de Chile and National Bureau of Economic Research. Hines, Jr.: University of Michigan Business School and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6903; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** H26, K34, K42. **KW** Tax Evasion. Auditing. Illegal Behavior. Law Enforcement.

AB Americans who are caught evading taxes in one year may be audited for prior years. It is widely believed that a taxpayer's probability of being audited is an increasing function of current evasion. Under these circumstances, a rational taxpayer's current evasion is a decreasing function of prior evasion, since, if audited and caught for evading this year, the taxpayer may incur penalties for past evasions. The paper presents a model that formalizes this notion, and derives its implications for the responsiveness of individual and aggregate tax evasion to changes in the economic environment. The aggregate behavior of American taxpayers over the 1947-1993 period is consistent with the implications of this model. Specifically, aggregate tax evasion is higher in years in which past evasions are small relative to current tax liabilities. Furthermore, aggregate audit-related fines and penalties imposed by the IRS are positively related not only to aggregate current-year evasion but also to evasion in prior years. The estimates imply that the average tax evasion rate in the United States over this period is 42% lower than it would be if taxpayers were unconcerned about retrospective audits.

Engle, Robert F.

PD May 2000. **TI** Dynamic Conditional Correlation -- A Simple Class of Multivariate GARCH Models. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/09; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 26. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C10, C22, G10. **KW** ARCH. GARCH. Correlation. Time Series. Value at Risk.

AB Time varying correlations are often estimated with Multivariate GARCH models that are linear in squares and cross products of returns. A new class of multivariate models called dynamic conditional correlation (DCC) models is proposed. These have the flexibility of univariate GARCH models coupled with parsimonious parametric models for the correlations. They are not linear but can often be estimated very simply with univariate or two step methods based on the likelihood function. It is shown that they perform well in a variety of situations and give sensible empirical results.

Engwerda, Jacob C.

PD September 1999. **TI** The Solution Set of the N-Player Scalar Feedback Nash Algebraic Riccati Equations. **AA** Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9990; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 15. **PR** no charge. **JE** C60, C70. **KW** Linear Quadratic Games. Feedback Nash Equilibrium. Solvability Conditions. Riccati Equations. Game Theory.

AB In this paper we analyze the set of scalar algebraic Riccati equations (ARE) that play an important role in finding feedback Nash equilibria of the scalar N-player linear-quadratic differential game. We show that in general there exist maximal (2-raised to the n-power)-1 solutions of the (ARE) that give rise to a Nash equilibrium. In particular we analyze the number of equilibria as a function of the state-feedback parameter and present both necessary and sufficient conditions for existence of a unique solution of the (ARE). Furthermore, we derive conditions under which the set of state-feedback parameters for which there is a unique solution grows with the number of players in the game.

Epple, Dennis

PD February 2000. **TI** Peer Effects, Financial Aid, and Selection of Students into Colleges and Universities: An Empirical Analysis. **AU** Epple, Dennis; Romano, Richard; Sieg, Holger. **AA** Epple: Carnegie Mellon University. Romano: University of Florida. Sieg: Duke University. **SR** Duke University Department of Economics Working Paper: 00/02; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 39. **PR** no charge. **JE** C33, D58, I21. **KW** Higher Education. Peer Effects. School Competition. Non-Linear Pricing. Empirical Analysis.

AB The goal of this paper is to develop predictions regarding market consequences of peer effects in higher education and to offer empirical evidence about the extent to which those predictions are borne out in the data. We develop a model in which colleges seek to maximize the quality of the educational experience provided to their students. From this model we deduce predictions about the hierarchy of schools that emerges in equilibrium, the allocation of students by income and ability among schools, and the pricing policies that schools adopt. We use both university-level and student-level data. Our findings suggest that there is a hierarchy of school qualities characterized by substantial stratification by income and ability. The evidence on pricing by ability is supportive of positive peer effects in educational achievement from high ability at the college level. However, the evidence on pricing also suggests that more highly ranked schools exercise some degree of market power.

PD February 1999. **TI** The Tiebout Hypothesis and Majority Rule: An Empirical Analysis. **AU** Epple, Dennis; Sieg, Holger. **AA** Epple: Carnegie Mellon University and National Bureau of Economic Research. Holger: Duke University. **SR** National Bureau of Economic Research Working Paper: 6977; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** C51, H31, H72, R12. **KW** Majority Rule. Tiebout Sorting. Regional Economics. Government Expenditures.

AB The paper provides a comprehensive empirical analysis of majority rule and Tiebout sorting within a system of local jurisdictions. The idea behind the estimation procedure is to investigate whether observed levels of public expenditures satisfy necessary conditions implied by majority rule in a general equilibrium model of residential choice. The estimator controls for both observed and unobserved heterogeneity among households, observed and unobserved characteristics of communities, the potential endogeneity of prices and expenditures as well as the self- selection of households into communities of their choice. We estimate the structural parameters of the model using data from the Boston Metropolitan Area. The empirical findings are by and large supportive of our approach.

Estape-Triay, Salvador

PD October 1999. **TI** State and Industry in the 1940s: The Spanish Automobile Industry. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 403; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 26. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** L10, L20, L52, L62, N64. **KW** Autarchy. Monopoly. Motor Industry. State Intervention. Automobiles.

AB The decade of the 1940s was one of the darkest periods in the country's history, with years of famine, repression, general misery, and impoverishment of all aspects of national life ranging from culture to the economy. During those years plans were made to establish a Spanish motor industry once the Civil War had come to an end in 1939. It seemed a propitious moment for private enterprise and various foreign motor companies presented proposals for manufacturing their entire vehicle range, from cars to trucks. However, the government plans were for a State monopoly, a policy which meant that any private projects which did not contemplate the regime making management decisions were rejected out of hand. From 1941 onwards, any new initiative was required to meet the plans set by INI. The main argument running through this paper is that one can only understand the development of the modern Spanish motor industry if one grasps the haggling between motor companies and government regarding market entry and the impact of the regime's autarchic policies in the 1940s.

Estrada, Angel

PD January 2000. **TI** Microeconomic Price Adjustments and Inflation: Evidence from Spanish Sectoral Data. **AU** Estrada, Angel; Hernando, Ignacio. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9921; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 30. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** D49, E31. **KW** Price Adjustments. Inflation. Price Rigidity. Menu Costs.

AB The purpose of this paper is to illustrate the implications for aggregate price dynamics of alternative characterizations of microeconomic price adjustment policies. Within the hazard adjustment framework developed in Caballero and Engel (1993a), we present alternative models of individual price adjustment that are consistent with the predictions of the menu-cost models. We estimate these models using a data set of Spanish sectoral price indexes covering the period 1978-1998, and compare their ability to explain the behavior of the aggregate price level, taking the partial adjustment models as a benchmark. The main findings are the following: 1) models with non- constant hazard functions slightly outperform the partial adjustment model; 2) there is weak evidence regarding the existence of differences between the magnitudes of upward and downward price rigidities; and 3) the impact on the aggregate inflation rate stemming from the existence of nominal rigidities in several subsets of sectors is non-negligible.

Farber, Henry S.

PD March 1999. **TI** Alternative and Part-Time Employment Arrangements as a Response to Job Loss. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7002; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** J23, J24, J31, J64. **KW** Job Loss. Unemployment. Alternative Employment. Temporary Work. Part- Time Work.

AB I examine the extent to which workers who lose jobs find work in alternative employment arrangements including temporary work and independent contracting and find part-time work, both voluntary and involuntary. The analysis is based on data from the Displaced Worker Supplements (DWS) and the February 1994 and 1996 Current Population Surveys (CPS) which I match to the Contingent and Alternative Employment Arrangements Supplements (CAEAS) to the February CPSs in the subsequent years (1995 and 1997 respectively). I find that job losers are significantly more likely than non-losers to be in temporary jobs (including on-call work and contract work). I also find evidence that the likelihood of temporary employment falls with time since job loss. With regard to part-time employment, I find that involuntary part-time employment is an important part of the employment experience subsequent to job loss and that the likelihood of involuntary part-time employment falls with time since job loss, particularly for full-time job losers. Thus, it appears that temporary and involuntary part-time jobs are part of a transitional process subsequent to job loss leading to regular full-time employment.

Faust, Jon

PD June 1999. **TI** The Equilibrium Degree of Transparency and Control in Monetary Policy. **AU** Faust, Jon; Svensson, Lars E. O. **AA** Faust: Board of Governors of the Federal Reserve System. Svensson: Stockholm University and NBER. **SR** National Bureau of Economic Research Working Paper: 7152; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** E52, E58. **KW** Monetary Policy. Transparency. Commitment. Discretion. Central Banks.

AB We examine a central bank's endogenous choice of degree of control and degree of transparency, under both commitment and discretion. Under commitment, we find that the deliberate choice of sloppy control is far less likely under a standard central-bank loss function than reported for a less standard loss function by Cukierman and Meltzer. Under discretion, maximum degree of control is the only equilibrium. With regard to the degree of transparency, under commitment, a sufficiently patient bank with sufficiently low average inflation bias will always choose minimum transparency. Under discretion, both minimum and maximum transparency are equilibria. We argue that discretion is the more realistic assumption for the choice of control and that commitment is more realistic for the choice of transparency. A maximum feasible degree of control with a minimum degree of transparency is then a likely outcome. The Bundesbank and the Federal Reserve System are, arguably, examples of this outcome.

Favero, Carlo A.

PD October 1999. **TI** The Transmission Mechanism of Monetary Policy in Europe: Evidence from Banks' Balance Sheets. **AU** Favero, Carlo A.; Giavazzi, Francesco; Flabbi, Luca. **AA** Favero and Flabbi: Universita Bocconi. Giavazzi: Universita Bocconi and Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/20; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 22. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E51, E52, G21. **KW** European Monetary Union. Transmission Mechanisms. Credit Channel. Banking. Monetary Policy.

AB Available studies on asymmetries in the monetary transmission mechanism within Europe are invariably based on macroeconomic evidence: such evidence is abundant but often contradictory. This paper takes a different route by using microeconomic data. We use the information contained in the balance sheets of individual banks (available from the BankScope database) to implement a case study on the response of banks in France, Germany, Italy, and Spain to a monetary tightening. The episode we study occurred during 1992, when monetary conditions were tightened throughout Europe. We do not find evidence of a significant response of bank loans to the monetary tightening, which occurred during 1992, in any of the four European countries we have considered. However, we find significant differences both across countries and across banks of different dimensions in the factors that allow them to shield the supply of loans from the squeeze in liquidity.

Feenstra, Robert C.

TI Pricing to Market, Staggered Contracts, and Real Exchange Rate Persistence. **AU** Bergin, Paul R.; Feenstra, Robert C.

Feichtinger, Gustav

TI A Resource-Constrained Optimal Control Model for Crackdown on Illicit Drug Markets. **AU** Baveja, Alok; Feichtinger, Gustav; Hartl, Richard F.; Haunschmied, Josef L.; Kort, Peter M.

Feldstein, Martin

PD December 1998. **TI** Unemployment Insurance Savings Accounts. **AU** Feldstein, Martin; Altman, Daniel. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6860; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** $5.00. **JE** H50, J65. **KW** Unemployment Insurance. Savings. Taxation.

AB The authors examine a system of Unemployment Insurance Saving Accounts (UISAs) as an alternative to the traditional unemployment insurance system. Individuals are required to save up to 4 percent of wages in special accounts and to draw unemployment compensation from these accounts. If the accounts are exhausted, the government lends money to the account. The system developed by the authors fully internalizes the cost of unemployment compensation. UISAs provide the same protection to the unemployed as the current UI system but with less of the adverse incentives. The key empirical question is whether accounts based on a moderate saving rate can finance a significant share of unemployment payments. To resolve this issue the authors use the Panel Study on Income Dynamics to simulate the UISA system over a 25 year historic period. The analysis indicates that almost all individuals have positive UISA balances and therefore remain sensitive to the cost of unemployment compensation. The analysis suggests a substantial potential improvement in the incentives of the unemployed. The cost to taxpayers of forgiving the negative balances is substantially less than half of the taxpayer cost of the current UI system.

PD January 1999. **TI** Self-Protection for Emerging Market Economies. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6907; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** E44, F31, F32, F33, F36. **KW** Emerging Markets. Financial Crises. Currency Crises. Contagion. Liquidity.

AB The rapid spread of the 1997 crisis in Asia and of the 1982 crisis in Latin America showed how shifts in market perceptions can suddenly bring trouble to countries even when there has been no change in objective conditions. More recently, the sharp jump in emerging market interest rates after Russia's August 1998 default underlined the vulnerability of all emerging market economies to increases in investors' aversion to risk. Emerging market countries that want to avoid the devastating effects of such crises must protect themselves. Taking steps to protect themselves requires more than avoiding those bad policies that make a currency crisis inevitable. The process of contagion makes even the virtuous vulnerable to currency runs. Liquidity is the key to self-protection. A country that has substantial international liquidity -- large foreign exchange reserves and a ready source of foreign currency loans -- is unlikely to be the object of a currency attack. Substantial liquidity also permits a country that is attacked from within or without to defend itself better and to make more orderly adjustments. The challenge is to find ways to increase liquidity at reasonable cost.

PD March 1999. **TI** The Transition to Investment-Based Social Security when Portfolio Returns and Capital Profitability are Uncertain. **AU** Feldstein, Martin; Ranguelova, Elena; Samwick, Andrew. **AA** Feldstein and Ranguelova: National Bureau of Economic Research. Samwick: Dartmouth College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7016; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 62. **PR** $5.00. **JE** G11, H55. **KW** Social Security. Portfolio Choice. Public Pensions.

AB In this paper we study the transition from a pay-as-you-go system of Social Security pensions to an investment-based system in an economy in which portfolio returns and capital profitability are both uncertain. The paper extends earlier studies by Feldstein and Samwick that modeled the transition process in a nonstochastic environment and by Feldstein and Ranguelova that examined the implication of portfolio risk after the transition to an investment-based system has been completed. We analyze transitions to a mixed system that maintains the current 12.4 percent pay-as-you-go tax rate as well as to a system that is completely investment-based. We model intergenerational guarantees and assess the risk of such guarantees to taxpayers. We find that transitions to either a completely investment-based system or a mixed system that maintains current law benefits can be done with little additional saving in the early years (a maximum of three percent) and substantially lower combinations of taxes and saving deposits in the later years. The extra risk to retirees and/or taxpayers is relatively small, making the investment-based plans preferable to a pure pay-as-you-go system for reasonable degrees of risk aversion.

Fernandez, Alberto

TI Causes of Subcontracting: Evidence from Panel Data on Construction Firms. **AU** Gonzalez, Manuel; Arrunyada, Benito; Fernandez, Alberto.

Fershtman, Chaim

PD June 1999. **TI** A Dynamic Oligopoly with Collusion and Price Wars. **AU** Fershtman, Chaim; Pakes, Ariel. **AA** Fershtman: Tel Aviv University, CentER, and Tilburg University. Pakes: Yale University, NBER, and University of Chicago. **SR** Tilburg CentER for Economic Research Discussion Paper: 9948; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 41. **PR** no charge. **JE** D43, L13, L15. **KW** Oligopoly. Collusion. Price Wars. Investment. Product Quality.

AB This paper extends the collusion framework to allow for heterogeneity among firms, investment, entry and exit. To be able to do this in a realistic setting and still get fairly detailed results the authors give up on the elegance of analytic results, and rely instead on numerical analysis. The focus is on a model with symmetric information in which it is hard to sustain collusion when either: one of the firms does not keep up with the advances of its competitors, or a "low quality" entrant enters. In either case there will be an active firm that is quite likely to exit in the near future. Not only is it hard to punish a firm who is likely to exit after it deviates, but if one of the competitors is near an exit state the other incumbent(s) has an incentive to price predatorily. The authors compare the numerical results from an institutional structure that allows for collusion to one which does not. Price paths clearly differ in the two environments; in particular only the collusive industry generates price wars. Equally interesting, however, are the implications of the different investment incentives. The collusive industry offers both more and higher quality products to consumers, albeit often at a higher price. The positive effect of collusion more than compensates consumers for the negative effect of collusive prices.

PD June 1999. **TI** Trust and Discrimination in a Segmented Society: An Experimental Approach. **AU** Fershtman, Chaim; Gneezy, Uri. **AA** Fershtman: Tel Aviv University. Gneezy: University of Haifa. **SR** Tilburg CentER for Economic Research Discussion Paper: 9955; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 30. **PR** no charge. **JE** C70, C90, J16, J71. **KW** Trust. Discrimination. Experiments. Gender. Israel.

AB An experimental approach is used to study ethnic discrimination within the Israeli Jewish society. The experiment indicates that the segmented structure of Israeli society manifests itself in a consistent pattern of mistrust. In a trust game, money transferred to players of Eastern ethnic origin (Sephardic Jew) was significantly less than that transferred to players of Western origin (Ashkenazic Jew). What is surprising is that this ethnic discrimination was entirely a male phenomenon. Women transferred a similar amount of money to their partners whether of Eastern or Western background; at the same time, the distribution of transfers to Eastern women was similar to that to Western women. Thus, the ethnic discrimination identified is only toward male players and by male players. Moreover, this systematic mistrust against men of Eastern origin is common not just among Western men but also among Eastern men themselves. Examination of whether trust is gender-dependent showed that Western women are trusted less than Western men while Eastern women are trusted more than Eastern men. The possibility of statistical discrimination was also examined, but no evidence for such an effect was found.

Ferson, Wayne E.

PD February 1999. **TI** Economic, Financial and Fundamental Global Risk In and Out of the EMU. **AU** Ferson, Wayne E.; Harvey, Campbell R. **AA** Ferson: University of Washington and National Bureau of Economic Research. Campbell: Duke University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6967; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 17. **PR** $5.00. **JE** F31, G12, G15. **KW** Asset Pricing. Expected Returns. Exchange Rates. Euro. Risk.

AB We explore the different factors that drive expected returns in world markets. Our research offers two innovations. First, the introduction of the Euro currency unit greatly reduces the complexity of including foreign exchange risk in asset pricing models. We use a synthetic Euro excess return along with a Yen excess return to assess country equity sensitivities to currency risk factors. Second, when combining the currency factors with a group of economic factors, we measure the incremental information in the factor proposed in Fama and French (1998). We find that a global price-to-book factor offers little additional explanatory power over and above a model that includes economic risk factors.

PD March 1999. **TI** Conditioning Variables and the Cross-Section of Stock Returns. **AU** Ferson, Wayne E.; Harvey, Campbell R. **AA** Ferson: University of Washington and National Bureau of Economic Research. Harvey: Duke University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7009; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 34. **PR** $5.00. **JE** G11, G12. **KW** Portfolio Choice. Asset Pricing. Lagged Variables. Expected Returns. Performance Measurement.

AB Previous studies have identified predetermined variables that have some power to explain the time series of stock and bond returns. This paper shows that loadings on the same variables also provide significant cross-sectional explanatory power for stock portfolio returns. These loadings are important, over and above the variables advocated by Fama and French (1993) in their three factor "model," and also the four factors of Elton, Gruber and Blake (1995). The explanatory power of the loadings on lagged variables is robust to various portfolio grouping procedures and other considerations. The lagged variables reveal information about the cross-section of expected returns that is not captured by popular asset pricing factors. These results carry implications for risk analysis, performance measurement, cost-of-capital calculations and other applications.

Fielding, Antony

PD February 2000. **TI** Scores and Categories for Ordinal Responses in Multilevel and Weighted Random Effects Models: Applications in Educational Progress Research. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 00/02; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 60. **PR** 2 pounds ($4); no charge to academics. **JE** C35, C87, I21. **KW** Education. MIwin. Multilevel Models. Random Effects. Ordered Categories.

AB The preliminaries in the paper contrast the advantages and disadvantages of using arbitrary scores for ordinal responses in linear models compared to generalized linear models for ordered category responses. The context of multilevel and random effects models is a particular focus. Simulations are undertaken to demonstrate the effect of arbitrary scoring and grouping on a basic two level model. Model formulation of generalized models for ordered categories are detailed. Their estimation by quasi-likelihood procedures is developed within the multilevel software MIwiN. An application in the progress to Key Stage I level reading in English primary schools is used. The models are extended to cross-classified structures where sets of non-nested random effects are discussed. An application is considered that deals with the segregation of group and student effects on the grades of entries to General Certificate of Education Advanced Level. The random effects of several teachers in a teaching group are then considered by the use of a weighted random effects model. Estimation and software developments are discussed. A final part deals with the interpretation of extra- multinomial variation for the level I ordered category response.

TI Random Effects Models for Ordered Category Responses and Complex Structures in Educational Progress. **AU** Yang, Min; Fielding, Antony.

Fiestras-Janeiro, Gloria

TI On the Convexity of Games Corresponding to Sequencing Situations with Due Dates. **AU** Borm, Peter; Fiestras-Janeiro, Gloria; Hamers, Herbert; Sanchez, Estela; Voorneveld, Mark.

Flabbi, Luca

TI The Transmission Mechanism of Monetary Policy in Europe: Evidence from Banks' Balance Sheets. **AU** Favero, Carlo A.; Giavazzi, Francesco; Flabbi, Luca.

Flamini, Francesca

PD February 2000. **TI** Agenda Formation in Issue-by-Issue Bargaining Games. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 00/01; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 27. **PR** no charge. **JE** C73, C78, D70, L14. **KW** Bargaining. Agenda.

AB This paper investigates the agenda formation problem by means of two- player two-cake sequential bargaining models. Players differ not only in their time preferences but also for their cake valuations; moreover they face a risk of breakdown in the negotiation process. The main model is characterized by risk of breakdown after the agreement on the first issue, transmission of delays between the negotiations over the two issues, and alternating offer (both after a rejection and an acceptance). Alternative models also are analyzed to highlight the complex interplay of forces in the bargaining process over different issues. We characterize the unique subgame perfect equilibrium and focus on the Pareto optimal agenda. The main result is that if there is consensus over the importance of the issues, it is Pareto optimal to discuss the most important issue first. However, if there is a controversial issue, it should be discussed at the end. Finally, this framework allows for analysis of the problem of issue-linkages.

Flavin, Marjorie

PD March 1999. **TI** Robust Estimation of the Joint Consumption/Asset Demand Decision. **AA** University of California, San Diego and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7011; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** C13, C20, D91, E21, F21. **KW** Consumption. Borrowing Constraints. Estimation. Instrumental Variables.

AB The paper proposes an instrumental variables version of the Huber estimator as an alternative to the IV-Krasker Welsch estimator. The IV- Huber estimator is analytically and computationally much simpler than IV-Krasker Welsch. In the context of an empirical study of the importance of borrowing constraints on consumption, the paper reports the results for the following estimators: 1) conventional (non-robust) IV, 2) conventional IV after the subjective rejection of outliers, 3) conventional IV after trimming, 4) IV-Huber, and 5) IV-Krasker-Welsch. In the presence of a heavy tailed error distribution, both the IV- Krasker Welsch and the IV-Huber estimators provide substantial improvements in efficiency over conventional IV. Further, the informal robust procedure of using conventional IV after trimming does not match the efficiency gains of the formal robust methods. The empirical results indicate that households exhibit incomplete smoothing of consumption. When saving is disaggregated by type of asset, the results provide some evidence of borrowing constraints: households which are not subject to a liquidity constraint primarily use financial assets to smooth consumption while constrained households use purchases of durable goods.

Flores, Nicholas E.

TI Contingent Valuation: Controversies and Evidence. **AU** Carson, Richard T.; Flores, Nicholas E.; Meade, Norman F.

Ford, Jim L.

TI Productivity Analysis in Asia-Pacific Economic Cooperation Region: A Multi-Country Translog Comparative Analysis, 1965-97. **AU** Bende-Nabende, A.; Ford, Jim L.; Sen, Somnath.

TI Portfolio Behaviour of Islamic Banks: A Case Study for Iran, 1984- 1994. **AU** Kagigi, K. A.; Ford, Jim L.; Cadle, P. J.; Makiyan, S. N.

TI Bank Behaviour and the Channel of Monetary Policy in Japan. **AU** Agung, J.; Ford, Jim L.

TI Money Multipliers for Simple Sum and Divisia Monetary Aggregates for Japan: Cointegration and ECM Modelling 1968(3) - 1996(2). **AU** Agung, J.; Ford, Jim L.

TI Economic Development, Financial Development and Deregulation: Japan, 1960 to 1996. **AU** Agung, J.; Ford, Jim L.

Forslid, Rikard

TI The Core-Periphery Model and Endogenous Growth: Stabilising and De- Stabilising Integration. **AU** Baldwin, Richard E.; Forslid, Rikard.

Francis, Bill B.

PD 2000. **TI** Operational Hedges and Coping with Foreign Exchange Exposure: The Case of U.S. MNCs During the Asian Financial Crisis of 1997. **AU** Francis, Bill B.; Hasan, Iftekhar; Pantzalis, Christos. **AA** Francis and Pantzalis: University of South Florida. Hasan: New York University and NJIT. **SR** New York University, Salomon Center Working Paper: S/00/13; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 20. **PR** $5.00 each; $100.00 yearly subscription. **JE** F23, F31, F32, F41, G30. **KW** Risk Management. Financial Crises. Operational Hedges. Multinational Corporations. Foreign Exchange.

AB This study sheds new light on the importance of operational hedges in foreign exchange risk management. The authors utilize measures of the structure of an MNC's foreign subsidiary network as proxies of the firm's ability to devise operational hedges and examine their relationship to exposure coefficients computed prior to and during the 1997-1998 Asian currency crisis. The results show that the mean exposure during the Asian crisis period was significantly higher than the pre-crisis period. In addition, the mean of the absolute change in the exposure of MNCs that only operate in the Asian crisis region was significantly higher than that of MNCs without operations in the crisis region. The authors find a strong relationship between their proxies for ability to construct operating hedges and exchange rate exposure measures both prior to the crisis and during the crisis. An even stronger association between exposure and measures of the MNC network structure is found for the subsample of MNCs that have some operations in the Asian crisis region. Overall, the results are consistent with the notion that operational hedges significantly reduced a firm's exposure to foreign exchange risk.

PD 2000. **TI** An Empirical Investigation of the Firm's Contract Choice and the Level of Underpricing of Initial Public Offerings. **AU** Francis, Bill B.; Hasan, Iftekhar. **AA** Francis: University of South Florida. Hasan: New York University. **SR** New York University, Salomon Center Working Paper: S/00/15; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 27. **PR** $5.00 each; $100.00 yearly subscription. **JE** G12, G24, G32. **KW** Initial Public Offerings. Contracts. Self-Selection. Corporate Finance. Investment Banking.

AB Past research indicates that firms using best-effort contracts to go public leave relatively more money on the table (AMT) than firms using firm-commitment contracts. Using self-selection analysis, we find that as the AMT associated with firm commitment IPOs increases relative to that of best effort IPOs, firms choose to use best-efforts contracts. This is consistent with the hypothesis that firms choose the offering method that minimizes AMT.

PD 2000. **TI** Underpricing of Venture and Non Venture Capital IPOs: An Empirical Investigation. **AU** Francis, Bill B.; Hasan, Iftekhar. **AA** Francis: University of South Florida. Hasan: New York University. **SR** New York University, Salomon Center Working Paper: S/00/21; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 26. **PR** $5.00 each; $100.00 yearly subscription. **JE** G12, G24, G32. **KW** Initial Public Offerings. Underpricing. Venture Capital. Stochastic Frontier. Investment Banking.

AB In this paper we examine the premarket underpricing phenomenon within a group of venture-backed and a group of non venture-backed initial public offerings (IPOs) using a stochastic frontier approach. Consistent with previous research, we find that venture-backed IPOs are managed by more reputable underwriters and are generally associated with less underwriter compensation. However, unlike other papers in the literature, we find that the initial day returns of venture-backed IPOs are, on average, higher than the non venture-backed group. We also observe a significantly higher degree of pre-market pricing inefficiency in the initial offer price of venture-backed IPOs. Further, our results show that a significant portion of the initial day returns is due to deliberate underpricing in the premarket. We also observe that for both venture and non-venture issuers, there is a positive relationship between deliberate underpricing and the probability that underwriters provide support for the issue. This evidence is consistent with the notion that underwriters deliberately underprice the offering to reduce cost of price stabilization in the after-market.

Freixas, Xavier

PD January 2000. **TI** Systemic Risk, Interbank Relations and Liquidity Provision by the Central Bank. **AU** Freixas, Xavier; Parigi, Bruno; Rochet, Jean-Charles. **AA** Freixas: Universitat Pompeu Fabra. Parigi: University of Padua. Rochet: IDEI-GREMAQ, Universit' des Sciences Sociales. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 440; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 23. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E58, G18, G21, G28. **KW** Systemic Risk. Central Banks. Prudential Regulation. Interbank Markets. Payment Systems.

AB We model systemic risk in an interbank market. Banks face liquidity needs as consumers are uncertain about where they need to consume. Interbank credit lines cope with these liquidity shocks while reducing the cost of maintaining reserves. However, the interbank market exposes the system to a coordination failure (gridlock equilibrium) even if all banks are solvent. When one bank is insolvent, the stability of the banking system is affected in various ways depending on the patterns of payments across locations. We investigate the ability of the banking industry to withstand the insolvency of one bank and whether the closure of one bank generates a chain reaction on the rest of the system. We analyze the coordinating role of the Central Bank in preventing payments systemic repercussions and we examine the justification of the Too-big-to-fail policy.

PD October 1999. **TI** Optimal Bail Out Policy, Conditionality and Constructive Ambiguity. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 400; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 31. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E58, G18, G21, G28. **KW** Bail-Outs. Lender of Last Resort. Constructive Ambiguity. Banking. Central Banks.
AB This paper addresses the issue of the optimal behavior of the Lender of Last Resort (LOLR) in its microeconomic role regarding individual financial institutions in distress. It has been argued that the LOLR should not intervene at the microeconomic level and let any defaulting institution face the market discipline, as it will be confronted with the consequences of the risks it has taken. By considering a simple cost benefit analysis we show that this position may lack a sufficient foundation. We establish that, instead, under reasonable assumptions, the optimal policy has to be conditional on the amount of uninsured debt issued by the defaulting bank. Yet in equilibrium, because the rescue policy is costly, the LOLR will not rescue all the banks that fulfill the uninsured debt requirement condition, but will follow a mixed strategy. This we interpret as the confirmation of the "creative ambiguity" principle, perfectly in line with the central bankers claim that it is efficient for them to have discretion in lending to individual institutions. Alternatively, in other cases, when the social cost of a bank's bankruptcy is too high, it is optimal for the LOLR to bail out the institution, and this gives support to the "too big to fail" policy.

Fullerton, Don
TI Distributional Impacts of Proposed Changes to the Social Security System. **AU** Coronado, Julia Lynn; Fullerton, Don; Glass, Thomas.

Gabszewicz, Jean J.
PD February 2000. **TI** TV-Broadcasting Competition and Advertising. **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie. **AA** Gabszewicz: CORE. Laussel: Universite d'Aix-Marseille II, France. Sonnac: ECARE: Universite Libre de Bruxelles and LEI-CREST, Paris, France. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/06; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 19. **PR** $100 per year. **JE** C70, L13, L51, L82, M37. **KW** Television. Advertising. Oligopoly. Regulation. Sequential Games.
AB We analyze the rivalry between two TV-channels competing both on the market for audience and the market for advertising. We identify the nature of TV-programs emerging from this competition, and the quantity of advertising that TV-viewers will have to attend at equilibrium. Finally, we examine how a government's regulation of this quantity will affect programs' selection by the channels.

PD February 2000. **TI** Does Press Advertising Foster the "Pensee Unique"? **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie. **AA** Gabszewicz: CORE. Laussel: Universite d'Aix-Marseille II, France. Sonnac: Universite Libre de Bruxelles and LEI-CREST, Paris, France. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/08; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 15. **PR** $100 per year. **JE** C70, L13, L82, M37. **KW** Newspapers. Advertising. Politics. Median Voter. Sequential Games.
AB The press industry depends in a crucial way on the possibility of financing an important fraction of its activities by advertising receipts. We show that this induces the editors of the newspapers to moderate the political message they display to their readers in order to make their newspapers more attractive as a media support for the advertisers, fostering thereby the ascent of the "Pensee Unique"?.

Galenson, David W.
PD January 1999. **TI** The Lives of the Painters of Modern Life: The Careers of Artists in France from Impressionism to Cubism. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6888; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** D44, J24, L82, O31. **KW** Art. Human Capital. Innovation. Painting.
AB Modern painting began in France during the nineteenth century. Using transactions from art auctions for the work of 50 leading painters who worked in France during the first century of modern art, I estimate the relationship between the value of a painting and the artist's age at the date of its execution. The econometric estimates show that artists born before 1850 -- including Manet, Cezanne, and Degas -- typically produced their most valuable work late in their careers, whereas artists born after 1850 -- including Picasso, Leger, and Braque -- were more likely to have done their most valuable work at early ages. Comparison of these results to evidence drawn from art history textbooks furthermore demonstrates that these artists' most valuable work has also been that most highly regarded by scholars. I argue that the change over time in the shape of these artists' age-price profiles was a result of changes in the nature of painting during the late nineteenth century, as painting increasingly became an activity in which innovation was a principal determinant of an artist's importance.

Gali, Jordi
TI Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

PD February 1999. **TI** La Politica Monetaria Europea y sus Posibles Repercusiones sobre la Economia Espanola. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu

Fabra, Economics and Business Working Paper: 353; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 34. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E32, E44, E58, F33, F41. **KW** Central Banks. Taylor Rules. Economic Integration. Monetary Policy. Business Cycles.

AB This paper examines the international transmission of business cycles through a case study of particular episode: the recession of the early nineties experienced by most of the developed world. We start by describing the features of this recession: its timing, its magnitude, and its scope. We go on to document the related behavior of expenditure components, trade, exchange rates, and interest rates. The behavior of these additional variables sheds some light, we think, on the economic connections among countries and on the role played by macroeconmic policy in the last recession. This paper is written in Spanish.

TI The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

TI The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

Ganuza, Juan-Jose

PD April 1999. **TI** Heterogeneity-Promoting Optimal Procurement. **AU** Ganuza, Juan-Jose; Pechlivanos, Lambros. **AA** Ganuza: Universitat Pompeu Fabra. Pechlivanos: IDEI and GREMAQ. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 377; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 13. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D44, H57, L51. **KW** Procurement. Project Design. Horizontal Differentiation.

AB When procurement takes place in the presence of horizontally differentiated contractors, the design of the object being procured affects the resulting degree of competition. This paper highlights the interaction between the optimal procurement mechanism and the design choice. Contrary to conventional wisdom, the sponsor's design choice, instead of homogenizing the market to generate competition, promotes heterogeneity.

TI Corruption and the Hadleyburg Effect. **AU** Celentani, Marco; Ganuza, Juan-Jose.

Garbade, Kenneth

TI Enhancing the Liquidity of U.S. Treasury Securities in an Era of Surpluses. **AU** Bennett, Paul; Garbade, Kenneth; Kambhu, John.

Garcia Blandon, Josep

PD March 1999. **TI** The Timing of Foreign Direct Investment under Uncertainty: Evidence from the Spanish Banking Sector. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 360; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 18. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** F21, F23, G21. **KW** OLI Advantages. Foreign Banking Entry. Survival Analysis. Foreign Direct Investment. Banking.

AB This paper investigates the timing of foreign direct investment (FDI) in the banking sector. The importance of this issue would arise from the existence of differential benefits associated with being the first entrant in a foreign location. Nevertheless, when uncertainty is considered, the existence of some Ownership-Location-Internalization (OLI) advantages can make FDI less reversible and/or more delayable and therefore it may be optimal for the firm to delay the investment until the uncertainty is resolved. In this paper, the nature of OLI advantages in the banking sector has been examined in order to propose a prognostic model of the timing of foreign direct investment. The model is then tested for the Spanish case using duration analysis.

Garcia-Jurado, Ignacio

TI Inventory Games. **AU** Meca, Ana; Timmer, Judith; Garcia-Jurado, Ignacio; Borm, Peter.

Garcia-Mila, Teresa

PD April 1999. **TI** Crecimiento de las Regiones Espanolas: Estructura Sectorial, Dinamica Regional y Distribucion de Rentas. **AU** Garcia-Mila, Teresa; Marimon, Ramon. **AA** Garcia-Mila: Universitat Pompeu Fabra. Marimon: European University Institute and Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 228; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 19. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E25, J24, J30, L16, R11. **KW** Growth. Sectoral Structure. Earned Income. Regional Economics. Employment.

AB Analysis of the Spanish regions in the period 1980-1995 indicates that sectoral composition explains most of the changes in employment and the differences in productivity, average salaries and share of earned income. For the GAV the regional component is more important that the sectoral, although this is not negligible. Our analysis allows us to identify in time those regions that have grown more (less) than expected in view of their sectoral composition. We identify a clear inverse relationship between the share of earned income in the product and the purely regional component of employment growth. We do not observe, however, a relationship between unemployment rate and product distribution. This suggests that salaries are not very sensitive to the conditions of the labor market, but that growth of employment is sensitive to the trend in the capital income of the region. This paper is written in Spanish.

Garcia-Perez, J. Ignacio

TI Unemployment Duration and Workers' Wage Aspirations in Spain. **AU** Ahn, Namkee; Garcia-Perez, J. Ignacio.

Garicano, Luis

TI Contractual Allocation of Decision Rights and Incentives: The Case of Automobile Distribution. **AU** Arrunyada, Benito; Garicano, Luis; Vazquez, Luis.

Garoupa, Nuno

PD April 2000. **TI** Optimal Magnitude and Probability of Fines. **AA** Universitat Pompeu Fabra. **SR** Universitat

https://doi.org/10.1017/S0951007900005210 Published online by Cambridge University Press

Pompeu Fabra, Economics and Business Working Paper: 454; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 8. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** K41, K42. **KW** Crime. Severity of Sanctions. Law Enforcement. Deterrence. Probability of Sanctions.

AB The economic literature on crime and punishment focuses on the trade- off between probability and severity of punishment, and suggests that detection probability and fines are substitutes. In this paper it is shown that, in the presence of substantial underdeterrence caused by costly detection and punishment, these instruments may become complements. When offenders are poor, the deterrent value of monetary sanctions is low. Thus, the government does not invest a lot in detection. If offenders are rich, however, the deterrent value of monetary sanctions is high, so it is more profitable to prosecute them.

PD March 1999. **TI** Optimal Law Enforcement and Criminal Organization. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 366; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 23. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D23, K14, K42, L14, L23. **KW** Organized Crime. Punishment. Plea-Bargaining. Law Enforcement. Firm Organization.

AB In this paper, we take an organizational view of organized crime. In particular, we study the organizational consequences of product illegality attending to the following characteristics: (i) contracts are not enforceable in court, (ii) all participants are subject to the risk of being punished, (iii) employees present a major threat to the entrepreneur having the most detailed knowledge concerning participation, (iv) separation between ownership and management is difficult because record-keeping and auditing augments criminal evidence.

TI Optimal Law Enforcement under Asymmetric Information. **AU** Jellal, Mohamed; Garoupa, Nuno.

TI Dynamic Optimal Law Enforcement with Learning. **AU** Jellal, Mohamed; Garoupa, Nuno.

Gatev, Evan G.

PD March 1999. **TI** Pairs Trading: Performance of a Relative Value Arbitrage Rule. **AU** Gatev, Evan G.; Goetzmann, William N.; Rouwenhorst, K. Geert. **AA** Gatev and Rouwenhorst: Yale School of Management. Goetzmann: Yale School of Management and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7032; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** G11, G12. **KW** Pairs Trading. Portfolio Choice. Market Microstructure. Transaction Costs. Bootstrap.

AB We test a Wall Street investment strategy known as "pairs trading" with daily data over the period 1962 through 1997. Stocks are matched into pairs according to minimum distance in historical normalized price space. We test the profitability of several trading rules with six-month trading periods over the 1962-1997 period, and find average annualized excess returns of up to 12 percent for a number of self-financing portfolios of top pairs. Part of these profits may be due to market microstructure effects. Nevertheless, our historical trading profits exceed a conservative estimate of transaction costs through most of the period. We bootstrap random pairs in order to distinguish pairs trading from pure mean-reversion strategies. The bootstrap results suggest that the 'pairs' effect differs from previously documented mean reversion profits.

Gaynor, Martin

PD December 1998. **TI** Are Invisible Hands Good Hands? Moral Hazard, Competition, and the Second Best in Health Care Markets. **AU** Gaynor, Martin; Haas-Wilson, Deborah; Vogt, William B. **AA** Gaynor and Vogt: Carnegie Mellon University and National Bureau of Economic Research. Haas-Wilson: Smith College. **SR** National Bureau of Economic Research Working Paper: 6865; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** D43, D82, G22, I11, I18. **KW** Health Care. Regulation. Moral Hazard. Insurance. Imperfect Competition.

AB The nature, and normative properties, of competition in health care markets has long been the subject of debate. In particular, policy- makers have exhibited a great deal of reservation toward competition in health care markets. Currently, as consolidation rapidly occurs in health care markets, concern about reduced competition has arisen. This concern, however, cannot be properly evaluated without a normative standard. This paper considers what the optimal benchmark is in the presence of moral hazard effects on consumption due to health insurance. Moral hazard due to health insurance leads to excess consumption. Therefore, it is not obvious that competition is second best optimal given this distortion. Intuitively, it seems that imperfect competition in the health care market may constrain this moral hazard by increasing prices. The authors show that this intuition cannot be correct if insurance markets are competitive. A competitive insurance market will always produce a contract that leaves consumers at least as well off under lower prices as under higher prices. Thus, imperfect competition in health care markets cannot have efficiency enhancing effects if the only distortion is due to moral hazard.

Genesove, David

PD May 1999. **TI** The Nominal Rigidity of Apartment Rents. **AA** Hebrew University of Jerusalem and NBER. **SR** National Bureau of Economic Research Working Paper: 7137; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 28. **PR** $5.00. **JE** E30, L16, R21, R31. **KW** Sticky Prices. Apartment Rents. Nominal Rigidity.

AB This paper contributes to the empirical literature on price stickiness by documenting a high rate of nominal rigidity among apartment rents in the U.S. between 1974-1981. Twenty-nine percent of units had no change in nominal rent from year to year. Nominal rigidity was much higher among units whose tenants continued from the previous year, than those in which the tenant turned over. This suggests that the previous year's nominal price was used as a focal point in bargaining. Most of the nominal rigidity among units that turned over can be ascribed to grid pricing, while most of the incidence among the units that did not turn over can not be thus explained, and probably reflects downward rigidity instead. Units in single-unit and small buildings were much more likely to display nominal rigidity.

Germano, Fabrizio

TI On Knots and Dynamics in Games. **AU** De Michelis, Stefano; Germano, Fabrizio.

TI On the Indices of Zeros of Nash Fields. **AU** De Michelis, Stefano; Germano, Fabrizio.

Gertler, Mark

TI Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

TI The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

TI The Science of Monetary Policy: A New Keynesian Perspective. **AU** Clarida, Richard; Gali, Jordi; Gertler, Mark.

Giavazzi, Francesco

TI The Transmission Mechanism of Monetary Policy in Europe: Evidence from Banks' Balance Sheets. **AU** Favero, Carlo A.; Giavazzi, Francesco; Flabbi, Luca.

Gilles, Robert P.

PD May 1999. **TI** Coalitional Provision of Pure Collective Goods. **AA** Virginia Tech University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9947; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 27. **PR** no charge. **JE** C70, D61, D71, D72, H40. **KW** Public Goods. Overprovision. Underprovision. Lobbying Implementation. Coalitions.

AB I consider a coalitional provision mechanism in an economy with one private good and multiple non-Samuelsonian collective goods. Coalitions are assumed to have complete autonomy to determine the provision level of these collective goods. I show that there exists an optimal tax-subsidy system that guides those coalitions to a particular Pareto efficient provision scheme for the collective goods. Second, I consider a non-cooperative framework in which the coalitions are given exogenously. In this setting I identify the conditions under which there is over- and underprovision of collective goods. Third, I investigate overprovision in a two stage game with endogenous coalition formation. In the first stage of the game, individuals choose for which collective good to lobby. In the second stage, the formed provision coalitions determine the provision levels of the collective goods. Intuitively one expects that uniform overprovision always occurs in these situations. However, I show with an example that there are situations in which there is uniform underprovision, uniform overprovision, as well as mixed provision.

TI Spatial Social Networks. **AU** Johnson, Cathleen; Gilles, Robert P.

Giraud, Gael

PD March 2000. **TI** An Algebraic Index Theorem for Non-Smooth Economies. **AA** Universite Louis Pasteur, Strasbourg, France and CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/16; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 14. **PR** $100 per year. **JE** C62, D51. **KW** Non-Smooth Production. Topological Degree. Local Homology. Increasing Returns. General Equilibrium.

AB In this paper, we prove an existence theorem for equilibria in production economies with increasing returns, which generalizes the classic results on this topic. In particular, we eliminate both the free-disposal assumptions and any smoothness requirements on the boundary of the production sets. For this purpose, we propose a new definition of the topological degree for non-convex-valued correspondences defined on non-smooth topological manifolds.

Glass, Thomas

TI Distributional Impacts of Proposed Changes to the Social Security System. **AU** Coronado, Julia Lynn; Fullerton, Don; Glass, Thomas.

Gneezy, Uri

TI Trust and Discrimination in a Segmented Society: An Experimental Approach. **AU** Fershtman, Chaim; Gneezy, Uri.

TI The Effect of Intergroup Competition on Group Coordination: An Experimental Study. **AU** Bornstein, Gary; Gneezy, Uri; Nagel, Rosemarie.

Goemans, Michel X.

PD March 2000. **TI** Cooperative Facility Location Games. **AU** Goemans, Michel X.; Skutella, Martin. **AA** Goemans: MIT. Skutella: TU Berlin, Germany. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/14; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 19. **PR** $100 per year. **JE** C44, C61, C71, R30, R53. **KW** Facility Location. Cooperative Games. LP Relaxation. Randomized Rounding. Core.

AB The location of facilities in order to provide service for customers is a well-studied problem in the operations research literature. In the basic model, there is a predefined cost for opening a facility and also for connecting a customer to a facility, the goal being to minimize the total cost. Often, we may want to find a 'fair' allocation of the total cost to the customers -- this is known as the cost allocation problem. A central question in cooperative game theory is whether the total cost can be allocated to the customers such that no coalition of customers has any incentive to build their own facility or to ask a competitor to service them. The authors establish strong connections between fair cost allocations and linear programming relaxations for several variants of the facility location problem. In particular, they show that a fair cost allocation exists if and only if there is no integrality gap for a corresponding linear programming relaxation. The authors use this insight in order to give proofs for the existence of fair cost allocations for several classes of instances based on a subtle variant of randomized rounding. They also prove that it is in general NP- complete to decide whether a fair cost allocation exists and whether a given allocation is fair.

Goergen, Marc

PD November 1999. **TI** Prediction of Ownership and

Control Concentration in German and UK Initial Public Offerings. **AU** Goergen, Marc; Renneboog, Luc. **AA** Goergen: UMIST. Renneboog: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99103; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 33. **PR** no charge. **JE** G32, G34. **KW** Corporate Finance. Initial Public Offerings. Corporate Control. Ownership Structures. Acquisitions.

AB The paper investigates why the corporate landscapes of Germany and UK are so different in terms of control by analyzing ownership and control evolution in recent IPOs. The authors report the control evolution of a sample of size- and industry-matched German and UK companies six years subsequent to the flotation. The initial shareholders in the average German IPO lose majority control six years after going public, whereas the initial owners of UK IPOs decrease their holding to less than the majority two years after going public. Acquisitions are frequent in the UK. Partial take-overs are common in German firms. In order to predict the state of ownership and control six years after going public, a multinomial logit model is used. The authors find that if the founder still owns a stake at the flotation, the probability that the company will be controlled by this founder after six years is large. For risky and poorly performing German and UK companies, the odds of ending up with concentrated ultimate control increase. In the case of German IPOs, the chance of substantial control concentration augments when non-voting shares have been issued at flotation and when the company experiences a high growth rate subsequent to the IPO.

Goetzmann, William N.

TI Pairs Trading: Performance of a Relative Value Arbitrage Rule. **AU** Gatev, Evan G.; Goetzmann, William N.; Rouwenhorst, K. Geert.

PD March 1999. **TI** Index Funds and Stock Market Growth. **AU** Goetzmann, William N.; Massa, Massimo. **AA** Goetzmann: Yale School of Management and National Bureau of Economic Research. Massa: INSEAD University. **SR** National Bureau of Economic Research Working Paper: 7033; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** \$5.00. **JE** G11, G12. **KW** Index Funds. Asset Pricing. Market Returns. Portfolio Choice.

AB This paper analyzes the relationship between index funds and asset prices. The authors analysis of daily index fund flows indicates a strong contemporaneous correlation between fund inflows and S&P market returns. They also document a strong negative correlation between fund outflows and S&P market returns with the exception of outflows from a fund with very high initial investment requirement. These effects may be interpreted in two ways. Either investor supply and demand affects S&P market prices, or investors condition their demand and supply on intra- day market fluctuations. To sort out these effects, the authors examine trailing investor reaction to market moves. The results suggest the market reacts to daily demand. However, only negative reactions appear due to past returns. The authors investigate whether index investor demand shocks are permanent or temporary by examining the related behavior of the S&P futures index. Clear evidence supports the hypothesis that they are permanent. This result may help explain the unusual recent relative performance of the S&P 500 index. Using the average market-timing newsletter recommendation over the period, the authors find that investors appear to react to "expert" advice about the market.

Goldberg, Fred T., Jr.

PD February 1999. **TI** Reforming Social Security: A Practical and Workable System of Personal Retirement Accounts. **AU** Goldberg, Fred T., Jr..; Graetz, Michael J. **AA** Goldberg: Skadden, Arps, Slate, Meagher & Flow LLP. Graetz: Yale Law School. **SR** National Bureau of Economic Research Working Paper: 6970; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 30. **PR** \$5.00. **JE** G23, H24, H55, J26. **KW** Social Security. Public Pensions. Retirement. Taxation.

AB This paper details a method for implementing personal retirement accounts (PRAs) as a part of Social Security reform. The approach described here answers the following questions: how funds are collected and credited to each participant's retirement account; how money is invested; and how funds are distributed to retirees. It is designed to accommodate a variety of answers to a wide range of important policy questions; to minimize administrative costs and distribute those costs in a fair and reasonable way; to minimize the burden on employers, especially small employers who do not now maintain a qualified retirement plan; and to meet the expectations of Americans for simplicity, security, control, and independence in ways that are easy to explain and to understand. The system relies on existing payroll and income tax mechanisms for collecting PRA funds and crediting PRA accounts. It provides two basic options for investments: (i) a simple system involving a limited number of funds sponsored by the Social Security Administration and managed by private companies, and (ii) privately sponsored funds with additional investment choices. It also provides two distribution alternatives if distributions are required to be annuitized.

Goldberg, Linda

PD February 1999. **TI** Exchange Rates and Local Labor Markets. **AU** Goldberg, Linda; Tracy, Joseph. **AA** Federal Reserve Bank of New York and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6985; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** \$5.00. **JE** E24, F31, F41, J30, R23. **KW** Exchange Rates. Employment. Wages. Manufacturing. Regional Economics.

AB We document the consequences of real exchange rate movements for the employment, hours, and hourly earnings of workers in manufacturing industries across individual states. Exchange rates have statistically significant wage and employment implications in these local labor markets. The importance and size of these dollar-induced effects vary considerably across industries and are more pronounced in some U.S. regions. In addition to the importance of exchange rate shocks, we confirm prior research results showing that relatively strong local conditions drive up wages in local industries, while anticipated future (positive) local shocks reduce current wages.

Gomes, Francisco J.

TI Investing Retirement Wealth: A Life-Cycle Model.

AU Campbell, John Y.; Cocco, Joao F.; Gomes, Francisco J.; Maenhout, Pascal J.

TI Investing Retirement Wealth: A Life-Cycle Model. AU Campbell, John Y.; Cocco, Joao F.; Gomes, Francisco J.; Maenhout, Pascal J.

Gomez, Ramon

TI Another Look at Unemployment Duration: Long-Term Unemployment and Exit to a Permanent Job. AU Bover, Olympia; Gomez, Ramon.

Gompers, Paul A.

PD January 1999. TI What Drives Venture Capital Fundraising? AU Gompers, Paul A.; Lerner, Josh. AA Harvard Business School and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 6906; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 37. PR $5.00. JE G24, G28. KW Venture Capital. Capital Gains Taxes.

AB We examine the determinants of venture capital fundraising in the U.S. over the past twenty-five years. We study industry aggregate, state-level, and firm-specific fundraising to determine if macroeconomic, regulatory, or performance factors affect venture capital activity. We find that shifts in demand for venture capital appear to have a positive and important impact on commitments to new venture capital funds. Commitments by taxable and tax-exempt investors seem equally sensitive to changes in capital gains tax rates, consistent with the notion that decreases in capital gains tax rates increase the demand for venture capital as more workers have the incentive to become entrepreneurs. Aggregate and state level venture fundraising are positively affected by easing of pension investment restrictions as well as industrial and academic research and development expenditures. Fund performance and reputation also lead to greater fundraising by venture organizations.

Gonzalez, Manuel

PD November 1999. TI Causes of Subcontracting: Evidence from Panel Data on Construction Firms. AU Gonzalez, Manuel; Arrunyada, Benito; Fernandez, Alberto. AA Gonzalez: University of Oviedo. Arrunyada and Fernandez: Universitat Pompeu Fabra. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 428; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 23. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE C23, L14, L22, L74. KW Intangible Assets. Monitoring Costs. Specificity. Subcontracting. Vertical Integration.

AB This paper examines factors explaining subcontracting decisions in the construction industry. Rather than the more common cross-sectional analyses, we use panel data to evaluate the influence of all relevant variables. We design and use a new index of the closeness to small numbers situations to estimate the extent of hold-up problems. Results show that as specificity grows, firms tend to subcontract less. The opposite happens when output heterogeneity and the use of intangible assets and capabilities increase. Neither temporary shortage of capacity nor geographical dispersion of activities seem to affect the extent of subcontracting. Finally, proxies for uncertainty do not show any clear effect.

Goodfriend, Marvin

PD June 1997. TI The New Neoclassical Synthesis and the Role of Monetary Policy. AU Goodfriend, Marvin; King, Robert G. AA Goodfriend: Federal Reserve Bank of Richmond. King: University of Virginia. SR Federal Reserve Bank of Richmond Working Paper: 98/05; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. PG 60. PR no charge. JE B22, E10, E31, E32, E52. KW Monetary Policy. Inflation. Business Cycles. Macroeconomics. Neoclassical Economics.

AB Macroeconomics is moving toward a New Neoclassical Synthesis, which like the synthesis of the 1960s melds Classical with Keynesian ideas. This paper describes the key features of the new synthesis and its implications for the role of monetary policy. We find that the New Neoclassical Synthesis rationalizes an activist monetary policy which is a simple system of inflation targets. Under this "neutral" monetary policy, real quantities evolve as suggested in the literature on real business cycles. Going beyond broad principles, we use the new synthesis to address several operational aspects of inflation targeting. These include its practicality, the response to oil shocks, the choice of price index, the design of a mandate, and the tactics of interest rate policy.

PD December 1998. TI Industrial Development and the Convergence Question. AU Goodfriend, Marvin; McDermott, John. AA Federal Reserve Bank of Richmond. SR Federal Reserve Bank of Richmond Working Paper: 99/01; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. PG 17. PR no charge. JE F12, F43, N10, O11, O40. KW Growth. Convergence. Technology. Familiarity. International Trade.

AB The paper studies endogenous world balanced growth equilibria in which national learning productivity differentials govern relative per capita products. Learning productivities depend on the national share of world specialized-goods production, national and world scale, and familiarity with the foreign economy. Familiarity indexes the extent to which imported specialized goods enhance learning productivity. We find that mutual familiarization causes per capita products to converge. Unfamiliar economies diverge substantially and persistently. Unilateral familiarization of a less-developed country (LDC) with the leading economy causes the LDC to catch up to, and even overtake, the leader.

PD January 1999. TI Limited Commitment and Central Bank Lending. AU Goodfriend, Marvin; Lacker, Jeffrey M. AA Federal Reserve Bank of Richmond. SR Federal Reserve Bank of Richmond Working Paper: 99/02; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. PG 24. PR no charge. JE E44, E58, F33, F34. KW Central Banks. Discount Window. Lender of Last Resort. Loan Commitments. Reputation.

AB Central bank or International Monetary Fund lending should be regarded as a line of credit, analogous to private line-of-credit products. Contractual provisions in private line-of-credit arrangements are designed to control managerial moral hazard and provide a means for profit-maximizing lenders to credibly commit to withdraw credit and induce closure when appropriate. The contractual mechanisms utilized by private line-of-credit providers are not effective for a central bank whose primary mission -- to maintain financial system stability -- can override its obligation to protect public funds and undercut its ability to limit its lending reach. We consider in some detail five broad approaches to a central bank's commitment problem: good offices only, collateralization and early intervention, constructive ambiguity, extending supervisory and regulatory reach, and reputation building. Our analysis suggests that the first four institutional approaches cannot be counted on to overcome the fundamental forces inducing a central bank to lend. We argue that the only practical way for a central bank to credibly limit lending is for it to build up over time a reputation for restraint.

PD July 1999. **TI** The Role of a Regional Bank in a System of Central Banks. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 99/04; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 26. **PR** no charge. **JE** E58, F33. **KW** Central Banks. Eurosystem. Federal Reserve System.

AB The paper assesses the role of a Reserve Bank in the Federal Reserve System. It compares the Eurosystem with the Fed System, and offers suggestions for the Eurosystem based on the Fed's experience. A regional presence facilitates surveillance of the economy and helps a central bank to communicate with the public. Competition among regional banks stimulates innovative thinking on operational, research, and policy questions. The Chairman (President) of the system should be strong enough to encourage diverse views in the monetary policy committee and to build a consensus for decisive and timely policy actions as needed.

Goolsbee, Austan

PD December 1998. **TI** In a World Without Borders: The Impact of Taxes on Internet Commerce. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6863; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 19. **PR** $5.00. **JE** H24, H31, H71, H73, R10. **KW** Internet Commerce. Taxation. Sales Taxes.

AB The rapid rise in sales over the Internet has generated debate over the taxation of such transactions since the buyers usually pay no sales tax. This paper uses new data on the purchase decisions of approximately 25,000 online users to examine the effects that local sales taxes have on Internet commerce. The results show that, controlling for many observable characteristics, people who live in locations with high sales taxes are significantly more likely to buy things over the Internet. The estimated tax responsiveness of both participation and spending are large and resemble the tax effects found in previous research on retail sales in geographic border areas. The results are quite robust; the tax sensitivity is clear nationally, within regions, within states, and even within metropolitan areas. Further results suggest that the tax effect cannot be explained by unobserved heterogeneity across cities. The magnitudes in the paper suggest that to apply existing sales taxes to Internet commerce would reduce the number of online buyers by 25% and spending by more than 30% with some specifications suggesting even larger effects.

Gordon, Robert J.

PD February 1999. **TI** The Aftermath of the 1992 ERM Breakup: Was There a Macroeconomic Free Lunch? **AA** Northwestern University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6964; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 44. **PR** $5.00. **JE** E31, F31, F41, F43. **KW** Exchange Rates. Growth. Inflation. Unemployment. Open Economy.

AB This paper examines the macroeconomic aftermath of the 1992 breakdown of the European Exchange Rate Mechanism (ERM). The economic performance of the six "leaver" nations is compared with five "stayer" nations that maintained a roughly fixed parity with the Deutsche Mark. Recent writing about post-1992 reports that a surprising miracle occurred -- the leaver nations are alleged to have enjoyed a burst of real growth and a decline in unemployment, all without any evidence of extra inflation. The results in this paper turn these findings on their heads. While the leaver nations experienced an acceleration of nominal GDP growth relative to the stayers, fully 80 percent of this spilled over into extra inflation. Virtually 100 percent of the nominal exchange rate depreciation passed through into higher import prices, and extra inflation would have been even more pronounced if it were not for quiescent wage rates, which the paper attributes to high unemployment. The absence of any significant stimulus to real output growth is attributed to fiscal tightening under pressure from the Maastricht criteria, which offset nearly all of the stimulus coming from the improved current account of the leaver nations.

Gottardi, Piero

TI A Note on the Convergence to Competitive Equilibria in Economies with Moral Hazard. **AU** Bisin, Alberto; Gottardi, Piero; Guaitoli, Danilo.

Gottschling, Andreas

PD November 1999. **TI** Closed Form Integration of Artificial Neural Networks with Some Applications to Finance. **AU** Gottschling, Andreas; Haefke, Christian; White, Halbert. **AA** Gottschling: Deutsche Bank Research. Haefke and White: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 99/24; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 21. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C14, C45, C63, G11, G13. **KW** Option Pricing. Neural Networks. Nonparametric Methods. Density Estimation. Portfolio Choice.

AB Many economic and econometric applications require the integration of functions lacking a closed form antiderivative, which is therefore a task that can only be solved by numerical methods. We propose a new family of probability densities that can be used as substitutes and have the property of closed form integrability. This is especially advantageous in cases where either the complexity of a problem makes numerical function evaluations very costly, or fast information extraction is required for time-varying environments. Our approach allows generally for nonparametric maximum likelihood density estimation and may thus find a variety of applications, two of which are illustrated briefly: estimation of Value at Risk based on approximations to the density of stock returns; [and] recovering risk neutral densities for the valuation of options from the option price -- strike price relation.

Goulder, Lawrence H.

PD March 1999. **TI** The Usual Excess-Burden Approximation Usually Doesn't Come Close. **AU** Goulder, Lawrence H.; Williams, Roberton C., III.. **AA** Goulder: Stanford University and National Bureau of Economic Research. Stanford: Stanford University. **SR** National Bureau of Economic Research Working Paper: 7034; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** D61, H21. **KW** Taxation. Excess Burden. Intermediate Inputs. Consumer Goods. Commodity Taxes.

AB This paper shows that the usual "excess-burden triangle" formula performs poorly when used to assess the excess burden from taxes on intermediate inputs or consumer goods, and derives a practical alternative to this formula. The authors use an analytically tractable general equilibrium model to reveal how interactions with pre-existing taxes in other markets critically affect the excess burden of new taxes on intermediate inputs or consumer goods. The usual excess-burden formula ignores these interactions, and consequently yields highly inaccurate assessments of excess burden. Prior economic theory implicitly acknowledges the relevance of general-equilibrium interactions to excess burden, but does not indicate which interactions are most important or reveal the fundamental (first-order) contribution of these interactions. This paper shows analytically that the importance of the interaction with a given pre-existing tax is roughly proportional to the amount of revenue raised by that tax. The paper also derives a practical alternative formula for approximating the excess burden from a commodity tax. Finally, it performs numerical simulations to illustrate the significance of adopting the alternative to the usual approximation formula.

Gourinchas, Pierre-Olivier

PD December 1998. **TI** Exchange Rates and Jobs: What Do We Learn from Job Flows. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6864; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** E32, F10, F31, J23, J41. **KW** Exchange Rates. Relative Prices. Job Reallocation. Labor Markets. International Finance.

AB Currency fluctuations provide a substantial source of movements in relative prices that is largely exogenous to the firm. This paper evaluates empirically and theoretically the importance of exchange rate movements on job reallocation across and within sectors. The objective is (1) to provide accurate estimates of the impact of exchange rate fluctuations and (2) to further our understanding of how reallocative shocks propagate through the economy. The empirical results indicate that exchange rates have a significant effect on gross and net job flows in the traded goods sector. Moreover, the paper finds that job creation and destruction comove positively, following a real exchange rate shock. Appreciations are associated with additional turbulence, and depreciations with a "chill." The paper then argues that existing non-representative agent reallocation models have a hard time replicating the salient features of the data. The results indicate a strong tension between the positive co-movements of gross flows in response to reallocative disturbances and the negative co-movement in response to aggregate shocks.

Graetz, Michael J.

TI Reforming Social Security: A Practical and Workable System of Personal Retirement Accounts. **AU** Goldberg, Fred T., Jr..; Graetz, Michael J.

Granger, Clive W. J.

TI Properties of Nonlinear Transformations of Fractionally Integrated Processes. **AU** Dittmann, Ingolf; Granger, Clive W. J.

Greenacre, Michael

PD December 1999. **TI** A Note on the Dual Scaling of Dominance Data and its Relationship to Correspondence Analysis. **AU** Greenacre, Michael; Torres, Anna. **AA** Univeristat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 430; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 8. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C19, C88. **KW** Correspondence Analysis. Dominance Data. Dual Scaling. Paired Comparisons. Preferences.

AB Dual scaling of a subjects-by-objects table of dominance data (preferences, paired comparisons and successive categories data) has been contrasted with correspondence analysis, as if the two techniques were somehow different. In this note we show that dual scaling of dominance data is equivalent to the correspondence analysis of a table which is doubled with respect to subjects. We also show that the results of both methods can be recovered from a principal components analysis of the undoubled dominance table which is centered with respect to subject means.

Greenan, Nathalie

TI Using Employee Level Data in a Firm Level Econometric Study. **AU** Mairesse, Jacques; Greenan, Nathalie.

Grosskopf, Brit

TI Relative Payoffs and Happiness: An Experimental Study. **AU** Charness, Gary; Grosskopf, Brit.

Grossman, Gene M.

PD January 1999. **TI** Imperfect Labor Contracts and International Trade. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6901; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** D51, F11, F41, J21, J41. **KW** Human Capital. Labor Contracts. International Trade. Information. Comparative Advantage.

AB In an economy with imperfect labor contracts, differences in the distribution of human capital are an independent source of comparative advantage. I study a world economy with two sectors, one where output is produced by teams and another where individuals can work alone. When workers' abilities are private information and workers cannot verify the value of output or the level of a firm's profits, feasible labor contracts fail to generate efficient matching of workers within teams. The general equilibrium has the most talented workers opting for individualistic activities, while their less talented compatriots join teams. The team mismatches are more severe in the country with the more heterogeneous labor force, which generates a comparative disadvantage for this country in team production. Trade exacerbates the "polarization" of the more diverse society. National income could be raised, and the distribution of income improved, by a marginal expansion in the size of the team sector.

Guaitoli, Danilo

TI A Note on the Convergence to Competitive Equilibria in Economies with Moral Hazard. **AU** Bisin, Alberto; Gottardi, Piero; Guaitoli, Danilo.

Guermat, C.

TI Doubly Heteroscedastic Stochastic Production Frontiers With An Application to English Cereal Farms. **AU** Hadri, Kaddour; Guermat, C.; Whittaker, J.

PD March 1999. **TI** Heteroscedasticity in Stochastic Frontier Models: A Monte Carlo Analysis. **AU** Guermat, C.; Hadri, Kaddour. **AA** Guermat: University of Exeter. Hadri: City University, London. **SR** University of Exeter, Department of Economics Discussion Paper: 99/14; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 18. **PR** no charge. **JE** C15, C21, C24, D24, Q12. **KW** Production Frontiers. Heteroskedasticity. Technical Efficiency. Monte Carlo. Maximum Likelihood.

AB This paper uses Monte Carlo experimentation to investigate the finite sample properties of the maximum likelihood (ML) estimators of the half- normal stochastic frontier production functions in the presence of heteroskedasticity. It is found that when heteroskedasticity exists correcting for it leads not only to a substantial improvement of the statistical properties of estimators but also to improved efficiency and ranking measures. On the other hand correcting for heteroskedasticity when there is none has serious adverse results. Hence, there is a need for testing for heteroskedasticity and if there is any the appropriate correction should be made.

PD April 1999. **TI** Backpropagation Neural Network Versus Translog Model in Stochastic Frontiers: A Monte Carlo Comparison. **AU** Guermat, C.; Hadri, Kaddour. **AA** Guermat: University of Exeter. Hadri: City University, London. **SR** University of Exeter, Department of Economics Discussion Paper: 99/16; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 11. **PR** no charge. **JE** C13, C15, C21, C24, D24. **KW** Production Frontiers. Neural Networks. Technical Efficiency. Monte Carlo. Maximum Likelihood.

AB Little attention has been given to the effects of functional form mis-specification on the estimation of stochastic frontier models and to the possibility of using backpropagation neural network as a flexible functional form to approximate the production or cost functions. This paper has two main aims. First, it uses Monte Carlo experimentation to investigate the effects of functional form mis-specification on the finite sample properties of the maximum likelihood (ML) estimators of the half-normal stochastic frontier production functions. Second, it compares the performance of backpropagation neural network with that of translog. It is found that, in general, the neural network is a better alternative to the translog formulation, but that both options produce poor efficiency rankings when the data is generated by Leontief or CES functions. Hence, when estimating efficiency, one should be aware of the possibility of functional form mis-specification and their serious negative implications on ranking measures in particular. Alternative functional forms should be considered including the promising backpropagation neural network technique.

Gust, Christopher J.

TI Taylor Rules in a Limited Participation Model. **AU** Christiano, Lawrence J.; Gust, Christopher J.

Haas-Wilson, Deborah

TI Are Invisible Hands Good Hands? Moral Hazard, Competition, and the Second Best in Health Care Markets. **AU** Gaynor, Martin; Haas-Wilson, Deborah; Vogt, William B.

Hadri, Kaddour

TI Effects of Rationing on Consumer Behaviour in Chinese Urban Households. **AU** Ding, Hua; Hadri, Kaddour.

PD December 1998. **TI** The Accuracy of the Higher Order Bias Approximation for the 2SLS Estimator. **AU** Hadri, Kaddour; Phillips, Garry D. A. **AA** Hadri: City University, London and University of Exeter. Phillips: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/06; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 11. **PR** no charge. **JE** C22. **KW** Two Stage Least Squares. Bias Approximation. Exact Bias. Monte Carlo. Higher Order.

AB Mikhail (1972a) found that estimated 2SLS biases, obtained through simulation using antithetic variables and control variate methods, were closer to each other than to Nagar's bias approximation to order (T raised to the -1). This suggested that the approximation might not be accurate, and in Mikhail (1972b) he presented the bias approximation to order (T raised to the -2). As remarked by Kiviet and Phillips (1996), this result represents one of a very small number of higher order approximations in the econometric literature yet there is no published evidence of its accuracy. In this paper the accuracy of the approximation is explored in the context of a framework similar to that chosen by Mikhail (1972a), and it is found that the higher order approximation is clearly superior. In cases where the bias is severe, the results support the belief that, when the first order approximation is poor but not terrible, the higher order approximation mops up most of the error.

PD February 1999. **TI** Doubly Heteroscedastic Stochastic Production Frontiers With An Application to English Cereal

Farms. **AU** Hadri, Kaddour; Guermat, C.; Whittaker, J. **AA** Hadri: City University, London. Guermat and Whittaker: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/08; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 16. **PR** no charge. **JE** C23, C24, D24, Q12, Q18. **KW** Production Frontiers. Heteroskedasticity. Technical Efficiency. Farm Size. Panel Data.

AB In previous studies, measures of technical inefficiency derived from stochastic production frontiers have been estimated from residuals which are sensitive to specification errors. This study corrects for this inaccuracy by extending the doubly heteroskedastic stochastic cost frontier suggested by Hadri (1999) to stochastic production frontiers and to panel data. The extended correction for heteroskedasticity is supported by the data. The study uses data on 102 mainly cereal farms in England, and not only estimates technical efficiency but also examines the links between the efficiency of cereal production, cereal area, chemical usage and labor usage. These links are explored because European Union agricultural policy is no longer narrowly concerned solely with farm income levels and productivity, but also embraces environmental quality and rural development concerns. Whenever there are multiple policy goals it is important to gain an understanding of whether there is conflict or complementarity between them.

TI Heteroscedasticity in Stochastic Frontier Models: A Monte Carlo Analysis. **AU** Guermat, C.; Hadri, Kaddour.

TI Backpropagation Neural Network Versus Translog Model in Stochastic Frontiers: A Monte Carlo Comparison. **AU** Guermat, C.; Hadri, Kaddour.

Haefke, Christian

TI A Subsampling Approach to Estimating the Distribution of Diverging Statistics with Applications to Assessing Financial Market Risks. **AU** Bertail, Patrice; Haefke, Christian; Politis, Dimitris N.; White, Halbert.

TI Closed Form Integration of Artificial Neural Networks with Some Applications to Finance. **AU** Gottschling, Andreas; Haefke, Christian; White, Halbert.

Haldrup, Niels

PD June 2000. **TI** Local Power Functions of Tests for Double Unit Roots. **AU** Haldrup, Niels; Lildholdt, Peter. **AA** University of Aarhus. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/12; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 13. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C14, C22. **KW** Local Power Functions. Brownian Motion. Ornstein-Uhlenbeck Process. Hypothesis Testing. Unit Roots.

AB The purpose of this paper is to characterize three commonly used double unit root tests in terms of their asymptotic local power. To this end, we study a class of nearly doubly integrated processes which in the limit will behave as a weighted integral of a double indexed Ornstein- Uhlenbeck process. Based on a numerical examination of the analytical distributions, a comparison of the tests is made via their asymptotic local power functions.

PD June 2000. **TI** On the Robustness of Unit Root Tests in the Presence of Double Unit Roots. **AU** Haldrup, Niels; Lildholdt, Peter. **AA** University of Aarhus. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/13; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 12. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C14, C22. **KW** Unit Root Tests. Dickey-Fuller Test. Phillips-Perron Test. Hypothesis Testing. Time Series.

AB We examine some of the consequences on commonly used unit root tests when the underlying series is integrated of order two rather than of order one. It turns out that standard augmented Dickey-Fuller type tests for a single unit root have excessive density in the explosive region of the distribution. The lower (stationary) tail, however, will be virtually unaffected in the presence of double unit roots. On the other hand, the Phillips-Perron class of semiparametric tests is shown to diverge to plus infinity asymptotically and thus favoring the explosive alternative. Numerical simulations are used to demonstrate the analytical results and some of the implications in finite samples.

TI Spurious Regression, Cointegration, and Near Cointegration: A Unifying Approach. **AU** Jansson, Michael; Haldrup, Niels.

PD June 2000. **TI** Measurement Errors and Outliers in Seasonal Unit Root Testing. **AU** Haldrup, Niels; Montanes, Antonio; Sanso, Andreu. **AA** Haldrup: University of Aarhus. Montanes: University of Zaragoza. Sanso: University of Barcelona. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/15; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 22. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C22. **KW** Seasonal Unit Roots. HEGY Tests. Additive Outliers. Measurement Errors. Brownian Motion.

AB Frequently, seasonal and non-seasonal data (especially macro time series) are observed with noise. For instance, the time series can have irregular abrupt changes and interruptions as a result of additive or temporary change outliers caused by external circumstances which are irrelevant for the series of interest. Equally, the time series can have measurement errors. In this paper we analyze the above types of data irregularities on the behavior of seasonal unit roots. It occurs that in most cases outliers and measurement errors can seriously affect inference towards the rejection of seasonal unit roots. It is shown how the distortion of the tests will depend upon the frequency, magnitude, and persistence of the outliers as well as on the signal to noise ratio associated with measurement errors. Some solutions to the implied inference problems are suggested.

Hall, Brian J.

TI CEO Incentives and Firm Size. **AU** Baker, George P.; Hall, Brian J.

Hall, Bronwyn H.

PD February 1999. **TI** Innovation and Market Value. **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6984; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** G12, O33, O34. **KW** Asset Pricing. Research and Development. Patents. Intellectual Property.

AB Recent research on financial market valuation of the knowledge assets of publicly traded firms is surveyed. The motivation for using a market value equation to price knowledge assets is discussed and the theory behind this equation is briefly presented. Then the empirical literature that relates Tobin's q or the market to book value ratio to R&D and patent measures is surveyed, and new results based on United States data through 1995 are presented. The conclusion is that the market value of the modern manufacturing corporation is strongly related to its knowledge assets, and that patent measures contain information about this value above and beyond that conveyed by the usual R&D measures.

Hall, Robert E.

PD March 1999. **TI** The Concentration of Job Destruction. **AA** Stanford University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7025; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** E24, J60. **KW** Concentration. Time Series. Job Destruction. Employment.

AB A time series is concentrated if the expectation of its current value is a negative function of a moving average of past values up to all but the most recent past. Job destruction has the property of concentration in a model of heterogeneous jobs because an adverse shock destroys jobs in plants close to the margin of shutdown. Until other plants drift close to that margin, there are fewer plants that are vulnerable to another adverse shock. Concentration is easy to spot in the autocorrelations of a time series, which will be negative except for the first few lags. A simple model generates data displaying concentration. Data on job destruction and employment change for U.S. manufacturing show unambiguous evidence of concentration. According to the simple model, job creation is more persistent and thus less concentrated than is destruction, a property reflected in the data as well.

Hamers, Herbert

PD May 1999. **TI** On the Extreme Points of the Core of Neighbour Games and Assignment Games. **AU** Hamers, Herbert; Klijn, Flip; Solymosi, Tamas; Tijs, Stef; Pere Villa, Joan. **AA** Hamers, Klijn, Tijs: CentER and Tilburg University. Solymosi: Budapest University. Pere Villar: Univeristat Autonoma de Barcelona. **SR** Tilburg CentER for Economic Research Discussion Paper: 9943; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 17. **PR** no charge. **JE** C71, C78. **KW** Assignment Games. Neighbor Games. Matching Theory. Cooperative Games. Game Theory.

AB Neighbor games arise from certain matching or sequencing situations in which only some specific pairs of players can obtain a positive gain. As a consequence, neighbor games are as well assignment games as line graph restricted games. We will show that the intersection of the class of assignment games and the class of line graph restricted games yields the class of neighbor games. Further, we give a necessary and sufficient condition for the convexity of neighbor games. In spite of the possible non-convexity of neighbor games, it turns out that for any neighbor game the extreme points of the core are marginal vectors. Moreover, we prove this for assignment games in general. Hence, for any assignment game the core is the convex hull of some marginal vectors.

TI On the Convexity of Games Corresponding to Sequencing Situations with Due Dates. **AU** Borm, Peter; Fiestras-Janeiro, Gloria; Hamers, Herbert; Sanchez, Estela; Voorneveld, Mark.

TI On the Convexity of Games Corresponding to Sequencing Situations with Due Dates. **AU** Borm, Peter; Fiestras-Janeiro, Gloria; Hamers, Herbert; Sanchez, Estela; Voorneveld, Mark.

TI Neighbour Games and the Leximax Solution. **AU** Klijn, Flip; Vermeulen, Dries; Hamers, Herbert; Solymosi, Tamas; Tijs, Stef; Villar, Joan Pere.

Hammour, Mohamad L.

TI Institutions, Restructuring, and Macroeconomic Performance. **AU** Caballero, Ricardo J.; Hammour, Mohamad L.

TI The Cost of Recessions Revisited: A Reverse-Liquidationist View. **AU** Caballero, Ricardo J.; Hammour, Mohamad L.

Hansen, Peter Reinhard

PD July 2000. **TI** The Johansen-Granger Representation Theorem: An Explicit Expression for I(1) Processes. **AA** University of California, San Diego and Brown University. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/17; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 12. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C32. **KW** Cointegration. Granger Representation. Impulse Response.

AB The Johansen-Granger representation theorem for the cointegrated vector autoregressive process is derived using the companion form. This approach yields an explicit representation of all coefficients and initial values. This result is useful for impulse response analysis, common feature analysis and asymptotic analysis of cointegrated processes.

Harrigan, James

PD February 1999. **TI** U.S. Wages in General Equilibrium: The Effects of Prices, Technology, and Factor Supplies, 1963-1991. **AU** Harrigan, James; Balaban, Rita A. **AA** Harrigan: Federal Reserve Bank of New York and National Bureau of Economic Research. Balaban: University of Pittsburgh and Samford University. **SR** National Bureau of Economic Research Working Paper: 6981; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 27. **PR** $5.00. **JE** D50, F10, J24, J31, O33. **KW** Skill Premia. Wage

Inequality. Technological Change. International Trade. Factor Supply.
AB Wage inequality in the United States has increased, and many suspect that the main causes are changes in technology, international competition, and factor supplies. Our empirical model estimates the general equilibrium relationship between wages and technology, prices, and factor supplies. The model is based on the neoclassical theory of production, and is implemented by assuming that GDP is a function of prices, technology levels, and supplies of capital and different types of labor. We find that relative factor supply and relative price changes are both important in explaining the growing return to skill. In particular, we find that capital accumulation and the fall in the price of traded goods served to increase the return to education.

Harris, Richard D. F.

PD December 1998. **TI** The Gilt-Equity Yield Ratio and the Predictability of UK and US Equity Returns. **AU** Harris, Richard D. F.; Sanchez-Valle, Rene. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 98/15; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 25. **PR** no charge. **JE** G12, G14. **KW** Stock Returns. Return Predictability. Gilt-Equity Yield Ratio. Asset Returns.
AB A number of financial variables have been shown to be effective in explaining the time-series of aggregate returns in both the UK and US equity markets. These include, inter alia, the dividend yield, the spread between the yields on long and short bonds, and lagged equity returns. Recently, however, the gilt-equity yield ratio -- the ratio between the long bond yield and the equity dividend yield -- has emerged as a variable that has considerable explanatory power for equity returns in the UK. This paper compares the performance of the gilt-equity yield ratio with these other variables in the UK and US equity markets, providing evidence on both ex post explanatory power and ex ante predictive ability. It is shown that in the UK, the dividend yield has high explanatory power in-sample but poor predictive ability out-of- sample, while in contrast, the gilt-equity yield ratio performs well in both cases. Although the predictability of US equity returns is much lower than in the UK, a similar result emerges, with the gilt-equity yield ratio providing both good in-sample explanatory power and a high degree of out-of-sample predictive ability.

TI Does Job Matching Explain Job Satisfaction? Evidence for UK Graduates. **AU** Belfield, C. R.; Harris, Richard D. F.

Hart, Sergiu

PD April 1999. **TI** A General Class of Adaptive Strategies. **AU** Hart, Sergiu; Mas-Colell, Andreu. **AA** Hart: The Hebrew University. Mas-Colell: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 373; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 35. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C60, C72, C73, D70, D83. **KW** Adaptive Strategies. Approachability. Correlated Equilibrium. Fictitious Play. Regret.
AB We exhibit and characterize an entire class of simple adaptive strategies, in the repeated play of a game, having the Hannan- consistency property: In the long-run, the player is guaranteed an average payoff as large as the best-reply payoff to the empirical distribution of play of the other players; i.e., there is no "regret." Smooth fictitious play (Fudenberg and Levine [1995]) and regret-matching (Hart and Mas-Colell [1998]) are particular cases. The motivation and application of this work come from the study of procedures whose empirical distribution of play is, in the long-run, (almost) a correlated equilibrium. The basic tool for the analysis is a generalization of Blackwell's [1956a] approachability strategy for games with vector payoffs.

Hartl, Richard F.

TI A Resource-Constrained Optimal Control Model for Crackdown on Illicit Drug Markets. **AU** Baveja, Alok; Feichtinger, Gustav; Hartl, Richard F.; Haunschmied, Josef L.; Kort, Peter M.

Haruvy, Ernan

TI Altruism, Equity, and Reciprocity in a Gift-Exchange Experiment: An Encompassing Approach. **AU** Charness, Gary; Haruvy, Ernan.

TI Self-Serving Biases: Evidence from a Simulated Labor Relationship. **AU** Charness, Gary; Haruvy, Ernan.

Harvey, Andrew

PD May 1999. **TI** Signal Extraction and the Formulation of Unobserved Components Models. **AU** Harvey, Andrew; Koopman, Siem Jan. **AA** Harvey: University of Cambridge. Koopman: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9944; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 28. **PR** no charge. **JE** C14, C15, C22. **KW** Cubic Spline. Kalman Filter. Kernels. Robustness. Time Series.
AB This paper looks at unobserved components models and examines the implied weighting patterns for signal extraction. There are three main themes. The first is the implications of correlated disturbances driving the components, especially those cases in which the correlation is perfect. The second is how setting up models with t-distributed disturbances leads to weighting patterns which are robust to outliers and breaks. The third is a comparison of implied weighting patterns with kernels used in nonparametric trend estimation and equivalent kernels used in spline smoothing. We also examine how weighting patterns are affected by heteroskedasticity and irregular spacing and provide an illustrative example.

Harvey, Campbell R.

TI Economic, Financial and Fundamental Global Risk In and Out of the EMU. **AU** Ferson, Wayne E.; Harvey, Campbell R.

TI Conditioning Variables and the Cross-Section of Stock Returns. **AU** Ferson, Wayne E.; Harvey, Campbell R.

Hasan, Iftekhar

TI Operational Hedges and Coping with Foreign Exchange Exposure: The Case of U.S. MNCs During the Asian Financial Crisis of 1997. **AU** Francis, Bill B.; Hasan, Iftekhar;

Pantzalis, Christos.

TI An Empirical Investigation of the Firm's Contract Choice and the Level of Underpricing of Initial Public Offerings. **AU** Francis, Bill B.; Hasan, Iftekhar.

PD 2000. **TI** A Rational Explanation For Home Country Bias. **AU** Hasan, Iftekhar; Simaan, Yusif. **AA** Hasan: New York University. Simaan: Fordham University. **SR** New York University, Salomon Center Working Paper: S/00/17; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 25. **PR** $5.00 each; $100.00 yearly subscription. **JE** G11, G15. **KW** Portfolio Choice. International Finance. Home Country Bias.
AB While modern portfolio theory predicts that investors should diversify across international markets, corporate equity is essentially held by domestic investors. Tesar and Werner (1995) find existing explanations for the home equity bias unsatisfactory and conclude that the issue poses a challenge for portfolio theory. The authors develop a model that incorporates both the forgone gains from diversification and the informational constraints of international investing, and shows that home equity bias is consistent with rational mean-variance portfolio choice. Specifically, the authors prove that the nature of estimation risk in international markets can be responsible for this phenomenon. They show that when the cross-market variability in the estimation errors of international markets' means far exceeds the cross-market variability in the means themselves, domestic dedication dominates international diversification. An examination of eleven international markets' returns over the last twenty-five years, from the perspective of German, Japanese and U.S investors provides evidence consistent with this explanation.

TI Loan Loss Provision Decisions: A Stochastic Frontier Approach. **AU** Anandarajan, Asokan; Hasan, Iftekhar; Lozano-Vivas, Ana.

PD 2000. **TI** Project Selection and Flexibility: A Simple Application of Option Theory. **AU** Hasan, Iftekhar; Sarkar, Sudipto. **AA** Hasan: New York University. Sarkar: Southern Methodist University. **SR** New York University, Salomon Center Working Paper: S/00/20; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 13. **PR** $5.00 each; $100.00 yearly subscription. **JE** G31, L21, L23, M11. **KW** Capital Budgeting. Option Theory. Discounted Cash Flow. Managerial Flexibility.
AB It is increasingly recognized in the academic literature that the standard Discounted Cash Flow (DCF) model is inadequate for many capital budgeting decisions because it cannot account for managerial flexibility. Models based on option theory have the ability to incorporate this flexibility in the capital budgeting decision. However, a recent survey by Bierman (1993) found that 99% of the largest industrial corporations still use the DCF model for capital budgeting decisions. There seems to be a gap between theoretical developments and practical applications in the corporate world. This paper is an attempt to bridge the gap by offering a simple illustration of the potential pitfalls in the traditional approach to capital budgeting. It shows how the DCF model can lead to bad (value-reducing) decisions and presents a simple approach to deal with a specific instance of managerial flexibility. We also examine the value of this flexibility and the economic factors affecting its significance.

TI Underpricing of Venture and Non Venture Capital IPOs: An Empirical Investigation. **AU** Francis, Bill B.; Hasan, Iftekhar.

TI The Determinants of De Novo Bank Survival. **AU** De Young, Robert; Hasan, Iftekhar; Hunter, William.

PD February 2000. **TI** Organizational Form and Expense Preference: Spanish Experience. **AU** Hasan, Iftekhar; Lozano-Vivas, Ana. **AA** Hasan: New York University. Lozano-Vivas: Universidad de Malaga. **SR** New York University, Salomon Center Working Paper: S/00/19; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 15. **PR** $5.00 each; $100.00 yearly subscription. **JE** D23, G21, G28, G32. **KW** Depository Institutions. Ownership Structures. Banking. Expense Preference. Organizational Form.
AB This article investigates the effect of alternative ownership structures, stock versus mutual, on the cost of production of Spanish depository institutions. The empirical approach adjusts for the possibility that the two sectors of the banking industry employ different production technologies and finds evidence that is consistent with the expense preference behavior by the mutual savings banks.

TI Cross-Border Performance in European Banking. **AU** Pastor, Jesus T.; Lozano-Vivas, Ana; Hasan, Iftekhar.

Haskel, Jonathan

PD February 1999. **TI** Trade, Technology and U.K. Wage Inequality. **AU** Haskel, Jonathan; Slaughter, Matthew J. **AA** Haskel: University of London. Slaughter: Dartmouth College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6978; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 32. **PR** $5.00. **JE** F14, F41, J24, J31, O33. **KW** Skill Premia. Wage Inequality. International Trade. Technological Change.
AB The U.K. skill premium fell from the 1950s to the late 1970s and then rose very sharply. This paper examines the contributions to these relative wage movements of international trade and technical change. We first measure trade as changes in product prices and technical change as TFP growth. Then we relate price and TFP changes to a set of underlying factors. Among a number of results, we find that changes in prices, not TFP, were the major force behind the rise in inequality in the 1980s. We also find that although increased trade pressure has raised technical change, its effect on wage inequality was not quantitatively significant.

Hauk, Esther

PD September 1999. **TI** Multiple Prisoner's Dilemma Games with (out) an Outside Option: An Experimental Study. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 391; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C14, C72, C78, C91. **KW** Prisoner's Dilemma.

Cooperation. Exit. Experiments. Loss Aversion.
AB Experiments in which subjects play simultaneously several finite prisoner's dilemma supergames with and without an outside option reveal that: (i) subjects use probabilistic start and end effect behavior, (ii) the freedom to choose whether to play the prisoner's dilemma game enhances cooperation, (iii) if the payoff for simultaneous defection is negative, subjects' tendency to avoid losses leads them to cooperate; while this tendency makes them stick to mutual defection if its payoff is positive.

PD September 1999. **TI** On the Cultural Transmission of Corruption. **AU** Hauk, Esther; Saez-Marti, Maria. **AA** Hauk: Universitat Pompeu Fabra. Saez-Marti: Stockholm School of Economics. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 392; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** A13, C73, I20, K42, Z10. **KW** Corruption Dynamics. Education. Preference Formation. Social Values. Illegal Behavior.
AB We provide a cultural explanation to the phenomenon of corruption in the framework of an overlapping generations model with intergenerational transmission of values. We show that the economy has two steady states with different levels of corruption. The driving force in the equilibrium selection process is the educational effort exerted by parents which depends on the distribution of ethics in the population and on expectations about future policies. We propose some policy interventions which via parents' efforts have long-lasting effects on corruption and show the success of intensive education campaigns. Educating the young is a key element in reducing corruption successfully.

PD October 1999. **TI** On Forward Induction and Evolutionary and Strategic Stability. **AU** Hauk, Esther; Hurkens, Sjaak. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 408: Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 28. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C43, C72. **KW** Forward Induction. Strategic Stability. EES Sets. Index Theory. Normal Form.
AB We analyze which normal form solution concepts capture the notion of forward induction, as defined by van Damme (JET, 1989) in the class of generic two player normal form games preceded by an outside option. We find that none of the known strategic stability concepts (including Mertens stable sets and hyperstable sets) captures this form of forward induction. On the other hand, we show that the evolutionary concept of EES set (Swinkels, JET, 1992) is always consistent with forward induction.

Haunschmied, Josef L.

TI A Resource-Constrained Optimal Control Model for Crackdown on Illicit Drug Markets. **AU** Baveja, Alok; Feichtinger, Gustav; Hartl, Richard F.; Haunschmied, Josef L.; Kort, Peter M.

TI A Resource-Constrained Optimal Control Model for Crackdown on Illicit Drug Markets. **AU** Baveja, Alok; Feichtinger, Gustav; Hartl, Richard F.; Haunschmied, Josef L.; Kort, Peter M.

Heckman, James J.

PD January 1999. **TI** General Equilibrium Cost Benefit Analysis of Education and Tax Policies. **AU** Heckman, James J.; Lochner, Lance; Taber, Christopher. **AA** Heckman: University of Chicago and National Bureau of Economic Research. Lochner: University of Rochester. Taber: Northwestern University. **SR** National Bureau of Economic Research Working Paper: 6881; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** H43, H52, I28, J24, J31. **KW** Human Capital. Wage Inequality. Skill. Investment. Education.
AB This paper formulates and estimates an open-economy overlapping generation general-equilibrium model of endogenous heterogeneous human capital in the form of schooling and on-the-job training. Physical capital accumulation is also analyzed. The authors use the model to explain rising wage inequality in the past two decades due to skill- biased technical change and to estimate investment responses. They compare an open economy version with a closed economy version. Using their empirically grounded general equilibrium model that explains rising wage inequality, the authors evaluate two policies often suggested as solutions to the problem of rising wage inequality: (a) tuition subsidies to promote skill formation and (b) tax policies. The authors establish that conventional partial equilibrium policy evaluation methods widely used in labor economics and public finance give substantially misleading estimates of the impact of national tax and tuition policies on skill formation. Simulations of the model also reveal that a move to a flat consumption tax raises capital accumulation and the real wages of all skill groups and barely affects overall measures of income inequality.

PD February 1999. **TI** The Pre-Program Earnings Dip and the Determinants of Participation in a Social Program: Implications for Simple Program Evaluation Strategies. **AU** Heckman, James J.; Smith, Jeffrey A. **AA** Heckman: University of Chicago and National Bureau of Economic Research. Smith: University of Western Ontario and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6983; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 36. **PR** $5.00. **JE** J24, J31. **KW** Self Selection. Job Training. Program Participation. Training Programs. Selection Bias.
AB This paper uses data from a major social experiment to identify what would have happened to the earnings of self-selected participants in a job training program had they not participated in it. The authors investigate the implications of these earnings patterns for the validity of widely-used before-after and difference-in-differences estimators. Motivated by the failure of these estimators to produce credible estimates, they investigate the determinants of program participation. The authors find that labor force status dynamics, rather than earnings or employment dynamics, drive the participation process. Their evidence suggests that training programs often function as a form of job search. Methods that control only for earnings dynamics, like the conventional difference-in-differences estimator, do not adequately capture the underlying differences between participants and non-participants. The authors use the estimated probabilities of participation in both

matching estimators and a nonparametric, conditional version of the difference-in-differences estimator and produce large reductions in the selection bias in non-experimental estimates of the effect of training on earnings.

Hege, Ulrich

PD September 1999. **TI** Collateral, Renegotiation and the Value of Diffusely Held Debt. **AU** Hege, Ulrich; Mella-Barral, Pierre. **AA** Hege: CentER and Tilburg University. Mella-Barral: London School for Economics. **SR** Tilburg CentER for Economic Research Discussion Paper: 9994; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 45. **PR** no charge. **JE** G12, G32, G33. **KW** Debt Reorganization. Multiple Creditors. Renegotiation.

AB Debt with many creditors is analyzed in a continuous-time pricing model of the levered firm. We specifically allow for debtor opportunism vis-a-vis a non-coordinated group of creditors, in the form of repeated strategic renegotiation offers and default threats. We show that the creditors' initial entitlement to non-collateralized assets will be expropriated through exchange offers. Exchange offers successively increase the level of collateral until all assets are fully collateralized. The ex ante optimal debt contract is neither fully collateralized nor without any collateral. Diffusely held debt allows for a larger debt capacity and bears lower credit risk premia than privately held debt. We derive simple closed-form solutions for the value of equity and defaultable bonds. Numerical estimates show that the bond valuation is very sensitive to the correct specification of the debt renegotiation model.

Hellerstein, Judith

TI Why are Racial and Ethnic Wage Gaps Larger for Men than for Women? Exploring the Role of Segregation Using the New Worker-Establishment Characteristics Database. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

TI New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

Henderson, Rebecca

TI Balancing Incentives: The Tension Between Basic and Applied Research. **AU** Cockburn, Iain; Henderson, Rebecca; Stern, Scott.

Hendricks, Kenneth

PD October 1999. **TI** Empirical Implications of Equilibrium Bidding in First-Price, Symmetric, Common Value Auctions. **AU** Hendricks, Kenneth; Pinkse, Joris; Porter, Robert H. **AA** Hendricks: University of British Columbia. Pinkse: Yale University. Porter: Northwestern University and Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/19; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 42. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C14, D44, D81, L71. **KW** Auctions. Common Values. Bidding. Hydrocarbon Fuels.

AB This paper studies federal auctions for wildcat leases on the Outer Continental Shelf from 1959 to 1970. These are leases where bidders privately acquire (at some cost) noisy, but equally informative signals about the amount of oil and gas that may be present. We develop a test of equilibrium bidding in a common values model that is implemented using data on bids and ex post values. We compute bid markups and rents under the alternative hypotheses of private and common values and find that the data are more consistent with the latter hypothesis. Finally, we use data on tract location and ex post values to test the comparative static prediction in common value auctions that bidders tend to bid less aggressively when they expect more competition.

Herings, P. Jean-Jacques

PD June 1999. **TI** The Robustness of the CAPM-A Computational Approach. **AU** Herings, P. Jean-Jacques; Kubler, Felix. **AA** Herings: CentER and Tilburg University. Kubler: Yale University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9954; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 41. **PR** no charge. **JE** C60, D52, D58, G11, G12. **KW** Asset Pricing. General Equilibrium. Incomplete Markets. Computational Methods. CAPM.

AB In this paper we argue that in realistically calibrated two period general equilibrium models with incomplete markets CAPM-pricing provides a good benchmark for equilibrium prices even when agents are not mean- variance optimizers and returns are not normally distributed. We numerically approximate equilibria for a variety of different specifications for preferences, endowments and dividends and compare the equilibrium prices and portfolio-holdings to the predictions of the CAPM. While the CAPM does not hold exactly for the chosen specification, it turns out that pricing errors are extremely small. Furthermore, two- fund separation holds approximately.

PD September 1999. **TI** Variational Inequality Problems With a Continuum of Solutions: Existence and Computation. **AU** Herings, P. Jean-Jacques; Talman, Dolf; Yang, Zaifu. **AA** Herings and Talman: CentER and Tilburg University. Yang: Yokohama National University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9972; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 25. **PR** no charge. **JE** C62, D51. **KW** Polytopes. Simplicial Algorithms. Nonlinear Equations. Variational Inequality. General Equilibrium.

AB In this paper three sufficient conditions are provided under each of which an upper semi-continuous point-to-set mapping defined on an arbitrary polytope has a connected set of zero points that connect two distinct faces of the polytope. Furthermore, we obtain an existence theorem of a connected set of solutions to a nonlinear variational inequality problem over arbitrary polytopes. These results follow in a constructive way by designing a new simplicial algorithm. The algorithm operates on a triangulation of the polytope and generates a piecewise linear path of points connecting two distinct faces of the polytope. Each point on the path is an approximate zero point. As the mesh size of the triangulation goes to zero, the path converges to a connected set of zero points linking the two distinct faces. As a consequence, our results generalize Browder's fixed point theorem (1960) and an earlier result by the authors (1996) on the n-dimensional unit cube. An application in economics is also discussed.

Hermalin, Benjamin E.

PD January 1999. **TI** Risks to Lenders and Borrowers in International Capital Markets. **AU** Hermalin, Benjamin E.; Rose, Andrew K. **AA** Hermalin: University of California, Berkeley. Rose: University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6886; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 30. **PR** $5.00. **JE** F32, F34, F41, G15. **KW** Capital Markets. Imperfect Information. International Finance. Credibility. Commitment.

AB This paper provides a framework for understanding the risks to borrowers and lenders in capital markets. We begin with a description of a capital market in a domestic context. This allows us to focus on two key imperfections which lie at the heart of all financial systems: imperfect information, and the difficulty of making credible commitments for repayment. In the international context, these problems tend to be exacerbated. There are also two sources of risk in international borrowing that are absent in a purely domestic context: the risk that sovereign borrowers will default, and the risk of macroeconomic instability that stems from the impact of the net capital flows on the monetary system.

Hernando, Ignacio

TI The Role of the Financial System in the Growth-Inflation Link: The OECD Experience. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David.

TI Microeconomic Price Adjustments and Inflation: Evidence from Spanish Sectoral Data. **AU** Estrada, Angel; Hernando, Ignacio.

TI The Long-Run Effect of Permanent Disinflations. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David.

PD February 1999. **TI** Relacion entre contratos laborales y financieros: un estudio teorico y empirico para el caso espanol. **AU** Hernando, Ignacio; Tribo, Josep A. **AA** Hernando: Banco de Espana; Tribo: Universidad Carlos III. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9904; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 32. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** D21, G20, G30, J23, J41. **KW** Financial Contracts. Labor Contracts. Financial Institutions. Employment. Manufacturing.

AB This paper deals, first, with the integrated modeling of the duration of employment and financial contracts, and predicts the existence of a positive correlation between them. Second, and in the light of the theoretical model, the impact of the financial structure and of other characteristics of firms (size or sector of activity, among others) on the temporary hiring policy of Spanish manufacturing firms during the period 1983-95 is analyzed. This period is especially relevant, since it has seen two labor reforms during it (1984, 1993- 94), which have led to a steadily increasing and uninterrupted resort to temporary employment.

Heuts, R. M. J.

PD September 1999. **TI** Inventory Modelling For a Manufacturer of Sweets: An Evaluation of an Adjusted Compound Renewal Approach for B-Items with a Relative Short Production Lead Time. **AU** Heuts, R. M. J.; Luijten, M. L. J. **AA** Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9980; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 25. **PR** no charge. **JE** C44, D24, L66, M11. **KW** Inventory Control. Compound Renewal. Demand Processes. Production Control. Manufacturing.

AB In this paper we are especially interested how to optimize the production/inventory control for a manufacturer of sweets, under the following circumstances: short production lead times in combination with an intermittent demand pattern for the so-called B-taste items. As for A-taste items a compound renewal approach appeared appropriate to control inventory/production, we formulated and tested an adjusted compound renewal approach for B-taste items, because a certain condition was not satisfied for those items. For several experiments where the condition was not satisfied and the adjusted approach was compared with the unadjusted one, it then appears that the difference in performance was small. So the first two moments with the compound renewal model appear to be more robust than the restriction given in the literature.

Hey, John D.

TI Two Experiments to Test a Model of Herd Behaviour. **AU** Allsopp, Louise; Hey, John D.

Hindriks, Jean

PD March 1999. **TI** Mobility and Redistributive Politics. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/15; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 19. **PR** no charge. **JE** C72, D71, H71, H73, R51. **KW** Majority Voting. Mobility. Redistribution. Taxation. Local Government.

AB There is a widespread concern that a greater mobility of individuals can undermine any attempt to redistribute income at the local level. In this paper we derive the equilibrium level of redistribution when both the rich and the poor are mobile (although in different degrees) and when each jurisdiction chooses its redistributive policy by majority voting. This leads to a fundamental interaction whereby the policy choices of jurisdictions determine who they attract, and who they attract determines their policy choices. Our main findings are twofold. First, we show that a greater mobility of the poor can increase the equilibrium amount of redistribution. Second, we find that some jurisdictions can be stuck in equilibrium on the "wrong" side of their Laffer curve. The reason is that the poor are in a majority in these jurisdictions and they are opposed to a potentially Pareto improving tax reduction because it would attract the rich and shift the majority.

TI Voting Over Social Security with Uncertain Lifetimes. **AU** De Donder, Philippe; Hindriks, Jean.

PD July 1999. **TI** The Targeting of Social Security: A Tax Reform Approach. **AA** University of Exeter. **SR** University of Exeter, Department of Economics

Discussion Paper: 99/18; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 13. **PR** no charge. **JE** H21, H23, H26, H53, H55. **KW** Social Security. Tax Evasion. Tax Reform. Means Testing. Redistribution.

AB Income-based targeting (or means-testing) reduces social security benefits as income rises. This form of targeting entails a well-known incentive distortion: the prospect for the recipients of losing part of their benefits if they were to earn more can deter them from working harder. In this paper, we argue that targeting is more than a simple redistribution device that takes from the rich to give to the poor. The question involves starting from a particular tax-transfer scheme in force, and asking whether everybody would like to depart from it. Adopting a general environment, we derive simple conditions under which there exist such directions of change and we identify these directions. Specializing the model further and using numerical calculations we estimate the effects of inequality and tax evasion on the desirability of targeting.

PD July 1999. **TI** Income Tax Compliance: The No-Commitment Game. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/19; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 25. **PR** no charge. **JE** D82, H26. **KW** Tax Enforcement. Signaling. No-Commitment. Taxation. Auditing.

AB We consider a tax enforcement game in which the fiscal authority cannot pre-commit to an inspection policy and its interaction with the taxpayer is modeled as a signaling game. We extend earlier work by allowing for imperfect auditing, non-linear taxation and non-linear penalties. Using the incentive compatibility approach in signaling games (Mailath, 1987) and making explicit out-of-equilibrium beliefs, we demonstrate that the separating equilibrium is the only equilibrium of this game. As for characterization, we show that the game has a simple solution which displays a constant level of non-compliance, constant audit rates and a progressive bias in the sense that the distribution of true liabilities Lorenz dominates the distribution of effective tax payments. We also study the impact on the equilibrium outcome of small changes in taxation, penalty, auditing quality and cost of audit. Lastly, we allow for the possibility that the taxpayer is intrinsically honest with some probability and show that a small change in this probability has significant effects on reporting behavior, audit policy and expected revenue.

PD July 1999. **TI** Optimal Tax Mix and Public Goods Supply Under Multilateral Tax Evasion. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/20; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 29. **PR** no charge. **JE** H21, H24, H26, H41. **KW** Tax Mix. Tax Evasion. Public Goods. Non-Linear Prices. Commodity Taxes.

AB The primary objective of this paper is to analyze the role of evasion possibilities as a determinant of the general structure of commodity and income taxes and of public goods supply. A secondary objective is to provide a defense of differentiated commodity taxes based on the screening role of the purchases of certain goods. Formally, we solve for the (constrained) Pareto-efficient commodity and income taxes when both types of taxes can be evaded. We find explicit solutions that readily incorporate the ease with which the transaction may be concealed. Many traditional issues are then (re-) considered, such as (i) the direct versus indirect tax controversy (proposition 1), (ii) uniform versus differential commodity taxes (proposition 2), (iii) regressivity versus progressivity (proposition 3) and (iv) decentralization versus non-decentralization of public good supply (proposition 4). We also formulate a modified Samuelson rule that accounts for the impact of tax evasion on the optimal provision of public goods.

Hines, James R., Jr.

TI Understanding Tax Evasion Dynamics. **AU** Engel, Eduardo M. R. A.; Hines, James R., Jr..

Hitt, Lorin M.

TI Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence. **AU** Bresnahan, Timothy F.; Brynjolfsson, Erik; Hitt, Lorin M.

Hodrick, Robert J.

PD June 1999. **TI** An International Dynamic Asset Pricing Model. **AU** Hodrick, Robert J.; Ng, David Tat-Chee; Sengmueller, Paul. **AA** Hodrick: Columbia University and NBER. Ng and Sengmueller: Columbia University. **SR** National Bureau of Economic Research Working Paper: 7157; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** F30, G11, G12, G15. **KW** Asset Pricing. Stock Returns. International Finance. Hedging. Portfolio Choice.

AB We examine the ability of a dynamic asset-pricing model to explain the returns on G7 country stock market indices. We extend Campbell's (1996) asset-pricing model to investigate international equity returns. We also utilize and evaluate recent evidence on the predictability of stock returns. We find some evidence for the role of hedging demands in explaining stock returns and compare the predictions of the dynamic model to those from the static CAPM. Both models fail in their predictions of average returns on portfolios of high book-to-market stocks across countries.

Hoffman, Alan

PD February 2000. **TI** New Upper Bounds for Maximum-Entropy Sampling. **AU** Hoffman, Alan; Lee, Jon; Williams, Joy. **AA** Hoffman: IBM. Lee: University of Kentucky and CORE. Williams: Earlham College. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/12; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 11. **PR** $100 per year. **JE** C61, C63, C90. **KW** Experimental Design. Entropy. Spectral Bounds. Fischer's Inequality. Set Partitioning.

AB We develop and experiment with new upper bounds for the constrained maximum-entropy sampling problem. Our partition bounds are based on Fischer's inequality. Further new upper bounds combine the use of Fischer's inequality with previously developed bounds. We demonstrate this in detail by using the partitioning idea to strengthen the spectral bounds of Ko, Lee and Queyranne and of Lee. Computational evidence suggests that these bounds may be useful in solving problems to optimality in a branch-and-bound framework.

Holmstrom, Bengt

PD January 1999. **TI** Managerial Incentive Problems -- A Dynamic Perspective. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6875; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** D82, J24, J31, J41. **KW** Incentives. Implicit Contracts. Human Capital. Managers.

AB The paper studies how a person's concern for a future career may influence his or her incentives to put in effort or make decisions on the job. In the model, the person's productive abilities are revealed over time through observations of performance. There are no explicit output contingent contracts, but since the wage in each period is based on expected output and expected output depends on assessed ability, an "implicit contact" links today's performance to future wages. An incentive problem arises from the person's ability and desire to influence the learning process, and therefore the wage process, by taking unobserved actions that affect today's performance. The fundamental incongruity in preferences is between the individual's concern for human capital returns and the firm's concern for financial returns. The two need to be only weakly related. It is shown that career motives can be beneficial as well as detrimental, depending on how well the two kinds of capital returns are aligned.

Hopenhayn, Hugo A.

PD February 1999. **TI** Innovation Fertility and Patent Design. **AU** Hopenhayn, Hugo A.; Mitchell, Matthew F. **AA** Hopenhayn: Universidad Torcuato Di Tella and University of Rochester. Mitchell: University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 303; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 32. **PR** no charge. **JE** D82, L10, L50, O31, O34. **KW** Innovation. Patents. Asymmetric Information. Technological Change. Property Rights.

AB It may be advantageous to provide a variety of kinds of patent protection to heterogeneous innovations. Innovations which benefit society largely through their use as building blocks to future inventions may require a different scope of protection in order to be encouraged, since expected profits are often decreasing in a products usefulness to others when the others are competitors. We model the problem of designing an optimal patent menu when the fertility of an innovation in generating more innovations cannot be observed when the patent is granted and characterize the optimal menu when breadth is a choice variable of the patent authority. If breadth is not definable at the time of the patent due to uncertainty about the kinds of future products that will arise, the menu can still be implemented with buyout fees. Evidence of heterogeneous fertility is presented using patent data from the US.

Hornstein, Andreas

PD March 1998. **TI** External vs. Internal Learning-by-Doing in an R&D Based Growth Model. **AU** Hornstein, Andreas; Peled, Dan. **AA** Hornstein: Federal Reserve Bank of Richmond. Peled: Technion, Israel, and University of Western Ontario. **SR** Federal Reserve Bank of Richmond Working Paper: 98/01; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 38. **PR** no charge. **JE** D92, L21, O31, O32, O40. **KW** Learning-by-Doing. Growth. Scale Effects. Research and Development.

AB In an economy where growth is determined by the interaction of R&D and learning-by-doing (LBD), changes of factors that stimulate either one of these activities affect growth differently than in an economy where growth is determined by either R&D or LBD alone. In particular, when firms anticipate that R&D for new types of goods threatens the future efficiency gains which they derive from LBD, a more efficient learning process or a larger workforce might reduce rather than increase the growth rate on a balanced growth path.

PD March 1998. **TI** Can a Matching Model Explain the Long-Run Increase in Canada's Unemployment Rate? **AU** Hornstein, Andreas; Yuan, Mingwei. **AA** Hornstein: Federal Reserve Bank of Richmond. Yuan: Bank of Canada. **SR** Federal Reserve Bank of Richmond Working Paper: 98/02; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 47. **PR** no charge. **JE** C68, E24, E62, J23, J64. **KW** Unemployment Insurance. Matching Models. Unemployment. Taxation. Labor Productivity.

AB We construct a simple general equilibrium model of unemployment and calibrate it to the Canadian economy. Job creation and destruction are endogenous. In this model, we consider several potential factors which could contribute to the long-run increase in the Canadian unemployment rate: a more generous unemployment insurance system, higher layoff costs, higher distortionary taxes, and a slower rate of productivity growth. We find that in the model economy the impact of all of these factors on the unemployment rate is small.

PD December 1998. **TI** Staggered Prices and Inventories: Production Smoothing Reconsidered. **AU** Hornstein, Andreas; Sarte, Pierre-Daniel G. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 98/08; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 18. **PR** no charge. **JE** D24, E13, E22, E31, E32. **KW** Inventory Investment. Production Smoothing. Nominal Rigidities. Price Setting. Sticky Prices.

AB Staggered nominal price setting introduces predictable sales variations at the firm level. We study the implications of staggered prices in a framework where, because of increasing marginal cost, firms use inventories to smooth production and thereby separate sales from production. Conventional criticisms of production smoothing models have focused on their inability to replicate the following two stylized facts: (1) production is more volatile than sales and (2), inventory investment is positively correlated with sales. In contrast, we show that a standard production smoothing model of inventory behavior is consistent with these facts when prices are sticky. Moreover, these results hold irrespective of whether the economy is driven by nominal demand or real supply shocks. It has been suggested that increasing short run marginal cost at the firm level can make the effects of nominal shocks more persistent. We show that if firms can hold inventories, nominal demand shocks will have persistent effects on sales, but not necessarily on production.

Hoxby, Caroline M.

PD December 1998. **TI** The Effects of Class Size and Composition on Student Achievement: New Evidence from Natural Population Variation. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6869; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** I21, J13, J16, J24. **KW** Education. Class Size. Student Achievement. Population Variation. Gender.

AB The author uses natural population variation to identify the effects of class size and composition on student achievement. She isolates the credibly random component of population variation in each grade and school district and uses this component to generate instrumental variables for class size and composition. The author also exploits the discontinuous changes in class size that occur when natural population variation triggers a change in the number of classes in a grade in a school. Discontinuity-based results are both consistent and precise only when applied to within-district changes in class size and population. The author finds that reductions in class size from a base of 15 to 30 students have no effect on student achievement. She also finds that the presence of black students in a class has no effect on achievement. She demonstrates that estimates of the effect of racial composition that rely on between-district comparisons suffer from substantial bias. Finally, the author shows that more female classes perform better in writing in the 4th through 8th grades and in math in the 4th grade. Comparison of the effects to average male-female differences in test scores suggest that gender composition alters classroom conduct.

PD January 1999. **TI** Explaining Rising Income and Wage Inequality Among the College- Educated. **AU** Hoxby, Caroline M.; Terry, Bridget. **AA** Hoxby: Harvard University and National Bureau of Economic Research. Terry: Harvard University. **SR** National Bureau of Economic Research Working Paper: 6873; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** D31, I21, J24, J31. **KW** Wages. Income Dispersion. Education. Human Capital. Colleges.

AB The incomes and wages of college-educated Americans have become significantly more dispersed since 1970. This paper attempts to decompose this growing dispersion into three possible sources of growth. The first source, or "extensive margin," is the increasing demographic diversity of people who attend college. The second is an increasing return to aptitude. The third, or "intensive margin," combines the increasing self-segregation (on the basis of aptitude) of students among colleges and the increasing correlation between the average aptitude of a college's student body and its expenditure on education inputs. These tendencies are the result of changes in the market structure of college education, as documented elsewhere. The authors find that about 70% of the growth in inequality among recipients of baccalaureate degrees can be explained with observable demographics, measures of aptitude, and college attributes. About 50% of the growth in inequality among people who have 2 years of college education can be similarly explained. Of the growth that can be explained, about 1/4th is associated with the extensive margin, 1/3rd with an increased return to measured aptitude, and 5/12ths with the intensive margin.

Huang, Jing-zhi

TI Costly Financing, Optimal Payout Policies and the Valuation of Corporate Debt. **AU** Acharya, Viral V.; Huang, Jing-zhi; Subrahmanyam, Marti G.; Sundaram, Rangarajan.

Huang, Kevin Xiaodong

PD October 1998. **TI** Valuation and Asset Pricing in Infinite Horizon Sequential Markets with Portfolio Constraints. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 302; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 32. **PR** no charge. **JE** G11, G12. **KW** Arbitrage. Ponzi Scheme. Market Price. Replication Price. Fundamental Value.

AB There are three ways of measuring the value of a payoff stream in sequential markets with portfolio constraints: the market price, the replication price, and the fundamental value. In this paper we characterize constraints for which these measures coincide in the absence of arbitrage, and in equilibrium. We show that the replication price functional is linear in finite horizon markets, but only sub- linear in general in infinite horizon unless markets are complete. We provide constraints for which the linearity holds regardless of whether markets are complete or incomplete. Applying a duality technique, we determine an optimal replicating strategy through solving a sequence of independent linear programs. These results do not depend on investors' preferences (other than monotonicity), probability beliefs, endowments of goods, or supply of assets.

PD January 1999. **TI** Infinite-Horizon Optimal Hedging Under Cone Constraints. **AA** Utah State University. **SR** University of Minnesota Center for Economic Research Discussion Paper: 304; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 13. **PR** no charge. **JE** C61, G11, G13, G20. **KW** Hedging. Cone Constraints. Stochastic Discounting. Portfolio Choice. Arbitrage.

AB We address the issue of hedging in infinite horizon markets with a type of constraints that the set of feasible portfolio holdings forms a convex cone. We show that the minimum cost of hedging a liability stream is equal to its largest present value with respect to admissible stochastic discount factors, thus the cost can be determined without finding an optimal hedging strategy. We solve for an optimal hedging strategy by solving a sequence of independent one-period hedging problems. We apply the results to a variety of trading restrictions and also show how the admissible stochastic discount factors can be characterized.

PD January 1999. **TI** Staggered Contracts and Business Cycle Persistence. **AU** Huang, Kevin Xiaodong; Liu, Zheng.

AA Huang: Utah State University. Liu: Clark University. **SR** University of Minnesota Center for Economic Research Discussion Paper: 305; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 32. **PR** no charge. **JE** E24, E31, E32, E52, J31. **KW** Staggered Contracts. Monetary Policy. Business Cycles. Prices. Wages.

AB Staggered price and staggered wage mechanisms are commonly viewed as similar in generating persistent real effects of monetary shocks. In this paper, we distinguish these two mechanisms with individuals' optimizing behavior being explicitly taken into account. We show that, although the dynamic price and wage setting equations are alike, a key parameter governing persistence in these two equations is linked to the underlying preferences and technologies in very different ways. Consequently, the two mechanisms have quite different implications on persistence. While the staggered price mechanism by itself is incapable, the staggered wage mechanism has a much greater potential of generating persistence.

Huddart, Steven

PD March 1999. **TI** Valuing the Reload Features of Executive Stock Options. **AU** Huddart, Steven; Jagannathan, Ravi; Saly, Jane. **AA** Huddart: Duke University. Jagannathan: Northwestern University and National Bureau of Economic Research. Saly: University of Minnesota. **SR** National Bureau of Economic Research Working Paper: 7020: National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 20. **PR** $5.00. **JE** C80, D84, G13, J33, M41. **KW** Compensations. Stock Options. Option Pricing. Reload Features. Accounting.

AB Under Statement of Financial Accounting Standards No. 123, the grant date value of executive stock options excludes the value of any reload feature because, at the time of writing the standard in 1995, the Financial Accounting Standards Board believed it was not feasible to value a reload feature at the grant date. We show how the Binomial Option Pricing Model can be used to determine the grant date value of such options. Ignoring the reload feature can substantially understate the value of the option: the reload feature increases the value of an otherwise similar option by 24 percent in the example we consider. In view of the potential significance of the reload feature and the versatility of the Binomial Option Pricing Model, the Financial Accounting Standards Board may wish to reconsider the accounting for options with a reload feature.

Huisman, Kuno J. M.

PD September 1999. **TI** Effects of Strategic Interactions on the Option Value of Waiting. **AU** Huisman, Kuno J. M.; Kort, Peter M. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9992; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 41. **PR** no charge. **JE** C73, D81, G13, G31, L13. **KW** Investment. Timing Games. Real Options. Game Theory. Oligopoly.

AB This paper considers an investment timing problem in a duopoly framework. The results of the seminal contribution by Fudenberg and Tirole (1985, RES) are extended by introduction of uncertainty. Three scenarios are identified. In the first scenario we have a preemption equilibrium with dispersed investment timing, while in the second scenario an equilibrium with joint investment prevails. In the third scenario preemption holds in case uncertainty is low, and joint investment is the Pareto dominating equilibrium if uncertainty is large. From the theory of real options it is known that it is optimal to invest when the net present value exceeds the option value of waiting. In this paper we modify the real options investment rule by taking into account strategic interactions. Now the net present value must be compared with the so-called strategic option value of waiting. It can be shown that, compared to the option value of waiting in the monopoly case, the strategic option value of waiting is the same in the joint investment case and lower in the preemption equilibrium. In the latter case it can even occur that investing is optimal, while the net present value is negative.

Hukkawala, Naeem

TI Defaults & Returns on High Yield Bonds: Analysis Through 1999 and Default Outlook for 2000-2002. **AU** Altman, Edward I.; Hukkawala, Naeem; Kishore, Vellore.

Hunt, Jennifer

PD January 1999. **TI** Post-Unification Wage Growth in East Germany. **AA** Yale University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6878; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 28. **PR** $5.00. **JE** J24, J31, J61, J63, P20. **KW** Wages. Human Capital. Job Changing. German Unification.

AB Following monetary union with west Germany in June 1990, the median real monthly wage of prime age east German workers rose by 83% in six years. I use the German Socio-Economic Panel data to investigate the determinants of this wage growth and some of its implications. For the 1990-1991 period, I find that the biggest gainers were low-wage workers generally, and women and the less educated specifically. In the 1991- 1996 period the biggest gainers were women and the better educated. Job changing rates were high; a majority of workers had changed jobs by 1996. The return to job changing, particularly changing to a job in the west, was high in 1990-1991 but fell greatly in the later period, so that overall only 18% of wage growth was due to job changing within the east, and 7% to east-west job changing.

Hunter, William

TI The Determinants of De Novo Bank Survival. **AU** De Young, Robert; Hasan, Iftekhar; Hunter, William.

Hurkens, Sjaak

PD May 1999. **TI** Endogenous Information Structures. **AU** Hurkens, Sjaak; Vulkan, Nir. **AA** Hurkens: Universitat Pompeu Fabra. Vulkan: Bristol University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 386; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 15. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C72, D82, D83. **KW** Information Acquisition. Private Information. Equilibrium. Game Theory.

AB Many models in the economics literature deal with strategic situations with privately informed agents. In those models the information structure is assumed to be exogenous and common knowledge. We consider whether such models, and the results they produce, are robust with respect to the endogenization of the information structure. The results depend on whether information acquisition is secret or private, and on whether the strategic situation involves simultaneous or sequential moves. In particular we find that only when information is secretly acquired and moves are simultaneous are the results fully robust. When information is acquired secretly but moves are sequential additional equilibria may appear. Instead, private information acquisition may make the equilibrium set smaller.

PD May 1999. **TI** Communication, Coordination, and Efficiency in Evolutionary One- Population Models. **AU** Hurkens, Sjaak; Schlag, Karl H. **AA** Hurkens: Universitat Pompeu Fabra. Schlag: University of Bonn. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 387; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 21. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C72, C79. **KW** Evolutionarily Stable Sets. Pure Coordination. Cheap Talk. Commitment. Game Theory.

AB We analyze the role of commitment in pre-play communication for ensuring efficient evolutionarily stable outcomes in coordination games. All players are a priori identical as they are drawn from the same population. In games where efficient outcomes can be reached by players coordinating on the same action we find commitment to be necessary to enforce efficiency. In games where efficient outcomes only result from play of different actions, communication without commitment is most effective although efficiency can no longer be guaranteed. Only when there are many messages then inefficient outcomes are negligible as their basins of attraction become very small.

TI On Forward Induction and Evolutionary and Strategic Stability. **AU** Hauk, Esther; Hurkens, Sjaak.

Hyson, Rosemary

TI Is the Impact of Health Shocks Cushioned by Socioeconomic Status? The Case of Low Birthweight. **AU** Currie, Janet; Hyson, Rosemary.

Imbens, Guido W.

PD March 1999. **TI** Estimating the Effect of Unearned Income on Labor Supply, Earnings, Savings and Consumption: Evidence from a Survey of Lottery Players. **AU** Imbens, Guido W.; Rubin, Donald B.; Sacerdote, Bruce. **AA** Imbens: University of California, Los Angeles and National Bureau of Economic Research. Rubin: Harvard University. Sacerdote: Dartmouth College. **SR** National Bureau of Economic Research Working Paper: 7001; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** D12, D23, D91, E22, J22. **KW** Unearned Income. Labor Supply. Lotteries. Consumption. Saving.

AB Knowledge of the effect of unearned income on economic behavior of individuals in general, and on labor supply in particular, is of great importance to policy makers. Estimation of income effects, however, is a difficult problem because income is not randomly assigned and exogenous changes in income are difficult to identify. Here the authors exploit the randomized assignment of large amounts of money over long periods of time through lotteries. They carried out a survey of people who played the lottery in the mid-eighties and estimate the effect of lottery winnings on subsequent earnings, labor supply, consumption, and savings. The authors find that winning a modest prize ($15,000 per year for twenty years) does not affect labor supply, earnings or savings substantially. Winning a much larger prize ($80,000 rather than $15,000 per year) reduces labor supply as measured by hours, as well as participation and social security earnings. Winning a large versus modest amount also leads to increased expenditures on cars and larger home values. Winning $80,000 increases overall savings, although savings in retirement accounts are not significantly affected. The results do not vary much by gender, age, or prior employment status.

TI Instrumental Variables Estimates of the Effect of Subsidized Training on the Quantiles of Trainee Earnings. **AU** Abadie, Alberto; Angrist, Joshua; Imbens, Guido W.

Immervoll, Herwig

PD February 2000. **TI** Child Poverty and Child Benefits in the European Union. **AU** Immervoll, Herwig; Sutherland, Holly; de Vos, Klaas. **AA** Immervoll and Sutherland: University of Cambridge. de Vos: CentER, Tilburg. **SR** EUROMOD Working Paper: EM1/00; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 15. **PR** US $10/5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** C81, D31, F47, I32, I38. **KW** Child Poverty. European Union. Child Benefits. Microsimulaion.

AB Using evidence from the European Community Household Panel, the authors find that family benefits vary in their importance to household incomes and in the prevention of child poverty across Europe. In one group of countries, family benefits appear to have a significant effect on the protection of children from financial poverty. The UK and the Netherlands are both members of this group, and the microsimulation model EUROMOD is used to explain the very different level of child poverty in the two countries. The paper also explores the effect of concludes that the poverty reduction properties of universal child benefits may be improved without resorting to means-testing or compromising the other functions of these benefits. This analysis illustrates that comparative microsimulations can be extremely informative, and provides a flavor of the potential of EUROMOD to offer valuable pointers for the direction of social policies.

PD May 2000. **TI** The Impact of Inflation on Income Tax and Social Insurance Contributions in Europe. **AA** University of Cambridge. **SR** EUROMOD Working Paper: EM2/00; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 14. **PR** US $10/5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** C81, D31, E31, H23, H24. **KW** Inflation. Income Taxes. Social Insurance. European Union. Microsimulation.

AB Inflation can alter the characteristics of tax and contribution systems in numerous ways. This paper demonstrates how inflation alters the distributive properties of nominally defined tax systems and looks at the impact of the tax revenues and social insurance contribution receipts generated. It provides quantitative estimates for Germany, the Netherlands and the UK, using a preliminary version of EUROMOD, a European tax-benefit micro-simulation model. The paper also tests the performance of automatic indexing regimes used in two of the countries.

PD September 1999. **TI** An Introduction to EUROMOD. **AU** Immervoll, Herwig; O'Donoghue, Cathal; Sutherland, Holly. **AA** University of Cambridge. **SR** EUROMOD Working Paper: EM0/99; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 11. **PR** US $10/ 5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** C15, C81, D31. **KW** European Union. Microsimulation. Income Distribution.
AB EUROMOD is a tax-benefit microsimulation model covering all 15 European Union countries. It is currently being constructed by a team from 18 institutions, coordinated by the Microsimulation Unit in the DAE. The objective is to build a model that is flexible and durable and that will be of use in a range of contexts and for many years to come. The purpose of this paper is twofold: to provide an introduction to the model and its potential uses; and to give information about the current construction project, its activities, organization and participants.

Jagannathan, Ravi
TI Valuing the Reload Features of Executive Stock Options. **AU** Huddart, Steven; Jagannathan, Ravi; Saly, Jane.

Jansen, Jos
PD October 1999. **TI** Strategic Information Revelation and Revenue Sharing in an R&D Race with Learning Labs. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9993; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 43. **PR** no charge. **JE** D82, D83, L23, O31, O32. **KW** Information Acquisition. Revelation. Revenue Sharing. Research and Development. Innovation.
AB Inherent to most research projects is the fact that researchers learn about their project during the course of it. Research investments result in signals on development costs. This paper studies how this fact influences firms' investments, and how revenue sharing can correct inefficient behavior. We compare efficient R&D investments, equilibrium investments when signals are public, and equilibrium investments for private signals. Furthermore, we show which equilibrium is played when firms strategically reveal information. The paper focuses on the trade- off between incentives to acquire and reveal information, and incentives to develop the innovation.

Jansson, Michael
TI Testing for Unit Roots with Stationary Covariates. **AU** Elliott, Graham; Jansson, Michael.

PD June 2000. **TI** Spurious Regression, Cointegration, and Near Cointegration: A Unifying Approach. **AU** Jansson, Michael; Haldrup, Niels. **AA** University of Aarhus. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/14; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 24. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C13, C22. **KW** Cointegration. Spurious Regression. Near Cointegration. Hypothesis Testing. Local Power Functions.
AB This paper introduces a representation of an integrated vector time series in which the coefficient of multiple correlation computed from the long-run covariance matrix of the innovation sequences is a primitive parameter of the model. Based on this representation, we propose a notion of near cointegration, which helps bridge the gap between the polar cases of spurious regression and cointegration. Two applications of the model of near cointegration are provided. As a first application, the properties of conventional cointegration methods under near cointegration are characterized, thereby investigating the robustness of cointegration methods. Secondly, we illustrate how to obtain local power functions of cointegration tests that take cointegration as the null hypothesis.

Jegadeesh, Narasimhan
PD June 1999. **TI** Profitability of Momentum Strategies: An Evaluation of Alternative Explanations. **AU** Jegadeesh, Narasimhan; Titman, Sheridan. **AA** Jegadeesh: University of Illinois. Titman: University of Texas and NBER. **SR** National Bureau of Economic Research Working Paper: 7159; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** G11, G12. **KW** Asset Pricing. Momentum Strategies. Profits. Expected Returns. Cross- Sectional Variation.
AB This paper evaluates various explanations for the profitability of momentum strategies documented in Jegadeesh and Titman (1993). The evidence indicates that momentum profits have continued in the 1990's suggesting that the original results were not a product of data snooping bias. The paper also examines the predictions of recent behavioral models that propose that momentum profits are due to delayed overreactions which are eventually reversed. Our evidence provides support for the behavioral models, but this support should be tempered with caution. Although we find no evidence of significant return reversals in the 2 to 3 years following the formation date, there are significant return reversals 4 to 5 years after the formation date. Our analysis of post holding period returns sharply rejects a claim in the literature that the observed momentum profits can be explained completely by the cross-sectional dispersion in expected returns.

Jellal, Mohamed
PD October 1999. **TI** Optimal Law Enforcement under Asymmetric Information. **AU** Jellal, Mohamed; Garoupa, Nuno. **AA** Jellal: CES Universite de Rabat. Garoupa: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 401; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 15. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D82, K42. **KW** Fines. Asymmetric Information. Detection Probability. Law Enforcement.

AB In this paper, we focus on the problem created by asymmetric information about the enforcer's costs associated with enforcement expenditure. This adverse selection problem affects optimal law enforcement because a low cost enforcer may conceal its information by imitating a high cost enforcer. The government faces a trade-off between minimizing the enforcer's compensation and maximizing the net surplus of harmful acts. As a consequence, the probability of apprehension and punishment is usually reduced leading to more offenses being committed.

PD October 1999. **TI** Dynamic Optimal Law Enforcement with Learning. **AU** Jellal, Mohamed; Garoupa, Nuno. **AA** Jellal: CES Universite de Rabat. Garoupa: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 402; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 10. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D82, D83, K42. **KW** Fines. Punishment. Learning. Detection Probability. Law Enforcement.
AB We incorporate the process of enforcement learning by assuming that the agency's current marginal cost is a decreasing function of its past experience of detecting and convicting. The agency accumulates data and information (on criminals, on opportunities of crime) enhancing the ability to apprehend in the future at a lower marginal cost. We focus on the impact of enforcement learning on optimal stationary compliance rules. In particular, we show that the optimal stationary fine could be less-than-maximal and the optimal stationary probability of detection could be higher-than-otherwise.

Jensen, J. Bradford

TI Exporting and Productivity. **AU** Bernard, Andrew B.; Jensen, J. Bradford.

John, A. Andrew

PD July 1999. **TI** Does State-Dependent Pricing Imply Coordination Failure? **AU** John, A. Andrew; Wolman, Alexander L. **AA** John: INSEAD. Wolman: Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 99/05; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 34. **PR** no charge. **JE** E10, E31, E32, E52. **KW** Sticky Prices. Complementarity. Coordination Failure. Menu Costs. Monetary Policy.
AB The analysis in Ball and Romer (1991) suggests that models with fixed costs of changing price may be rife with multiple equilibria; in their static model price adjustment is always characterized by strategic complementarity, a necessary condition for multiplicity. We extend Ball and Romer's analysis to a dynamic setting. In steady states of the dynamic model, we find only weak complementarity and no evidence of multiplicity, although nonexistence of a symmetric steady state with pure strategies does arise in a small number of cases.

Johnson, Cathleen

PD September 1999. **TI** Spatial Social Networks. **AU** Johnson, Cathleen; Gilles, Robert P. **AA** Virginia Tech University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9987; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 34. **PR** no charge. **JE** A14, C70, D20. **KW** Social Networks. Implementations. Spatial Cost Topologies. Game Theory.
AB We introduce a spatial cost topology in the network formation model analyzed by Jackson and Wolinsky, Journal of Economic Theory 71 (1996), 44-74. This cost topology might represent geographical, social, or individual differences. It describes variable costs of establishing social network connections. Participants form links based on a cost- benefit analysis. We examine the pairwise stable networks within this spatial environment. Incentives vary enough to show a rich pattern of emerging behavior. We also investigate the subgame perfect implementation of pairwise stable and efficient networks. We construct a multistage extensive form game that describes the formation of links in our spatial environment. Finally, we identify the conditions under which the subgame perfect Nash equilibria of these network formation games are stable.

Johri, Alok

TI Learning by Doing and Aggregate Fluctuations. **AU** Cooper, Russell; Johri, Alok.

Jones, John B.

TI Finite Mixture Distribution, Sequential Likelihood, and the EM Algorithm. **AU** Arcidiacono, Peter; Jones, John B.

Joyce, Theodore

TI Does Publicly Provided Health Insurance Improve the Health of Low- Income Children in the United States? **AU** Kaestner, Robert; Joyce, Theodore; Racine, Andrew.

Kaestner, Robert

PD January 1999. **TI** Does Publicly Provided Health Insurance Improve the Health of Low- Income Children in the United States? **AU** Kaestner, Robert; Joyce, Theodore; Racine, Andrew. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6887; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** I12, I18, I38. **KW** Health Insurance. Health Production. Government Expenditures. Medicaid. Children.
AB In this study we analyze the effect of Medicaid on children's health. We examine the effect of Medicaid on a variety of health outcomes using two data sources: the National Health Interview Surveys (NHIS) and the Nationwide Inpatient Sample (NIS) of hospital discharges. Using the NHIS, we examine the effect of Medicaid participation on maternal ratings of child health and maternal reports of the number of bed days in the past year (i.e. morbidity). The NIS data was used to examine the effect of Medicaid program expansions on the incidence of ambulatory care sensitive (ACS) discharges. ACS discharges are known to be sensitive to medical intervention and are objective measures of children's health. The results of this paper provide at best weak support for the hypothesis that Medicaid improves the health of low-income children.

Kagigi, K. A.

PD October 1998. **TI** Portfolio Behaviour of Islamic

Banks: A Case Study for Iran, 1984- 1994. **AU** Kagigi, K. A.; Ford, Jim L.; Cadle, P. J.; Makiyan, S. N. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/01; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 44. **PR** 2 pounds ($4); no charge to academics. **JE** G11, G21, G28, P34. **KW** Banking. Portfolio Behavior. Musharakah. Mudarabah. Murabahah.

AB In this paper we investigate the portfolio behavior of Iranian banks consequent upon their having to comply with the Sharia. Details are provided of the nature of their portfolios and their composition over the years. Two models are estimated (both by SURE) for Iran: a money-in- money-out model based on the supposition that the Sharia has been imposed rigorously and a dynamic version of a portfolio choice model. The portfolio model is superior to the money-flow model. It suggests that asset returns influence the composition of the portfolio, though not as strongly as does the availability of funds. Policy-induced multiplier effects on the banks' portfolio structure are derived from the dynamic model.

Kaiser, Regina

PD August 1999. **TI** Estimation of the Business Cycle: A Modified Hodrick-Prescott Filter. **AU** Kaiser, Regina; Maravall, Agustin. **AA** Kaiser: Universidad Carlos III, Madrid. Maravall: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9912; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 36. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C13, C22, E32. **KW** Time Series. Optimal Filtering. Trends. Seasonality. Economic Cycles.

AB Hodrick-Prescott (HP) filtering of (most often, seasonally adjusted) quarterly series is analyzed. Some of the criticisms of the filter are addressed. It is seen that, while filtering strongly affects autocorrelations, it has little effect on cross-correlations. It is argued that the criticism that HP filtering induces a spurious cycle in the series is unwarranted. The filter, however, presents two serious drawbacks: First, poor performance at the end periods, due to the size of the revisions in preliminary estimators, and, second, the amount of noise in the cyclical signal, which seriously disturbs its interpretation. We show how the addition of two model-based features (in particular, applying the filter to the series extended with proper ARIMA forecasts and backcasts, and using as input to the filter the trend-cycle component instead of the seasonally adjusted series) can considerably improve the filter performance. Throughout the discussion, we use a computationally and analytically convenient alternative derivation of the HP filter, and illustrate the results with an example consisting of 4 Spanish economic indicators.

PD August 1999. **TI** Seasonal Outliers in Time Series. **AU** Kaiser, Regina; Maravall, Agustin. **AA** Kaiser: Universidad Carlos III, Madrid. Maravall: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9915; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 28. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C22, C51, C89. **KW** ARIMA Models. Seasonality. Atypical Observations. Level Shifts. Time Series.

AB In the analysis of time series, the classification of perturbations as Additive Outliers (AO), Innovative Outliers (IO), Level Shift (LS) outliers or Transitory Change (TC) outliers occurs frequently. When a time series with a clear seasonal behavior is considered, this classification may be too restrictive since none of the four outlier types is adequate to model changes in the seasonal pattern of the series. In this paper, a new outlier type, the Seasonal Level Shift (SLS), is introduced in order to complete the usual classification. The iterative procedure for the detection of outliers in Chen and Liu (1993) is extended to detect SLS outliers. We use simulations and real examples to assess the properties of the new type of outlier.

PD October 1999. **TI** Short-Term and Long-Term Trends, Seasonal Adjustment, and the Business Cycle. **AU** Kaiser, Regina; Maravall, Agustin. **AA** Kaiser: Universidad Carlos III, Madrid. Maravall: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9918; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 121. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C13, C22, C51, E32. **KW** Time Series. Optimal Filtering. Trends. Seasonality. Economic Cycles.

AB This paper analyzes in detail some of the major limitations of the standard procedure to estimate business cycles with the Hodrick- Prescott (HP) filter. By incorporating time series analysis techniques, it is seen how some intuitive and relatively simple modifications to the filter can improve significantly its performance, in particular in terms of cleanness of the signal, smaller revision, stability of end- period estimators, and detection of turning points. The authors show how the modified filter can be seen as the exact solution of a well- defined statistical problem, namely, optimal (minimum mean squared error) estimation of components in a standard unobserved-component model, where the observed series is decomposed into a trend, a cycle, a seasonal, and an irregular component. This problem is straightforward to solve with Kalman or Wiener-Kolmogorov filter techniques. The models for the components incorporate some a priori features, and some series- dependent features. It is shown how the model-based interpretation greatly facilitates diagnostics and inference, thereby facilitating systematic analysis and improvement.

Kambhu, John

TI Enhancing the Liquidity of U.S. Treasury Securities in an Era of Surpluses. **AU** Bennett, Paul; Garbade, Kenneth; Kambhu, John.

Kane, Edward J.

PD June 1999. **TI** How Offshore Financial Competition Disciplines Exit Resistance by Incentive-Conflicted Bank Regulators. **AA** Boston College and NBER. **SR** National Bureau of Economic Research Working Paper: 7156; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 36. **PR** $5.00. **JE** F30, G21, G28, L51, O33. **KW** Banking. Regulation. Regulatory Competition. Rent. Financial Crises.

AB This paper studies the impact of technological change and regulatory competition on governmental efforts to generate rents for banks in two stylized regulatory environments. In the first environment, incentive- conflicted regulators attempt to create rents by restricting the size and scope of individual banking organizations. In the second, rents come from efforts to supply deposit guarantees to troubled banks. In both cases, innovations in financial technology and in competing domestic and offshore regulatory arrangements make the costs of delivering rents to banks more transparent to taxpayers and encourage customers to push rent-dependent banking systems into crisis. This analysis portrays the banking crises that have roiled world markets in recent years as information-producing events that identify and discredit inefficient strategies of regulating banking markets.

Kaplow, Louis

PD February 1999. **TI** Economic Analysis of Law. **AU** Kaplow, Louis; Shavell, Steven. **AA** Harvard Law School and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6960; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 78. **PR** $5.00. **JE** K11, K12, K13, K41, K42. **KW** Law. Tort Law. Property Law. Contracts. Litigation Process.

AB This is a survey of the field of economic analysis of law, focusing on the work of economists. The survey covers the three central areas of civil law -- liability for accidents (tort law), property law, and contracts -- as well as the litigation process and public enforcement of law.

Kashyap, Anil K.

PD February 1999. **TI** Banks as Liquidity Providers: An Explanation for the Co-Existence of Lending and Deposit-Taking. **AU** Kashyap, Anil K.; Rajan, Raghuram; Stein, Jeremy C. **AA** Kashyap and Rajan: University of Chicago and National Bureau of Economic Research. Stein: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6962; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 38. **PR** $5.00. **JE** G21. **KW** Banking. Lending. Deposits. Credit. Liquidity.

AB This paper addresses the following question: what ties together the traditional commercial banking activities of deposit-taking and lending? We begin by observing that since banks often lend via commitments, or credit lines, their lending and deposit-taking may be two manifestations of the same primitive function: the provision of liquidity on demand. After all, once the decision to extend a line of credit has been made, it is really nothing more than a checking account with overdraft privileges. This observation leads us to argue that there will naturally be synergies between the two activities, to the extent that both require banks to hold large volumes of liquid assets (cash and securities) on their balance sheets: if deposit withdrawals and commitment takedowns are imperfectly correlated, the two activities can share any deadweight costs of holding the liquid assets. We develop this idea with a simple model, and then use a variety of data to test the model's empirical implications.

Katz, Barbara G.

PD January 2000. **TI** The Emergence of Concentrated Ownership and the Rebalancing of Portfolios Due to Shareholder Activism in a Financial Market Equilibrium. **AU** Katz, Barbara G.; Owen, Joel. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/00/05; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 28. **PR** $5.00 each; $100.00 yearly subscription. **JE** D82, G11, G12, G32. **KW** Portfolio Choice. Ownership. Investor Behavior. Activism. Information.

AB Consider a financial market equilibrium with correlated firms and risk averse investors holding diversified portfolios. When an activist investor has the ability to perform value-enhancing activities in a single firm, and these activities increase with ownership, the authors show that optimizing behavior by all investors leads to a concentration of shares in the hands of this activist. This concentration arises in the presence of complete information and is a consequence of Walrasian equilibrium mechanisms. By yielding more ownership to the activist, all investors alter the risk profiles of their holdings, ending with less balanced portfolios. This rebalancing effect is accompanied by an increase in the price of the security that the activist can affect, as well as in the total value of the market. When the activist can affect more than one firm, rebalancing of all portfolios again occurs. When the authors study multiple activists in many firms, they show that concentration can occur for several activists, and rebalancing occurs for all investors. The introduction of asymmetric information concerning activism again results in rebalancing and in concentration of ownership, but not necessarily in the hands of the activists.

Kehoe, Patrick J.

TI Money, Interest Rates, and Exchange Rates With Endogenously Segmented Asset Markets. **AU** Alvarez, Fernando; Atkeson, Andrew; Kehoe, Patrick J.

TI Optimal Fiscal and Monetary Policy. **AU** Chari, V. V.; Kehoe, Patrick J.

Keller, Wolfgang

PD March 1999. **TI** How Trade Patterns and Technology Flows Affect Productivity Growth. **AA** University of Texas at Austin and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6990; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 30. **PR** $5.00. **JE** F12, F14, F43, O19, O30. **KW** Productivity Growth. International Trade. Technology Diffusion. Development. Open Economy.

AB This paper examines the evidence on technology diffusion through trade in differentiated intermediate goods. Because intermediates are invented through costly research and development (R&D) investments, employing imported intermediates implies an implicit sharing of the technology that was created in other countries. The model predicts that the import patterns of countries matter for productivity, because a country that imports primarily from technological leaders receives more technology than another that imports primarily from follower countries. The author tries to quantify the importance of trade patterns in determining technology flows that affect productivity by using industry level data for machinery goods imports and productivity in eight OECD countries between 1970-91. First, there is evidence that these countries benefit more from domestic R&D than from R&D of the average foreign country. Second, conditional on technology diffusion from domestic R&D, the import composition of a country matters, but only if it is strongly biased towards or away from technological leaders. Third, the author estimates that differences in technology inflows explain about 20% of the total variation in the countries' productivity growth.

Kelley, Allen C.

PD May 2000. **TI** Population and Economic Development. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 00/06; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 21. **PR** no charge. **JE** B20, J10, N30, O10, O40. **KW** Revisionism. Population Consequences. Growth. Demographics. Development.

AB Assessing the consequences of population on the pace and process of economic growth is one of the oldest themes in the literature on economics. These assessments have varied enormously over time, spanning the highly pessimistic to the outright optimistic. A systematic review of the major studies in this literature represents a useful way to organize a survey of the consequences of demographic change. Such an approach places the population debates in perspective, and it infuses a healthy dose of caution in appraising current debates. This paper assesses how the "bottom-line" appraisals of the consequences of demographic change on development have changed over time; why they have changed; what the most recent contributions to this literature are; and what major uncertainties in these assessments merit particular attention by future research.

PD 1999. **TI** Economic and Demographic Change: A Synthesis of Models, Findings, and Perspectives. **AU** Kelley, Allen C.; Schmidt, Robert M. **AA** Kelley: Duke University. Schmidt: University of Richmond. **SR** Duke University Department of Economics Working Paper: 99/01; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 45. **PR** no charge. **JE** J11, J19, O10, O40, R23. **KW** Population Growth. Economic Development. Growth. Demographic Change.

AB The primary objective of this paper is to take stock of the various ways demography has been incorporated into convergence-type models and to extend these analyses in several ways by: 1) incorporating and comparing alternative demographic specifications; 2) extending the time period of analysis to the mid 1990s; and 3) assessing the impacts of demography in early and later periods. This permits the authors to assess, in a preliminary way, the role of demography on economic growth, at least in the popular convergence-type models. Building upon a state- of-the-art Core economic and political model of economic growth, the authors evaluate the merits of alternative specifications to expose the impacts of demographic change. They arrive at the qualified judgment that, given the demographic trends (mainly declining mortality and fertility) over the period 1960-1995, economic growth has been favorably impacted by demography. The sole growth-inhibiting trend is a decline in the growth of the working-age population. However, this trend is not universal.

PD April 1999. **TI** The Population Debate in Historical Perspective: Revisionism Revisited. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 99/09; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 37. **PR** no charge. **JE** B20, J10, N30, R23. **KW** Revisionism. Population Consequences. Growth. Demographics. Economic History.

AB There appeared to be a dramatic shift of thinking from an alarmist and pessimistic assessment of the consequences of population growth prevalent before 1985, to a more balanced and eclectic assessment thereafter. It is argued that this shift, sometimes denoted as "revisionist thinking," is due less to a shift amongst economic demographers, and more to the elevation of economists' views vis-a-vis those of demographers, biologists, and others. The impact of the 1986 National Academy Report was profound, causing a careful consideration of the 1971 NAS report, discovered to be badly flawed in its presentation. Revisionism is re-defined to emphasize less the bottom-line results and more the methodology of evaluation, where a long-run perspective is espoused and (positive) feedbacks of initial adverse impacts of population growth are highlighted.

Kelsey, David

PD December 1999. **TI** Free Riders Do Not Like Uncertainty. **AU** Kelsey, David; Eichberger, Jurgen. **AA** Kelsey: University of Birmingham. Eichberger: Universitat des Saarlandes. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/25; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 41. **PR** 2 pounds ($4); no charge to academics. **JE** D81, H41. **KW** Public Goods. Strategic Complements. Knightian Uncertainty. Choquet Integral. Free Riding.

AB We examine the effect of Knightian uncertainty in a simple model of public good provision. We find that uncertainty may reduce free-riding if utility is concave or there are decreasing returns to scale in the production of public goods. Comparative statics analysis shows that increases in uncertainty will increase donations. These effects may be reversed if there are sufficiently strong increasing returns to scale. We show that these results generalize and uncertainty tends to increase/decrease equilibrium strategies in games with strategic complements/substitutes and positive externalities. These effects are reversed in games with negative externalities.

TI Uncertainty and Strategic Interaction in Economics. **AU** Eichberger, Jurgen; Kelsey, David.

Kessler, Daniel

PD January 1999. **TI** Designing Hospital Antitrust Policy to Promote Social Welfare. **AU** Kessler, Daniel; McClellan, Mark. **AA** Kessler: Stanford University and National Bureau of Economic Research. McClellan: Department of Treasury. **SR** National Bureau of Economic Research Working Paper: 6897; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 23. **PR** $5.00. **JE** D82, G22, G34, I11, L44. **KW** Health Care. Mergers. Hospitals. Insurance. Asymmetric Information.

AB Applying principles of merger evaluation to the health care industry in general, and to hospital markets in particular, poses several unique challenges. Definition of relevant geographic markets and assessment of the consequences of changes in competition for patient and social welfare are complicated by asymmetric information and moral hazard due to health insurance. We suggest a new empirical approach to assessing the impact of hospital competition which addresses the shortcomings of existing methods. We then summarize our main results on the welfare consequences of competition. We conclude with an illustration of how our methods can be used to assess the welfare implications of specific hospital mergers, and with some implications of our findings for antitrust policy.

Kim, Tae-Hwan

PD May 2000. **TI** James-Stein Type Estimators in Large Samples with Application to the Least Absolute Deviations Estimator. **AU** Kim, Tae-Hwan; White, Halbert. **AA** Kim: University of Nottingham. White: University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 99/04R; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 16. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C13, C40, G10. **KW** Shrinkage. Asymptotic Risk. Combination Estimators. Estimation.

AB We explore the extension of James-Stein type estimators in a direction that enables them to preserve their superiority when the sample size goes to infinity. Instead of shrinking a base estimator towards a fixed point, we shrink it towards a data-dependent point. We provide an analytic expression for the asymptotic risk and bias of James-Stein type estimators shrunk towards a data-dependent point and prove that they have smaller asymptotic risk than the base estimator. Shrinking an estimator toward a data-dependent point turns out to be equivalent to combining two random variables using the James-Stein rule. We propose a general combination scheme which includes random combination (the James-Stein combination) and the usual nonrandom combination as special cases. As an example, we apply our method to combine the Least Absolute Deviations estimator and the Least Squares estimator. Our simulation study indicates that the resulting combination estimators have desirable finite sample properties when errors are drawn from symmetric distributions. Finally, using stock return data we present some empirical evidence that the combination estimators have the potential to improve out-of-sample prediction in terms of both mean square error and mean absolute error.

Kim, Woochan

PD February 1999. **TI** Foreign Portfolio Investors Before and During a Crisis. **AU** Kim, Woochan; Wei, Shang-Jin. **AA** Kim: Harvard University. Wei: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6968; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** F21, F31, F32, F36, G15. **KW** International Finance. Currency Crises. Institutional Investors. Korea. Financial Markets.

AB Different categories of foreign portfolio investors in Korea have differences as well as similarities in their trading behavior before and during a currency crisis. First, non-resident institutional investors are always positive feedback traders, whereas resident investors were negative feedback (contrarian) traders before the crisis but switch to be positive feedback traders during the crisis. Second, individual investors herd significantly more than institutional investors. Non- resident (institutional as well as individual) investors herd significantly more than their resident counterparts. Third, differences in the Western and Korean news coverage are correlated with differences in net selling by non-resident investors relative to resident investors.

King, Robert G.

TI The New Neoclassical Synthesis and the Role of Monetary Policy. **AU** Goodfriend, Marvin; King, Robert G.

Kirchsteiger, Georg

PD April 1999. **TI** Common Agency and Computational Complexity: Theory and Experimental Evidence. **AU** Kirchsteiger, Georg; Prat, Andrea. **AA** Kirchsteiger: University of Vienna. Prat: Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9936; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 33. **PR** no charge. **JE** C70, C90, D72, D82. **KW** Lobbying. Experimental Economics. Common Agency. Truthful Equilibrium. Natural Equilibrium.

AB In a common agency game, several principals try to influence the behavior of an agent. Common agency games typically have multiple equilibria. One class of equilibria, called truthful has been identified by Bernheim and Whinston and has found widespread use in the political economy literature. In this paper we identify another class of equilibria, which we call natural. In a natural equilibrium, each principal offers a strictly positive contribution on at most one alternative. We show that a natural equilibrium always exists and that its computational complexity is much smaller than that of a truthful equilibrium. To compare the predictive power of the two concepts, we run an experiment on a common agency game for which the two equilibria predict a different equilibrium alternative. The results strongly reject the truthful equilibrium. The alternative predicted by the natural equilibrium is chosen in 65% of the matches, while the one predicted by the truthful equilibrium is chosen in less than 5% of the matches.

TI Aging Anxiety: Much Ado About Nothing? **AU** Butler, Monika; Kirchsteiger, Georg.

Kishore, Vellore

TI Defaults & Returns on High Yield Bonds: Analysis Through 1999 and Default Outlook for 2000-2002. **AU** Altman, Edward I.; Hukkawala, Naeem; Kishore, Vellore.

Kiviet, Jan F.

PD October 1998. **TI** Higher-Order Asymptotic Expansions of the Least-Squares Estimation Bias in First-Order Dynamic Regression Models. **AU** Kiviet, Jan F.; Phillips, Garry D. A. **AA** Kiviet: University of Amsterdam. Phillips: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/03; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 27. **PR** no charge.

JE C13, C22. **KW** ARX Models. First-Order Dynamics. Lagged Dynamics. Large Sample Asymptotics. Nagar Expansions.
AB An approximation to order (T raised to the -2) is obtained for the bias of the least-squares estimator in the stationary ARX model which yields generalizations of Kendall's and White's classic results for particular variants of AR(1) models. The accuracy of the various approximations is compared for particular parametrizations of AR(1) and ARX(1) models. The results show that generally the second-order approximation is considerably better than its first-order counterpart in ARX models. This is also largely true for AR(1) models except that in such models second-order approximations may be vulnerable in the near unit root case.

PD December 1998. **TI** The Bias of the 2SLS Variance Estimator. **AU** Kiviet, Jan F.; Phillips, Garry D. A. **AA** Kiviet: University of Amsterdam. Phillips: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/04; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 11. **PR** no charge. **JE** C13, C22. **KW** Two Stage Least Squares. Nagar Expansions. Asymptotic Variance. Variance Estimation Bias. Simultaneous Equations.
AB In simultaneous equation models the two stage least squares (2SLS) estimator of the coefficients, though consistent, is biased in general and the nature of this bias has given rise to a good deal of research. However, little if any attention has been given to the bias that arises when an estimate of the asymptotic variance is used to approximate the small sample variance. In this paper we use asymptotic expansions to show that, in general, the asymptotic variance estimator has an upwards bias.

PD February 1999. **TI** Moment Approximation for Least Squares Estimators in Dynamic Regression Models with a Unit Root. **AU** Kiviet, Jan F.; Phillips, Garry D. A. **AA** Kiviet: University of Amsterdam. Phillips: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/09; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 15. **PR** no charge. **JE** C13, C22. **KW** Asymptotic Expansions. Dynamic Regression. Finite Sample Bias. Moment Approximations. Unit Roots.
AB Asymptotic expansions are employed in a dynamic regression model with a unit root in order to find approximations for the bias, the variance and for the mean squared error of the least-squares estimator. For this purpose such expansions are shown to be useful only when the autoregressive model contains at least one non-redundant exogenous explanatory variable. It is found that large sample and small disturbance asymptotic techniques give closely related results in this model, which is not the case in stable dynamic regression models. The results are specialized to the random walk with drift model, where it is seen that the ratio of the standard deviation of the disturbance to the drift term plays a crucial role. The random walk to the model with drift plus a linear trend is also examined. The accuracy of the approximations are checked in the context of these models making use of a set of Monte Carlo experiments to estimate the true moments.

Klaassen, Franc

PD September 1999. **TI** Why is it so Difficult to Find an Effect of Exchange Rate Risk on Trade? **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9973; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 26. **PR** no charge. **JE** C22, C51, F14, F31, F41. **KW** Exports. Risk Measurement. Imperfect Substitutes. Distributed Lags. International Trade.
AB The question whether exchange rate risk affects trade has received considerable attention in the literature. However, the conclusions are still mixed. This paper analyzes why it is so difficult to obtain a clear answer from time series analyses. We use data on bilateral aggregate US exports to the other G7 countries. The results show that export decisions are mostly affected by the exchange rate about one year later. The riskiness of the exchange rate at such a long horizon appears fairly constant over time with only short-term fluctuations. This makes it difficult to discover the true effect of exchange risk on trade from the limited time series data that are typically available.

Kleijnen, Jack P. C.

PD October 1999. **TI** Validation of Models: Statistical Techniques and Data Availability. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99104; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 7. **PR** no charge. **JE** C15, C52, C80, C90. **KW** Verification. Credibility Assessment. Sensitivity Robustness. Regressions. Simulation.
AB This paper shows which statistical techniques can be used to validate simulation models, depending on which real-life data are available. Concerning this availability, three situations are distinguished (i) no data, (ii) only output data, and (iii) both input and output data. In case (i) -- no real data -- the analysts can still experiment with the simulation model to obtain simulated data; such an experiment should be guided by the statistical theory on the design of experiments. In case (ii) -- only output data -- real and simulated output data can be compared through the well-known two-sample Student t statistic or certain other statistics. In case (iii) -- input and output data -- trace-driven simulation becomes possible, but validation should not proceed in the popular way (make a scatter plot with real and simulated outputs, fit a line, and test whether that line has unit slope and passes through the origin); alternative regression and bootstrap procedures are presented. Several case studies are summarized to illustrate the three types of situations.

Klijn, Flip

TI On the Extreme Points of the Core of Neighbour Games and Assignment Games. **AU** Hamers, Herbert; Klijn, Flip; Solymosi, Tamas; Tijs, Stef; Pere Villa, Joan.

PD November 1999. **TI** Neighbour Games and the Leximax Solution. **AU** Klijn, Flip; Vermeulen, Dries; Hamers, Herbert; Solymosi, Tamas; Tijs, Stef; Villar, Joan Pere. **AA** Klijn, Hamers and Tijs: CentER and Tilburg University. Vermeulen: University of Maastricht. Solymosi: Budapest

University of Economic Sciences. Villar: Universitat Autonoma de Barcelona. **SR** Tilburg CentER for Economic Research Discussion Paper: 99110; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 18. **PR** no charge. **JE** C71, C78. **KW** Neighbor Games. Leximax Solution. Assignment Games. Component Additive Games.

AB Neighbor games arise from certain matching or sequencing situations in which only specific pairs of players can obtain a positive gain. As a consequence, the class of neighbor games is the intersection of the class of assignment games (Shapley and Shubik (1972)) and the class of component additive games (Curiel et al. (1994)). We first present some elementary features of neighbor games. After that we provide a polynomially bounded algorithm of order p-cubed for calculating the leximax solution (cf. Arin and Inarra (1997)) of neighbor games, where p is the number of players.

Knetter, Michael M.

PD February 1999. **TI** Measuring Product-Market Integration. **AU** Knetter, Michael M.; Slaughter, Matthew J. **AA** Dartmouth College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6969; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** F15, F30. **KW** Economic Integration. Product Markets.

AB Globalization -- the integration of national economies -- has become one of the most widely used buzzwords of the late 20th century. Yet there are remarkably few statistical measures of product-market integration across time, countries, and goods. In this paper we present some new measures of product-market integration based on price and quantity data. We find evidence of greater integration, but we also find that this process has not been uniform over time, countries, or goods.

Kohatsu-Higa, Arturo

TI Local Volatility Changes in the Black-Scholes Model. **AU** Bermin, Hans-Peter; Kohatsu-Higa, Arturo.

Kolev, Dobrin R.

PD February 1999. **TI** Dumping and Double Crossing: The (In)Effectiveness of Cost-Based Trade Policy Under Incomplete Information. **AU** Kolev, Dobrin R.; Prusa, Thomas J. **AA** Kolev: Mitchell Madison Group. Prusa: Rutgers University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6986; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 32. **PR** $5.00. **JE** D82, F13, F41, L13. **KW** Incomplete Information. International Trade. Protection. Dumping. Exports.

AB We argue that the rise of antidumping protection and the proliferation of voluntary export restraints are fundamentally inter- related. We show that both can be explained by a cost-based definition of dumping when the domestic government has incomplete information about the foreign firm's costs. Given that its costs are only imperfectly observed and knowing the government's desire to offer greater protection against competitively priced imports, efficient foreign firms will voluntarily restrain their exports prior to the antidumping investigation. In turn, the VER distorts the government's perception of the foreign firm's efficiency and often leads to undesirably high duties regardless of the foreign firm's efficiency. The clumsy way that duties are levied benefits domestic firms, which explains the popularity of cost-based complaints.

Koopman, Siem Jan

TI Signal Extraction and the Formulation of Unobserved Components Models. **AU** Harvey, Andrew; Koopman, Siem Jan.

Kort, Peter M.

TI Effects of Tax Depreciation on Optimal Firm Investments. **AU** Wielhouwer, Jacco; Kort, Peter M.; De Waegenaere, Anja.

TI Optimal Dynamic Investment Policy Under Different Rates for Tax Depreciation and Economic Depreciation. **AU** Wielhouwer, Jacco; De Waegenaere, Anja; Kort, Peter M.

TI Effects of Strategic Interactions on the Option Value of Waiting. **AU** Huisman, Kuno J. M.; Kort, Peter M.

Koster, Maurice

TI Weighted Allocation Rules for Standard Fixed Tree Games. **AU** Bjxrndal, Endre; Koster, Maurice; Tijs, Stef.

PD September 1999. **TI** Voluntary Contribution to Multiple Public Projects. **AU** Koster, Maurice; Reijnierse, H.; Voorneveld, Mark. **AA** Koster and Voorneveld: CentER and Tilburg University. Reijnierse: University of Nijmegen. **SR** Tilburg CentER for Economic Research Discussion Paper: 9988; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 30. **PR** no charge. **JE** C71, C72, H41. **KW** Public Goods. Cooperative Games. Coordination Games. Potential Games. Utilitarian Welfare.

AB The problem of financing a set of public goods (facilities, projects) by private contributions is studied. The corresponding cooperative game, the realization game, is shown to be convex. For the non-cooperative setting we study a realization scheme that induces a strategic game. This contribution game is shown to be best-response equivalent with a coordination game in which the payoff to all players is the utilitarian collective welfare function, i.e., the sum of the utility functions of the players. Several equilibrium properties are derived: no money is wasted in an equilibrium; a player whose necessary projects are not all realized does not contribute. Strategy profiles maximizing utilitarian welfare are strong Nash equilibria of the contribution game. Each strong Nash equilibrium corresponds to a core element of the realization game in a natural way. It is shown that there is a one-to-one correspondence between the set of strong Nash equilibria of the contribution game and the largest set of core elements of the realization game, that is consistent with maximizing the number of players with non-zero payoffs. It is precisely the subset of the core according to which rewards zero indicate null players.

PD November 1999. **TI** Weighted Constrained Egalitarianism in TU-Games. **AA** Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99107; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 25. **PR** no charge. **JE** A13,

C71, D31, D63. **KW** Cooperative Games. Inequality. Egalitarianism. Lorenz Ordering. Core.
AB The constrained egalitarian solution of Dutta and Ray (1989) for TU- games is extended to asymmetric cases, using the notion of weight systems as in Kalai and Samet (1987,1988). This weighted constrained egalitarian solution is based on the weighted Lorenz-criterion as an inequality measure. It is shown that in general there is at most one such weighted egalitarian solution for TU-games. Existence is proved for the class of convex games. Furthermore, the core of a positive valued convex game is covered by weighted constrained egalitarian solutions.

Koszegi, Botond

TI Quasi-Hyperbolic Discounting and Retirement. **AU** Diamond, Peter; Koszegi, Botond.

Koutsougeras, Leonidas C.

PD May 1999. **TI** Market Games With Multiple Trading Posts. **AA** University of Manchester and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9940; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 21. **PR** no charge. **JE** C72. **KW** Trading Posts. Law of One Price. Market Games.
AB We study market games with multiple posts per commodity. We provide some facts that characterize prices of commodities across posts and show the following results: (i) As the number of agents increases, the price variability across posts for a commodity becomes smaller and it becomes zero when the number of agents becomes infinite, irrespective of the distribution of characteristics in the economy. (ii) The set of equilibrium prices and allocations of a market game is a subset of the set of equilibria of another game with more trading posts per commodity. (iii) We demonstrate via an example that the inclusion can be strict, as there are equilibria with price disparities across posts for a commodity which cannot be captured with less trading posts. (iv) One can pass from an equilibrium of a market game into an equilibrium of a game with less trading posts per commodity by consolidating posts where the price of a commodity is uniform.

Kramarz, Francis

TI Minimum Wages and Employment in France and the United States. **AU** Abowd, John M.; Kramarz, Francis; Margolis, David N.

Kramer, Randall A.

TI Worth of Watersheds: A Producer Surplus Approach for Valuing Drought Mitigation in Eastern Indonesia. **AU** Pattanayak, Subhrendu K.; Kramer, Randall A.

Krishna, Kala

PD December 1998. **TI** Trade, Investment, and Growth: Nexus, Analysis, and Prognosis. **AU** Krishna, Kala; Ozyildirim, Ataman; Swanson, Norman R. **AA** Krishna and Swanson: Pennsylvania State University and National Bureau of Economic Research. Ozyildirim: National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6861; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** $5.00. **JE** F43, O47. **KW** Growth. International Trade. Exports. Imports. Investment.
AB This paper looks at the patterns of causation between income, export, import, and investment growth for 25 developing countries. Our approach differs from previous efforts in a number of ways. First, we examine each country individually in order to allow for complete heterogeneity and properly account for the stochastic trending properties of the data. Second, we apply novel model selection techniques which are based on in-sample goodness-of-fit criteria and ex-ante predictive ability criteria to identify the best model for each country. Finally, we propose a rather novel device based on simple contingency tables which allows us to assess whether our models are capable of accurately predicting turning points in GDP growth. We find that countries with high trade exposure fare poorly in this dimension and posit that the GDP growth in such countries is best modeled using an index of global business cycle conditions, in addition to the above variables. Overall, we find that in around two thirds of the countries examined, growth is best explained by exports and/or imports. Further, and in contrast to previous findings of bi-directional causality, around 70% of the countries exhibit uni-directional causality.

Krishnamurthy, Arvind

TI International Liquidity Management: Sterilization Policy in Illiquid Financial Markets. **AU** Caballero, Ricardo J.; Krishnamurthy, Arvind.

TI Emerging Market Crises: An Asset Markets Perspective. **AU** Caballero, Ricardo J.; Krishnamurthy, Arvind.

Krueger, Alan B.

PD March 1999. **TI** Measuring Labor's Share. **AA** Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7006; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 10. **PR** $5.00. **JE** D33, E24, E25, J24, J30. **KW** National Income. Factor Income. Labor Compensation. Human Capital.
AB This paper considers conceptual and practical issues that arise in measuring labor's share of national income. Most importantly: How are workers defined? How is compensation defined? The current definition of labor compensation used by the Bureau of Economic Analysis (BEA) includes the salary of business owners and payments to retired workers in labor compensation. An alternative series to the BEA's standard series is presented. In addition, a simple method for decomposing labor compensation into a component due to "raw labor" and a component due to human capital is presented. Raw labor's share of national income is estimated using Census and CPS data. The share of national income attributable to raw labor increased from 9.6 percent to 13 percent between 1939 and 1959, remained at 12-13 percent between 1959 and 1979, and fell to 5 percent by 1996.

Kubler, Felix

TI The Identification of Preferences from Equilibrium Prices. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

TI The Identification of Preferences from Equilibrium Prices. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

TI The Identification of Preferences from Equilibrium Prices Under Uncertainty. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

TI The Identification of Preferences from Equilibrium Prices Under Uncertainty. **AU** Chiappori, Pierre-Andre; Ekeland, Ivar; Kubler, Felix; Polemarchakis, Heracles M.

TI The Robustness of the CAPM-A Computational Approach. **AU** Herings, P. Jean-Jacques; Kubler, Felix.

Kugler, Adriana D.

PD March 2000. **TI** Hiring and Firing Costs, Adverse Selection and Long-Term Unemployment. **AU** Kugler, Adriana D.; Saint-Paul, Gilles. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 447; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 25. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E24, J41, J63, J64, J65. **KW** Adverse Selection. Turnover Costs. Unemployment. Matching Models. Discrimination.

AB In this paper, we present a matching model with adverse selection that explains why flows into and out of unemployment are much lower in Europe compared to North America, while employment-to-employment flows are similar in the two continents. In the model, firms use discretion in terms of whom to fire and, thus, low quality workers are more likely to be dismissed than high quality workers. Moreover, as hiring and firing costs increase, firms find it more costly to hire a bad worker and, thus, they prefer to hire out of the pool of employed job seekers rather than out of the pool of the unemployed, who are more likely to turn out to be 'lemons'. We use microdata for Spain and the U.S. and find that the ratio of the job finding probability of the unemployed to the job finding probability of employed job seekers was smaller in Spain than in the U.S. Furthermore, using U.S. data, we find that the discrimination of the unemployed increased over the 1980's in those states that raised firing costs by introducing exceptions to the employment-at-will doctrine.

PD May 1999. **TI** The Impact of Firing Costs on Turnover and Unemployment: Evidence from the Colombian Labour Market Reform. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 388; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 25. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** J41, J42, J63, J64, J65. **KW** Firing Costs. Worker Turnover. Exit Hazard Rates. Grouping Estimators. Labor Market Reform.

AB Reductions in firing costs are often advocated as a way of increasing the dynamism of labor markets and of reducing unemployment in both developed and less developed countries. However, evidence on the impact of firing costs on turnover and unemployment from Europe and the U.S. has been mixed. This paper examines the impact of the Colombian Labor Market Reform of 1990, which substantially reduced dismissal costs. I find that the exit hazard rates into and out of unemployment increased after the Reform by over 1% for formal workers (covered by the legislation) relative to informal workers (uncovered). The increase of the hazards implies a net decrease in unemployment of a third of a percentage point, which accounts for about one quarter of the fall in unemployment during the period of study.

Kumbhakar, Subal C.

PD 2000. **TI** The Effects of Deregulation on the Performance of Financial Institutions: The Case of Spanish Savings Banks. **AU** Kumbhakar, Subal C.; Lozano-Vivas, Ana; Lovell, C. A. Knox; Hasan, Iftekhar. **AA** Kumbhakar: University of Texas. Lozano-Vivas: Universidad de Malaga. Lovell: University of New South Wales. Hasan: New York University. **SR** New York University, Salomon Center Working Paper: S/00/16; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 22. **PR** $5.00 each; $100.00 yearly subscription. **JE** G21, G28, L50, L94. **KW** Banking. Financial Institutions. Regulation. Technical Efficiency. Profit Functions.

AB This paper examines the impact of regulatory reform on the performance of Spanish savings banks. To this end it uses panel data for the period 1986-1995 and a flexible variable profit function that incorporates time-varying technical efficiency. The focus is whether increased competition brought on by deregulation affected performance of banks over time. Bank performance, measured by the percentage change in profitability, ceteris paribus, is decomposed into technical change and change in technical efficiency both of which are defined in terms of the profit function. We also examine output technical efficiency, which is defined in terms of the production possibility frontier. Several alternative models with different specifications of technical efficiency are used to check robustness of the results. Empirical results show declining levels of output technical efficiency along with a significantly high rate of technical progress. In spite of declining technical efficiency during this period, we find evidence of an increasing trend in productivity growth.

Kuo, Ping-Sing

TI A Dual Dutch Auction in Taipei: The Choice of Numeraire and Auction Form in Multi-Object Auctions with Bundling. **AU** Crawford, Vincent P.; Kuo, Ping-Sing.

La Ferrara, Eliana

TI Participation in Heterogeneous Communities. **AU** Alesina, Alberto; La Ferrara, Eliana.

Lacker, Jeffrey M.

PD May 1998. **TI** Collateralized Debt as the Optimal Contract. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 98/04; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 58. **PR** no charge. **JE** D82, F34, G10, G20, L14. **KW** Debt. Financial Contracts. Optimal Contracts. Asymmetric Information. Collateral.

AB In a simple risk-sharing environment with ex post private information, conditions are found under which a collateralized debt contract is the optimal allocation. The critical condition for optimality is that the borrower values the collateral good more highly than does the lender; otherwise the optimal contract does not resemble debt. Limited collateral can give rise to an endogenous borrowing constraint, driving a further wedge between the intertemporal marginal rates of substitution of the borrower and the lender. I argue that perhaps all debt contracts are implicitly collateralized.

TI Limited Commitment and Central Bank Lending. **AU** Goodfriend, Marvin; Lacker, Jeffrey M.

Lakdawalla, Darius

PD February 1999. **TI** Aging and the Growth of Long-Term Care. **AU** Lakdawalla, Darius; Philipson, Tomas. **AA** Lakdawalla: University of Chicago. Philipson: University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6980; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 21. **PR** $5.00. **JE** I11, I12, J14, J16. **KW** Health Care. Elderly. Long-Term Care. Aging. Gender.

AB This paper analyzes how markets for old-age care respond to the aging of populations. The authors consider how the biological forces, which govern the stocks of frail and healthy persons in a population, interact with economic forces, which govern the demand for and supply of care. They argue that aging many times may lower the demand for market care by increasing the supply of family-provided care, which substitutes for market care. Unexpectedly, this implies that relative growth in healthy elderly males may contract the long-term care market, while relative growth in healthy elderly females may expand that market. The authors examine these implications empirically using individual, county, and national-level evidence on the US market for long-term care and find substantial support for them, particularly the negative output effect of growth in elderly males. They then decompose the per capita growth in long-term care output over the last three decades into the component accounted for by improvements in health and that accounted for by relative growth among elderly males. The novel effects of unbalanced gender growth among the elderly appear important in explaining the net decline in US per-capita output over the last 30 years.

Lamont, Owen

PD February 1999. **TI** Investment Plans and Stock Returns. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6973; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** E22, E44, G12, G31. **KW** Investment. Stock Returns. Capital. Asset Pricing.

AB Capital expenditure plans at the beginning of the year, from a US government survey of firms, explain more than three quarters of the variation in real annual aggregate investment growth between 1948 and 1993. The negative correlation of contemporaneous investment and stock returns is explained by the negative correlation of planned investment and subsequent stock returns. Unexpected revisions to aggregate investment (actual minus plan) within a year are essentially unrelated to current stock returns, and positively related to current profits. Revisions to industry investment are positively related to industry- specific stock returns and to aggregate profits.

Lang, Mark H.

PD January 1999. **TI** Capitalizations of Capital Gains Taxes: Evidence from Stock Price Reactions to the 1997 Rate Reduction. **AU** Lang, Mark H.; Shackelford, Douglas A. **AA** Lang: University of North Carolina. Shackelford: University of North Carolina and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6885; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** G12, G14, G35, H24. **KW** Capital Gains Taxes. Asset Pricing. Dividends. Taxation. Payout Policy.

AB The authors empirically document that stock prices moved inversely with dividend yields during the May, 1997 week, when the White House and Congress agreed on a budget accord that included a reduction in the capital gains tax rate. The share prices of firms not currently paying dividends increased approximately 6 percentage points more over a five-day window than the share prices of other firms. Among firms paying dividends, the change in share prices was decreasing in dividend yields. The results are consistent with at least two related explanations. First, to the extent a stock's returns are expected to be taxed as capital gains, a reduction in the expected capital gains tax rate enhances the attractiveness of the investment to investors. Second, to the extent a firm's stock is held by shareholders subject to the capital gains tax, a reduction in the expected capital gains tax rate increases its market value. The findings present evidence consistent with neither a sell-off of appreciated securities following the rate reduction nor a reduction in the compensation for capital gains taxes that selling shareholders demand from buyers. The upward price pressure around the accord dominated any downward price pressure.

Laslier, Jean-Francois

PD March 2000. **TI** Distributive Politics: Does Electoral Competition Promote Inequality? **AU** Laslier, Jean-Francois; Picard, Nathalie. **AA** Laslier: CNRS and Ecole Polytechnique, Paris, France. Picard: Universite de Cergy-Pontoise, France. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/22; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 20. **PR** $100 per year. **JE** D63, D72. **KW** Redistribution. Political Processes. Electoral Competition. Inequality.

AB Within the framework of pure redistribution (dividing one unit of a homogeneous good among identical individuals), the paper analyses the redistributions that arise from Downsian two-party electoral competition. It appears that the strategic behavior of vote-maximizing parties leads them to propose divisions which are not far from the egalitarian one.

Laussel, Didier

TI TV-Broadcasting Competition and Advertising. **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie.

TI Does Press Advertising Foster the "Pensee Unique"? **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie.

Lawrence, Robert Z.

TI Search and Deliberation in International Exchange: Learning from Multinational Trade About Lags, Distance Effects, and Home Bias. **AU** Rangan, Subramanian; Lawrence, Robert Z.

Leahy, John

TI Durable Goods Cycles. **AU** Caplin, Andrew; Leahy, John.

Lee, Jon

TI New Upper Bounds for Maximum-Entropy Sampling. **AU** Hoffman, Alan; Lee, Jon; Williams, Joy.

Leith, Campbell

PD September 1998. **TI** Aggregate Investment, Tobin's q and Insolvency Risk. **AA** University of Glasgow and University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/11; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 20. **PR** no charge. **JE** D92, E22, G31. **KW** Aggregate Investment. Tobin's Q. Financial Constraints. Insolvency Risk.

AB Despite being theoretically appealing, the standard q-theory of investment performs very poorly in empirical work. This paper extends the q-theory to include the possibility that costs associated with the risk of insolvency affect the firm's investment decisions. Using aggregate data for the UK business sector, the model is estimated both as a structural equation and in a less restrictive dynamic form which also allows for mis-measurement of Tobin's q by average q. The paper finds clear evidence that aggregate investment is influenced by the risk of insolvency.

TI A Note on the Determinants of UK Business Cycles. **AU** Day, Alexander; Leith, Campbell; Wren-Lewis, Simon.

PD January 1999. **TI** Interactions Between Monetary and Fiscal Policy Rules. **AU** Leith, Campbell; Wren-Lewis, Simon. **AA** Wren-Lewis: University of Exeter. Leith: University of Glasgow and University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/13; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 27. **PR** no charge. **JE** E52, E58, E61, E62, E63. **KW** Fiscal Policy. Monetary Policy. Simple Rules. Inflation Targeting. Fiscal Theory.

AB The Fiscal Stability Pact for EMU suggests that constraints on fiscal policy are thought by policy makers to be necessary to ensure that the independent European central bank can control inflation. In this paper we examine the interrelationship between monetary and fiscal policy when both follow simple rules. We identify two stable policy regimes. In the "active" regime, defined as a monetary policy that seeks to raise real interest rates in response to excess inflation, a self-stabilizing fiscal policy is required to ensure model stability. In the corresponding "passive" regime, a fiscal policy which does not, by itself, ensure fiscal solvency constrains monetary policy to be relatively "passive". The precise nature of these constraints depends upon the importance of money and the degree to which the economy deviates from Ricardian Equivalence. We then present simulations which analyze the impact of differing degrees of policy activism in the face of shocks. Our conclusion is that the central bank does not need to seek, on this account, the degree of debt stabilization that appears to be implied by the fiscal stability pact.

Leiva Maldonado, Wilfredo

PD October 1999. **TI** Adaptive Learning in Models with Lagged Variables. **AA** Leiva Maldonado: Universidade Federal Fluminense. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 413; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 14. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C61, C62, D83, E37. **KW** Intertemporal Equilibrium. Lagged Variables. Adaptive Learning. Expectational Stability. Dynamics.

AB In this work I study the stability of the dynamics generated by adaptive learning processes in intertemporal economies with lagged variables. I prove that determinacy of the steady state is a necessary condition for the convergence of the learning dynamics, and I show that the reciprocal is not true characterizing the economies where convergence holds. In the case of the existence of cycles I show that there is not, in general, a relationship between determinacy and convergence of the learning process to the cycle. I also analyze the expectational stability of these equilibria.

Lerner, Josh

TI What Drives Venture Capital Fundraising? **AU** Gompers, Paul A.; Lerner, Josh.

Leruty, Luc

TI Corporate Governance Structures, Control and Performance in European Markets: A Tale of Two Systems. **AU** Crama, Yves; Leruty, Luc; Renneboog, Luc; Urbain, Jean-Pierre.

Lettau, Martin

TI Dispersion and Volatility in Stock Returns: An Empirical Investigation. **AU** Campbell, John Y.; Lettau, Martin.

Levin, Andrew T.

TI Robust Covariance Matrix Estimation with Data-Dependent VAR Prewhitening Order. **AU** den Haan, Wouter J.; Levin, Andrew T.

Levine, David I.

TI When Are Layoffs Acceptable? Evidence from a Quasi-Experiment. **AU** Charness, Gary; Levine, David I.

Levinsohn, James

PD January 1999. **TI** When Industries Become More Productive, Do Firms? Investigating Productivity Dynamics. **AU** Levinsohn, James; Petrin, Amil. **AA** Levinsohn: University of Michigan and National Bureau of Economic Research. Petrin: University of Chicago. **SR** National Bureau of Economic Research Working Paper: 6893; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 26. **PR** $5.00. **JE** C13, D24, L11, L20, L60. **KW** Productivity. Firms. Manufacturing. Estimation. Production Functions.

AB This paper investigates two explanations for why industries might become more productive over time. The first explanation, termed the "real productivity case," is one in which firms become more productive and this leads to more productive industries. The second explanation, termed the "rationalization case," is one in which firm productivity is constant, but productive firms expand while less productive firms either shrink or exit. Each case has very different implications for factor markets, long term growth prospects, and public policy regarding productivity. Further, one can only distinguish between these two cases with plant- or firm-level data. We investigate the empirical relevance of the two cases using the Chilean manufacturing census. We find that the rationalization case explains much of the measured increase in industry productivity. When industry productivity falls, the rationalization case appears much less important. We also contribute to the applied econometric literature on productivity estimation as we show that the value-added production function is especially well-suited to a simple extension of recent methods developed by Oiley and Pakes.

Li, Hao

PD June 1999. **TI** Conflicts and Common Interests in Committees. **AU** Li, Hao; Rosen, Sherwin; Suen, Wing. **AA** Li and Suen: University of Hong Kong. Rosen: University of Chicago and NBER. **SR** National Bureau of Economic Research Working Paper: 7158; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 43. **PR** $5.00. **JE** D71, D72, D74, D82. **KW** Committees. Conflict. Private Information. Voting. Self-Interest.

AB Committees improve decisions by pooling independent information of members, but promote manipulation, obfuscation, and exaggeration of private evidence when members have conflicting preferences. We study how self-interest mediates these conflicting forces. When members' preferences differ, no person ever submits a report that allows perfect inference of his private information. Instead, equilibrium strategies are many-to-one mappings that transform continuous data into ordered ranks: voting procedures are the equilibrium methods of achieving a consensus in committees. Voting necessarily coarsens the transmission of information among members, but is necessary to control conflicts of interest. The degree of coarseness of the equilibrium voting procedure is determined by the extent of conflicting preferences. Though self- interests necessarily reduce the efficient use of information in committees, real information sharing occurs nonetheless. Committees make better decisions on behalf of the "average" (Pareto weighted) member than would any individual on the basis of own information. Committees are viable, though imperfect ways of making decisions when information is dispersed among members.

Li, Wenli

PD September 1997. **TI** Entrepreneurship and Government Subsidies Under Capital Constraints: A General Equilibrium Analysis **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 97/09; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 41. **PR** no charge. **JE** E44, E62, G30, J23, M13. **KW** Borrowing Constraints. Costly Intermediation. Entrepreneurship. Income Subsidies. Interest Subsidies.

AB This paper studies the interaction of capital constraints and business formation, growth and destruction, and the policy implication of this interaction. A dynamic general equilibrium model is constructed and shown to be consistent with recent empirical findings on this subject. In the model, agents face uninsurable income risk and costly financial intermediation, and they choose to be either a worker or an entrepreneur. A calibrated version of the model is used to examine two government assistance programs: loan guarantees and grants. The main findings are that both programs can improve welfare and that grants outperform the more popular loan guarantees.

TI Challenges and Choices in Post-Crisis East-Asia: Simulations of Investment Policy Reform in an Intertemporal, Global Model. **AU** Diao, Xinshen; Li, Wenli; Yeldan, Erinc.

TI The Dynamic Effects of Government Spending Shocks on Employment and Work Hours. **AU** Yuan, Mingwei; Li, Wenli.

PD February 1999. **TI** Firm-Specific Learning and the Investment Behavior of Large and Small Firms. **AU** Li, Wenli; Weinberg, John A. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 99/03; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 18. **PR** no charge. **JE** D21, D83, D92, G30, L11. **KW** Firm Growth. Size Distribution. Firm Age. Learning. Industrial Organization.

AB We examine a model of the size distribution and growth of firms whereby firms learn about idiosyncratic productivity parameters. Aggregate shocks, by adding noise to learning at the firm level, can produce differentiated responses across firms with their reactions depending on the position of the firms in their individual life cycle. In particular, young firms, which are smaller on average than older firms, can "overreact" to aggregate shocks. Such differences across firm sizes and ages, which arise here in a model with perfect financial markets, are often attributed to financial frictions that hit small and large firms differently.

Liang, Qi

PD October 1998. **TI** A Survey of Total Factor Productivity and Technical Change in the Chinese Economy 1979-1996. **AU** Liang, Qi; Phillips, Garry D. A. **AA** Liang: Nanjing University. Phillips: University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/01; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 24. **PR** no charge. **JE** F13, F41, O33, O47, O53. **KW** Chinese Economy. Total Factor Productivity. Technological Change. Development. Open Economy.

AB This paper examines the growth of productivity and technical change in the rapid development of the Chinese economy since China opened its door to the world. Based on a study of available empirical evidence and relevant statistics, the paper argues that there has been remarkable technological progress in China in the period 1979-1996. The original source of that change was China's reform and openness policy. The important role played by foreign trade and foreign direct investment is highlighted. Also the paper suggests that high output growth was more affected by an increased input of resources than by technical change. It is argued that only by improving endogenous growth through increasing the rate of technical-intensive development will China sustain a growing economy.

Libecap, Gary D.

PD May 1999. **TI** The Self-Enforcing Provisions of Oil and Gas Unit Operating Agreements: Theory and Evidence. **AU** Libecap, Gary D.; Smith, James L. **AA** Libecap: University of Arizona and NBER. Smith: Southern Methodist University. **SR** National Bureau of Economic Research Working Paper: 7142; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 30. **PR** $5.00. **JE** K12, L14. **KW** Unitization Contracts. Contracting. Incentive Compatibility. Moral Hazard. Self-Enforcement.

AB This paper extends the existing theory and empirical investigation of unitization contracts. It highlights the importance of incentive- compatibility and self-enforcement and the bargaining problems faced in achieving viable, long-term contracts. The authors argue that only if the parties to a unitization contract have unit production shares that are the same as their cost shares will the contract be incentive compatible. Using a data base of sixty unit operating agreements, the authors measure the industry's actual behavior against the principles of production from a common pool. Their survey of units that have only one production phase and that are relatively homogeneous reveals that such equal sharing rules are always found and they appear to encourage the parties to behave optimally. In more complex units with multiple production phases and/or separate concentrations of oil and gas (gas caps) the authors find deviations from the theoretical ideal. In the case of multi-phase units, they find equal cost and production shares within phases, but not across phases. A pre-set trigger for shifting from one production phase to the next helps to maintain optimal behavior. For gas cap units, however, the authors generally do not find the equal sharing rule.

Lildholdt, Peter

TI Local Power Functions of Tests for Double Unit Roots. **AU** Haldrup, Niels; Lildholdt, Peter.

TI On the Robustness of Unit Root Tests in the Presence of Double Unit Roots. **AU** Haldrup, Niels; Lildholdt, Peter.

Lippi, Francesco

TI Labor Markets and Monetary Union: A Strategic Analysis. **AU** Cukierman, Alex; Lippi, Francesco.

Lipsey, Robert E.

PD January 1999. **TI** The Location and Characteristics of U.S. Affiliates in Asia. **AA** National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6876; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** F21, F23, F40, O19. **KW** Foreign Direct Investment. International Investment. Multinational Firms. Development.

AB Market size and growth rates, per capita income, distance from the United States, and tax rates on U.S. affiliates accounted for about half the variation among developing host countries in most aspects of U.S. FDI activity. Residuals from the equations for one period add greatly to the explanatory power of the next period's equations, suggesting that there are long-run characteristics of the host economies, omitted from the equations, that are favorable or unfavorable to U.S. investment and FDI activity. There are considerable differences in the determinants of U.S. FDI activity between industries in which U.S. affiliates are export-oriented, such as machinery, and industries in which the affiliates' sales are mainly local. In the export-oriented industries, market size and distance from the United States were unimportant, and high per capita real income was the most consistent favorable influence. In the industries oriented to local sales, large market size attracted U.S. firms and long distance from the United States discouraged them. The countries with the largest shares were also those that ranked high on measures of institutional characteristics, including low levels of corruption.

Liu, Jun

TI Conditioning Information and Variance Bounds on Pricing Kernels. **AU** Bekaert, Geert; Liu, Jun.

Liu, Zheng

TI Staggered Contracts and Business Cycle Persistence. **AU** Huang, Kevin Xiaodong; Liu, Zheng.

Llorca, Natividad

TI Games Arising From Infinite Production Situations. **AU** Timmer, Judith; Llorca, Natividad; Tijs, Stef.

PD September 1999. **TI** Semi-Infinite Assignment Problems and Related Games. **AU** Llorca, Natividad; Tijs, Stef; Timmer, Judith. **AA** Llorca: Miguel Hernandez University. Tijs and Timmer: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9974; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 12. **PR** no charge. **JE** C61, C71. **KW** Infinite Programs. Assignment. Cooperative Games. Balancedness. Game Theory.

AB In 1972 Shapley and Shubik introduced assignment games associated to finite assignment problems in which two types of agents were involved and they proved that these games have a non-empty core. In this paper we look at the situation where the set of one type is infinite and investigate when the core of the associated game is non-empty. Two infinite programming problems arise here, which we tackle with the aid of finite approximations. We prove that there is no duality gap and we show that the core of the corresponding game is non-empty. Finally, the existence of optimal assignments is discussed.

Lochner, Lance

TI General Equilibrium Cost Benefit Analysis of Education and Tax Policies. **AU** Heckman, James J.; Lochner, Lance; Taber, Christopher.

Lockwood, Ben

TI Outside Options, Ownership and Incentives Revisited. **AU** De Meza, David; Lockwood, Ben.

Lopez Casasnovas, Guillem

PD March 1999. **TI** Review of the Literature on Reference Pricing. **AU** Lopez Casasnovas, Guillem; Puig-Junoy, Jaume. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business

Working Paper: 362; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 25. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** H51, I18, L65. **KW** Pharmaceutical Prices. Reference Pricing. Pharmaceutical Expenditure. Health.

AB The reference pricing (RP) strategy for cost containment in pharmaceutical markets is analyzed from the point of view of its role as a procurement mechanism for drugs. In particular, we consider the following economic aspects: (1) Which is the institutional context that creates the need for a RP strategy; (2) how RP operates in practice; that is, how third party-payers (the insurers/buyers) have established the different systems we observe in the international experience; (3) the range of health and socioeconomic effects that result from particular RP strategies, and (4) which are the market failures that a RP policy was supposed to address and its main advantages in pursuing this once the effects are analyzed.

PD October 1999. **TI** La Capitacion en la Financiacion Territorial de los Servicios Poblicos Transferidos: El Caso de la Sanidad y de la Educacion. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 399; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 30. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** H11, H51, H52, H72, I18. **KW** Fiscal Federalism. Regional Finance. Health Expenditures. Education Expenditures. Fiscal Accountability.

AB The paper explores the consequences of pooling together health and education expenditure under a single per capita parameter for financing the Spanish regions. Despite population being a crude indicator for expenditure needs, the per capita finance regime appears to be more transparent and politically feasible than other "ad hoc" formulations. According to our data, the lack of adjustment for health expenditure finance by age is overcompensated by the lack of adjustment for expenditure on education, in most of the Spanish regions. This is due to the relative unit costs of health and education and the demographic structure of each region. In addition, the paper builds on different financing scenarios, by using linear programming, in order to convert state finance to regions into equivalent regional tax sharing on revenues. This paper is written in Spanish.

Lopez, Humberto

TI Internal and External Exchange Rate Equilibrium in a Cointegration Framework: An Application to the Spanish Peseta. **AU** Alberola, Enrique; Lopez, Humberto.

Lopez-Salido, J. David

TI The Role of the Financial System in the Growth-Inflation Link: The OECD Experience. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David.

TI The Long-Run Effect of Permanent Disinflations. **AU** Andres, Javier; Hernando, Ignacio; Lopez-Salido, J. David.

TI The Liquidity Effect in a Small Open Economy Model. **AU** Andres, Javier; Lopez-Salido, J. David; Valles, Javier.

TI Intertemporal Substitution and the Liquidity effect in a Sticky Price Model. **AU** Andres, Javier; Lopez-Salido, J. David; Valles, Javier.

Lovell, C. A. Knox

TI The Effects of Deregulation on the Performance of Financial Institutions: The Case of Spanish Savings Banks. **AU** Kumbhakar, Subal C.; Lozano-Vivas, Ana; Lovell, C. A. Knox; Hasan, Iftekhar.

TI The Effects of Deregulation on the Performance of Financial Institutions: The Case of Spanish Savings Banks. **AU** Kumbhakar, Subal C.; Lozano-Vivas, Ana; Lovell, C. A. Knox; Hasan, Iftekhar.

Lozano-Vivas, Ana

TI The Effects of Deregulation on the Performance of Financial Institutions: The Case of Spanish Savings Banks. **AU** Kumbhakar, Subal C.; Lozano-Vivas, Ana; Lovell, C. A. Knox; Hasan, Iftekhar.

TI Loan Loss Provision Decisions: A Stochastic Frontier Approach. **AU** Anandarajan, Asokan; Hasan, Iftekhar; Lozano-Vivas, Ana.

TI Organizational Form and Expense Preference: Spanish Experience. **AU** Hasan, Iftekhar; Lozano-Vivas, Ana.

TI Cross-Border Performance in European Banking. **AU** Pastor, Jesus T.; Lozano-Vivas, Ana; Hasan, Iftekhar.

Lucas, Henry C., Jr.

TI Electronic Commerce in the Retail Brokerage Industry: Trading Costs of Internet Versus Full Service Firms. **AU** Bakos, Yannis; Lucas, Henry C., Jr..; Oh, Wonseok; Viswanathan, Sivakumar; Simon, Gary; Weber, Bruce.

Lugosi, Gabor

TI Worst-Case Bounds for the Logarithmic Loss of Predictors. **AU** Cesa-Bianchi, Nicola; Lugosi, Gabor.

Luijten, M. L. J.

TI Inventory Modelling For a Manufacturer of Sweets: An Evaluation of an Adjusted Compound Renewal Approach for B-Items with a Relative Short Production Lead Time. **AU** Heuts, R. M. J.; Luijten, M. L. J.

Maag, Felix

PD September 1999. **TI** On Benchmarks and the Performance of DEM Bond Mutual Funds. **AU** Maag, Felix; Zimmermann, Heinz. **AA** Univsersitat St. Gallen, Switzerland. **SR** New York University, Salomon Center Working Paper: S/00/03; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 30. **PR** $5.00 each; $100.00 yearly subscription. **JE** G11, G23, G24. **KW** Bonds. Mutual Funds. Fund Performance. Expense Ratios.

AB This paper analyses the performance of 40 Deutschmark bond mutual funds over the time-period 1988 to 1996. Performance is measured by estimating unrestricted single and multi-index models as well as an asset class factor model that explicitly takes investment restrictions into account. Special emphasis is put on the selection of the benchmark indexes and their impact on performance (Alphas). Most funds exhibit a negative performance with respect to reasonable benchmarks, and it is statistically significant in many cases. This result is very robust across the different models and index specifications. In particular, the out-of-sample results of a dynamic asset class factor model are surprisingly similar to the most simple single-index in-sample models. However, the average absolute size of the (negative) alpha roughly corresponds to our estimate of the average expense ratio. We moreover find a negative relationship (although not statistically significant) between performance and expense ratios. There is no clear evidence for or against performance persistence.

MaCurdy, Thomas E.

PD March 1999. **TI** Asset Allocation and Risk Allocation: Can Social Security Improve Its Future Solvency Problem By Investing In Private Securities? **AU** MaCurdy, Thomas E.; Shoven, John B. **AA** Stanford University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7015; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** $5.00. **JE** G11, H55. **KW** Social Security. Portfolio Choice. Defined Benefits. Asset Swap.

AB This paper examines the economics of investing the central trust fund of Social Security in private securities. We note that switching from a policy of having the trust fund invest solely in special issue Treasury bonds to one where some of the portfolio holds common stocks amounts to an asset swap. Such an asset swap does not increase national saving, wealth or GDP. We also show that it is far from a sure thing in terms of improving the finances of the Social Security system. The asset swap is deemed successful if the stock portfolio generates sufficient cash to pay off the interest and principal of the bonds and still have money left over. It is deemed a failure otherwise. By using historical data and a bootstrap statistical technique, we estimate that the exchange of ten or twenty year bonds for a stock portfolio would worsen social security's finances roughly twenty to twenty-five percent of the time. Further, failures are autocorrelated meaning that if the strategy fails one year it is extremely likely to fail the next. Such high failure rates imply that the defined benefit structure of benefits becomes less credible with stocks in the trust fund.

Magnus, Jan R.

PD May 1999. **TI** Macro Accounts Estimation Using Indicator Ratios. **AU** Magnus, Jan R.; van Tongeren, Jan W.; de Vos, Aart F. **AA** Magnus: CentER and Tilburg University. van Tongeren: United Nations, Statistics Division. de Vos: Free University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9939; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 38. **PR** no charge. **JE** C11, C82, E20. **KW** Macro Accounts. Indicator Ratios. Missing Observations. Bayesian Estimation. Sensitivity Analysis.

AB We consider a system of macro accounts consisting of latent variables. Data, containing measurement errors, are available on some of these latent variables. The system has to satisfy accounting identities. In addition, we wish to incorporate subjective views (priors) on the latent variables. A complete Bayesian solution for the linear normal case is provided. The subjective views are typically given in terms of indicator ratios, that is, ratios of two latent variables, since these are generally considered more stable than the underlying variables themselves. The theory is extended to deal with such indicator ratios. An additional problem is that many indicator ratios could be available, thus providing multiple priors. A solution to this problem is also provided. A constructed but realistic example demonstrates the method.

Mairesse, Jacques

PD March 1999. **TI** Using Employee Level Data in a Firm Level Econometric Study. **AU** Mairesse, Jacques; Greenan, Nathalie. **AA** Mairesse: INSEE-CREST and National Bureau of Economic Research. Greenan: Centre d'Etude de l'Emploi. **SR** National Bureau of Economic Research Working Paper: 7028; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 22. **PR** $5.00. **JE** C51, C81, D20, J16, O33. **KW** Firms. Surveys. Sampling Errors. Employees. Empirical Analysis.

AB This paper makes the general point that econometric studies of the firm can be enriched by using information collected from employees, even if only a few of them are surveyed per firm. The first part of the paper shows that in estimating parameters of interest in a regression model of the firm, the biases arising from the sampling errors in the employee based variables can be assessed, as long as there is a large enough sub- sample of firms with at least two (randomly chosen) surveyed employees. The second part of the paper considers the estimation of the relationship between the firm average wage (directly obtained from the firm accounts) and estimates of the proportion of female workers based on the gender of one, two or three surveyed employees per firm. As a test, the authors compare their estimates with those using the "true" proportion of female workers (i.e., based on all the employees), which we could also directly obtain at the firm level from a firm survey. The analysis is performed on two linked employer-employee samples of about 2500 firms in the French manufacturing and services industries in 1987 and 1993, with one, two or three surveyed employees per firm (for respectively 75%, 15% and 10% of the firms).

Makiyan, S. N.

TI Portfolio Behaviour of Islamic Banks: A Case Study for Iran, 1984- 1994. **AU** Kagigi, K. A.; Ford, Jim L.; Cadle, P. J.; Makiyan, S. N.

Mamuneas, Theofanis P.

TI Factor Adjustment, Quality Change, and Productivity Growth for U.S. Manufacturing. **AU** Bernstein, Jeffrey I.; Mamuneas, Theofanis P.; Pashardes, Panos.

Manski, Charles F.

PD January 1999. **TI** Worker Perceptions of Job Insecurity in the Mid-1990s: Evidence from the Survey of Economic Expectations. **AU** Manski, Charles F.; Straub, John D. **AA** Manski: Northwestern University and National Bureau of Economic Research. Straub: University of Wisconsin-Madison. **SR** National Bureau of Economic Research Working Paper: 6908; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 32. **PR** $5.00. **JE** D84, J23, J63, J64. **KW** Labor Markets. Job Insecurity. Job Destruction. Search. Expectations.

AB This paper analyzes the probabilistic measures of job insecurity that have recently become available through the nationwide Survey of Economic Expectations (SEE). It is found that workers vary considerably in their perceptions of job insecurity, with most workers perceiving little or no risk but some perceiving moderate to high risk. Expectations of job loss tend to decrease markedly with age, but so do expectations of a good outcome should job search become necessary. The net result is that composite job insecurity tends not to vary at all with age. Subjective probabilities of job loss tend to decrease with schooling and subjective probabilities of good search outcomes tend to increase with schooling. Perceptions of job insecurity vary little by sex. Perceptions of job insecurity vary substantially by race. Self- employed workers see themselves as facing less job insecurity than do those who work for others. Expectations within groups are heterogeneous, the covariates (age, schooling, sex, race, employer, year) collectively explaining only a small part of the sample variation in worker expectations. Moving beyond descriptive analysis, the paper connects the empirical findings to modern theories of the labor market.

Maravall, Agustin

TI Estimation of the Business Cycle: A Modified Hodrick-Prescott Filter. **AU** Kaiser, Regina; Maravall, Agustin.

PD August 1999. **TI** An Application of TRAMO and SEATS: Report for the "Seasonal Adjustment Research Appraisal" Project. **AA** Banco de Espana.. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9914; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 123. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** C22, C53, C87. **KW** Time Series. Forecasting. Seasonal Adjustment. Trend Estimation. Statistical Software.

AB The Seasonal Adjustment Research Appraisal committee was created in Italy to evaluate procedures for seasonal adjustment of economic series. Because the TRAMO-SEATS programs were one of the main procedures considered, the committee sent a selection of 11 series of interest to be analyzed. This paper contains the results of the application of TRAMO and SEATS to these series. It is seen that very simple procedures, based mostly on the automatic features, provide parsimonious models and considerably good results, in terms of seasonal adjustment, trend-cycle estimation, and short-term forecasting. The paper contains first a summary of the two programs. Then the application is discussed, starting with the description of the series and the selection of the input parameters.

TI Seasonal Outliers in Time Series. **AU** Kaiser, Regina; Maravall, Agustin.

TI Short-Term and Long-Term Trends, Seasonal Adjustment, and the Business Cycle. **AU** Kaiser, Regina; Maravall, Agustin.

Marcouiller, Douglas

TI Trade, Insecurity, and Home Bias: An Empirical Investigation. **AU** Anderson, James E.; Marcouiller, Douglas.

Margolis, David N.

TI Minimum Wages and Employment in France and the United States. **AU** Abowd, John M.; Kramarz, Francis; Margolis, David N.

Marianov, Vladimir

PD March 2000. **TI** Location Models for Airline Hubs Behaving as M/D/c Queues. **AU** Marianov, Vladimir; Serra, Daniel. **AA** Marianov: The Catholic University of Chile. Serra: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 453; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 26. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C61, C63, R12, R41, R53. **KW** Hub Location. Congestion. Tabu-Search. Airline Industry.

AB Models are presented for the optimal location of hubs in airline networks, that take into consideration the congestion effects. Hubs, which are the most congested airports, are modeled as M/D/c queuing systems, that is, Poisson arrivals, deterministic service time, and {\m c} servers. A formula is derived for the probability of a number of customers in the system, which is later used to propose a probabilistic constraint. This constraint limits the probability of {\m b} airplanes in queue, to be lesser than a value $lpha$. Due to the computational complexity of the formulation, the model is solved using a meta- heuristic based on tabu search. Computational experience is presented.

PD November 1999. **TI** Hierarchical Location-Allocation Models for Congested Systems. **AU** Marianov, Vladimir; Serra, Daniel. **AA** Marianov: The Catholic University of Chile. Serra: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 425; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 23. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C61, C63, R12, R32, R53. **KW** Hierarchical Location. Congestion. Queueing.

AB In this paper we address the issue of locating hierarchical facilities in the presence of congestion. Two hierarchical models are presented, where requests are attended first by lower level servers, and then some of the served customers are referred to higher level servers. In the first model, the objective is to find the minimum number of servers and locations that will cover a given region within given distance or time limits. The second model is cast as a Maximal Covering Location formulation. A heuristic procedure is then presented together with computational experience. Finally, some extensions of these models are put forward addressing other types of spatial configurations.

Marimon, Ramon

TI Crecimiento de las Regiones Espanolas: Estructura Sectorial, Dinamica Regional y Distribucion de Rentas. **AU** Garcia-Mila, Teresa; Marimon, Ramon.

Marques, Jose Manuel

TI On the Relevance and Nature of Regional Inflation Differentials: The Case of Spain. **AU** Alberola, Enrique; Marques, Jose Manuel.

Marsiliani, Laura

PD August 1999. **TI** Time Inconsistency in Environmental Policy: Tax Earmarking as a Commitment Solution. **AU** Marsiliani, Laura; Renstrom, Thomas I. **AA** Marsiliani: Tilburg University. Renstrom: University of Birmingham and Tilburg University. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/22; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 23. **PR** 2 pounds ($4); no charge to academics. **JE** D62, D72, E62, H20, Q28. **KW** Tax Earmarking. Fiscal Policy. Redistributive Taxation. Time Inconsistency. Environmental Taxes.

AB Tax earmarking imposes a constraint on government policymaking, and may be desirable if it solves a time-inconsistency problem in tax policy. In a two-period economy, in which the policy decisions regarding taxes, public goods provision, and pollution abatement are taken by a majority-elected individual, we show how the time-inconsistency problem in environmental policy arises. We demonstrate that the commitment equilibrium under no earmarking rules cannot be as fully implemented as a no-commitment equilibrium under earmarking rules. However, the earmarking rules do act as a partial commitment mechanism.

PD September 1999. **TI** Time Inconsistency in Environmental Policy: Tax Earmarking as a Commitment Solution. **AU** Marsiliani, Laura; Renstrom, Thomas I. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9986; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 24. **PR** no charge. **JE** D62, D72, E62, H20, Q28. **KW** Tax Earmarking. Fiscal Policy. Redistributive Taxation. Time Inconsistency. Environmental Tax.

AB See the abstract for Marsiliani, Laura; Renstrom, Thomas I., August 1999. "Time Inconsistency in Environmental Policy: Tax Earmarking as a Commitment Solution". University of Birmingham, Department of Economics Discussion Paper: 99/22; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics.

Marti-Bonmati, Luis

TI Validation Procedures in Radiological Diagnostic Models: Neural Network and Logistic Regression. **AU** Arana, Estanislao; Delicado, Pedro; Marti-Bonmati, Luis.

Martin, Philippe

TI Two Waves of Globalisation: Superficial Similarities, Fundamental Differences. **AU** Baldwin, Richard E.; Martin, Philippe.

Martinez Resano, Jose Ramon

PD February 1999. **TI** Instrumentos derivados de los tipos "overnight: call money swaps" y futuros sobre fondos federales. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9901; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 50. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** F36, G13, G15. **KW** Euro Money Markets. Derivatives Pricing. Credit Risk. Call Money Swaps. Federal Fund Futures.

AB This paper studies two highly developed derivative instruments, call money swaps and federal fund futures, using qualitative and mathematical analysis. First, the raison d'etre of these derivative contracts on overnight rates is explained. After characterizing the short-term bias of the interbank market, and taking into account the existence of classical money market derivatives, it is argued that the virtue of call money swaps lies in the fact that they allow the maturity segmentation that credit risk imposes on the interbank market to be trascended. The higher importance of the speculative motive in their use that this implies is shown using data from the Spanish market. The launch of the euro, initially with a segmentation between domestic interbank markets, for counterparty reasons among others, requires the analysis of the role of call money swaps in this new framework and of how they will be affected by changes in the conduct of monetary policy. From a more mathematical point of view, the arbitrage pricing of federal fund futures and call money swaps is also studied. Finally, a preliminary analysis of the rates quoted in the Spanish market for call money swaps is made.

Martinez Zarzoso, I.

TI Transfers, Trade, Food and Growth: Britain and the European Union over Forty Years. **AU** Sinclair, Peter J. N.; Martinez Zarzoso, I.

Mas-Colell, Andreu

TI A General Class of Adaptive Strategies. **AU** Hart, Sergiu; Mas-Colell, Andreu.

Maskin, Eric

TI Sequential Innovation, Patents, and Imitation. **AU** Bessen, James; Maskin, Eric.

Massa, Massimo

TI Index Funds and Stock Market Growth. **AU** Goetzmann, William N.; Massa, Massimo.

Masset, Pierre

TI Market Size, Investment Performance, and Expected New Supply of Defaulted Bonds & Bank Loans: 1987-1999. **AU** Altman, Edward I.; Masset, Pierre.

Matea, Maria de los Llanos

TI Underlying Inflation Measures in Spain. **AU** Alvarez, Luis J.; Matea, Maria de los Llanos.

Mazon, Cristina

PD April 1999. **TI** On the Optimality of Treasury Bond Auctions: The Spanish Case. **AU** Mazon, Cristina; Nunez, Soledad. **AA** Mazon: Universidad Complutense de Madrid. Nunez: Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9905; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 38. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** D44, G14, G18. **KW** Treasury Auctions. Auction Discounts. Winner's Curse. Bonds.

AB This paper explores Spanish bond auctions both from a theoretical and an empirical perspective. In the theoretical analysis we present a model to explore the revenue efficiency of the auctions. The model captures the two distinctive features of the Spanish auction: the format used, a hybrid of discriminatory and uniform auctions, and the uncertainty about the amount to be issued faced by bidders. The main result is that there exists a pure strategy Nash equilibrium that maximizes the seller's revenue, which is unique. The empirical analysis uses auction data for 1993-1997. The main results are: First, as predicted by the model, auction discounts are not statistically significant for reopening auctions with non-compulsory volume announcement, which we think that the model better characterizes. Second, both participation and competition are significant determinants of the size of auction discount: participation has a positive effect and competition has a negative one. Third, both price and quantity uncertainty also have a positive significant effect on the size of auction discount.

McClellan, Mark

TI Designing Hospital Antitrust Policy to Promote Social Welfare. **AU** Kessler, Daniel; McClellan, Mark.

McDermott, John

TI Industrial Development and the Convergence Question. **AU** Goodfriend, Marvin; McDermott, John.

McHale, John

PD March 1999. **TI** The Risk of Social Security Benefit Rule Changes: Some International Evidence. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 7031; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 33. **PR** $5.00. **JE** H23, H55, J26. **KW** Social Security. Public Pensions. Retirement. Reform.

AB Against a background of projections of sharply increasing elderly dependency rates, workers in the major industrial economies are apprehensive that their social security benefit entitlements will be cut before or after they retire, leaving them with inadequate retirement income. This paper looks at recent benefit rule changes in the G7 countries to see what can be learned about such political risk in PAYGO pension systems. From this small sample, I find that projections of rising costs under current rules are inducing reforms, and that these reforms often have a major impact on the present discounted value of promised benefits for middle-aged and younger workers. Usually, however, the benefits of the retired and those nearing retirement are protected. The phasing in of benefit cuts raises the question as to why younger workers are willing to take significant cuts in their implicit wealth while protecting the currently old. One possible answer is explored through a simple model: these workers fear even larger cuts in their benefits if the tax burden on future workers rises too high.

McLennan, Andrew

PD March 1999. **TI** The Expected Number of Nash Equilibria of a Normal Form Game. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 306; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 39. **PR** no charge. **JE** C60, C72. **KW** Nash Equilibrium. Computational Complexity. Algebraic Methods.

AB Fix finite pure strategy sets S1,...,Sn, and let S = S1 x ... x Sn. In the author's model of a random game the agents' payoffs are statistically independent, with each agent's payoff uniformly distributed on the unit sphere in the dual of s-dimensional Real space. For given nonempty T1 a subset of S1,...,Tn a subset of Sn the author gives a computationally implementable formula for the mean number of Nash equilibria in which each agent i's mixed strategy has support Ti. The formula is the product of two expressions, where the first is the expected number of totally mixed equilibria for the truncated game obtained by eliminating pure strategies outside the sets Ti, and the second may be construed as the "probability" that such an equilibrium remains an equilibrium when the strategies in the sets SiTi become available. The expected number of totally mixed equilibria for the truncated game is shown to be at least as large as 2 raised to the -3p/2 times the square root of the maximal number of totally mixed equilibria. Thus, in certain senses, the mean number of totally mixed equilibria grows exponentially as the size of the game increases. The expected number of Nash equilibria of all sorts is obtained by summing over supports.

PD March 1999. **TI** The Expected Number of Real Roots of a Multihomogeneous System of Polynomial Equations. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 307; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 20. **PR** no charge. **JE** C61, C63, C72. **KW** Multihomogenous Systems. Polynomial Equations. Nash Equilibrium. Computational Complexity.

AB The methods of Shub and Smale (SS93) are extended to the class of multihomogeneous systems of polynomial equations, yielding Theorem 1, which is a formula expressing the mean (with respect to a particular distribution on the space of coefficient vectors) number of real roots as a multiple of the mean absolute value of the determinant of a random matrix. Theorem 2 derives closed form expressions for the mean in special cases that include: (a) Shub and Smale's result that the expected number of real roots of the general homogeneous system is the square root of the generic number of complex roots given by Bezout's theorem; (b) Rojas' (Roj96) characterization of the mean number of real roots of an "unmixed" multihomogeneous system. Theorem 3 gives upper and lower bounds for the mean number of roots, where the lower bound is the square root of the generic number of complex roots, as determined by Bernstein's (Ber75) theorem. These bounds are derived by induction from recursive inequalities given in Theorem 4.

Meade, Norman F.

TI Contingent Valuation: Controversies and Evidence. **AU** Carson, Richard T.; Flores, Nicholas E.; Meade, Norman F.

Meca, Ana

PD June 1999. **TI** Inventory Games. **AU** Meca, Ana; Timmer, Judith; Garcia-Jurado, Ignacio; Borm, Peter. **AA** Meca: Miguel Hernandez University, Spain. Timmer and Borm: CentER and Tilburg University. Garcia-Jurado: Santiago de Compostela University, Spain. **SR** Tilburg CentER for Economic Research Discussion Paper: 9953; CentER for

Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 18. **PR** no charge. **JE** C71, D24, E22, L21. **KW** Inventory Management. Information. Cooperative Games. Proportional Division. Transferable Utilities.

AB Inventory Management studies show how a single firm can minimize the average cost per time unit of its inventory. In this paper we extend this analysis to situations where a collective of firms minimizes its joint inventory cost by means of cooperation. Depending on the information revealed by the individual firms, we analyze related cooperative TU games and focus on proportional division mechanisms to share the joint costs.

Melenberg, Bertrand

TI Bounds on Quantiles in the Presence of Full and Partial Item Nonresponse. **AU** Vazquez Alvarez, Rosalia; Melenberg, Bertrand; van Soest, Arthur.

TI Testing Affine Term Structure Models in Case of Transaction Costs. **AU** Driessen, Joost; Melenberg, Bertrand; Nijman, Theo.

Mella-Barral, Pierre

TI Collateral, Renegotiation and the Value of Diffusely Held Debt. **AU** Hege, Ulrich; Mella-Barral, Pierre.

Mendoza, Enrique G.

PD May 2000. **TI** On the Benefits of Dollarization When Stabilization Policy is Not Credible and Financial Markets are Imperfect. **AA** Duke University and NBER. **SR** Duke University Department of Economics Working Paper: 00/01; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 61. **PR** no charge. **JE** E63, F32, F33, F34, F41. **KW** Dollarization. Credit Frictions. Credibility. Exchange Rate Regimes. Stabilization Policy.

AB This paper argues that dollarization can be beneficial for countries where credit-market frictions and non-credible stabilization policies are large distortions on economic activity and welfare. A dynamic general-equilibrium model with these features is proposed for the case of a small open economy with a non-credible managed exchange-rate regime and a liquidity requirement that acts as an endogenous borrowing constraint. Assessing the experience of Mexico in the light of the quantitative predictions of this model suggests that, unless mechanisms to secure potential benefits of discretionary monetary policy can be implemented, dollarization is worth pursuing. The mean welfare gain of neutralizing both credibility distortions and credit frictions exceeds 9 percent in terms of the trend level of consumption per capita.

PD June 2000. **TI** On the Instability of Variance Decompositions of the Real Exchange Rate Across Exchange-Rate-Regimes: Evidence from Mexico and the United States. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 00/05; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 23. **PR** no charge. **JE** E42, F30, F41, G11, G15. **KW** Real Exchange Rate. Managed Exchange Rates. Purchasing Power Parity. Foreign Exchange.

AB Variance decompositions of the Mexico-United States real exchange rate are examined using monthly data on consumer prices and the nominal exchange rate for the period January, 1969 to February, 2000. The results show that the robust result found in industrial-country data that most of the variation of the real exchange rate is due to fluctuations in prices of tradable goods and nominal exchange rates holds only in periods in which Mexico was not under a regime of exchange-rate management. In periods in the sample in which Mexico had a managed exchange-rate regime, the variability of prices of non-tradable goods relative to tradable goods accounts for up to 70 percent of the variability of the peso-dollar real exchange rate.

PD March 1999. **TI** Devaluation Risk and the Syndrome of Exchange-Rate-Based Stabilizations. **AU** Mendoza, Enrique G.; Uribe, Martin. **AA** Mendoza: Duke University and National Bureau of Economic Research. Uribe: University of Pennsylvania. **SR** National Bureau of Economic Research Working Paper: 7014; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** E63, F31, F32, F41, F47. **KW** Devaluation Risk. Foreign Exchange. Open Economy. Investment. Stabilization.

AB This paper shows that the risk of devaluation can be an important factor accounting for the stylized facts of exchange-rate-based stabilizations. This conclusion follows from studying the quantitative implications of a two-sector equilibrium business cycle model of a small open economy calibrated to Mexico's 1987-1994 stabilization plan. In the model, devaluation risk creates a time-variant interest rate differential that acts as a stochastic tax on money demand, labor supply, investment, and saving. Under incomplete markets, this tax induces endogenous state-contingent wealth effects via fiscal adjustment and suboptimal investment. Devaluation risk entails large welfare costs in this environment.

TI Rational Contagion and the Globalization of Securities Markets. **AU** Calvo, Guillermo A.; Mendoza, Enrique G.

Menes, Rebecca

PD February 1999. **TI** The Effect of Patronage Politics on City Government in American Cities, 1900-1910. **AA** University of California, Los Angeles and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6975; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 33. **PR** $5.00. **JE** D72, H41, H72, N41, R53. **KW** Economic History. Urban Economics. Regional Economics. Public Goods. Patronage.

AB In this paper I explore the effect of patronage or "machine" politics on government performance in American cities during the Progressive era. I use game theoretic models and an empirical analysis of spending and public goods provision during the first decade of the twentieth century in a cross section of American cities with and without governments dominated by political machines. The ability to buy votes relaxes the electoral constraints on the government. Taxes, budgets, municipal wages, and (unobserved) corruption are all predicted to rise under a patronage based regime. But in a city, patronage politics does not relax the incentives to provide public goods. A politician who buys his way into office will still be motivated to provide optimal levels of government goods and services because he can capture the resulting locational rents in higher taxes and graft. Empirically, city governments dominated by political machines paid city government employees more and had larger budgets but provided high levels of public goods.

Merrick, John J., Jr.

PD December 1999. **TI** Crisis Dynamics of Implied Default Recovery Ratios: Evidence From Russia and Argentina. **AA** New York University. **SR** New York University, Salomon Center Working Paper: S/99/42; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 20. **PR** \$5.00 each; \$100.00 yearly subscription. **JE** E44, F36, G12, G13, G15. **KW** Bond Pricing. Default Risk. Recovery Value. Sovereign Bonds. Contagion.

AB Pricing bonds subject to the risk of default requires understanding both default probabilities and recovery value. This paper introduces a joint implied parameter approach to extract both the expected recovery ratio and the default probability term structure for risky bonds. The methodology is applied to both Russian Federation and Republic of Argentina US dollar-denominated Eurobonds before and after 1998's Russian GKO default crisis. The Russian crisis provides a unique window into the impact of changing default probabilities and recovery ratio assumptions on credit-sensitive sovereign bond prices. For the Russian Eurobonds, the sample paths suggest a two-phase crisis revaluation. Shifts in default probabilities account for most of the initial price collapse. Marked decreases in the projected default recovery ratio dominate the second-phase's continued Russian bond price declines. Through a "contagion effect," the impact of the default crisis on the Argentine Eurobond market actually resembles the Russian case much more than the raw price data indicate. The crucial Argentine distinction is that investors never cut recovery value assumptions.

Minelli, Enrico

PD February 2000. **TI** Information at Equilibrium. **AU** Minelli, Enrico; Polemarchakis, Heracles M. **AA** Minelli: University of Brescia, Italy. Polemarchakis: CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/04; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 11. **PR** \$100 per year. **JE** C70, D82, D84. **KW** Nash Equilibrium. Rational Expectations. Common Knowledge. Veto Games. Game Theory.

AB In a game with rational expectations individuals refine their information with the information revealed by the strategies of other individuals: the elementary acts of other individuals at each state of the world. At a Nash Equilibrium of a game with rational expectations, the information of individuals is essentially symmetric: the same profile is also an equilibrium of a game with symmetric information; and their acts are common knowledge. If each player has a veto act, which yields a minimum payoff that no other profile of strategies attains, then the veto profile is the only Nash equilibrium, and it is an equilibrium with rational expectations and essentially symmetric information, which accounts for the impossibility of speculation.

Mishkin, Frederic S.

PD January 1999. **TI** What Will Technology Do to Financial Structure? **AU** Mishkin, Frederic S.; Strahan, Philip E. **AA** Mishkin: Columbia University and National Bureau of Economic Research. Strahan: Federal Reserve Bank of New York. **SR** National Bureau of Economic Research Working Paper: 6892; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** \$5.00. **JE** G14, G21, G24, G28, O33. **KW** Technological Change. Financial Systems. Intermediaries. Risk Taking. Information.

AB This paper looks at how advances in information and telecommunications technologies have been changing the structure of the financial system by lowering transaction costs and reducing asymmetric information. These changes have reduced the role of traditional financial intermediaries, but have improved overall efficiency by lowering the costs of financial contracting. Despite these benefits, technological progress presents policymakers with some important challenges. First, as markets for financial products become larger and more contestable, defining geographic and product markets narrowly becomes more problematic. Second, financial consolidation and the trend towards new activities of financial intermediaries require the exploration of new methods to preserve the safety and soundness of the financial system. A combined system of vigilant supervision and constructive ambiguity to deal with failures of larger institutions should be capable of mitigating the potential for increased risk-taking and help preserve the health of the financial system.

PD February 1999. **TI** International Experiences with Different Monetary Policy Regimes. **AA** Columbia University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6965; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 40. **PR** \$5.00. **JE** E52, E58. **KW** Monetary Policy. Targeting. Transparency. Accountability.

AB This paper examines the international experiences with four basic types of monetary policy regimes: 1) exchange-rate targeting, 2) monetary targeting, 3) inflation targeting, and 4) monetary policy with an implicit but not an explicit nominal anchor. The basic theme that emerges from this analysis is that transparency and accountability are crucial to constraining discretionary monetary policy so that it produces desirable long-run outcomes. Because the devil is in the details in achieving transparency and accountability, what strategy will work best in a country depends on its political, cultural and economic institutions and its past history.

Mitchell, Matthew F.

TI Innovation Fertility and Patent Design. **AU** Hopenhayn, Hugo A.; Mitchell, Matthew F.

Mitchell, Olivia S.

TI The Role of Real Annuities and Indexed Bonds in an Individual Accounts Retirement Program. **AU** Brown, Jeffrey R.; Mitchell, Olivia S.; Poterba, James M.

Moffitt, Robert A.

PD March 1999. **TI** Demographic Change and Public Assistance Expenditures. **AA** Johns Hopkins University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6995; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 31. **PR** $5.00. **JE** H51, H53, I38, J11. **KW** Welfare Programs. Government Expenditures. Demographic Trends. Forecasts.

AB Growth in overall real welfare expenditures per capita has been a noted trend in the last thirty years in the U.S. The influence of demographic forces in contributing to this growth is considered in this paper. It is found that the growth of female-headed families is the strongest and dominant force in contributing to trends in real AFDC expenditures per capita over the long run. The influence of demographic growth is especially strong for the black population. For the Food Stamp and Medicaid programs, increases in participation rates, on the other hand, have been more important. Projections of future trends in the age, race, and sex composition of the U.S. population show that expenditures in none of these programs is likely to respond to such basic demographic trends, however.

Montanes, Antonio

TI Measurement Errors and Outliers in Seasonal Unit Root Testing. **AU** Haldrup, Niels; Montanes, Antonio; Sanso, Andreu.

Montero, Maria

PD July 1999. **TI** Noncooperative Bargaining in Apex Games and the Kernel. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9961; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 24. **PR** no charge. **JE** C72, C78. **KW** Noncooperative Bargaining. Apex Games. Kernel. Random Proposers. Game Theory.

AB This paper studies non-cooperative bargaining with random proposers in apex games. Two different protocols are considered: the egalitarian protocol, which selects each player to be the proposer with the same probability, and the proportional protocol, which selects each player with a probability proportional to his number of votes. Expected equilibrium payoffs coincide with the kernel for the grand coalition regardless of the protocol. Expected payoffs conditional on a coalition may depend on the protocol: given a coalition of the apex player with a minor player, an egalitarian protocol yields a nearly equal split whereas a proportional protocol leads to a proportional split.

Moore, Michael J.

TI Alcohol. **AU** Cook, Phillip J.; Moore, Michael J.

Morck, Randall

PD July 1999. **TI** The Information Content of Stock Markets: Why Do Emerging Markets Have Synchronous Stock Price Movements? **AU** Morck, Randall; Yeung, Bernard; Yu, Wayne. **AA** Morck: University of Alberta. Yeung: New York University. Yu: Hong Kong Polytechnic University. **SR** New York University, Salomon Center Working Paper: S/00/23; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 43. **PR** $5.00 each; $100.00 yearly subscription. **JE** G12, G14, G38, O16, P16. **KW** Asset Pricing. Information. Market Efficiency. Regulation. Economic History.

AB Stock prices move together more in low-income economies than in high- income economies. This finding is clearly not due to market size and is only partially explained by higher fundamentals correlation in low- income economies. However, measures of institutionalized respect for property rights do explain these differences. We conjecture that weak private property rights impede informed trading and increase systematic noise trader risk. We also conjecture that, in countries that protect public investors poorly from corporate insiders, intercorporate income shifting may make firm-specific information less useful to risk arbitrageurs and therefore impede its capitalization into stock prices.

Moreno, Manuel

PD December 1999. **TI** On the Relevance of Modeling Volatility for Pricing Purposes. **AA** Univertat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 431; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 22. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C51, E43, G13. **KW** Term Structure. Interest Rates. Bond Pricing. Two-Factor Models. Ornstein-Uhlenbeck Process.

AB This paper presents a two-factor (Vasicek-CIR) model of the term structure of interest rates and develops its pricing and empirical properties. We assume that default free discount bond prices are determined by the time to maturity and two factors, the long-term interest rate and the spread. Assuming a certain process for both factors, a general bond pricing equation is derived and a closed-form expression for bond prices is obtained. Empirical evidence of the model's performance in comparison with a double Vasicek model is presented. The main conclusion is that the modeling of the volatility in the long-term interest rate process can help (in a large amount) to fit the observed data and can improve -- in a reasonable quantity -- the prediction of the future movements in the medium- and long-term interest rates. However, for shorter maturities, it is shown that the pricing errors are, basically, negligible and it is not so clear which is the best model to be used.

Moxnes, Erling

TI Information Feedback in Public-Bad Games: A Cross-Country Experiment. **AU** Van der Heijden, Eline C. M.; Moxnes, Erling.

Mulligan, Casey B.

PD May 1999. **TI** Gerontocracy, Retirement, and Social Security. **AU** Mulligan, Casey B.; Sala-i-Martin, Xavier. **AA** Mulligan: University of Chicago and NBER. Sala-i-Martin: Columbia University, Universitat Pompeu Fabra, and NBER. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 383; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 51. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D70, H55, J14, J24, J26. **KW** Social Security. Retirement. Gerontocracy. Lobbying. Pressure Groups.

AB Why are the old politically successful? We build a simple interest group model in which political pressure is time-intensive, showing that in the political competitive equilibrium each group lobbies for government policies that lower their own value of time but the old do so to a greater extent and as a result are net gainers from the political process. What distinguishes the elderly from other political groups (and what makes them more successful) is that they have lower labor productivity and/or that we are all likely to become elderly at some point, while we are relatively unlikely to change gender, race, sexual orientation, or even occupation. The model has a variety of implications for the design of social security programs, which we test using data from the Social Security Administration.

PD May 1999. **TI** Social Security in Theory and Practice (I): Facts and Political Theories. **AU** Mulligan, Casey B.; Sala-i-Martin, Xavier. **AA** Mulligan: University of Chicago and NBER. Sala-i-Martin: Columbia University, Universitat Pompeu Fabra, and NBER. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 384; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 36. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D70, H23, H55, J14, J26. **KW** Social Security. Retirement. Gerontocracy. Retirement Incentives. Political Theories.
AB 166 countries have some kind of public old age pension. What economic forces create and sustain old age Social Security as a public program? We document some of the internationally and historically common features of Social Security programs including explicit and implicit taxes on labor supply, pay-as-you-go features, intergenerational redistribution, benefits which are increasing functions of lifetime earnings and not means-tested. We partition theories of Social Security into three groups: "political", "efficiency" and "narrative" theories. We explore three political theories in this paper: the majority rational voting model (with its two versions: "the elderly as the leaders of a winning coalition with the poor" and the "once and for all election" model), the "time-intensive model of political competition" and the "taxpayer protection model". Each of the explanations is compared with the international and historical facts.

PD May 1999. **TI** Social Security in Theory and Practice (II): Efficiency Theories, Narrative Theories, and Implications for Reform. **AU** Mulligan, Casey B.; Sala-i-Martin, Xavier. **AA** Mulligan: University of Chicago and NBER. Sala-i-Martin: Columbia University, Universitat Pompeu Fabra, and NBER. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 385; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 35. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D70, H23, H55, J14, J26. **KW** Social Security. Retirement. Gerontocracy. Retirement Incentives. Political Theories.
AB 166 countries have some kind of public old age pension. What economic forces create and sustain old age Social Security as a public program? Mulligan and Sala-i-Martin (1999b) document several of the internationally and historically common features of social security programs, and explore "political" theories of Social Security. This paper discusses the "efficiency theories", which view creation of the SS program as a full of partial solution to some market failure. Efficiency explanations of social security include the "SS as welfare for the elderly", the "retirement increases productivity to optimally manage human capital externalities", "optimal retirement insurance", the "prodigal father problem", the "misguided Keynesian", the "optimal longevity insurance", the "government economizing transaction costs", and the "return on human capital investment". We also analyze four "narrative" theories of social security: the "chain letter theory", the "lump of labor theory", the "monopoly capitalism theory", and the "Sub- but-Nearly-Optimal policy response to private pensions theory".

Mutuswami, Suresh

PD March 2000. **TI** Subscription Mechanisms for Network Formation. **AU** Mutuswami, Suresh; Winter, Eyal. **AA** Mutuswami: CORE. Winter: Hebrew University of Jerusalem. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/20; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 18. **PR** $100 per year. **JE** C60, C70, D20, D82, L10. **KW** Mechanism Design. Network Formation. Game Theory. Subscription Mechanisms. Operations Research.
AB We analyze a model of network formation where the costs of forming links are publicly known but an individual's benefits are not known to the social planner. The objective is to design a mechanism which not only ensures that an efficient network always forms in equilibrium but also ensures that the resulting net payoffs to the agents are equitable. We propose two mechanisms towards this end; in the first, agents announce sequentially the set of players with whom they wish to form links and a cost contribution. We show that all subgame perfect equilibria of this game result in the formation of an efficient network but the resulting net payoffs are asymmetric. The second mechanism corrects this asymmetry through a two-stage variant of the first mechanism. We also discuss an extension of the basic model to cover the case of directed graphs and give conditions under which the proposed mechanisms are immune to deviations by coalitions.

Mykula, Jaroslava K.

TI Do Indirect Cost Rates Matter? **AU** Ehrenberg, Ronald G.; Mykula, Jaroslava K.

Nagel, Rosemarie

PD January 2000. **TI** One, Two, (Three), Infinity: Newspaper and Lab Beauty-Contest Experiments. **AU** Nagel, Rosemarie; Bosch-Domenech, Antoni; Satorra, Albert; Garcia-Montalvo, Jose. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 438; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 29. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C70, C91, C92, C93. **KW** Experiments. Bounded Rationality. Beauty-Contest. Parallelism. Game Theory.
AB "Beauty-contest" is a game in which participants have to choose, typically, a number in [0,100], the winner being the person whose number is closest to a proportion of the average of all chosen numbers. We describe and analyze Beauty-contest experiments run in newspapers in UK, Spain, and Germany and find stable patterns of behavior across them, despite the uncontrollability of these experiments. These results are then compared with lab experiments involving undergraduates and game theorists as subjects, in what must be one of the largest empirical corroborations of interactive behavior ever tried. We claim that all observed behavior, across a wide variety of

treatments and subject pools, can be interpreted as iterative reasoning. Level-1 reasoning, Level-2 reasoning and Level-3 reasoning are commonly observed in all the samples, while the equilibrium choice (Level-Maximum reasoning) is only prominently chosen by newspaper readers and theorists. The results show the empirical power of experiments run with large subject-pools, and open the door for more experimental work performed on the rich platform offered by newspapers and magazines.

TI The Effect of Intergroup Competition on Group Coordination: An Experimental Study. **AU** Bornstein, Gary; Gneezy, Uri; Nagel, Rosemarie.

Nahuis, Richard

TI Vested Interests and Resistance to Technology Adoption. **AU** Canton, Eric J. F.; de Groot, Henri L. F.; Nahuis, Richard.

Neary, J. Peter

TI The Mercantilist Index of Trade Policy. **AU** Anderson, James E.; Neary, J. Peter.

Nelissen, Jan H. M.

TI Simple and Complex Gift Exchange in the Laboratory. **AU** Van der Heijden, Eline C. M.; Nelissen, Jan H. M.; Potters, Jan J. M.; Verbon, Harrie A. A.

Nesterov, Yu

PD February 2000. **TI** Confidence Level Solutions for Stochastic Programming. **AU** Nesterov, Yu; Vial, Jean-Philippe. **AA** Nesterov: CORE. Vial: University of Geneva. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/13; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 16. **PR** $100 per year. **JE** C61, C63. **KW** Stochastic Programming. Stochastic Subgradient. Complexity Estimate. Optimization.

AB We propose an alternative approach to stochastic programming based on Monte-Carlo sampling and stochastic gradient optimization. The procedure is by essence probabilistic and the computed solution is a random variable. The associated objective value is doubly random, since it depends on two outcomes: the event in the stochastic program and the randomized algorithm. We propose a solution concept in which the probability that the randomized algorithm produces a solution with an expected objective value departing from the optimal one by more than E is small enough. We derive complexity bounds for this process. We show that by repeating the basic process on an independent sample, one can significantly sharpen the complexity bounds.

Neumark, David

TI Why are Racial and Ethnic Wage Gaps Larger for Men than for Women? Exploring the Role of Segregation Using the New Worker-Establishment Characteristics Database. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

TI Why are Racial and Ethnic Wage Gaps Larger for Men than for Women? Exploring the Role of Segregation Using the New Worker-Establishment Characteristics Database. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

TI New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

TI New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. **AU** Bayard, Kimberly; Hellerstein, Judith; Neumark, David; Troske, Kenneth R.

Newey, Whitney K.

PD July 1999. **TI** Conditional Moment Restrictions in Censored and Truncated Regression Models. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/15; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 32. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** C13, C14, C24, C34. **KW** Censored Regression. Truncated Regression. Semiparametric Estimation. Conditional Moment.

AB Censored and truncated regression models with unknown distribution are important in econometrics. This paper characterizes the class of all conditional moment restrictions that lead to consistent estimators for these models. The semiparametric efficiency bound for each conditional moment restriction is derived. In the case of a nonzero bound it is shown how an estimator can be constructed, and that an appropriately weighted version can attain the efficiency bound. These estimators also work when the disturbance is independent of the regressors. The paper discusses selecting among several estimators in this case, as well as methods of combining them to improve efficiency.

Ng, David Tat-Chee

TI An International Dynamic Asset Pricing Model. **AU** Hodrick, Robert J.; Ng, David Tat-Chee; Sengmueller, Paul.

Nijman, Theo

TI Testing Affine Term Structure Models in Case of Transaction Costs. **AU** Driessen, Joost; Melenberg, Bertrand; Nijman, Theo.

Nunez, Soledad

TI On the Optimality of Treasury Bond Auctions: The Spanish Case. **AU** Mazon, Cristina; Nunez, Soledad.

Nyman, John A.

PD April 1999. **TI** The Welfare Economics of Insurance Contracts that Pay Off by Reducing Price. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 308; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 16. **PR** no charge. **JE** G22, I11. **KW** Health Insurance. Moral Hazard. Price Decomposition. Welfare. Demand Curves.

AB For the purposes of this paper, moral hazard is defined as the change in consumption that results from becoming insured when the insurance contract pays off by reducing the price of the insured commodity. In the case of "health" insurance, moral hazard most commonly refers to the change in health care utilization or spending that results from becoming insured under a contract that reduces the price of health care. Early health insurance contracts typically paid off by reducing the price to zero, but modern contracts typically establish a percentage reduction in price (the coinsurance rate) or a more complex payoff scheme that includes such a percentage reduction in price in addition to other parameters. This analysis focuses on that portion of any insurance contract that pays off with any reduction in price. This paper presents the welfare implications of moral hazard under the assumption that medical care consumption is related to income. It suggests that a portion of moral hazard is due to income transfers and that this portion of moral hazard should be excluded from the welfare loss calculations.

O'Donoghue, Cathal

TI An Introduction to EUROMOD. **AU** Immervoll, Herwig; O'Donoghue, Cathal; Sutherland, Holly.

PD September 1999. **TI** Integrating Output in EUROMOD: An Assessment of the Sensitivity of Multi-Country Microsimulation Results. **AU** O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca. **AA** O'Donoghue and Sutherland: University of Cambridge. Utili: University of Rome "Tor Vergata". **SR** EUROMOD Working Paper: EM1/99; Microsimulation Unit, Department of Applied Economics, Sidgwick Avenue, Cambridge CB3 9DE, United Kingdom. Website: www.econ.cam.ac.uk/dae/mu/emod3.htm. **PG** 15. **PR** US $10/5 pounds/ STG/EUROS 8; make checks payable to University of Cambridge. **JE** C15, C81, D31, F47. **KW** European Union. Microsimulation. Income Distribution. Microeconomic Data.
AB In order to provide European results, and for results at the national level to be comparable, it is necessary to make adjustments to the input micro-data and to adopt assumptions about the relative value of incomes across countries. This paper explores the sensitivity of the EUROMOD model results to the choice of these adjustments and assumptions. It focuses particularly on the effects of the treatment of survey non-response and income under-reporting, and on the choice of exchange rates and equivalence scales.

TI Microsimulation and the Formulation of Policy: A Case Study of Targeting in the European Union. **AU** Atkinson, Tony; Bourguignon, Francois; O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca.

TI Microsimulation and the Formulation of Policy: A Case Study of Targeting in the European Union. **AU** Atkinson, Tony; Bourguignon, Francois; O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca.

O'Shaughnessy, Terry

PD July 2000. **TI** The Taxing Issue of Queues. **AA** St. Anne's College, Oxford. **SR** Oxford Department of Economics Discussion Paper: 18; Institute of Economics and Statistics, University of Oxford, St Cross Building, Manor Road, Oxford OX1 3UL, England. Website: www.economics.ox.ac.uk/. **PG** 37. **PR** 2 pounds (US $4.00). **JE** D61, D63, H21, H23. **KW** Redistribution. Queues. Subsidies. Tax-Benefit System.
AB This paper examines the redistributional function of queues. A system in which subsidies and queues are used to allocate goods may appear attractive to policy makers who are concerned about equity since the resource used in queuing (time) is generally allocated more equally than, say, human or physical capital. Thus a subsidy-queue mechanism performs a role similar to that performed by a tax-benefit system. Both mechanisms, however, bring with them efficiency losses, which the paper compares. It is shown that the subsidy-queue mechanism may appear superior if the trade-off between efficiency and equity is viewed in terms of consumption and the distribution of consumption. On the other hand, if the equity-efficiency trade-off is properly formulated in terms of utility and the distribution of utility the tax-based redistributional mechanism is superior.

Oh, Wonseok

TI Electronic Commerce in the Retail Brokerage Industry: Trading Costs of Internet Versus Full Service Firms. **AU** Bakos, Yannis; Lucas, Henry C., Jr..; Oh, Wonseok; Viswanathan, Sivakumar; Simon, Gary; Weber, Bruce.

TI Electronic Commerce in the Retail Brokerage Industry: Trading Costs of Internet Versus Full Service Firms. **AU** Bakos, Yannis; Lucas, Henry C., Jr..; Oh, Wonseok; Viswanathan, Sivakumar; Simon, Gary; Weber, Bruce.

Oliveras, Ester

TI The Ethics of Creative Accounting: Some Spanish Evidence. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI The Struggle Against Creative Accounting: Is "True and Fair View" Part of the Problem or Part of the Solution? **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI The Case for a New Accounting Research Agenda in Spain. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI Dimensions of National Culture and the Accounting Environment -- The Spanish Case. **AU** Amat, Oriol; Blake, John; Wraith, Philip; Oliveras, Ester.

TI Spanish Auditors and the 'True and Fair View'. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

TI Variations in National Management Accounting Approaches. **AU** Amat, Oriol; Blake, John; Oliveras, Ester.

Owen, Joel

TI The Emergence of Concentrated Ownership and the Rebalancing of Portfolios Due to Shareholder Activism in a Financial Market Equilibrium. **AU** Katz, Barbara G.; Owen, Joel.

Ozyildirim, Ataman

TI Trade, Investment, and Growth: Nexus, Analysis, and Prognosis. **AU** Krishna, Kala; Ozyildirim, Ataman; Swanson, Norman R.

Page, Frank H.

PD March 2000. **TI** Competitive Selling Mechanisms: The Delegation Principle and Farsighted Stability. **AA** University of Alabama. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/21; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 21. **PR** $100 per year. **JE** C70, D43, L13. **KW** Mechanism Design. Oligopoly. Incentive Compatibility. Pricing. Selling Mechanisms.

AB The author analyzes the problem of competitive mechanism design within the context of a model of product differentiated oligopoly. In the model, firms compete via their catalogs, that is, via the sets of products (broadly defined) and prices firms offer to the market. In an oligopoly setting, participation by an agent in any one firm's catalog is endogenously determined. This fact leads naturally to a modification of the classical notion of incentive compatibility for mechanisms. The author extends the classical notion of incentive compatibility to take into account endogenous participation, introducing the notion of participation incentive compatibility (PIC). The main contribution is a characterization of all PIC selling mechanisms in terms of catalogs. In particular, the author shows that a selling mechanism is PIC if and only if there exists a unique, minimal catalog profile which implements the mechanisms. The author calls this characterization the delegation principle. A second contribution is the application of the notion of farsighted stability to the problem of competitive mechanism design. The author shows that for any approximating finite subgame (of catalog choice), the farsightedly stable set of catalog profiles.

Pakes, Ariel

TI A Dynamic Oligopoly with Collusion and Price Wars. **AU** Fershtman, Chaim; Pakes, Ariel.

Palomino, Frederic

PD August 1999. **TI** Should Smart Investors Buy Funds with High Returns in the Past. **AU** Palomino, Frederic; Uhlig, Harald. **AA** CentER, Tilburg University and CEPR. **SR** Tilburg CentER for Economic Research Discussion Paper: 9969; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 31. **PR** no charge. **JE** D82, D84, G11, G20. **KW** Heterogeneous Abilities. Performance Intervals. Portfolio Riskiness. Mutual Funds. Asymmetric Information.

AB Newspapers and weekly magazines catering to the investing crowd often rank funds according to the returns generated in the past. Aside from satisfying sheer curiosity, these numbers are probably also the basis on which investors pick a fund to invest in. In this article, we fully characterize the equilibrium in a game between a mutual fund manager of unknown ability who controls the riskiness of his portfolio and investors who only observe realized returns. We derive conditions under which (i) investors invest in the fund if the realized return falls within some interval, i.e., is neither too low nor too high, (ii) a good mutual fund manager picks a portfolio of minimal riskiness and (iii) a bad mutual fund manager will pick a portfolio with higher risk, "gambling" on a lucky outcome. We also show that regulating the maximum risk a mutual fund is allowed to take may actually decrease rather than increase the expected return to investors, even if the market price of risk is zero: the regulation ends up forcing the investor to pick the bad fund more often.

Pantzalis, Christos

TI Operational Hedges and Coping with Foreign Exchange Exposure: The Case of U.S. MNCs During the Asian Financial Crisis of 1997. **AU** Francis, Bill B.; Hasan, Iftekhar; Pantzalis, Christos.

Paradis, Jaume

TI A Non-Quasi-Competitive Cournot Oligopoly with Stability. **AU** Villanova, Ramon; Paradis, Jaume; Viader, Pelegri.

Parigi, Bruno

TI Systemic Risk, Interbank Relations and Liquidity Provision by the Central Bank. **AU** Freixas, Xavier; Parigi, Bruno; Rochet, Jean-Charles.

Pashardes, Panos

TI Factor Adjustment, Quality Change, and Productivity Growth for U.S. Manufacturing. **AU** Bernstein, Jeffrey I.; Mamuneas, Theofanis P.; Pashardes, Panos.

Pastor, Jesus T.

PD March 2000. **TI** Cross-Border Performance in European Banking. **AU** Pastor, Jesus T.; Lozano-Vivas, Ana; Hasan, Iftekhar. **AA** Pastor: Universidad Miguel Hernandez. Lozano-Vivas: Universidad de Malaga. Hasan: New York University. **SR** New York University, Salomon Center Working Paper: S/00/14; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 21. **PR** $5.00 each; $100.00 yearly subscription. **JE** E58, F33, G21, G28. **KW** Banking. Central Banks. International Finance. European Union.

AB Using a Data Envelop Analysis model, this paper expands and improves on existing methodologies used in inter-country banking efficiency behavior by defining an approach that can successfully predict what the efficiency of institutions in one country would be if they operate in another country. This is the first such systematic multi-country analysis of bank efficiency analyzing the potential cross-country performance by countries of the integrated European Union. Overall, the evidence indicates that banks from Spain, Denmark, Portugal and Belgium are predicted to maintain their high domestic efficiency scores if they decide to expand business beyond their borders to any of the other European countries. The evidence also indicates that adverse local environmental conditions in Spain, Portugal and Denmark make it harder for banks from other countries to establish and perform well in these markets.

Pattanayak, Subhrendu K.

PD August 1999. **TI** Worth of Watersheds: A Producer Surplus Approach for Valuing Drought Mitigation in Eastern Indonesia. **AU** Pattanayak, Subhrendu K.; Kramer, Randall A. **AA** Pattanayak: Research Triangle Institute. Kramer: Duke University. **SR** Duke University Department of Economics Working Paper: 99/10; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 36. **PR** no charge. **JE** H41, Q12, Q23, Q25, R12. **KW** Watershed Protection. Drought Mitigation. Valuation. Producer Surplus. Tropical Deforestation.

AB This study combines hydrological modeling with applied micro- econometric techniques to value a complex ecosystem service: drought mitigation provided by tropical forested watersheds to agrarian communities. Spatial variation in current baseflow allows estimation of drought mitigation values as the marginal profit accruing to agricultural households. The paper shows that this uncommon focus on producer (not consumer) surplus measures is appropriate for valuation as long as markets for commodities related to the environmental services are complete. For the typical household, the estimated marginal profit is positive, validating the central hypothesis that baseflow makes positive contributions to agricultural profits. There is some evidence, however, that increased watershed protection will increase profits through greater baseflow only in watersheds with a unique mix of physio- graphic and climatic features. The paper evaluates and provides some support for the hypothesis, put forward by hydrological science and the Indonesian Government, that protected watersheds can supply latent and unrecognized ecosystem services to local people.

Paxson, Christina

TI Mortality, Education, Income, and Inequality Among American Cohorts. **AU** Deaton, Angus; Paxson, Christina.

Pechlivanos, Lambros

TI Heterogeneity-Promoting Optimal Procurement. **AU** Ganuza, Juan-Jose; Pechlivanos, Lambros.

Peeters, Ronald

PD May 1999. **TI** On the Structure of the Set of Correlated Equilibria in Two-By-Two Bimatrix Games. **AU** Peeters, Ronald; Potters, Jos. **AA** Peeters: CentER and Tilburg University. Potters: Nijmegen University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9945; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 9. **PR** no charge. **JE** C72. **KW** Correlated Equilibrium. Bimatrix Games. Game Theory. Noncooperative Games.

AB The paper studies the structure of the set of correlated equilibria for two-by-two bimatrix games. We find that the extreme points of the (convex) set of correlated equilibria can be determined very easily from the Nash equilibria of the game.

PD May 1999. **TI** Sender-Receiver Games. **AU** Peeters, Ronald; Potters, Jos. **AA** Peeters: CentER and Tilburg University. Potters: Nijmegen University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9946; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 18. **PR** no charge. **JE** C72, D82. **KW** Noncooperative Games. Game Theory. Signaling. Sender-Receiver Games. Cheap Talk.

AB Standard game-theoretic solution concepts do not guarantee meaningful communication in cheap-talk games. In this paper, we define a solution concept which guarantees communication for a large class of games by designing a behavior protocol which the receiver uses to judge messages sent by the sender on acceptability. For that, we will make use of the Nash equilibrium concept for which truth-telling is a consequence. Uniqueness is nevertheless not a consequence, but after reasonable selection it is. Further, we arrive at a method for computing all equilibria very easily.

Peled, Dan

TI External vs. Internal Learning-by-Doing in an R&D Based Growth Model. **AU** Hornstein, Andreas; Peled, Dan.

Penalva, Jose

PD March 1999. **TI** Insurance with Frequent Trading. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 365; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 28. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D50, D81, D99, G11, G22. **KW** Risk-Sharing. Insurance. Hedging. Point Processes. Complete Markets.

AB This paper looks at the dynamic management of risk in an economy with discrete time consumption and endowments and continuous trading. I study how agents in such an economy deal with all the risk in the economy and attain their Pareto optimal allocations by trading in a few natural securities: private insurance contracts and a common set of derivatives on the aggregate endowment. The parsimonious nature of the implied securities needed for Pareto optimality suggests that in such contexts complete markets is a very reasonable assumption.

Penyarrubia, Diego

TI Economic Booms, Trade Deficits, and Economic Policy. **AU** Alcala, Francisco; Penyarrubia, Diego.

Peranson, Elliott

TI The Redesign of the Matching Market for American Physicians: Some Engineering Aspects of Economic Design. **AU** Roth, Alvin E.; Peranson, Elliott.

Pereira, Olivier

PD March 2000. **TI** On The Wagner-Whitin Lot-Sizing Polyhedron. **AU** Pereira, Olivier; Wolsey, Laurence. **AA** Pereira: Universite Catholique de Louvain. Wolsey: CORE and INMA. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/23; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 10. **PR** $100 per year. **JE** C61, D21, D24. **KW** Polyhedra. Adjacency. Maximal Faces. Dual Algorithm. Lot-Sizing.

AB We study a family of unbounded polyhedra arising in the study of uncapacitated lot-sizing problems with Wagner-Whitin costs. With n the number of periods, we completely characterize the bounded faces of maximal dimension, and derive an O(n-squared) algorithm to express any point within the polyhedron as a convex combination of extreme points and extreme rays. We also study adjacency on the polyhedra, and give a simple O(n) test for adjacency. Finally, we observe that if we optimize over these polyhedra, the face of optimal solutions can be found in O(n- squared).

Peretto, Pietro F.

TI Industrial Revolutions and Demographic Transitions. **AU** Connolly, Michelle; Peretto, Pietro F.

Peri, Giovanni

TI Capital, Wages, and Growth: Theory and Evidence. **AU** Ciccone, Antonio; Peri, Giovanni; Almond, Douglas.

Pesenti, Paolo

TI Competitive Devaluations: A Welfare-Based Approach. **AU** Corsetti, Giancarlo; Pesenti, Paolo; Roubini, Nouriel; Tille, Cedric.

Peterson, Sandra

PD December 1999. **TI** The Valuation of American-Style Swaptions in a Two-Factor Spot- Futures Model. **AU** Peterson, Sandra; Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Peterson and Stapleton: Strathclyde University. Subrahmanyam: New York University. **SR** New York University, Salomon Center Working Paper: S/00/07; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 22. **PR** $5.00 each; $100.00 yearly subscription. **JE** E43, G13. **KW** Swaptions. Options. Term Structure. Contingent Pricing. Interest Rates.

AB Satisfactory models exist for the pricing of interest-rate dependent derivatives in a single-factor context, where interest rates of various maturities are perfectly correlated. However, these models, by definition, are not capable of accurately pricing derivatives, such as swaptions and yield-spread options, whose payoffs are sensitive to the shape as well as the level of the term structure. One promising approach has been to build multi-factor forward-rate models of the Heath, Jarrow and Morton (1992) type. However, this approach has some drawbacks for the pricing of swaptions and bond options. This paper presents an alternative, no-arbitrage model based on the London Interbank Offer Rate (Libor) futures. By modeling both the Libor spot and futures rates, the authors generate a two-dimensional process for the term structure. The authors illustrate the model using realistic examples with a large number of time periods. The computational efficiency is achieved through the use of a two-dimensional recombining lattice of interest rates. The problem is to price European-style, Bermudan-style and American-style swaptions, given the prices of European-style interest rate caps and floors for all maturities.

Petrin, Amil

TI When Industries Become More Productive, Do Firms? Investigating Productivity Dynamics. **AU** Levinsohn, James; Petrin, Amil.

Petron-Brunel, Anne

TI A New Approach to Rights in Social Choice Theory Which Incorporates Utilitarianism. **AU** Barrett, Richard; Petron-Brunel, Anne; Salles, Maurice.

Philipson, Tomas

TI Aging and the Growth of Long-Term Care. **AU** Lakdawalla, Darius; Philipson, Tomas.

Phillips, Garry D. A.

TI A Survey of Total Factor Productivity and Technical Change in the Chinese Economy 1979-1996. **AU** Liang, Qi; Phillips, Garry D. A.

TI Higher-Order Asymptotic Expansions of the Least-Squares Estimation Bias in First-Order Dynamic Regression Models. **AU** Kiviet, Jan F.; Phillips, Garry D. A.

PD November 1998. **TI** An Alternative Approach to Obtaining Nagar-Type Moment Approximations in Simultaneous Equation Models. **AA** University of Exeter. **SR** University of Exeter, Department of Economics Discussion Paper: 99/05; Department of Economics, University of Exeter, Amory Building, Rennes Drive, Exeter Devon, EX4 4JR, England. Website: www.ex.ac.uk/~BPearson/Research/Discussion Papers Econ/Discussion Papers.html. **PG** 18. **PR** no charge. **JE** C13, C30. **KW** Simultaneous Equations. Non-Spherical Disturbances. Nagar Expansions. Bias. Second Moments.

AB The paper examines asymptotic expansions for estimation errors expressed explicitly as functions of underlying random variables. Taylor series expansions are obtained from which first and second moment approximations are derived. While the expansions are essentially equivalent to the traditional Nagar-type, the terms are expressed in a form which enables moment approximations to be obtained in a particularly straightforward way, once the partial derivatives have been found. The approach is illustrated by considering the k-class estimators in a static simultaneous equation model where the disturbances are non- spherical.

TI The Bias of the 2SLS Variance Estimator. **AU** Kiviet, Jan F.; Phillips, Garry D. A.

TI The Accuracy of the Higher Order Bias Approximation for the 2SLS Estimator. **AU** Hadri, Kaddour; Phillips, Garry D. A.

TI Moment Approximation for Least Squares Estimators in Dynamic Regression Models with a Unit Root. **AU** Kiviet, Jan F.; Phillips, Garry D. A.

Picard, Nathalie

TI Distributive Politics: Does Electoral Competition Promote Inequality? **AU** Laslier, Jean-Francois; Picard, Nathalie.

Picone, Gabriel A.

TI Does Where You Are Admitted Make A Difference? An Analysis of Medicare Data. **AU** Sloan, Frank A.; Picone, Gabriel A.; Taylor, Donald H., Jr..; Chou, Shin-Yi.

Piehl, Anne Morrison

TI The Role of Deportation in the Incarceration of Immigrants. **AU** Butcher, Kristin F.; Piehl, Anne Morrison.

Pindyck, Robert S.

TI Network Effects and Diffusion in Pharmaceutical Markets: Antiulcer Drugs. **AU** Berndt, Ernst R.; Pindyck, Robert S.; Azoulay, Pierre.

Pinkse, Joris

TI Empirical Implications of Equilibrium Bidding in First-Price, Symmetric, Common Value Auctions. **AU** Hendricks, Kenneth; Pinkse, Joris; Porter, Robert H.

Pires Pina, Joaquim

TI Implementing Interactive Computing in an Object-Oriented Environment. **AU** Canova, Fabio; Pires Pina, Joaquim.

Pischke, Jorn-Steffen

TI Minimum Wages and On The Job Training. **AU** Acemoglu, Daron; Pischke, Jorn-Steffen.

TI Certification of Training and Training Outcomes. **AU** Acemoglu, Daron; Pischke, Jorn-Steffen.

Polemarchakis, Heracles M.

TI Information at Equilibrium. **AU** Minelli, Enrico; Polemarchakis, Heracles M.

Polinsky, A. Mitchell

PD March 1999. **TI** The Economic Theory of Public Enforcement of Law. **AU** Polinsky, A. Mitchell; Shavell, Steven. **AA** Polinsky: Stanford University and National Bureau of Economic Research. Shavell: Harvard Law School and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6993; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 46. **PR** $5.00. **JE** H26, K42. **KW** Law Enforcement. Legal Procedure.

AB This article surveys the theory of the public enforcement of law -- the use of the public agents (inspectors, tax auditors, police, prosecutors) to detect and to sanction violators of legal rules. We first present the basic elements of the theory, focusing on the probability of imposition of sanctions, the magnitude and form of sanctions, and the rule of liability. We then examine a variety of extensions of central theory, concerning accidental harms, costs of imposing fines, errors, general enforcement, marginal deterrence, the principal-agent relationship, settlements, self-reporting, repeat offenders, imperfect knowledge about the probability and magnitude of fines, and incapacitation.

Politis, Dimitris N.

TI A Subsampling Approach to Estimating the Distribution of Diverging Statistics with Applications to Assessing Financial Market Risks. **AU** Bertail, Patrice; Haefke, Christian; Politis, Dimitris N.; White, Halbert.

TI A Subsampling Approach to Estimating the Distribution of Diverging Statistics with Applications to Assessing Financial Market Risks. **AU** Bertail, Patrice; Haefke, Christian; Politis, Dimitris N.; White, Halbert.

Porter, Robert H.

PD May 1999. **TI** Patterns of Trade in the Market for Used Durables: Theory and Evidence. **AU** Porter, Robert H.; Sattler, Peter. **AA** Porter: Northwestern University and NBER. Sattler: SUNY Buffalo. **SR** National Bureau of Economic Research Working Paper: 7149; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** D10, D42, L14, L15, L62. **KW** Durables. Automobiles. Secondhand Markets. Transaction Costs. Specialization.

AB The consumption value of a durable good diminishes as it ages due to physical deterioration and consumers' preference for the new. We develop a model of consumer specialization and trade in the market for used durables based on imperfect substitutability. Imperfect substitutability across vintages is reflected in a declining market price over time. Heterogeneous consumers maximize utility by specializing in durables of differing ages. Consumers must trade to acquire their preferred vintage each period. When there are transaction costs in the secondhand market, the volume of trade due to specialization increases with imperfect substitutability. We examine the determinants of vehicle ownership transfers in Illinois, a measure of trade volume. Observed patterns of trade across automobile model years are consistent with our model, and inconsistent with a model of adverse selection.

TI Empirical Implications of Equilibrium Bidding in First-Price, Symmetric, Common Value Auctions. **AU** Hendricks, Kenneth; Pinkse, Joris; Porter, Robert H.

Possajennikov, Alex

PD June 1999. **TI** On Evolutionary Stability of Spiteful Preferences. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9956; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 15. **PR** no charge. **JE** A13, C72, D10, D82. **KW** Indirect Evolution. Spite. Endogenous Preferences. Incomplete Information. Noncooperative Games.

AB The paper analyzes under what conditions spiteful preferences are evolutionarily stable applying the indirect evolution approach. With a quadratic material payoff function, spiteful preferences are evolutionarily stable for a large set of parameters. It is shown that strategic substitutability or complementarity is an endogenous property of the game played with evolutionarily stable preferences. Its relation to properties of the material payoff function is analyzed. Finally, it is shown that with incomplete information only selfish preferences are evolutionarily stable.

Postlewaite, Andrew

TI Ambiguity in Election Games. **AU** Aragones, Enriqueta; Postlewaite, Andrew.

Poterba, James M.

TI The Role of Real Annuities and Indexed Bonds in an Individual Accounts Retirement Program. **AU** Brown, Jeffrey R.; Mitchell, Olivia S.; Poterba, James M.

Potters, Jan J.

TI Simple and Complex Gift Exchange in the Laboratory. **AU** Van der Heijden, Eline C. M.; Nelissen, Jan H. M.; Potters, Jan J. M.; Verbon, Harrie A. A.

Potters, Jos

TI On the Structure of the Set of Correlated Equilibria in Two-By-Two Bimatrix Games. **AU** Peeters, Ronald; Potters, Jos.

TI Sender-Receiver Games. **AU** Peeters, Ronald; Potters, Jos.

Pradhan, Menno P.

TI Declining Prices in the Sequential Dutch Flower Auction of Roses. **AU** Van den Berg, Gerard J.; Van Ours, Jan C.; Pradhan, Menno P.

Prat, Andrea

TI Common Agency and Computational Complexity: Theory and Experimental Evidence. **AU** Kirchsteiger, Georg; Prat, Andrea.

PD August 1999. **TI** Games Played Through Agents. **AU** Prat, Andrea; Rustichini, Aldo. **AA** Prat: Tilburg University. Rustichini: CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9968; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands.

Website: center.kub.nl. **PG** 33. **PR** no charge. **JE** C72, D72, D82. **KW** Common Agency. Balanced Games. Principal Agent Models. Information. Game Theory.

AB We introduce a game of complete information with multiple principals and multiple agents. Each agent takes an action which can affect the payoffs of all principals and all agents. Each principal offers monetary transfers to each agent conditional on the action taken by the agent. We characterize pure-strategy equilibria and we provide conditions -- in terms of game balancedness -- for the existence of an equilibrium with an efficient outcome. Games played through agents display a type of strategic inefficiency which is absent when either there is a unique principal or there is a unique agent.

Prescott, Edward S.

PD June 1998. **TI** Computing Moral-Hazard Problems Using the Dantzig-Wolfe Decomposition Algorithm. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 98/06; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 28. **PR** no charge. **JE** C61, C63, D82. **KW** Computation. Private Information. Linear Programming. Moral Hazard. Decomposition.

AB *Linear programming is an important method for* computing solutions to private information problems. The method is applicable for arbitrary specifications of the preferences and technology. Unfortunately, as the cardinality of underlying sets increases the programs quickly become too large to compute. This paper demonstrates that moral-hazard problems have a structure that allows them to be computed using the Dantzig-Wolfe decomposition algorithm. This algorithm breaks the linear program into subproblems, greatly increasing the size of problems that may be practically computed. Connections to dynamic programming are discussed. Two examples are computed. Role of lotteries is discussed.

Prusa, Thomas J.

TI Dumping and Double Crossing: The (In)Effectiveness of Cost-Based Trade Policy Under Incomplete Information. **AU** Kolev, Dobrin R.; Prusa, Thomas J.

Puig-Junoy, Jaume

PD January 2000. **TI** Radial Measures of Public Services Deficit for Regional Allocation of Public Funds. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 439; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 18. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D61, D63, H40, H50, I10. **KW** Regional Allocation. Public Services. Equality of Access. Data Envelopment. Availability Frontier.

AB The goal of this paper is to present an optimal resource allocation model for the regional allocation of public service inputs. The proposed solution leads to a maximization of the relative public service availability in regions located below the best availability frontier, subject to exogenous budget restrictions and equality of access for equal need criteria (equity-based notion of regional needs). The construction of non-parametric deficit indicators is proposed for public service availability by a novel application of Data Envelopment Analysis (DEA) models, whose results offer advantages for the evaluation and improvement of decentralized public resource allocation systems. The method introduced in this paper has relevance as a resource allocation guide for the majority of services centrally funded by the public sector in a given country, such as health care, basic and higher education, citizen safety, justice, transportation, environmental protection, leisure, culture, housing and city planning, etc.

PD March 2000. **TI** Technical Inefficiency and Public Capital in U.S. States: A Stochastic Frontier Approach. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 451; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 22. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C23, D24, E22, H40, H54. **KW** Capital Productivity. Technical Efficiency. Stochastic Frontier. Public Capital.

AB This paper estimates a translog stochastic frontier production function in the analysis of all 48 contiguous U.S. states in the period 1970-1983, to attempt to measure and explain changes in technical efficiency. The model allows technical inefficiency to vary over time, and inefficiency effects to be a function of a set of explanatory variables in which the level and composition of public capital plays an important role. Results indicated that U.S. state inefficiency levels were significantly and positively correlated with the ratio of public capital to private capital. The proportion of public capital devoted to highways is negatively correlated with technical inefficiency, suggesting that not only the level but also the composition of public capital influenced state efficiency.

TI Review of the Literature on Reference Pricing. **AU** Lopez Casasnovas, Guillem; Puig-Junoy, Jaume.

Rabin, Matthew

TI Social Preferences: Some Simple Tests and a New Model. **AU** Charness, Gary; Rabin, Matthew.

Racine, Andrew

TI Does Publicly Provided Health Insurance Improve the Health of Low- Income Children in the United States? **AU** Kaestner, Robert; Joyce, Theodore; Racine, Andrew.

Rajan, Raghuram

TI Banks as Liquidity Providers: An Explanation for the Co-Existence of Lending and Deposit-Taking. **AU** Kashyap, Anil K.; Rajan, Raghuram; Stein, Jeremy C.

Ramey, Garey

TI Contract-Theoretic Approaches to Wages and Displacement. **AU** den Haan, Wouter J.; Ramey, Garey; Watson, Joel.

Ramey, Valerie A.

TI The Cost Channel of Monetary Transmission. **AU** Barth, Marvin J., III..; Ramey, Valerie A.

TI Market Responses to Interindustry Wage Differentials. **AU** Borjas, George J.; Ramey, Valerie A.

Rangan, Subramanian

PD March 1999. **TI** Search and Deliberation in International Exchange: Learning from Multinational Trade About Lags, Distance Effects, and Home Bias. **AU** Rangan, Subramanian; Lawrence, Robert Z. **AA** Rangan: INSEAD. Lawrence: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7012; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** F14, F15, F23, F31. **KW** Exchange Rates. International Trade. Multinational Firms. Home Bias. Adjustment Lags.

AB This paper compares the responses of intra- and extra-firm trade to exchange rate changes. It does so both to inform the debate on whether these responses are qualitatively different and to improve understanding of the microfoundations of features of trade behavior such as long adjustment lags, the large impact of distance, and the presence of significant home bias. We argue that the informational problems posed by search (acts identifying potential exchange partners) and deliberation (acts assessing their reliability and trustworthiness) play a key role in explaining these features and suggest that multinationals should have advantages in overcoming these problems. Indeed we find that the responses of multinationals to exchange rates are both larger and more rapid.

Ranguelova, Elena

TI The Transition to Investment-Based Social Security when Portfolio Returns and Capital Profitability are Uncertain. **AU** Feldstein, Martin; Ranguelova, Elena; Samwick, Andrew.

Ravn, Morten O.

TI The Macroeconomic Effects of German Unification: Real Adjustments and the Welfare State. **AU** Canova, Fabio; Ravn, Morten O.

Razin, Assaf

PD January 1999. **TI** An Information-Based Model of Foreign Direct Investment: The Gains from Trade Revisited. **AU** Razin, Assaf; Sadka, Efraim; Yuen, Chi-Wa. **AA** Razin: Tel-Aviv University and National Bureau of Economic Research. Sadka: Tel-Aviv University. Yuen: University of Hong Kong. **SR** National Bureau of Economic Research Working Paper: 6884; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** D82, F21, F32, F41, G31. **KW** Foreign Direct Investment. Capital Flows. Asymmetric Information. Emerging Economies. Financial Crises.

AB Foreign direct investment (FDI) is observed to be a predominant form of capital flows to emerging economies, especially when they are liquidity-constrained internationally during a global financial crisis. This paper focuses on the financial aspects of FDI. The authors analyze the problem of channeling domestic saving into productive investment in the presence of asymmetric information between the managing owners of firms and the other portfolio stakeholders. The authors explore the role played by FDI in reviving equity-financed capital investment for economies plagued by such information problems. In the presence of asymmetry, the paper identifies how, however, FDI gives rise to foreign overinvestment as well as domestic undersaving. The authors re-examine the gains from trade argument for informational-asymmetry driven FDI. They show that the gains could be sizable when the domestic credit market is either underdeveloped or failing as a result of a financial crisis. But with a well-functioning domestic credit market, the gains turn into losses. Surprisingly, capital may flow into the country even though the autarkic marginal productivity of capital in the domestic economy falls short of the world rate of interest.

PD March 1999. **TI** Unskilled Migration: A Burden or a Boon for the Welfare State. **AU** Razin, Assaf; Efraim, Sadka. **AA** Razin: Tel Aviv University and National Bureau of Economic Research. Efraim: Tel Aviv University. **SR** National Bureau of Economic Research Working Paper: 7013; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** not available. **PR** $5.00. **JE** F22, H10, H55, J10, J61. **KW** International Migration. Unskilled Labor. Public Pensions. Welfare. Capital Markets.

AB In a static setup, migration of unskilled labor may be resisted by the entire native-born population because, being relatively low earners, migrants are net beneficiaries of the fiscal system. However, the paper shows that with a pay-as-you-go pension, an important pillar of the welfare state, the dynamics are such that migration is beneficial to low and high income groups and the old and the young, provided that the economy has good access to the world capital market. This overall gain holds even though the migrants are net consumers of the pension system; they give to it less than they take from it. The pro-migration feature of the dynamic model is however weakened and possibly overturned when access to the world capital market is limited. In the case of low elasticity of substitution between capital and labor, earnings of native-born may be significantly affected, and the factor price effects can dwarf the effects of migrants' giving to or taking from the welfare state on the native-born population.

Rebelo, Sergio

TI Hedging and Financial Fragility in Fixed Exchange Rate Regimes. **AU** Burnside, Craig; Eichenbaum, Martin; Rebelo, Sergio.

Reijnierse, H.

TI Voluntary Contribution to Multiple Public Projects. **AU** Koster, Maurice; Reijnierse, H.; Voorneveld, Mark.

Reiter, Michael

PD September 1999. **TI** Asset Prices and the Measurement of Wealth and Saving. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 396; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 31. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C43, E21, E22, E44, G10. **KW** Real Wealth. Real Saving. Welfare. Index Numbers.

AB The paper defines concepts of real wealth and saving which take into account the intertemporal index number problem that results from changing interest rates. Unlike conventional measures of real wealth, which are based on the market value of assets and ignore the index number problem, the new measure reflects correctly the changes in the welfare of households over time. An empirically operational approximation to the theoretical measure is provided and applied to US data. A major empirical finding is that US real financial wealth increased strongly in the 1980s, much more than is revealed by the market value of assets.

PD October 1999. **TI** Are These Classical Business Cycles? **AU** Reiter, Michael; Woitek, Ulrich. **AA** Reiter: Universitat Pompeu Fabra. Woitek: University of Glasgow. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 398; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 17. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E22, E32. **KW** Business Cycles. Investment Cycles. Spectral Tests.

AB The aim of this paper is to test formally the classical business cycle hypothesis, using data from industrialized countries for the time period since 1960. The hypothesis is characterized by the view that the cyclical structure in GDP is concentrated in the investment series: fixed investment has typically a long cycle, while the cycle in inventory investment is shorter. To check the robustness of our results, we subject the data for 15 OECD countries to a variety of detrending techniques. While the hypothesis is not confirmed uniformly for all countries, there is a considerably high number for which the data display the predicted pattern. None of the countries shows a pattern which can be interpreted as a clear rejection of the classical hypothesis.

Renneboog, Luc

PD July 1999. **TI** Ownership, Managerial Control and the Governance of Companies Listed on the Brussels Stock Exchange. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9963; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 31. **PR** no charge. **JE** G32, G38, J40. **KW** Corporate Finance. Corporate Control. Ownership Structures. Government Regulation.

AB This paper examines how corporate control is exerted in companies listed on the Brussels Stock Exchange. There are several alternative corporate control mechanisms which may play a role in disciplining poorly performing management: blockholders, the market for partial control, debt policy, and board composition. The authors find that top managerial turnover is strongly related to poor performance measured by stock returns, accounting earnings in relation to industry peers and dividend cuts and omissions. Tobit models reveal that there is little relation between ownership and managerial replacement, although industrial companies resort to disciplinary actions when performance is poor. When industrial companies increase their share stake or acquire a new stake in a poorly performing company, there is evidence of increase in executive board turnover, which suggests a partial market for control. There is no relation between the ownership concentration held by institutions and holding companies and disciplining. Still, high leverage and decreasing solvency and liquidity variables are also followed by increased disciplining, as are a high proportion of non- executive directors and the separation of the functions of CEO and chairman.

PD August 1999. **TI** The Monetary Appreciation of Paintings: From Realism to Magritte. **AU** Renneboog, Luc; Van Houte, Tom. **AA** Renneboog: CentER and Tilburg University. Van Houte: Price Waterhouse Coopers. **SR** Tilburg CentER for Economic Research Discussion Paper: 9962; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 35. **PR** no charge. **JE** G11, G12, G19, Z10. **KW** Hedonic Regression. Art. Investment. Asset Pricing. Portfolio Choice.

AB This study investigates how returns on investments in visual arts compare to those of stocks in terms of risk-return trade-off using Sharpe and Treynor ratios and Markowitz efficient frontiers. A large database, consisting of more than 10,500 Belgian art sales prices was analyzed from auction houses from all over the world for the period 1970-1997. Hedonic art returns are influenced by auction house, current of art, painter reputation, medium, signature and painting size. Surrealism and luminism were the most popular currents of art (in monetary terms), while expressionism and symbolism gained (financial) esteem. This study concludes that art investments underperform equity market investments due to high riskiness, transaction costs, capital gains and copyright taxes, and insurance premia. In addition, the Markowitz efficient frontier shows limited diversification potential of art.

TI Shareholding Cascades: The Separation of Ownership and Control in Belgium. **AU** Becht, Marco; Chapelle, Ariane; Renneboog, Luc.

TI Corporate Governance Structures, Control and Performance in European Markets: A Tale of Two Systems. **AU** Crama, Yves; Leruty, Luc; Renneboog, Luc; Urbain, Jean-Pierre.

TI Prediction of Ownership and Control Concentration in German and UK Initial Public Offerings. **AU** Goergen, Marc; Renneboog, Luc.

Renstrom, Thomas I.

PD January 1999. **TI** Optimal Dynamic Taxation. **AA** University of Birmingham and Tilburg University. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/21; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 26. **PR** 2 pounds ($4); no charge to academics. **JE** D90, E62, H21, H24, H25. **KW** Optimal Taxation. Dynamic Taxation. Fiscal Policy.

AB This paper reviews the recent optimal dynamic tax literature, and links the results from dynastic one-person economies, dynastic heterogeneous individual economies and overlapping generations economies. The paper shows that the second best labor tax is positive, and further analyzes the dynamic paths of capital and labor taxes, as well as the economy's adjustment under the optimal program. Furthermore, we prove that in a heterogeneous individual economy, every individual's most preferred capital tax in steady state is zero. The optimal labor tax in a heterogeneous individual framework is similar to the optimal labor tax in a one-person economy.

TI Time Inconsistency in Environmental Policy: Tax Earmarking as a Commitment Solution. **AU** Marsiliani, Laura; Renstrom, Thomas I.

TI Time Inconsistency in Environmental Policy: Tax Earmarking as a Commitment Solution. **AU** Marsiliani, Laura; Renstrom, Thomas I.

Restoy, Fernando

PD June 1999. **TI** Los mercados financieros espanoles ante la Union Monetaria. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9910; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 60. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** F33, F36, G11, G15, G18. **KW** Portfolio Choice. Foreign Exchange Risk. Financial Markets. Economic Integration. European Union.

AB This paper investigates the potential supply-side and demand-side movements in the Spanish financial markets associated with the beginning of Stage Three. Special attention is paid to the effects of the currency unification on the international composition of agents' portfolios. Thus, the paper provides an empirical evaluation of the potential portfolio changes associated with three different elements: the elimination of exchange rate risk, the reduction of those transaction costs related to currency conversion, and the increase in the cyclical synchrony of the economies involved. According to the evidence provided, there are no reasons to expect big changes in the composition of agents.

Revelle, Charles

TI Surviving in Competitive Spatial Market: The Threshold Capture Model. **AU** Serra, Daniel; Revelle, Charles; Rosing, Ken.

Riba, Clara

TI Catalan Government Popularity. An Example of Economic Effects on Sub- National Government Support. **AU** Diaz, Aida; Riba, Clara.

Richardson, Elizabeth

TI Your Money and Your Life: The Value of Health and What Affects It. **AU** Cutler, David M.; Richardson, Elizabeth.

Rinaldi, Giovanni

TI On The Cut Polyhedron. **AU** Conforti, Michele; Rinaldi, Giovanni; Wolsey, Laurence.

Riordan, Michael H.

TI Predatory Pricing: Strategic Theory and Legal Policy. **AU** Bolton, Patrick; Brodley, Joseph F.; Riordan, Michael H.

Rivera, Pilar

PD January 2000. **TI** Country Effects in ISSP -- 1993 Environmental Data: Comparison of SEM Approaches. **AU** Rivera, Pilar; Satorra, Albert. **AA** Rivera: Universidad de Zaragoza. Satorra: Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 458; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 12. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C10, C21, C31, Q20, Q30. **KW** Structural Equation Models. Factors Models. Latent Variables. Multiple Group Analysis. Non-Normality.

AB Structural equation models (SEM) are commonly used to analyze the relationship between variables some of which may be latent, such as individual "attitude" to and "behavior" concerning specific issues. A number of difficulties arise when we want to compare a large number of groups, each with large sample size, and the manifest variables are distinctly non-normally distributed. Using a specific data set, we evaluate the appropriateness of the following alternative SEM approaches: multiple group versus MIMIC models, continuous versus ordinal variables estimation methods, and normal theory versus non- normal estimation methods. The approaches are applied to the ISSP-1993 Environmental data set, with the purpose of exploring variation in the mean level of variables of "attitude" to and "behavior" concerning environmental issues and their mutual relationship across countries. Issues of both theoretical and practical relevance arise in the course of this application.

Robins, Philip K.

TI Financial Incentives for Increasing Work and Income Among Low-Income Families. **AU** Blank, Rebecca M.; Card, David; Robins, Philip K.

Robinson, James A.

TI A Theory of Political Transitions. **AU** Acemoglu, Daron; Robinson, James A.

TI Democratization or Repression? **AU** Acemoglu, Daron; Robinson, James A.

Rochet, Jean-Charles

TI Systemic Risk, Interbank Relations and Liquidity Provision by the Central Bank. **AU** Freixas, Xavier; Parigi, Bruno; Rochet, Jean-Charles.

Rodriguez Palenzuela, Diego

PD February 1999. **TI** Endogenous Spillovers, Increased Competition and Re-Organization Waves. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 352; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 23. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C70, D23, D82, L22, O31. **KW** Information Sharing. Endogenous Spillovers. Physical Assets. Corporate Transformation. Trade Secrets.

AB We consider an entrepreneur that is the sole producer of a cost reducing skill, but the entrepreneur that hires a team to use the skill cannot prevent collusive trade for the innovation related knowledge between employees and competitors. We show that there are two types of diffusion avoiding strategies for the entrepreneur to preempt collusive communication i) setting up a large productive capacity (the traditional firm) and ii) keeping a small team (the lean firm). The traditional firm is characterized by its many "marginal" employees that work short days, receive flat wages and are incompletely informed about the innovation. The lean firm is small in number of employees and engages in complete information sharing among members, that are paid with stock option schemes. We find that the lean firm is superior to the traditional firm when technological entry costs are low and when the sector is immature.

Rodrik, Dani

PD June 1999. **TI** Capital Mobility, Distributive Conflict and International Tax Coordination. AU Rodrik, Dani; van Ypersele, Tanguy. AA Rodrik: Harvard University and NBER. Van Ypersele: CenTER, Tilburg University. SR National Bureau of Economic Research Working Paper: 7150; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 17. PR $5.00. JE F21, F42. KW Capital Mobility. International Trade. Policy Coordination.

AB Basic economic theory identifies a number of efficiency gains that derive from international capital mobility. But just as with free trade in goods, there is no guarantee that capital mobility makes everyone better off. Consequently, capital mobility may be politically unsustainable even though it enhances efficiency. This paper discusses how such a dilemma might arise, and suggests that international tax coordination might serve as a way out under some circumstances.

Romano, Richard

TI Peer Effects, Financial Aid, and Selection of Students into Colleges and Universities: An Empirical Analysis. AU Epple, Dennis; Romano, Richard; Sieg, Holger.

Rose, Andrew K.

TI Risks to Lenders and Borrowers in International Capital Markets. AU Hermalin, Benjamin E.; Rose, Andrew K.

Rosen, Sherwin

TI Conflicts and Common Interests in Committees. AU Li, Hao; Rosen, Sherwin; Suen, Wing.

Rosing, Ken

TI Surviving in Competitive Spatial Market: The Threshold Capture Model. AU Serra, Daniel; Revelle, Charles; Rosing, Ken.

Rotemberg, Julio J.

PD January 1999. TI The Cyclical Behavior of Prices and Costs. AU Rotemberg, Julio J.; Woodford, Michael. AA Rotemberg: Harvard University and National Bureau of Economic Research. Woodford: Princeton University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 6909; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 89. PR $5.00. JE E22, E24, E32. KW Business Cycles. Marginal Costs. Markups.

AB Because inputs are scarce, marginal cost should be an increasing function of output. Without changes in this real marginal cost schedule, aggregate output can vary if and only if the markup of price over marginal cost varies. This paper discusses the extent to which observed fluctuations in aggregate economic activity depend upon such variations in average markups. The authors first study whether, empirically, real marginal cost rises in cyclical expansions. Average real labor cost is not very procyclical, but, for reasons such as overhead labor and adjustment costs, marginal labor cost should be more procyclical. Measures of marginal cost based on materials costs and inventories also appear procyclical. The authors next show that countercyclical markup variation may account for a substantial fraction of cyclical output movements. They also show that the observed procyclical variations in productivity and profits are consistent with the hypothesis that cyclical variations in output are primarily due to markup variations than to shifts in the real marginal cost schedule. Finally, the authors survey theories of endogenous markup variation. These include both models of sticky prices and models in which firms' desired markup varies over time.

Roth, Alvin E.

PD February 1999. TI The Redesign of the Matching Market for American Physicians: Some Engineering Aspects of Economic Design. AU Roth, Alvin E.; Peranson, Elliott. AA Roth: Harvard University and National Bureau of Economic Research. Peranson: National Matching Services, Inc. SR National Bureau of Economic Research Working Paper: 6963; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 47. PR $5.00. JE I11, J41, J44. KW Physicians. Matching. Labor Markets. Health Care.

AB We report on the design of the new clearinghouse adopted by the National Resident Matching Program, which annually fills approximately 20,000 jobs for new physicians in the United States. Because that market exhibits many complementarities between applicants and between positions, the theory of simple matching markets does not apply directly. However, computational experiments reveal that the theory provides a good approximation, and furthermore the set of stable matchings, and the opportunities for strategic manipulation, are surprisingly small. A new kind of "core convergence" result is presented to explain this; the fact that each applicant can interview for only a small fraction of available positions is important. We also describe in detail engineering aspects of the design process.

Roubini, Nouriel

TI Competitive Devaluations: A Welfare-Based Approach. AU Corsetti, Giancarlo; Pesenti, Paolo; Roubini, Nouriel; Tille, Cedric.

TI Competitive Devaluations: A Welfare-Based Approach. AU Corsetti, Giancarlo; Pesenti, Paolo; Roubini, Nouriel; Tille, Cedric.

Rouse, Cecilia

TI Schooling, Intelligence, and Income in America: Cracks in the Bell Curve. AU Ashenfelter, Orley; Rouse, Cecilia.

Rouwenhorst, K. Geert

TI Pairs Trading: Performance of a Relative Value Arbitrage Rule. AU Gatev, Evan G.; Goetzmann, William N.; Rouwenhorst, K. Geert.

Rubin, Donald B.

TI Estimating the Effect of Unearned Income on Labor Supply, Earnings, Savings and Consumption: Evidence from a Survey of Lottery Players. AU Imbens, Guido W.; Rubin, Donald B.; Sacerdote, Bruce.

Rustichini, Aldo

TI State-Dependent Utility and Decision Theory. AU Dreze, Jacques H.; Rustichini, Aldo.

TI Games Played Through Agents. AU Prat, Andrea; Rustichini, Aldo.

Ruys, Pieter H. M.

PD August 1999. **TI** Values and Governance Systems. **AU** Ruys, Pieter H. M.; Van den Brink, Rene; Semenov, Radislav. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9966; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 24. **PR** no charge. **JE** C71, D23, D63, D71, L22. **KW** Governance. Hierarchy. Clubs. Firm Organization. Cooperative Games.

AB Cooperative behavior as well as other cultural rules and values are made explicit in organizational units that procure and provide a common service. The common service is procured by a club, which consists of a user-value function, a representation governance, and a budget- allocation function. The common service is provided by a firm, which consists of a value-production function, an implementation governance, and a remuneration function. They extend the concepts of the consumer and the producer in neoclassical theory. The functions mentioned are determined by cooperative games. A governance is represented by a structure of principal-agent relations. The representation governance is a bottom-up hierarchy, empowered by the members of the club. The implementation governance is a top-down hierarchy, empowered by the governor of the firm. The optimal size of the club organization and the firm organization in a competitive environment is determined under certain conditions. This description of a club and a firm allows characterization of some cultural dimensions in the society. For one such cultural dimension, viz. the degree of collectivism in society, the impact on the optimal organization is shown.

TI Governance of Clubs and Firms with Cultural Dimensions. **AU** Van den Brink, Rene; Ruys, Pieter H. M.; Semenov, Radislav.

Sacerdote, Bruce

TI Estimating the Effect of Unearned Income on Labor Supply, Earnings, Savings and Consumption: Evidence from a Survey of Lottery Players. **AU** Imbens, Guido W.; Rubin, Donald B.; Sacerdote, Bruce.

Sadka, Efraim

TI An Information-Based Model of Foreign Direct Investment: The Gains from Trade Revisited. **AU** Razin, Assaf; Sadka, Efraim; Yuen, Chi-Wa.

Saez-Marti, Maria

TI Credit Cycles in Theory and Experiment. **AU** Bosch-Domenech, Antoni; Saez-Marti, Maria.

TI On the Cultural Transmission of Corruption. **AU** Hauk, Esther; Saez-Marti, Maria.

Saggi, Kamal

PD November 1998. **TI** On Intrabrand and Interbrand Competition: The Strategic Role of Fees and Royalties. **AU** Saggi, Kamal; Vettas, Nikolaos. **AA** Saggi: Southern Methodist University. Vettas: Duke University and CEPR. **SR** Duke University Department of Economics Working Paper: 99/06; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 35. **PR** no charge. **JE** L13, L14, L22, L42. **KW** Intrabrand Competition. Strategic Contracting. Two-Part Tariffs. Royalties. Oligopoly.

AB We examine oligopolistic markets with both intrabrand and interbrand competition. We characterize equilibrium contracts involving a royalty (or wholesale price) and a fee when each upstream firm contracts with multiple downstream firms. Royalties control competition between own downstream firms at the expense of making them passive against rivals. The main result is that, when we endogenize the number of downstream firms, each upstream firm chooses to have only one downstream firm. This result is in sharp contrast to previous literature where competitors benefit by having a larger number of independent downstream firms under only fixed fee payments. We discuss how allowing for contracts that involve both fees and per-unit payments dramatically alters the strategic incentives.

PD February 1999. **TI** Leasing Versus Selling and Firm Efficiency in Oligopoly. **AU** Saggi, Kamal; Vettas, Nikolaos. **AA** Saggi Southern Methodist University. Vettas: Duke University and CEPR. **SR** Duke University Department of Economics Working Paper: 99/07; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 9. **PR** no charge. **JE** D43, L13. **KW** Durable Goods. Leasing. Dynamic Oligopoly.

AB We examine sales and leasing of a durable good in an asymmetric duopoly. We find that inefficient firms tend to lease more. While the low cost firm sells more than the high cost firm, the high cost firm leases more. Further, an increase in unit costs implies a higher ratio of leased units to sales. This pattern is reversed when the unit cost decreases significantly over time.

Saha, Souresh

PD December 1999. **TI** R&D Composition Over the Product Life Cycle. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 309; Department of Economics, 1035 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455. Website: www.econ.umn.edu/~econlib. **PG** 24. **PR** no charge. **JE** D21, D24, M11, O31, O32. **KW** Product Life Cycle. Research and Development. Innovation. Buyer Composition.

AB Firms do product R&D (making new and better products) as well as process R&D (making cheaper products). There is evidence that firms devote an increasing share of R&D to process R&D over the life cycle of a product. There is also evidence that over time, the composition of buyers of a product shifts towards the lower end of the market. This paper distinguishes product and process R&D in terms of their relationship to the composition of buyers of a product. It uses this distinction to link the aforementioned facts and to explain the change in R&D composition over time.

Saint-Paul, Gilles

TI Hiring and Firing Costs, Adverse Selection and Long-Term Unemployment. **AU** Kugler, Adriana D.; Saint-Paul, Gilles.

PD March 2000. **TI** Will EMU Increase Eurosclerosis? **AU** Saint-Paul, Gilles; Bentolila, Samuel. **AA** Saint-Paul: Universitat Pompeu Fabra. Bentolila: CEMFI and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 449; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu.

PG 33. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE E24, E31, E52, J31, J64. KW Monetary Union. Labor Market Institutions. Monetary Policy. Labor Market Reform. Unemployment.

AB In this paper we study the relationship between labor market institutions and monetary policy. We use a simple macroeconomic framework to show how optimal monetary policy rules depend on labor institutions (labor adjustment costs, and nominal and real wage rigidity) and social preferences regarding inflation, employment, and real wages. We also calibrate our model to compute how the change in social welfare brought about by giving up monetary policy as a result of joining the Economic and Monetary Union (EMU) depends on institutions and preferences. We then use the calibrated model to analyze how EMU affects the incentives for labor market reform, both for reforms that increase the economy's adjustment potential and for those that affect the long-run unemployment rate.

PD March 2000. TI Flexibility vs. Rigidity: Does Spain Have the Worst of Both Worlds? AA Universitat Pompeu Fabra. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 450; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 16. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE E24, J21, J23, J41, J63. KW Unemployment. Labor Markets. Flexibility. Temporary Contracts. Job Search.

AB In this paper we study the structure of labor market flows in Spain and compare them with France and the US. We characterize a number of empirical regularities and stylized facts. One striking result is that the job finding rate is slightly higher than in France, while the job loss rate is much higher, putting Spain half-way between France and the US. This suggests that while Spain has borne the full cost of its labor market reforms in terms of job precariousness, the benefits in terms of job creation have been quite modest. We hypothesize that this has been due to the reform's credibility being imperfect, which leads to expectation of reversal.

PD February 1999. TI The Political Economy of Employment Protection. AA Universitat Pompeu Fabra. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 355; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 55. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE E24, E60, J38, J50, J60. KW Vintage Capital. Obsolescence. Political Economy. Firing Costs. Creative Destruction.

AB This paper develops a model of job creation and job destruction that we use to analyze the political support for employment protection legislations. We show the existence of local, and sometimes global, majority winners. We show that the gains from, and consequently the political support for, employment protection are larger the lower the rate of creative destruction and the larger the worker's bargaining power.

TI Explaining Movements in the Labor Share. AU Bentolila, Samuel; Saint-Paul, Gilles.

PD November 1999. TI On the Distribution of Income and Worker Assignment under Intra-Firm Spillovers, with an Application to Ideas and Networks. AA Universitat Pompeu Fabra. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 417; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 34. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE D31, J23, J24, J31. KW Income Distribution. Worker Assignment. Human Capital. Skill. Information Technology.

AB We study the earnings structure and the equilibrium assignment of workers when workers exert intra-firm spillovers on each other. We allow for arbitrary spillovers provided output depends on some aggregate index of workers' skill. Despite the possibility of increasing returns to skills, equilibrium typically exists. We show that equilibrium will typically be segregated; that the skill space can be partitioned into a set of segments and any firm hires from only one segment. Next, we apply the model to analyze the effect of information technology on segmentation and the distribution of income. There are two types of human capital, productivity and creativity, i.e. the ability to produce ideas that may be duplicated over a network. Under plausible assumptions, inequality rises and then falls when network size increases, and the poorest workers cannot lose. We also analyze the impact of an improvement in worker quality and of an increased international mobility of ideas.

PD December 1999. TI Toward a Theory of Labor Market Institutions. AA Universitat Pompeu Fabra. SR Universitat Pompeu Fabra, Economics and Business Working Paper: 433; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. PG 18. PR Print copies $5.00: make checks payable to Universitat Pompeu Fabra. JE E24, J40, J50, J64, K31. KW Political Economy. Labor Market Institutions. Unemployment. Job Creation. Wages.

AB Standard economic analysis holds that labor market rigidities are harmful for job creation and typically increase unemployment. But many orthodox reforms of the labor market have proved difficult to implement because of political opposition. For these reasons it is important to explain why we observe such regulations. In this paper I outline a theory of how they may arise and why they fit together. This theory is fully developed in a forthcoming book (Saint-Paul (2000)), to which the reader is referred for further details.

Sala-i-Martin, Xavier

TI Gerontocracy, Retirement, and Social Security. AU Mulligan, Casey B.; Sala-i-Martin, Xavier.

TI Social Security in Theory and Practice (I): Facts and Political Theories. AU Mulligan, Casey B.; Sala-i-Martin, Xavier.

TI Social Security in Theory and Practice (II): Efficiency Theories, Narrative Theories, and Implications for Reform. AU Mulligan, Casey B.; Sala-i-Martin, Xavier.

Salles, Maurice

TI A New Approach to Rights in Social Choice Theory Which Incorporates Utilitarianism. AU Barrett, Richard; Petron-Brunel, Anne; Salles, Maurice.

Saly, Jane

TI Valuing the Reload Features of Executive Stock Options. AU Huddart, Steven; Jagannathan, Ravi; Saly, Jane.

Samwick, Andrew

TI The Transition to Investment-Based Social Security when Portfolio Returns and Capital Profitability are Uncertain. **AU** Feldstein, Martin; Ranguelova, Elena; Samwick, Andrew.

Sanchez-Valle, Rene

TI The Gilt-Equity Yield Ratio and the Predictability of UK and US Equity Returns. **AU** Harris, Richard D. F.; Sanchez-Valle, Rene.

Sanso, Andreu

TI Measurement Errors and Outliers in Seasonal Unit Root Testing. **AU** Haldrup, Niels; Montanes, Antonio; Sanso, Andreu.

Sarkar, Sudipto

TI Project Selection and Flexibility: A Simple Application of Option Theory. **AU** Hasan, Iftekhar; Sarkar, Sudipto.

Sarte, Pierre-Daniel G.

PD April 1998. **TI** Rent-Seeking Bureaucracies and Oversight in a Simple Growth Model. **AA** Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 98/03; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 30. **PR** no charge. **JE** D72, D73, E13, O10, O40. **KW** Bureaucracies. Growth. Rent-Seeking. Corruption. Monitoring.

AB Following recent cross-country empirical work, research on public policy and growth has come to examine the impact of inefficient or corrupt bureaucracies. Most of this work has emphasized the interactions between bureaucracies and private markets. By contrast, this paper focuses on the relationship between rent-seeking bureaucracies and their political authority. We emphasize two main points. First, when oversight is relatively costly, the political authority exercises little monitoring of its agencies which reduces the effectiveness of productive government spending. Second, when the technology used to provide public services is poor, as in many developing economies, bureaus better succeed in requesting overly large budgets before triggering any monitoring. Both of these characteristics contribute to reducing the growth rate of already poor economies.

TI Staggered Prices and Inventories: Production Smoothing Reconsidered. **AU** Hornstein, Andreas; Sarte, Pierre-Daniel G.

Satorra, Albert

TI One, Two, (Three), Infinity: Newspaper and Lab Beauty-Contest Experiments. **AU** Nagel, Rosemarie; Bosch-Domenech, Antoni; Satorra, Albert; Garcia-Montalvo, Jose.

TI One, Two, (Three), Infinity: Newspaper and Lab Beauty-Contest Experiments. **AU** Nagel, Rosemarie; Bosch-Domenech, Antoni; Satorra, Albert; Garcia-Montalvo, Jose.

TI Country Effects in ISSP -- 1993 Environmental Data: Comparison of SEM Approaches. **AU** Rivera, Pilar; Satorra, Albert.

TI Life-Cycle Effects on Household Expenditures: A Latent-Variable Approach. **AU** Ventura, Eva; Satorra, Albert.

PD September 1999. **TI** Scaled and Adjusted Restricted Tests in Multi-Sample Analysis of Moment Structures. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 395; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 15. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C12, C13, C14, C15, C20. **KW** Moment Structures. Goodness-of-Fit. Score Test. Wald Test. Scaling Corrections.

AB We extend to score, Wald and difference test statistics the scaled and adjusted corrections to goodness-of-fit test statistics developed in Satorra and Bentler (1988a,b). The theory is framed in the general context of multi-sample analysis of moment structures, under general conditions on the distribution of observable variables. Computational issues, as well as the relation of the scaled and corrected statistics to the asymptotically robust ones, is discussed. A Monte Carlo study illustrates the comparative performance in finite samples of corrected score test statistics.

PD October 1999. **TI** A Scaled Difference Chi-Square Test Statistic for Moment Structure Analysis. **AU** Satorra, Albert; Bentler, Peter M. **AA** Satorra: Universitat Pompeu Fabra. Bentler: Uiversity of California. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 412; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 10. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C12, C13, C14, C15, C20. **KW** Moment Structures. Goodness-of-Fit. Chi-Square Difference. Test Statistics. Non-Normality.

AB A family of scaling corrections aimed to improve the chi-square approximation of goodness-of-fit test statistics in small samples, large models, and nonnormal data was proposed in Satorra and Bentler (1994). For structural equations models, Satorra-Bentler's (SB) scaling corrections are available in standard computer software. Often, however, the interest is not on the overall fit of a model, but on a test of the restrictions that a null model implies on a less restricted one. If TN and TR denote the goodness-of-fit test statistics associated with the null and the less restricted models respectively, then typically the difference TD=TN-TR is used as a chi-square test statistic with degrees of freedom equal to the difference on the number of independent parameters estimated under the models. As in the case of the goodness- of-fit test, it is of interest to scale the statistic TD in order to improve its chi-square approximation in realistic, i.e., nonasymptotic and nonnormal, applications. Satorra (1999) developed an expression that permits scaling the difference test statistic, but his formula has some practical limitations. The purpose of the present paper is to provide an easy way to compute the scaled difference chi-square statistic from the scaled goodness-of-fit test statistics of the null and less restricted models.

Sattler, Peter

TI Patterns of Trade in the Market for Used Durables: Theory and Evidence. **AU** Porter, Robert H.; Sattler, Peter.

Saunders, Anthony

TI An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings. **AU** Altman, Edward I.; Saunders, Anthony.

Schaling, Eric

TI A Theory of Interest Rate Stepping: Inflation Targeting in a Dynamic Menu Cost Model. **AU** Eijffinger, Sylvester; Schaling, Eric; Verhagen, Willem.

Schalk, Sharon

PD September 1999. **TI** Restriction of Preferences to the Set of Consumption Bundles, in a Model with Production and Consumption Bundles. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9989; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 39. **PR** no charge. **JE** C62, C67, D51, D57. **KW** General Equilibrium. Input-Output. Salient Space.

AB In contrast to the neoclassical theory of Arrow and Debreu, a model of a private ownership economy is presented, in which production and consumption bundles are treated separately. Each of the two types of bundles is assumed to establish a convex cone. Production technologies can convert production bundles into consumption bundles, and the preferences of the consumers are assumed to lie only on the set of consumption bundles. The main theorem of this paper states the existence of a Walrasian equilibrium in this setting.

Schieber, Sylvester J.

TI Has Job Security Vanished in Large Corporations? **AU** Allen, Steven G.; Clark, Robert L.; Schieber, Sylvester J.

Schlag, Karl H.

TI Communication, Coordination, and Efficiency in Evolutionary One- Population Models. **AU** Hurkens, Sjaak; Schlag, Karl H.

Schmidt, Robert M.

TI Economic and Demographic Change: A Synthesis of Models, Findings, and Perspectives. **AU** Kelley, Allen C.; Schmidt, Robert M.

Schmutzler, Armin

TI Innovation and the Emergence of Market Dominance. **AU** Athey, Susan; Schmutzler, Armin.

Schumacher, J. M.

TI Disturbance Decoupling in Dynamic Games. **AU** Van den Broek, W. A.; Schumacher, J. M.

Schwartz, Alan

PD April 2000. **TI** Economic and Legal Aspects of Costly Recontracting. **AU** Schwartz, Alan; Watson, Joel. **AA** Schwartz: Yale University. Watson: University of California, San Diego. **SR** University of California, San Diego. Department of Economics Working Paper: 2000/05; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 34. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C70, D20, D74, K12. **KW** Renegotiation. Investment. Legal Institutions. Contract Law. Contract Form.

AB This paper explores how the opportunity to recontract affects investment and trade in contractual relationships when it is assumed that renegotiation is costly. In this world, recontracting retains much of the benefit that has been ascribed to it, including the realization of any surplus that is available ex post. Costly recontracting also mitigates the well-known drawback, that parties who expect to renegotiate sometimes cannot credibly commit to invest efficiently. This is because the attractiveness of renegotiation decreases in recontracting costs. We show that the optimal contracting environment often involves moderate recontracting costs, which balance the beneficial and detrimental effects of renegotiation. Our result stands in contrast to those derived in common models that assume unrealistically either that recontracting costs are zero or that they are infinite. We discuss implications for the design of legal institutions, governance systems, and contractual form.

Semenov, Radislav

TI Values and Governance Systems. **AU** Ruys, Pieter H. M.; Van den Brink, Rene; Semenov, Radislav.

TI Governance of Clubs and Firms with Cultural Dimensions. **AU** Van den Brink, Rene; Ruys, Pieter H. M.; Semenov, Radislav.

Sen, Somnath

TI Productivity Analysis in Asia-Pacific Economic Cooperation Region: A Multi-Country Translog Comparative Analysis, 1965-97. **AU** Bende-Nabende, A.; Ford, Jim L.; Sen, Somnath.

Sengmueller, Paul

TI An International Dynamic Asset Pricing Model. **AU** Hodrick, Robert J.; Ng, David Tat-Chee; Sengmueller, Paul.

Serra, Daniel

TI Location Models for Airline Hubs Behaving as M/D/c Queues. **AU** Marianov, Vladimir; Serra, Daniel.

PD March 1999. **TI** Surviving in Competitive Spatial Market: The Threshold Capture Model. **AU** Serra, Daniel; Revelle, Charles; Rosing, Ken. **AA** Serra: Universitat Pompeu Fabra. Revelle: The Johns Hopkins University. Rosing: Erasmus University. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 359; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 19. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C61, R12, R32, R53. **KW** Discrete Facility Location. Threshold. Competitive Location.

AB Most facility location decision models ignore the fact that for a facility to survive it needs a minimum demand level to cover costs. In this paper we present a decision model for a firm that wishes to enter a spatial market where there are several competitors already located. This market is such that for each outlet there is a demand threshold level that has to be achieved in order to survive. The firm wishes to know where to locate its outlets so as to maximize its market share taking into account the threshold level. It may happen that due to this new entrance, some competitors will not be able to meet the threshold and therefore will disappear. A formulation is presented together with a heuristic solution method and computational experience.

TI Hierarchical Location-Allocation Models for Congested Systems. AU Marianov, Vladimir; Serra, Daniel.

Shackelford, Douglas A.

TI Capitalizations of Capital Gains Taxes: Evidence from Stock Price Reactions to the 1997 Rate Reduction. AU Lang, Mark H.; Shackelford, Douglas A.

Shapiro, Alexander

TI Value-at-Risk Based Risk Management: Optimal Policies and Asset Prices. AU Basak, Suleyman; Shapiro, Alexander.

Shapiro, Irving

PD February 1999. TI Quality Improvement in Health Care: A Framework for Price and Output Measurement. AU Shapiro, Irving; Shapiro, Matthew D.; Wilcox, David W. AA Shapiro, I.: Phillips Eye Institute. Shapiro, D.: University of Michigan and National Bureau of Economic Research. Wilcox: U.S. Department of the Treasury. SR National Bureau of Economic Research Working Paper: 6971; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 9. PR $5.00. JE I11, O39, O47. KW Health Care. Technological Change. Demand.

AB The durability of health care treatment, the substantial technical change in health care treatment, and the prevalence of third-party payment interact to create substantial difficulty in measuring the price and output of health care. This paper provides a framework for analyzing the demand for health care taking into account these difficulties. It then suggests how this framework might be used to improve measurement of health care prices and output.

Shapiro, Matthew D.

TI Quality Improvement in Health Care: A Framework for Price and Output Measurement. AU Shapiro, Irving; Shapiro, Matthew D.; Wilcox, David W.

Shavell, Steven

TI Economic Analysis of Law. AU Kaplow, Louis; Shavell, Steven.

TI The Economic Theory of Public Enforcement of Law. AU Polinsky, A. Mitchell; Shavell, Steven.

Sheiner, Louise

TI Demographics and Medical Care Spending: Standard and Non-Standard Effects. AU Cutler, David M.; Sheiner, Louise.

Shiller, Robert J.

PD March 1999. TI Measuring Bubble Expectations and Investor Confidence. AA Yale University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 7008; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 14. PR $5.00. JE D84, G12. KW Bubble Expectations. Investor Confidence. Stock Markets. Speculative Bubbles.

AB This paper presents evidence on attitude changes among investors in the US stock market. Two basic attitudes are explored: bubble expectations and investor confidence. Semiannual time-series indicators of these attitudes are presented for US stock market institutional investors based on questionnaire survey results 1989-1998, from surveys that the author has derived in collaboration with Fumiko Kon-Ya and Yoshiro Tsutsui. Five different time-series indicators of whether there is among investors an expectation of a speculative bubble, an unstable situation with expectations for increase in the short run only, are produced. Four different time-series indicators of whether there is an expectation of a negative speculative bubble are presented. Four different time-series indicators of investor confidence, that nothing can go wrong, are produced. Time-series variation for these indicators is significant, and cross correlations are generally positive. A bubble expectations index, a negative-bubble expectations index, and an investor confidence index are derived from these indicators. Behavior of the indicators and indexes through time is examined, and the indexes are compared with other economic variables.

Shimer, Robert

TI Productivity Gains from Unemployment Insurance. AU Acemoglu, Daron; Shimer, Robert.

Shoven, John B.

PD March 1999. TI The Location and Allocation of Assets in Pension and Conventional Savings Accounts. AA Stanford University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 7007; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. PG 37. PR $5.00. JE D91, G11, J26. KW Saving. Retirement. Portfolio Choice. Pensions. Risk Aversion.

AB This paper addresses two important parts of the problem of saving for retirement. They are (1) if assets are to be held in both conventional (and hence taxable) accounts and pension accounts, which assets should be held in each? and, (2) if the investor is substantially risk averse, what is the optimal mix of stocks and bonds for retirement saving? It is shown that the conventional wisdom of first placing heavily taxed corporate bonds in the pension account (and holding equity mutual funds outside the account) is the wrong asset location strategy for most people and most circumstances. It is also shown that even very risk averse retirement savers should allocate more than half of their portfolio to stocks if asset returns have the same means, variances, and covariances as have been observed over the past seventy years.

TI Asset Allocation and Risk Allocation: Can Social Security Improve Its Future Solvency Problem By Investing In Private Securities? AU MaCurdy, Thomas E.; Shoven, John B.

Sieg, Holger

TI Peer Effects, Financial Aid, and Selection of Students into Colleges and Universities: An Empirical Analysis. AU Epple, Dennis; Romano, Richard; Sieg, Holger.

PD December 1998. TI Estimating a Bargaining Model with Asymmetric Information: Evidence From Medical Malpractice Disputes. AA Duke University. SR Duke University Department of Economics Working Paper: 99/02; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. PG 28. PR no charge. JE C51, C72, C78, K40. KW Game Theory.

Asymmetric Information. Bargaining. Medical Malpractice. Estimation.

AB Games with asymmetric information play a prominent role in the theoretical literature of malpractice disputes. The common modeling framework in many papers is a game in extensive form which consists of two stages. In the first stage, one agent makes a settlement demand, and the other agent accepts or rejects the demand. If the demand is accepted, the case is settled out of court. Otherwise the case is taken to court and decided by a jury. This article develops a strategy for estimating such a model and focuses on reconciling the theoretical literature with observed regularities in malpractice data. Estimation of these types of models is complicated by the fact that key variables are (partially) unobserved and must therefore be treated as latent variables. The estimation strategy requires a complete specification of the bargaining model, including distributional assumptions of the latent variables. The parameters of the model are estimated using a simulated method of moments (SMM) estimator. The results of this study suggest that a simple bargaining model with private information can explain many of the qualitative and quantitative regularities observed in the data.

TI Charitable Giving and Income Taxation in a Life-Cycle Model: An Analysis of Panel Data. **AU** Auten, Gerald; Sieg, Holger; Clotfelter, Charles.

TI The Tiebout Hypothesis and Majority Rule: An Empirical Analysis. **AU** Epple, Dennis; Sieg, Holger.

Silvestre, Joaquim

TI Does Risk Aversion or Attraction Depend on Income? An Experiment. **AU** Bosch-Domenech, Antoni; Silvestre, Joaquim.

Simaan, Yusif

TI A Rational Explanation For Home Country Bias. **AU** Hasan, Iftekhar; Simaan, Yusif.

Sinclair, Peter J. N.

TI Water Charges and the Cost of Metering. **AU** Barrett, Richard; Sinclair, Peter J. N.

PD December 1998. **TI** Transfers, Trade, Food and Growth: Britain and the European Union over Forty Years. **AU** Sinclair, Peter J. N.; Martinez Zarzoso, I. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 98/26; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 28. **PR** 2 pounds ($4); no charge to academics. **JE** F13, F15, F43, O47, Q17. **KW** Transfers. Growth Effects. European Union. Trade Liberalization. Agricultural Policy.

AB The European Union's agricultural policies are wasteful, and Britain's share of the burdens of them are disproportionately large. Nonetheless, enlargement of the European Union in the 1970s and 1980s appears to have raised new members' growth rates (with the single exception of Greece). In Britain's case, this long run income gain from trade liberalization appears to exceed its net transfers to the European Union by at least a three-to-one margin.

PD June 1999. **TI** Income-Tax Protection, Trade and Unemployment. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/17; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 17. **PR** 2 pounds ($4); no charge to academics. **JE** E24, F13, F41, H87. **KW** Income Tax Protection. Redistribution. International Trade. Unemployment.

AB Within an open economy, redistributive taxation makes home output scarcer, thereby improving the terms of trade all else equal. This can generate too much taxation and unemployment, and excess taxation tends to shrink, not grow, the larger the economy.

Sinn, Hans-Werner

PD February 1999. **TI** Inflation and Welfare: Comment on Robert Lucas. **AA** University of Munich and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 6979; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 11. **PR** $5.00. **JE** D60, E31. **KW** Inflation. Welfare Costs. Price Level.

AB The paper argues that Lucas overestimates the Friedman-Bailey type of welfare cost of inflation and neglects other important welfare effects. With an alternative interpretation of the non-observability of low interest rates than the one Lucas gave and the introduction of taxes that reduce the opportunity cost of money holding, the welfare cost shrinks to one third of Lucas' estimate. The neglected welfare effects of inflation include an adverse Baumol-Tobin effect on growth and international capital movements, historical cost accounting for tax purposes, uncertainty about the price level and the relationship between inflation, relative prices and structural change.

Skutella, Martin

TI Cooperative Facility Location Games. **AU** Goemans, Michel X.; Skutella, Martin.

Slaughter, Matthew J.

TI Measuring Product-Market Integration. **AU** Knetter, Michael M.; Slaughter, Matthew J.

TI Trade, Technology and U.K. Wage Inequality. **AU** Haskel, Jonathan; Slaughter, Matthew J.

Slikker, Marco

PD September 1999. **TI** Coalition Formation and Potential Games. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9983; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 23. **PR** no charge. **JE** C71, C72. **KW** Cooperative Games. Coalition Formation. Potential Games. Potential Maximizer. Game Theory.

AB In this paper we study the formation of coalition structures in situations described by a cooperative game. Players choose independently which coalition they want to join. The payoffs to the players are determined by an allocation rule on the underlying game and the coalition structure that results from the strategies of the players according to some formation rule. We study two well-known coalition structure formation rules. We show that for both formation rules there exists a unique component efficient allocation rule that results in a potential game and study the coalition structures resulting from potential maximizing strategy profiles.

Sloan, Frank A.

PD January 1999. **TI** Does Where You Are Admitted Make A Difference? An Analysis of Medicare Data. **AU** Sloan, Frank A.; Picone, Gabriel A.; Taylor, Donald H., Jr..; Chou, Shin-Yi. **AA** Sloan: Duke University and National Bureau of Economic Research. Picone: University of South Florida. Taylor and Chou: Duke University. **SR** National Bureau of Economic Research Working Paper: 6896; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 25. **PR** $5.00. **JE** H51, I11, I12, I18. **KW** Medicare. Health Care. Health Production. Hospitals.

AB This study investigated whether the type of hospital in which a Medicare beneficiary is admitted for hip fracture, stroke, coronary heart disease, or congestive heart failure matters in terms of amount and timing of Medicare payments and survival. In total, government hospitals were the least expensive for Medicare, with major teaching hospitals being most expensive within 6 months of admission after the index event. Survival was best in major teaching hospitals. When considering payments subsequent to those for the initial hospitalization, Medicare spent more for patients admitted to for- profit hospitals than for those admitted to other non-teaching facilities, but had similar outcomes measured by survival. Payments on behalf of patients treated in for-profit hospitals were higher for Medicare Part B and home health, especially during the first two months following discharge from the initial hospital. Results of our research suggest that Medicare has a definite financial interest in where Medicare beneficiaries are admitted for their hospital care.

Smith, James L.

TI The Self-Enforcing Provisions of Oil and Gas Unit Operating Agreements: Theory and Evidence. **AU** Libecap, Gary D.; Smith, James L.

Smith, Jeffrey A.

TI The Pre-Program Earnings Dip and the Determinants of Participation in a Social Program: Implications for Simple Program Evaluation Strategies. **AU** Heckman, James J.; Smith, Jeffrey A.

Smith, Justin

PD July 2000. **TI** On Kolmogorov Complexity and the Costs of Carrying Out Strategies. **AA** St. Peter's College, Oxford. **SR** Oxford Department of Economics Discussion Paper: 19; Institute of Economics and Statistics, University of Oxford, St Cross Building, Manor Road, Oxford OX1 3UL, England. Website: www.economics.ox.ac.uk/. **PG** 43. **PR** 2 pounds (US $4.00). **JE** C72, C79. **KW** Kolmogorov. Complexity. Strategic Complexity. Bounded Rationality. Limited Rationality.

AB It is common to model costs of carrying out strategies in games in relation to the complexity, in some sense, of the strategies. We show a particularly general definition of complexity for this purpose, one that subsumes many alternatives as special cases. We explore how this definition can be used and developed, and illustrate with applications to the analysis of two player finite repeated games.

Smith, Richard J.

TI Tests of the Seasonal Unit Root Hypothesis Against Heteroscedastic Seasonal Integration. **AU** Taylor, A. M. Robert; Smith, Richard J.

PD May 1999. **TI** Regression-Based Seasonal Unit Root Tests. **AU** Smith, Richard J.; Taylor, A. M. Robert. **AA** Smith: University of Bristol. Taylor: University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/15; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 25. **PR** 2 pounds ($4); no charge to academics. **JE** C22. **KW** Unit Roots. Seasonality. Time Series.

AB The contribution of this paper is three-fold. Firstly, a characterization theorem of the sub-hypotheses comprising the seasonal unit root hypothesis is presented which provides a precise formulation of the alternative hypotheses against which regression-based seasonal unit root tests test. Secondly, it proposes regression-based tests for the seasonal unit root hypothesis which allow a general seasonal aspect for the data and are similar both exactly and asymptotically with respect to initial values and seasonal drift parameters. Limiting representations for the statistics are presented and specialized for other scenarios concerning the deterministics. These representations allow those for particular seasonal aspects to be simply obtained and provide an explanation for the similarity between critical values in apparently quite different cases of interest. Thirdly, simulation evidence is given on the size and power properties of the statistics presented in this paper which has important implications for how tests of the seasonal unit root hypothesis should be conducted.

Smulders, Sjak

TI The Trade Off Between Sclerosis and Hold Up Problems: Rhenish vs. Anglosaxon Economies. **AU** Boone, Jan; Smulders, Sjak.

Solymosi, Tamas

TI On the Extreme Points of the Core of Neighbour Games and Assignment Games. **AU** Hamers, Herbert; Klijn, Flip; Solymosi, Tamas; Tijs, Stef; Pere Villa, Joan.

TI Neighbour Games and the Leximax Solution. **AU** Klijn, Flip; Vermeulen, Dries; Hamers, Herbert; Solymosi, Tamas; Tijs, Stef; Villar, Joan Pere.

TI Neighbour Games and the Leximax Solution. **AU** Klijn, Flip; Vermeulen, Dries; Hamers, Herbert; Solymosi, Tamas; Tijs, Stef; Villar, Joan Pere.

Sonnac, Nathalie

TI TV-Broadcasting Competition and Advertising. **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie.

TI Does Press Advertising Foster the "Pensee Unique"? **AU** Gabszewicz, Jean J.; Laussel, Didier; Sonnac, Nathalie.

Spector, David

PD June 1999. **TI** Is it Possible to Redistribute the Gains from Trade Using Income Taxation? **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of

Technology, Department of Economics Working Paper: 99/13; MIT, Dept. of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 25. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** D31, F11, F41, H23, H24. **KW** Gains From Trade. Redistribution. Income Taxation. Wages. International Trade.

AB How does international trade affect income redistribution? We consider a country where the government uses a nonlinear income tax to maximize some redistributive social welfare function, subject to the constraint that it can observe only individual income but not individual characteristics. In autarky, the government is able to partially equalize equilibrium prices and wages by manipulating quantities through the tax system. If borders are open, prices and wages are determined by world markets and the government is deprived of this possibility. This implies that it may be unable to redistribute the gains from trade: opening borders may decrease welfare even after the optimal policy adjustment.

PD October 1999. **TI** Can Work-Sharing Work? **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology, Department of Economics Working Paper: 99/21; MIT, Department of Economics, Room E52-262, 50 Memorial Drive, Cambridge, MA 02142. **PG** 22. **PR** $7.00 U.S., Canada, Mexico; $10.00 other international. **JE** E24, J21, J23, J31, J38. **KW** Unemployment. Work-Sharing. Payroll Taxes. Minimum Wages. Labor Demand.

AB This paper assesses the effectiveness of work-sharing as a tool against unemployment, within a simple model where unemployment is induced by a binding minimum wage. To be effective, policies such as working time reduction or early retirement require that the workforce be homogeneous enough: The unemployed can then easily replace the freed up hours of work. We calculate the effects of work-sharing and of classical payroll tax reduction policies, as a function of some homogeneity measure and of the relevant elasticities. On the basis of existing empirical results, we estimate that in France, 2.5 hours of work must be removed to free up one hour of work: labor force heterogeneity makes work-sharing much less effective than a naive analysis would predict, and payroll tax reductions are more cost- effective than work-sharing with income compensation.

Spetz, Joanne

TI Managed Care and Medical Technology Growth. **AU** Baker, Laurence; Spetz, Joanne.

Stapleton, Richard C.

PD October 1999. **TI** The Term Structure of Interest-Rate Futures Prices. **AU** Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Stapleton: University of Strathclyde. Subrahmanyam: New York University. **SR** New York University, Salomon Center Working Paper: S/00/06; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 27. **PR** $5.00 each; $100.00 yearly subscription. **JE** E43, G13. **KW** Term Structure. Interest Rates. Futures Pricing. Volatility. Mean Reversion.

AB We derive general properties of two-factor models of the term structure of interest rates and, in particular, the process for futures prices and rates. Then, as a special case, we derive a no-arbitrage model of the term structure in which any two futures rates act as factors. The term structure shifts and tilts as the factor rates vary. The cross-sectional properties of the model derive from the solution of a two-dimensional autoregressive process for the short-term rate, which exhibits both mean reversion and a lagged persistence parameter. We show that the correlation of the futures rates is restricted by the no- arbitrage conditions of the model. In addition, we investigate the determinants of the volatility of the futures rates of various maturities. These are shown to be related to the volatilities of the short rate, the volatility of the second factor, the degree of mean reversion and the persistence of the second factor shock. We obtain specific results for futures rates in the case where the logarithm of the short-term rate (e.g., the London Inter-Bank Offer Rate (Libor)) follows a two-dimensional process. Our results lead to empirical hypotheses that are testable using data from the liquid market for Eurocurrency interest rate futures contracts.

TI The Valuation of American-Style Swaptions in a Two-Factor Spot- Futures Model. **AU** Peterson, Sandra; Stapleton, Richard C.; Subrahmanyam, Marti G.

Starr, Ross M.

PD November 1999. **TI** Why Is There Money? Convergence to a Monetary Equilibrium in a General Equilibrium Model with Transaction Costs. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 99/23; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** 18. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C62, D50, E40. **KW** Money. Transaction Cost. Scale Economy. Double Coincidence of Wants. General Equilibrium.

AB This paper presents a class of examples where a nonmonetary economy converges in a tatonnement process to a monetary equilibrium. Exchange takes place in organized markets characterized by an array of trading posts where each pair of goods may be traded for one another. A barter equilibrium with m commodities is characterized by m(m-1)/2 commodity pair trading posts, most of which host active trade. A monetary equilibrium with unique money is characterized by active trade concentrated on m-1 posts, those trading in 'money' versus the m-1 nonmonetary commodities. There are two distinct sources of monetization: absence of double coincidence of wants and scale economies in transaction costs. As households discover that some pairwise markets (those dealing in the 'natural' money or those with high trading volumes) have lower transaction costs, they restructure their trades to take advantage of the low cost. Use of media of exchange arises endogenously from their low transaction cost. Uniqueness of the medium of exchange in equilibrium results from scale economies in the transaction technology.

Stein, Jeremy C.

TI Banks as Liquidity Providers: An Explanation for the Co-Existence of Lending and Deposit-Taking. **AU** Kashyap, Anil K.; Rajan, Raghuram; Stein, Jeremy C.

Stern, Scott

TI Balancing Incentives: The Tension Between Basic and Applied Research. **AU** Cockburn, Iain; Henderson, Rebecca;

Stern, Scott.

TI Patient Welfare and Patient Compliance: An Empirical Framework for Measuring the Benefits from Pharmaceutical Innovation. **AU** Ellickson, Paul; Stern, Scott; Trajtenberg, Manuel.

Stock, James H.

PD March 1999. **TI** Forecasting Inflation. **AU** Stock, James H.; Watson, Mark W. **AA** Stock: Harvard University and National Bureau of Economic Research. Watson: Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7023; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 24. **PR** $5.00. **JE** C32, E31, E37. **KW** Inflation. Forecasting. Phillips Curve. Time Series.

AB This paper investigates forecasts of U.S. inflation at the 12-month horizon. The starting point is the conventional unemployment rate Phillips curve, which is examined in a simulated out of sample forecasting framework. Inflation forecasts produced by the Phillips curve generally have been more accurate than forecasts based on other macroeconomic variables, including interest rates, money and commodity prices. These forecasts can however be improved upon using a generalized Phillips curve based on measures of real aggregate activity other than unemployment, especially a new index of aggregate activity based on 61 real economic indicators.

Stomberg, Christopher

PD April 2000. **TI** Bootstrapping the Information Matrix Test. **AU** Stomberg, Christopher; White, Halbert. **AA** University of California, San Diego. **SR** University of California, San Diego, Department of Economics Working Paper: 2000/04; Working Paper Coordinator, Department of Economics, 0508, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0508. Website: http://econ.ucsd.edu/papers. **PG** Not available. **PR** $3.00 U.S. and Canada; $7.00 Foreign; make checks payable to Regents, University of California. **JE** C12, C15, C52. **KW** Information Matrix Testing. Specification Testing. Misspecification. Bootstrap Methods. Monte Carlo Methods.

AB In this paper we provide considerable Monte Carlo evidence on the finite sample performance of several alternative forms of White's [1982] IM test. Using linear regression and probit models, we extend the range of previous analysis in a manner that reveals new patterns in the behavior of the asymptotic version of the IM test -- particularly with respect to curse of dimensionality effects. We also explore the potential of parametric and nonparametric bootstrap methods for reducing the size bias that characterizes the asymptotic IM test. The nonparametric bootstrap is of particular interest because of the weak conditions it imposes, but the results of our Monte Carlo experiments suggest that this technique is not without limitations. The parametric bootstrap demonstrates good size and power in reasonably small samples, but requires assumptions that may be auxiliary from the standpoint of a QMLE. We observe that the effects of violating one of these auxiliary assumptions has a non-trivial impact on the size of IM tests that employ this technique.

Storesletten, Kjetil

PD October 1999. **TI** Asset Pricing with Idiosyncratic Risk and Overlapping Generations. **AU** Storesletten, Kjetil; Telmer, Chris; Yaron, Amir. **AA** Storesletten: Stockholm University. Telmer: Carnegie Mellon University. Yaron: University of Pennsylvania. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 405; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 49. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** E44, G12. **KW** Finance. Overlapping Generations. Asset Pricing.

AB A number of existing studies have concluded that risk sharing allocations supported by competitive, incomplete markets equilibria are quantitatively close to first-best. Equilibrium asset prices in these models have been difficult to distinguish from those associated with a complete markets model, the counterfactual features of which have been widely documented. This paper asks if life cycle considerations, in conjunction with persistent idiosyncratic shocks which become more volatile during aggrĕgate downturns, can reconcile the quantitative properties of the competitive asset pricing framework with those of observed asset returns. The authors begin by arguing that data from the Panel Study on Income Dynamics support the plausibility of such a shock process. Their estimates suggest a high degree of persistence as well as a substantial increase in idiosyncratic conditional volatility coincident with periods of low growth in U.S. GNP. When these factors are incorporated in a stationary overlapping generations framework, the implications for the returns on risky assets are substantial. Plausible parameterizations of the authors' economy are able to generate Sharpe ratios which match those observed in U.S. data.

Strahan, Philip E.

TI What Will Technology Do to Financial Structure? **AU** Mishkin, Frederic S.; Strahan, Philip E.

Straub, John D.

TI Worker Perceptions of Job Insecurity in the Mid-1990s: Evidence from the Survey of Economic Expectations. **AU** Manski, Charles F.; Straub, John D.

Strobel, Frank

PD January 1999. **TI** Monetary Integration, Stochastic Inflation Preferences and the Value of Waiting. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/06; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 16. **PR** 2 pounds ($4); no charge to academics. **JE** E31, F33. **KW** Monetary Integration. Inflation. International Finance. Waiting.

AB Using a simple two-country model where policymakers minimize the continuous-time equivalent of a Barro-Gordon-type loss function over inflation, we examine the value of the option to give up monetary independence in favor of monetary integration when the national preference parameters associated with an inflationary surprise follow correlated geometric Brownian motions. We derive the critical level of the ratio of these parameters that triggers a move to monetary integration and find that, apart from the symmetric case where they are perfectly correlated with identical variances, it is generally significantly different from one, so that any one country will be willing to give up monetary independence only if the other country is valuing inflationary surprises strictly, and potentially substantially, less than itself.

PD December 1999. **TI** When to Leave a Monetary Union: Now or Later? **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/23; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 13. **PR** 2 pounds ($4); no charge to academics. **JE** E31, E50, F33. **KW** Monetary Disintegration. Inflation. Brownian Motion. Irreversible Investment. Monetary Union.

AB Using a two-country model of monetary union where policymakers minimize the continuous-time equivalent of a Barro-Gordon-type loss function, we examine the value of the option of monetary break-up when the national preference parameters associated with an inflationary surprise follow correlated geometric Brownian motions. We derive the critical level of the ratio of these parameters that triggers a move to monetary disintegration and find that a country will be willing to return to monetary independence only if the other country's relative inflation preferences are strictly, and potentially substantially, greater than a benchmark value depending on the cost of monetary breakup alone.

PD December 1999. **TI** Marriage and the Value of Waiting. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/24; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 11. **PR** 2 pounds ($4); no charge to academics. **JE** J12. **KW** Marriage. Brownian Motion. Irreversible Investment.

AB Using a simple model where singles try to maximize their pizzazz, we examine the value of the option to give up single life in favor of marriage when singles' pizzazz levels follow correlated geometric Brownian motions. We derive the critical level of relative pizzazz levels that triggers the move to marriage and find that for relatively small (large) potential economies of scale in marriage, a single will generally be willing to get married if his/her prospective partner's pizzazz is strictly higher (lower) than his/her own.

Stulz, Rene M.

PD March 1999. **TI** Globalization of Equity Markets and the Cost of Capital. **AA** Ohio State University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7021; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 51. **PR** $5.00. **JE** F21, F23, F36, G15. **KW** Globalization. Equity Capital. International Investment. Agency Costs.

AB This paper examines the impact of globalization on the cost of equity capital. We argue that the cost of equity capital decreases because of globalization for two important reasons. First, the expected return that investors require to invest in equity to compensate them for the risk they bear generally falls. Second, the agency costs which make it harder and more expensive for firms to raise funds become less important. The existing empirical evidence is consistent with the theoretical prediction that globalization decreases the cost of capital, but the documented effects are lower than theory leads us to expect. We discuss various reasons for why this is the case.

Subrahmanyam, Marti G.

TI Costly Financing, Optimal Payout Policies and the Valuation of Corporate Debt. **AU** Acharya, Viral V.; Huang, Jing-zhi; Subrahmanyam, Marti G.; Sundaram, Rangarajan.

TI Costly Financing, Optimal Payout Policies and the Valuation of Corporate Debt. **AU** Acharya, Viral V.; Huang, Jing-zhi; Subrahmanyam, Marti G.; Sundaram, Rangarajan.

TI The Term Structure of Interest-Rate Futures Prices. **AU** Stapleton, Richard C.; Subrahmanyam, Marti G.

TI The Valuation of American-Style Swaptions in a Two-Factor Spot- Futures Model. **AU** Peterson, Sandra; Stapleton, Richard C.; Subrahmanyam, Marti G.

Suen, Wing

TI Conflicts and Common Interests in Committees. **AU** Li, Hao; Rosen, Sherwin; Suen, Wing.

Suijs, Jeroen

PD September 1999. **TI** Price Uncertainty in Linear Production Situations. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9991; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 18. **PR** no charge. **JE** C71, C73, D24, G11, G20. **KW** Linear Production. Cooperative Games. Investment Funds. Stochastic Games.

AB This paper analyzes linear production situations with price uncertainty, and shows that the corresponding stochastic linear production games are totally balanced. It also shows that investment funds, where investors pool their individual capital for joint investments in financial assets, fit into this framework. For this subclass, the paper provides a procedure to construct an optimal investment portfolio. Furthermore it provides necessary and sufficient conditions for the proportional rule to result in a core-allocation.

PD October 1999. **TI** Insurance Games. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9995; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 19. **PR** no charge. **JE** C71, C73, G22. **KW** Insurance. Cooperative Games. Zero Utility Premium. Stochastic Games. Arbitrary Risk.

AB This paper generalizes the results of Suijs, De Waegenaere and Borm (1998) to arbitrary risks. It provides Pareto optimal allocations and shows that the zero utility premium calculation principle yields a core- allocation.

Sun, Ning

PD September 1999. **TI** Surjective Function Theorems. **AU** Sun, Ning; Yang, Zaifu. **AA** Sun: Akita Prefectural University. Yang: Yokohama National University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9975; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 6. **PR** no charge. **JE** C60. **KW** Surjective Functions. Fixed Point. Antifixed Point. Antipodal Point. Spheres.

AB Given the unit sphere S-raised to the n-power, the authors prove the following theorem and several extensions: For any continuous function f: S-raised to the n-power maps onto S-raised to the n-power, if f has no fixed point in S-raised to the n-power, then f must be surjective. Furthermore, there exists x* in the set S-raised to the n-power such that f(x*) = -f(-x*).

Sutherland, Holly

TI Child Poverty and Child Benefits in the European Union. **AU** Immervoll, Herwig; Sutherland, Holly; de Vos, Klaas.

TI An Introduction to EUROMOD. **AU** Immervoll, Herwig; O'Donoghue, Cathal; Sutherland, Holly.

TI Integrating Output in EUROMOD: An Assessment of the Sensitivity of Multi-Country Microsimulation Results. **AU** O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca.

Svensson, Lars E. O.

TI The Equilibrium Degree of Transparency and Control in Monetary Policy. **AU** Faust, Jon; Svensson, Lars E. O.

Swanson, Norman R.

TI Trade, Investment, and Growth: Nexus, Analysis, and Prognosis. **AU** Krishna, Kala; Ozyildirim, Ataman; Swanson, Norman R.

Taber, Christopher

TI General Equilibrium Cost Benefit Analysis of Education and Tax Policies. **AU** Heckman, James J.; Lochner, Lance; Taber, Christopher.

Talman, Dolf

TI Variational Inequality Problems With a Continuum of Solutions: Existence and Computation. **AU** Herings, P. Jean-Jacques; Talman, Dolf; Yang, Zaifu.

TI Existence and Welfare Properties of Equilibrium in an Exchange Economy with Multiple Divisible, Indivisible Commodities and Linear Production Technologies. **AU** Van der Laan, Gerard; Talman, Dolf; Yang, Zaifu.

Taylor, A. M. Robert

PD May 1999. **TI** Tests of the Seasonal Unit Root Hypothesis Against Heteroscedastic Seasonal Integration. **AU** Taylor, A. M. Robert; Smith, Richard J. **AA** Taylor: University of Birmingham. Smith: University of Bristol. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/13; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 20. **PR** 2 pounds ($4); no charge to academics. **JE** C12, C22. **KW** Autoregressions. Locally Most Powerful. Unit Roots. Seasonality. Random Walk.

AB This paper considers the problem of testing for a nonstochastic seasonal unit root in a seasonally observed time-series process against the alternative of a randomized seasonal root with mean unity; that is, the process displays heteroskedastic seasonal integration. The alternative hypothesis allows for potentially frequently occurring changes of regime in the process under investigation, allowing for more volatile forms of seasonal non-stationarity. We discuss a family of models which allow for a potentially smooth transition between the explosive and stationary phases of the seasonal model. In order to test this hypothesis we consider extensions to existing approaches developed to test against non-seasonal stochastic unit roots. Asymptotic representations of the test-statistics are derived. An empirical application to a variety of quarterly measures of U.K. consumers' expenditure is also considered.

PD May 1999. **TI** The Finite Sample Effects of Deterministic Variables on Conventional Methods of Lag-Selection in Unit Root Tests. **AA** University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/14; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 16. **PR** 2 pounds ($4); no charge to academics. **JE** C22. **KW** Dickey-Fuller Tests. Lag Selection. Deterministic Variables. Unit Roots. Information Criteria.

AB In this paper we use numerical techniques to investigate the finite sample properties of data-based approaches to selecting the lag truncation order in the context of the augmented Dickey-Fuller unit root test in a general autoregressive first-order integrated moving-average model. We focus on the well known Akaike and Schwarz information criteria and the recently suggested general-to-specific sequential approach. We find that in each case the resulting unit root tests are highly sensitive to both the form of deterministic variables included in the test-regression and to the lag structure adopted, the latter of which will tend to be under-fitted under both information-based and sequential rules. A strong interrelationship is highlighted between these two aspects of the test regression. We also show that under the data-based lag selection currently used finite sample critical values often represent a poor approximation to the finite sample null distribution of the unit root test.

TI Regression-Based Seasonal Unit Root Tests. **AU** Smith, Richard J.; Taylor, A. M. Robert.

Taylor, Donald H., Jr.

TI Does Where You Are Admitted Make A Difference? An Analysis of Medicare Data. **AU** Sloan, Frank A.; Picone, Gabriel A.; Taylor, Donald H., Jr..; Chou, Shin-Yi.

TI Does Where You Are Admitted Make A Difference? An Analysis of Medicare Data. **AU** Sloan, Frank A.; Picone, Gabriel A.; Taylor, Donald H., Jr..; Chou, Shin-Yi.

Telmer, Chris

TI Asset Pricing with Idiosyncratic Risk and Overlapping Generations. **AU** Storesletten, Kjetil; Telmer, Chris; Yaron, Amir.

Terry, Bridget

TI Explaining Rising Income and Wage Inequality Among the College- Educated. **AU** Hoxby, Caroline M.; Terry, Bridget.

Tharakan, Joe

PD January 2000. **TI** The Importance of Being Small: Size Effects in International Trade. **AU** Tharakan, Joe; Thisse, Jacques-Francois. **AA** CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/01; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-

la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 20. **PR** $100 per year. **JE** F12, F41, L13. **KW** International Trade. Nation Size. Mill Pricing. Spatial Competition. Transportation Costs.
AB Market size and transport costs are important ingredients of international trade. We propose to look at these issues from a different perspective. Using a Hotelling duopoly model with quadratic transport costs, we analyze the welfare effects of international trade between two countries which differ only in size. Our results indicate that in most cases free trade will lead to a decrease in prices. Furthermore, the firm of the small country will benefit from market expansion. Finally, the model predicts that the small country benefits from a move towards free trade whereas the large country may be hurt by the opening to trade.

Thisse, Jacques-Francois

TI The Importance of Being Small: Size Effects in International Trade. **AU** Tharakan, Joe; Thisse, Jacques-Francois.

Tijs, Stef

TI On the Extreme Points of the Core of Neighbour Games and Assignment Games. **AU** Hamers, Herbert; Klijn, Flip; Solymosi, Tamas; Tijs, Stef; Pere Villa, Joan.

TI On the Extreme Points of the Core of Neighbour Games and Assignment Games. **AU** Hamers, Herbert; Klijn, Flip; Solymosi, Tamas; Tijs, Stef; Pere Villa, Joan.

TI Games Arising From Infinite Production Situations. **AU** Timmer, Judith; Llorca, Natividad; Tijs, Stef.

TI Semi-Infinite Assignment Problems and Related Games. **AU** Llorca, Natividad; Tijs, Stef; Timmer, Judith.

TI Weighted Allocation Rules for Standard Fixed Tree Games. **AU** Bjxrndal, Endre; Koster, Maurice; Tijs, Stef.

TI Congestion Games and Potentials Reconsidered. **AU** Voorneveld, Mark; Borm, Peter; Van Megen, Freek; Tijs, Stef; Facchini, Giovanni.

TI Congestion Games and Potentials Reconsidered. **AU** Voorneveld, Mark; Borm, Peter; Van Megen, Freek; Tijs, Stef; Facchini, Giovanni.

Timmer, Judith

TI Inventory Games. **AU** Meca, Ana; Timmer, Judith; Garcia-Jurado, Ignacio; Borm, Peter.

PD June 1999. **TI** Games Arising From Infinite Production Situations. **AU** Timmer, Judith; Llorca, Natividad; Tijs, Stef. **AA** Timmer and Tijs: CentER and Tilburg University. Llora: Miguel Hernandez University, Spain. **SR** Tilburg CentER for Economic Research Discussion Paper: 9957; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 11. **PR** no charge. **JE** C61, C71. **KW** Semi-Infinite Programs. Linear Transformation. Cooperative Games. Balancedness. Programming.
AB Owen (1975) introduced linear production (LP) situations and Timmer, Borm and Suijs (1998) introduced more general situations involving the linear transformation of products (LTP). They showed that the corresponding LTP games are totally balanced. In this paper we look at LTP situations with an infinite number of transformation techniques. The linear program that calculates the maximal profit is a semi-infinite program. We show that an optimal solution of the dual program exists and that it is a core-element of the corresponding LTP game.

TI Semi-Infinite Assignment Problems and Related Games. **AU** Llorca, Natividad; Tijs, Stef; Timmer, Judith.

Tirelli, Mario

PD February 2000. **TI** Capital Income Taxation when Markets are Incomplete. **AA** CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/11; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 22. **PR** $100 per year. **JE** D52, D61, H21, H25, H43. **KW** Capital Income Taxation. Optimal Taxation. Tax Reform. General Equilibrium. Incomplete Markets.
AB In this paper we investigate the welfare effects of capital income taxation in a standard one commodity general equilibrium model with incomplete markets (GEI) and production. We consider a competitive economy of two periods with uncertainty over a finite number S of possible states of nature revealed in the second period. One perishable commodity is traded on (S + 1) spot markets, there are 1 < J < S security markets, and trade takes place among a finite number H > 1 of consumer types. Securities are equity contracts; claims on second period's returns from production plans which are selected by J firms in the interest of shareholders. The number of such contracts is insufficient to span all possible contingencies; that is we assume that the security markets are incomplete. The central planner is (uniquely) endowed with a system of ad-valorem taxes on corporate dividends. If H is not too large, there exist tax reforms that have positive welfare effects; yet, tax reforms with opposite effects do also exist. This result has implications for the theory of optimal taxation and social discounting.

PD March 2000. **TI** Constrained Suboptimality and Financial Innovation in GEI with a Single Commodity. **AA** CORE. **SR** Universite Catholique de Louvain CORE Discussion Paper: 2000/19; Center for Operations Research and Econometrics, Universite Catholique de Louvain, 34 Voi du Roman Pays, 1348 Louvain-la-Neuve, Belgium. Website: www.core.ucl.ac.be. **PG** 28. **PR** $100 per year. **JE** D51, D52, D60, G18. **KW** Pareto Optimality. Incomplete Markets. Financial Innovation. Government Intervention. General Equilibrium.
AB In this paper we exploit global analysis to explore welfare properties of a standard one-commodity General Equilibrium economy with incomplete markets (GEI), under different notions of constrained Pareto optimality. In a unifying framework we revise and extend some of the leading results of the literature on incomplete markets and government intervention, including those concerning financial innovation.

Titman, Sheridan

TI Profitability of Momentum Strategies: An Evaluation of Alternative Explanations. **AU** Jegadeesh, Narasimhan; Titman, Sheridan.

Tornell, Aaron

PD May 1999. **TI** Common Fundamentals in the Tequila and Asian Crises. **AA** Harvard University and NBER.

SR National Bureau of Economic Research Working Paper: 7139; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 25. **PR** $5.00. **JE** E44, F31, F32, F36. **KW** Financial Crises. International Finance. Foreign Exchange. Balance of Payments. Capital Movements.

AB We find that in 1995 and 1997 the crises did not spread in a truly random way. The cross-country variation in the severity of the crises was largely determined by three fundamentals: the strength of the banking system, the real appreciation, and the international liquidity of the country. We also find that the rule that links fundamentals to the crisis severity has been the same in both the Tequila and Asian crises.

Torres, Anna

TI A Note on the Dual Scaling of Dominance Data and its Relationship to Correspondence Analysis. **AU** Greenacre, Michael; Torres, Anna.

Tracy, Joseph

TI Exchange Rates and Local Labor Markets. **AU** Goldberg, Linda; Tracy, Joseph.

Trajtenberg, Manuel

TI Patient Welfare and Patient Compliance: An Empirical Framework for Measuring the Benefits from Pharmaceutical Innovation. **AU** Ellickson, Paul; Stern, Scott; Trajtenberg, Manuel.

PD March 1999. **TI** Innovation in Israel 1968-97: A Comparative Analysis Using Patent Data. **AA** Tel-Aviv University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7022; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 25. **PR** $5.00. **JE** O31, O34, O53, O57. **KW** Innovation. Patents. Technological Change. Israel.

AB This paper presents a close-up portrait of innovation in Israel for the past 30 years, with the aid of highly detailed patent data. The authors use for that purpose all Israeli patents taken in the US (over 7,000), as well as US patents and patents from other countries for comparative purposes. The time path of Israeli patenting reveals big jumps in the mid eighties and then again in the early nineties, reflecting underlying "shocks" in policy and in availability of relevant inputs. Israel ranks high in terms of patents per capita, compared to the G7, the "Asian Tigers" and a group of countries with similar GDP per capita. The technological composition of Israeli innovations reflects quite well world-wide technological trends, except that Computers and Communications, the fastest growing field in the US, has grown even faster in Israel. The weak side resides in the composition of Israeli assignees, the actual owners of the intellectual property rights: just 35% of Israeli patents were assigned to Israeli corporations, a much lower percentage than in most other countries. On the other hand Israeli patents are of good "quality" in terms of citations received.

Tribo, Josep A.

TI Relacion entre contratos laborales y financieros: un estudio teorico y empirico para el caso espanol. **AU** Hernando, Ignacio; Tribo, Josep A.

Turnovsky, Stephen J.

TI Reserve Requirements on Sovereign Debt in the Presence of Moral Hazard -- on Debtors or Creditors? **AU** Aizenman, Joshua; Turnovsky, Stephen J.

Tyrvainen, Timo

TI Is There Scope for Inflation Differentials in EMU? **AU** Alberola Ila, Enrique; Tyrvainen, Timo.

Udina, Frederic

PD November 1999. **TI** Implementing Interactive Computing in an Object-Oriented Environment. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 419; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 20. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C13, C43, C80. **KW** Histograms. Frequency Polygons. Bin Width. Interactive Graphics. Statistical Computing.

AB Statistical computing when input/output is driven by a Graphical User Interface is considered. A proposal is made for automatic control of computational flow to ensure that only strictly required computations are actually carried on. The computational flow is modeled by a directed graph for implementation in any object-oriented programming language with symbolic manipulation capabilities. A complete implementation example is presented to compute and display frequency-based piecewise- linear density estimators such as histograms or frequency polygons.

Uhlig, Harald

TI Should Smart Investors Buy Funds with High Returns in the Past. **AU** Palomino, Frederic; Uhlig, Harald.

Uppal, Raman

TI Global Diversification, Growth and Welfare with Imperfectly Integrated Markets for Goods. **AU** Dumas, Bernard; Uppal, Raman.

Urbain, Jean-Pierre

TI Corporate Governance Structures, Control and Performance in European Markets: A Tale of Two Systems. **AU** Crama, Yves; Leruty, Luc; Renneboog, Luc; Urbain, Jean-Pierre.

Uribe, Martin

TI Devaluation Risk and the Syndrome of Exchange-Rate-Based Stabilizations. **AU** Mendoza, Enrique G.; Uribe, Martin.

Urich, Thomas

PD January 2000. **TI** Financial Market Response to Monetary Policy Changes in the 1990s. **AU** Urich, Thomas; Wachtel, Paul. **AA** Urich: Fordham University. Wachtel: New York University. **SR** New York University, Salomon Center Working Paper: S/00/02; Salomon Center, Stern School of Business, New York University, 44 West 4th Street, Suite 9-160, New York, NY 10012-1126. Website: www.stern.nyu.edu/salomon. **PG** 20. **PR** $5.00 each; $100.00 yearly subscription. **JE** E52, E58, G14.

KW Monetary Policy. Federal Funds Rate. Targets. Interest Rates.
AB The operating target for monetary policy in the U.S. has changed from borrowings in the late 1980's to a target range for the fed funds rate to a specific fed funds target. In addition, secrecy about the policy target has largely disappeared and policy targets are now announced immediately. We explore the impact of policy decisions on short-term interest rates as the policy target and policy announcements have changed. We find that the policy targets increased in importance as the Fed moved to a specific emphasis on the fed funds rate. However, since the Fed began to announce the targets, policy changes have had a lesser effect on rates.

Utili, Francesca

TI Integrating Output in EUROMOD: An Assessment of the Sensitivity of Multi-Country Microsimulation Results. AU O'Donoghue, Cathal; Sutherland, Holly; Utili, Francesca.

Valles, Javier

TI The Liquidity Effect in a Small Open Economy Model. AU Andres, Javier; Lopez-Salido, J. David; Valles, Javier.

TI On the Real Effects of Monetary Policy. AU Vinals, Jose; Valles, Javier.

TI Intertemporal Substitution and the Liquidity effect in a Sticky Price Model. AU Andres, Javier; Lopez-Salido, J. David; Valles, Javier.

Van Damme, Eric

PD September 1999. TI The Dutch DCS-1800 Auction. AA CentER and Tilburg University. SR Tilburg CentER for Economic Research Discussion Paper: 9977; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. PG 28. PR no charge. JE C72, D44, L51, L96. KW Telecommunications. Auctions. Regulation. Noncooperative Games.
AB In February 1998 the Dutch government auctioned licenses to operate mobile telecommunications networks according to the DCS-1800 technology. Two "national" licenses and sixteen "regional" ones were auctioned by using a variant of the simultaneous, multiple round auction that was proposed by US-economists and that had been tested in the US. This paper describes how the decision to auction came about, it details the auction rules, and it analyzes the resulting outcomes.

Van den Berg, Gerard J.

PD June 1999. TI Declining Prices in the Sequential Dutch Flower Auction of Roses. AU Van den Berg, Gerard J.; Van Ours, Jan C.; Pradhan, Menno P. AA Van den Berg: Free University and CEPR. Van Ours: CentER and Tilburg University. Pradhan: Free University. SR Tilburg CentER for Economic Research Discussion Paper: 9952; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. PG 32. PR no charge. JE C23, D44. KW Sequential Auctions. Declining Prices. Buyer's Option. Pricing. Panel Data.
AB According to basic models of sequential private value auctions of identical objects, consecutive prices are on average constant or rising. In empirical studies, prices are often found to decline. Several explanations have been put forward for this declining price anomaly. In this paper we analyze data on sequential Dutch auctions of roses from the largest flower auction in the world. We find that there is a substantial price decline and suggest that the presence of a buyer's option, whereby the winner of the first auction has the opportunity to buy the remaining units at the winning price, is a main determinant of the observed price decline. We advance on the empirical literature on sequential auctions by using formal panel data estimation techniques.

TI Business Cycles and Compositional Variation in U.S. Unemployment. AU Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C.

TI The Anatomy of Unemployment Dynamics. AU Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C.

Van den Brink, Rene

PD May 1999. TI Potentials and Reduced Games for Share Functions. AU Van den Brink, Rene; Van der Laan, Gerard. AA Van den Brink: CentER and Tilburg University. Van der Laan: Free University. SR Tilburg CentER for Economic Research Discussion Paper: 9941; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. PG 32. PR no charge. JE C71. KW Cooperative Games. Transferable Utilities. Value Functions. Share Functions.
AB A situation in which a finite set of players can obtain certain payoffs by cooperation can be described by a cooperative game with transferable utilities -- or simply a TU-game. A value function for TU- games is a function that assigns to every game a distribution of the payoffs. A value function is efficient if for every game it exactly distributes the worth that can be obtained by all players cooperating together. An approach to efficiently allocating the worth of the 'grand coalition' is using share functions which assign to every game a vector with components that sum up to one such that every component is the corresponding players' share in the total payoff that is to be distributed among the players. In this paper we give some characterizations of a class of share functions containing the Shapley share function and the Banzhaf share function using generalizations of potentials and of Hart and Mas-Colell's reduced game property.

PD July 1999. TI Core Concepts for Share Vectors. AU Van den Brink, Rene; Van der Laan, Gerard. AA Van den Brink: CentER and Tilburg University. Van der Laan: Free University. SR Tilburg CentER for Economic Research Discussion Paper: 9964; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. PG 34. PR no charge. JE C71. KW Share Vectors. Reduced Game. Cooperative Games. Transferable Utilities. Value Mappings.
AB A situation in which a finite set of players can obtain certain payoffs by cooperation can be described by a cooperative game with transferable utilities -- or simply a TU-game. A value mapping for TU- games is a mapping that assigns to every game a set of vectors each representing a distribution of the payoffs. A value mapping is efficient if to every game it assigns a set of vectors with components that all sum up to the worth that can be obtained by all players cooperating together. An approach to efficiently allocating the worth of the 'grand coalition' is using share mappings which assign to every game a set of share vectors, which are vectors with components that sum up to one such that every component

is the corresponding players' share in the total payoff that is to be distributed among the players. In this paper we discuss a class of share mappings containing the (Shapley) share-core, the Banzhaf share-core and the Large Banzhaf share-core. We provide characterizations of this class of share mappings and show how they are related to the corresponding share functions, which are functions that assign to every TU-game exactly one share vector.

TI Values and Governance Systems. **AU** Ruys, Pieter H. M.; Van den Brink, Rene; Semenov, Radislav.

PD October 1999. **TI** Governance of Clubs and Firms with Cultural Dimensions. **AU** Van den Brink, Rene; Ruys, Pieter H. M.; Semenov, Radislav. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99101; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 24. **PR** no charge. **JE** C71, D23, D63, D71, L22. **KW** Governance. Service Economy. Cooperative Organization. Clubs. Firms.
AB The neoclassical way to cope with firms providing services, or with clubs procuring services, is restricted by the lack of institutional features. An institutional approach is introduced that requires a cooperative governance to realize the potential value-production by firms, or to realize the potential user-value by clubs. For each, a distinctive governance system is introduced. The firm requires an implementation governance to activate the value-production capacities of its service providers. It is empowered top-down by the unique top-position of the organization. The club, on the other hand, requires a representation governance to aggregate the user-values of its members for some common service and to order this service. It is empowered bottom-up by the service users, i.e., the members of the club using that common service. Institutional characteristics are also reflected in the distribution functions that are used in rewarding positions in firms and clubs. Some cultural dimensions are expressed in these distribution functions. That allows us to relate characteristics of governance systems to society's cultural dimensions.

Van den Broek, W. A.

PD August 1999. **TI** Disturbance Decoupling in Dynamic Games. **AU** Van den Broek, W. A.; Schumacher, J. M. **AA** Van den Broek: Tilburg University. Schumacher: CWI. **SR** Tilburg CentER for Economic Research Discussion Paper: 9967; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 9. **PR** no charge. **JE** C67, C73. **KW** Disturbance Decoupling. Differential Games. Controlled Invariance. Dynamic Games.
AB A theory for disturbance decoupling problems has been well developed in the area of geometric control theory. The aim of the present study is to introduce disturbance decoupling problems in a dynamic game context. For this purpose, techniques from geometric control theory are applied. Necessary and sufficient conditions are derived for the solvability of the disturbance decoupling problems introduced here. Consequently, for a given game, the players can easily check if these problems are solvable or not.

Van der Heijden, Eline C. M.

PD September 1999. **TI** Simple and Complex Gift Exchange in the Laboratory. **AU** Van der Heijden, Eline C. M.; Nelissen, Jan H. M.; Potters, Jan J. M.; Verbon, Harrie A. A. **AA** Van der Hijden, Potters and Verbon: CentER and Tilburg University. Nelissen: CentER Applied Research. **SR** Tilburg CentER for Economic Research Discussion Paper: 9978; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 32. **PR** no charge. **JE** C71, C90, D63, H55. **KW** Experiments. Reciprocity. Trust. Coordination. Gift Exchange.
AB We examine an experimental gift exchange game in which the players can improve upon the unique no-gifts equilibrium through cooperative gift giving. The main feature of the study is that there are two different types of gift exchange, which we call simple and complex exchange, respectively. Complex exchange gives higher payoffs than simple exchange but it requires not only mutual trust, like simple exchange, but also a substantial degree of coordination. We examine whether players are able to conclude simple and complex exchanges and how this is affected by the move and matching structure of the game.

PD November 1999. **TI** Information Feedback in Public-Bad Games: A Cross-Country Experiment. **AU** Van der Heijden, Eline C. M.; Moxnes, Erling. **AA** Van der Heijden: CentER and Tilburg University. Moxnes: Foundation for Research in Economics and Business Administration. **SR** Tilburg CentER for Economic Research Discussion Paper: 99102; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 19. **PR** no charge. **JE** C70, C92, D63, H41. **KW** Public Bads. Experiments. Information Feedback. Cross-Culture. Restart Effect.
AB In this paper, we examine the impact of information on individual contributions in a public-bad experiment. We compare two experimental treatments. In the partial information treatment, subjects are only informed about the total contributions by their group, whereas in the full information treatment they also get feedback on the individual decisions of their group members. Both treatments have been performed in two countries: Norway and the Netherlands. The main results are that the average contributions are not significantly different between the information conditions in the two countries. Furthermore, a restart effect, which is often observed in public-good experiments, is also found here.

Van der Klaauw, Bas

PD November 1999. **TI** Labor Supply and Matching Rates for Welfare Recipients: An Analysis Using Neighborhood Characteristics. **AU** Van der Klaauw, Bas; Van Ours, Jan C. **AA** Van der Klaauw: Free University and Tinbergen Institute. Van Ours: CentER, Tilburg University and CEPR. **SR** Tilburg CentER for Economic Research Discussion Paper: 99105; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 31. **PR** no charge. **JE** I30, J22, J64, R23. **KW** Welfare. Unemployment Duration. Spillovers.
AB This paper investigates how in addition to personal characteristics the neighborhood affects the individual transition rate from welfare to work. We use a unique administrative database on welfare recipients in Rotterdam, the second largest city of The Netherlands. We find that the exit rate to work of young Dutch welfare recipients is influenced by the neighborhood unemployment rate. Other neighborhood

characteristics such as the average housing price are not important. From this we conclude that for young Dutch welfare recipients a high local unemployment rate has a negative spillover effect on the transition from welfare to work.

Van der Laan, Gerard

TI Potentials and Reduced Games for Share Functions. **AU** Van den Brink, Rene; Van der Laan, Gerard.

TI Core Concepts for Share Vectors. **AU** Van den Brink, Rene; Van der Laan, Gerard.

PD September 1999. **TI** Existence and Welfare Properties of Equilibrium in an Exchange Economy with Multiple Divisible, Indivisible Commodities and Linear Production Technologies. **AU** Van der Laan, Gerard; Talman, Dolf; Yang, Zaifu. **AA** Van der Laan: Free University. Talman: CentER and Tilburg University. Yang: Yokohama National University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9976; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 18. **PR** no charge. **JE** D24, D40, D51, D60. **KW** Indivisible Commodities. Divisible Commodities. Linear Production. General Equilibrium. Welfare Theorems.

AB In this paper we consider a class of economies with a finite number of divisible commodities, linear production technologies, and indivisible goods, and a finite number of agents. This class contains several well-known economies with indivisible goods and money as special cases. It is shown that if the utility functions are continuous on the divisible commodities and are weakly monotonic both on one of the divisible commodities and on all the indivisible commodities, if each agent initially owns a sufficient amount of one of the divisible commodities, and if a "no-production-without-input" -like assumption on the production sector holds, then there exists a competitive equilibrium for any economy in this class. The usual convexity assumption is not needed here. Furthermore, by imposing strong monotonicity on one of the divisible commodities we show that any competitive equilibrium is in the core of the economy and therefore the first theorem of welfare also holds. We further obtain a second welfare theorem stating that under some conditions a Pareto efficient allocation can be sustained by a competitive equilibrium allocation for some well-chosen redistribution of the total initial endowments.

Van Groenendaal, Willem

TI Search for a New Conceptual Bookkeeping Model: Different Levels of Abstraction. **AU** Vousten-Sweere, Anne-Marie; Van Groenendaal, Willem.

Van Houte, Tom

TI The Monetary Appreciation of Paintings: From Realism to Magritte. **AU** Renneboog, Luc; Van Houte, Tom.

Van Megen, Freek

TI Congestion Games and Potentials Reconsidered. **AU** Voorneveld, Mark; Borm, Peter; Van Megen, Freek; Tijs, Stef; Facchini, Giovanni.

Van Ours, Jan C.

TI Declining Prices in the Sequential Dutch Flower Auction of Roses. **AU** Van den Berg, Gerard J.; Van Ours, Jan C.; Pradhan, Menno P.

TI Business Cycles and Compositional Variation in U.S. Unemployment. **AU** Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C.

TI The Anatomy of Unemployment Dynamics. **AU** Abbring, Jaap H.; Van den Berg, Gerard J.; Van Ours, Jan C.

TI Labor Supply and Matching Rates for Welfare Recipients: An Analysis Using Neighborhood Characteristics. **AU** Van der Klaauw, Bas; Van Ours, Jan C.

van Soest, Arthur

TI Bounds on Quantiles in the Presence of Full and Partial Item Nonresponse. **AU** Vazquez Alvarez, Rosalia; Melenberg, Bertrand; van Soest, Arthur.

TI Parametric and Semiparametric Estimation in Models with Misclassified Categorical Dependent Variables. **AU** Dustmann, Christian; van Soest, Arthur.

van Tongeren, Jan W.

TI Macro Accounts Estimation Using Indicator Ratios. **AU** Magnus, Jan R.; van Tongeren, Jan W.; de Vos, Aart F.

van Ypersele, Tanguy

TI Capital Mobility, Distributive Conflict and International Tax Coordination. **AU** Rodrik, Dani; van Ypersele, Tanguy.

Vandenbussche, Hylke

TI Trade, FDI, and Unions. **AU** Collie, David; Vandenbussche, Hylke.

Vazquez Alvarez, Rosalia

PD April 1999. **TI** Bounds on Quantiles in the Presence of Full and Partial Item Nonresponse. **AU** Vazquez Alvarez, Rosalia; Melenberg, Bertrand; van Soest, Arthur. **AA** Vazquez Alvarez: CentER and Tilburg University. Melenberg and van Soest: Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9938; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 33. **PR** no charge. **JE** C13, C42, C81, D31. **KW** Item Nonresponse. Bracket Response. Bounds. Identification. Surveys.

AB Microeconomic surveys are usually subject to the problem of item nonresponse, typically associated with variables like income and wealth, where confidentiality and/or lack of accurate information can affect the response behavior of the individual. Follow up categorical questions can reduce item nonresponse and provide additional partial information on the missing value, hence improving the quality of the data. In this paper we allow item nonresponse to be non-random and extend Manski's approach of estimating bounds to identify an upper and lower limit for the parameter of interest (the distribution function or its quantiles). Our extension consists of deriving bounding intervals taking into account all three types of response behavior: full response, partial (categorical) response and full nonresponse. We illustrate the theory by estimating bounds for the quantiles of the distribution of amounts held in savings accounts. We consider worst case bounds which cannot be improved upon without additional assumptions, as well as bounds that follow from different assumptions of monotonicity.

Vazquez, Luis

TI Ownership and Performance in Car Distribution. **AU** Arrunyada, Benito; Vazquez, Luis.

TI Contractual Allocation of Decision Rights and Incentives: The Case of Automobile Distribution. **AU** Arrunyada, Benito; Garicano, Luis; Vazquez, Luis.

Vegh, Carlos A.

TI What if Alexander Hamilton Had Been Argentinean? A Comparison of the Early Monetary Experiences of Argentina and the United States. **AU** Bordo, Michael D.; Vegh, Carlos A.

Velilla, Pilar

TI Migrations in Spain : Historical Background and Current Trends. **AU** Bover, Olympia; Velilla, Pilar.

Ventura, Eva

PD February 1999. **TI** Life-Cycle Effects on Household Expenditures: A Latent-Variable Approach. **AU** Ventura, Eva; Satorra, Albert. **AA** Universitat Pompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 354; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 27. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C31, C51, D12, D91, M31. **KW** Structural Equations. Multi-Group Analysis. Life-Cycle Effects. Product Expenditures. Income.

AB We investigate life-cycle effects on several product expenditures. We evaluate the impact of income on expenditures, controlling for the number of members in the family. Two latent factors underlying repeated measures of monetary and non-monetary income are used as explanatory variables in the expenditure regression equations, thus avoiding possible bias associated with the measurement error in income. The proposed methodology also takes care of the case in which product expenditures exhibit a pattern of infrequent purchases. Multiple-group analysis is used to assess the variation of key parameters of the model across various household life-cycle typologies. Asymptotic robust methods are used to account for possible non-normality of the data.

Verhagen, Willem

TI A Theory of Interest Rate Stepping: Inflation Targeting in a Dynamic Menu Cost Model. **AU** Eijffinger, Sylvester; Schaling, Eric; Verhagen, Willem.

Vermeulen, Dries

TI Neighbour Games and the Leximax Solution. **AU** Klijn, Flip; Vermeulen, Dries; Hamers, Herbert; Solymosi, Tamas; Tijs, Stef; Villar, Joan Pere.

Vettas, Nikolaos

TI Strategic Pricing and Entry Under Universal Service and Cross-Market Price Constraints. **AU** Anton, James J.; Weide, James H. Vander; Vettas, Nikolaos.

PD July 1998. **TI** Investment Dynamics in Markets With Endogenous Demand. **AA** Duke University. **SR** Duke University Department of Economics Working Paper: 99/05; available only on web site. Website: www.econ.duke.edu/Papers/wpindex.html. **PG** 40. **PR** no charge. **JE** D24, D40, E22, L11, L52. **KW** New Products. Diffusion Paths. Network Externalities. Infant Industries. Path Dependence.

AB In several interesting markets, demand is an increasing function of past sales because of learning, network externalities, or fashion. This paper examines entry into such markets. The two key elements of the model are that firms are uncertain about the demand (and learn in a Bayesian fashion) and that demand grows endogenously over time. The capacity expansion path of the competitive market is compared with the planning/monopoly solution. These paths differ not only with respect to levels (the market's investment is too low), but also their time patterns (externalities may lead to S-shaped diffusion). This framework provides some justification for industrial or trade policy arguments for subsidizing entry into new markets, especially for infant-export industries. The markets examined also exhibit path-dependence; small initial differences in demand conditions may lead either to an established market or a non-existing one.

TI On Intrabrand and Interbrand Competition: The Strategic Role of Fees and Royalties. **AU** Saggi, Kamal; Vettas, Nikolaos.

TI Leasing Versus Selling and Firm Efficiency in Oligopoly. **AU** Saggi, Kamal; Vettas, Nikolaos.

Veugelers, Reinhilde

PD January 2000. **TI** Importance of International Linkages for Local Know-How Flows. Some Econometric Evidence from Belgium. **AU** Veugelers, Reinhilde; Cassiman, Bruno. **AA** Veugelers: KULeuven and CEPR-Fellow. Cassiman: Universitat Pompeu Fabra and CEPR. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 434; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 16. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** D23, F23, L22, O31, O32. **KW** Technology Transfers. Know-How Flows. Research and Development. Multinational Firms. Innovation.

AB External knowledge is an important input for the innovation process of firms. Increasingly, this knowledge is likely to originate from outside of their national borders. This explains the preoccupation of policymakers with stimulating local technology transfers coming from international firms. We find that firms that have access to the international technology market are more likely to transfer technology to the local economy. In doing so, we qualify the traditional assertion that multinational firms are more likely to transfer technology to the local economy. Once the superior access to the international technology market that multinationals enjoy has been controlled for, we find that these firms are not more likely to transfer technology to the local economy compared to exporting or local firms that have access to the international technology market. In summary, the main result of this paper is that it is not so much the international character of the firms, but rather their access to the international technology market that is important for generating external knowledge transfers to the local economy.

TI External Technology Sources: Embodied or Disembodied Technology Acquisition. **AU** Cassiman, Bruno; Veugelers, Reinhilde.

Viader, Pelegri
TI A Non-Quasi-Competitive Cournot Oligopoly with Stability. **AU** Villanova, Ramon; Paradis, Jaume; Viader, Pelegri.

Vial, Jean-Philippe
TI Confidence Level Solutions for Stochastic Programming. **AU** Nesterov, Yu; Vial, Jean-Philippe.

Vigfusson, Robert J.
TI Maximum Likelihood in the Frequency Domain: A Time to Build Example. **AU** Christiano, Lawrence J.; Vigfusson, Robert J.

Villanova, Ramon
PD February 1999. **TI** A Non-Quasi-Competitive Cournot Oligopoly with Stability. **AU** Villanova, Ramon; Paradis, Jaume; Viader, Pelegri. **AA** UniversitatPompeu Fabra. **SR** Universitat Pompeu Fabra, Economics and Business Working Paper: 357; Department of Economics and Business, Universitat Pompeu Fabra, Ramon Trias Fargas 25-27, 08005 Barcelona, Spain. Website: http://www.econ.upf.edu. **PG** 17. **PR** Print copies $5.00: make checks payable to Universitat Pompeu Fabra. **JE** C62, D43, L13. **KW** Cournot Equilibrium. Non-Cooperative Oligopoly. Quasi- Competitiveness. Stability. Market Structure.

AB This paper presents a classical Cournot oligopoly model with some peculiar features: it is non-quasi-competitive as price under N-poly is greater than monopoly price; Cournot equilibrium exists and is unique with each new entry; the successive equilibria after new entries are stable under the adjustment mechanism that assumes that actual output of each seller is adjusted proportionally to the difference between actual output and profit maximizing output. Moreover, the model tends to perfect competition as N goes to infinity, reaching the monopoly price again.

Vinals, Jose
PD April 1999. **TI** El marco general de la politica monetaria unica: racionalidad, consecuencias y cuestiones pendientes. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9907; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 46. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E42, E52, E58, F33. **KW** Monetary Policy. European Central Bank. Price Stability. European Union.

AB The aim of this paper is to review the institutional and strategic framework that governs the single monetary policy, and to identify the main challenges the European System of Central Banks (ESCB) will have to face. Section 1 describes the institutional framework for single monetary policy. The various economic arguments for making price stability the primary aim of the single monetary policy are examined when analyzing the institutional framework. Subsequently, both the degree in which it is possible to expect actual ESCB independence to go hand in hand with legal independence, and the consequences of the asymmetry of power authorities are assessed. Section 2 analyses the development of the preparatory work for the selection of a monetary policy framework, and subsequently, the strategy finally adopted by the Governing Council of the ESCB for the conduct of the single monetary policy.

PD September 1999. **TI** On the Real Effects of Monetary Policy. **AU** Vinals, Jose; Valles, Javier. **AA** Banco de Espana. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9917; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 39. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E32, E52, E58. **KW** Monetary Policy. Real Effects. Low Inflation. Central Banks.

AB This paper is an attempt to provide an updated assessment of what we know and what we do not know about the impact of monetary policy on the economy and what implications follow for the conduct of monetary policy in today's world. Firstly, we discuss the conditions under which monetary policy can be expected to affect the economy, both over the medium term and the short term, and review the most policy-relevant empirical results, providing some new evidence. Secondly, we analyze the implications that the empirical regularities have for the practical conduct of monetary policy. We focus on whether the existence of short-run real effects can and should be exploited by central banks and whether the impact of monetary policy on the economy may be affected by the present circumstances of low rates of inflation and low nominal interest rates.

Vogt, William B.
TI Are Invisible Hands Good Hands? Moral Hazard, Competition, and the Second Best in Health Care Markets. **AU** Gaynor, Martin; Haas-Wilson, Deborah; Vogt, William B.

Voorneveld, Mark
TI Voluntary Contribution to Multiple Public Projects. **AU** Koster, Maurice; Reijnierse, H.; Voorneveld, Mark.

PD October 1999. **TI** Congestion Games and Potentials Reconsidered. **AU** Voorneveld, Mark; Borm, Peter; Van Megen, Freek; Tijs, Stef; Facchini, Giovanni. **AA** Voorneveld, Borm, Van Megen, and Tijs: CentER and Tilburg University. Facchini: Stanford University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9998; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 22. **PR** no charge. **JE** C70, R41. **KW** Potential Games. Congestion. Strong Nash Equilibrium. Potential Maximizing. Game Theory.

AB In congestion games, players use facilities from a common pool. The benefit that a player derives from using a facility depends, possibly among other things, on the number of users of this facility. The paper gives an easy alternative proof of the isomorphism between exact potential games and the set of congestion games introduced by Rosenthal (1973). It clarifies the relations between existing models on congestion games, and studies a class of congestion games where the sets of Nash equilibria, strong Nash equilibria and potential-maximizing strategies coincide. Particular emphasis is on the computation of potential- maximizing strategies.

Vousten-Sweere, Anne-Marie
PD November 1999. **TI** Search for a New Conceptual

Bookkeeping Model: Different Levels of Abstraction. **AU** Vousten-Sweere, Anne-Marie; Van Groenendaal, Willem. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 99109; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 29. **PR** no charge. **JE** M41. **KW** Bookkeeping. Accounting. Information Systems. Conceptual Modeling.

AB Nowadays, every bookkeeping system used in practice is automated. Most bookkeeping software and integrated information systems are based on databases. In this paper, we develop a new conceptual bookkeeping model which is not based on manual techniques, but which is applicable in a database environment. The model is designed as a composition of equations. The starting point of these equations is the well-known accounting equation. In the development of the model, several levels of abstraction are distinguished: from an abstract level to a more concrete level. Every level of abstraction is described by one equation. This equation has both an input-function and an output-function. With the development of this model, the gap between the bookkeeping literature and bookkeeping practice has been reduced.

Vulkan, Nir

TI Endogenous Information Structures. **AU** Hurkens, Sjaak; Vulkan, Nir.

Wachtel, Paul

TI Financial Market Response to Monetary Policy Changes in the 1990s. **AU** Urich, Thomas; Wachtel, Paul.

Wacziarg, Romain

TI Is Europe Going Too Far? **AU** Alesina, Alberto; Wacziarg, Romain.

Wantchekon, Leonard

TI Electoral Competition under the Threat of Political Unrest. **AU** Ellman, Matthew; Wantchekon, Leonard.

Watson, Joel

TI Economic and Legal Aspects of Costly Recontracting. **AU** Schwartz, Alan; Watson, Joel.

TI Evidence Disclosure and Verifiability. **AU** Bull, Jesse; Watson, Joel.

TI Contract-Theoretic Approaches to Wages and Displacement. **AU** den Haan, Wouter J.; Ramey, Garey; Watson, Joel.

Watson, Mark W.

TI Forecasting Inflation. **AU** Stock, James H.; Watson, Mark W.

Watson, Nadine

PD April 1999. **TI** Bank Lending Channel Evidence at the Firm Level. **AA** National Economic Research Associates. **SR** Banco de Espana Servicio de Estudios, Documentos de Trabajo: 9906; Banco de Espana, Seccion de Publicaciones, Negociado de Distribucion y Gestion, Alcala, 50, 28014 Madrid, Spain. Website: www.bde.es. **PG** 36. **PR** single copy 430 pesetas; annual subscription 10,000 pesetas; payment accepted only in Spanish currency. **JE** E52, G21, G32. **KW** Credit Channel. Monetary Policy. Firm Financing. Corporate Finance.

AB This paper represents an attempt to improve the empirical analysis of the narrow credit channel by estimating the effect of monetary policy on the debt mix using a panel of individual firms, controlling for firm specific heterogeneity. Using a data set of 12,909 Spanish firms provided by the Central Balance Sheet Office of the Bank of Spain, the estimates obtained support the existence of a bank lending channel during the 1983-1996 period. Monetary contractions during the period reduced the supply of bank loans relative to nonbank loans as evidenced by the significantly negative effect of an increase in the intervention rate on the financing mix of all firms. Furthermore, a differential impact of monetary policy is observed across firms according to their access to public capital markets, proxied by various variables, including employee size.

Wei, Shang-Jin

TI Foreign Portfolio Investors Before and During a Crisis. **AU** Kim, Woochan; Wei, Shang-Jin.

Weide, James H. Vander

TI Strategic Pricing and Entry Under Universal Service and Cross-Market Price Constraints. **AU** Anton, James J.; Weide, James H. Vander; Vettas, Nikolaos.

Weinberg, John A.

TI Firm-Specific Learning and the Investment Behavior of Large and Small Firms. **AU** Li, Wenli; Weinberg, John A.

Weismantel, Robert

TI Non-Standard Approaches to Integer Programming. **AU** Aardal, Karen; Weismantel, Robert; Wolsey, Laurence.

Weitzman, Martin L.

PD February 1999. **TI** A Contribution to the Theory of Welfare Comparisons. **AA** Harvard University. **SR** National Bureau of Economic Research Working Paper: 6988; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 18. **PR** $5.00. **JE** D61, D63, I30. **KW** Welfare. Consumer Welfare. Comparisons.

AB Using only information based on current directly-observable market behavior, the paper shows how to make rigorous dynamic welfare comparisons among economies or economic situations having arbitrarily- different endowments and technologies, but sharing a common dynamic preference ordering. The current answers to seemingly complicated questions, which intrinsically involve comparing wealth-like measures of dynamic well-being, can be translated isomorphically into a simple- minded story told in the familiar language of old-fashioned static consumer-welfare theory.

White, Halbert

TI Bootstrapping the Information Matrix Test. **AU** Stomberg, Christopher; White, Halbert.

TI James-Stein Type Estimators in Large Samples with Application to the Least Absolute Deviations Estimator. **AU** Kim, Tae-Hwan; White, Halbert.

TI Closed Form Integration of Artificial Neural Networks with Some Applications to Finance. **AU** Gottschling, Andreas; Haefke, Christian; White, Halbert.

Whittaker, J.

TI Doubly Heteroscedastic Stochastic Production Frontiers With An Application to English Cereal Farms. **AU** Hadri, Kaddour; Guermat, C.; Whittaker, J.

Wielhouwer, Jacco

PD July 1999. **TI** Effects of Tax Depreciation on Optimal Firm Investments. **AU** Wielhouwer, Jacco; Kort, Peter M.; De Waegenaere, Anja. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9958; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 37. **PR** no charge. **JE** C61, D20, E22, G31, H25. **KW** Tax Depreciation. Technical Depreciation. Deferred Taxation. Investment. Dynamic Optimization.

AB This paper studies how the difference between technical depreciation and tax depreciation affects the firm's optimal investment strategy. The objective is maximization of shareholder value. When tax depreciation differs from technical depreciation, an additional investment not only generates value due to the fact that the firm can produce more, but also due to the fact that an additional deferred tax liability arises. Two types of capital stock will therefore affect shareholder value, i.e. the replacement value of the assets and the tax base of the assets. We present a dynamic model of the firm with these two types of capital stock, and study the effects of the tax depreciation rate on the firm's optimal dynamic investment strategy, dividend policy, and long run capital stock level.

PD July 1999. **TI** Optimal Dynamic Investment Policy Under Different Rates for Tax Depreciation and Economic Depreciation. **AU** Wielhouwer, Jacco; De Waegenaere, Anja; Kort, Peter M. **AA** CentER and Tilburg University. **SR** Tilburg CentER for Economic Research Discussion Paper: 9959; CentER for Economic Research, Tilburg University, P.O. Box 90153, 5000 Le Tilburg, The Netherlands. Website: center.kub.nl. **PG** 30. **PR** no charge. **JE** C61, D20, E22, G31, H25. **KW** Optimal Control. Investment Policy. Tax Regulation. Economic Depreciation. Tax Depreciation.

AB This paper analyzes the consequences of incorporating a different rate for tax depreciation than for economic depreciation. Firms most often choose their tax depreciation rate in a strategic way. It would therefore be a coincidence if this optimization process leads to a tax depreciation rate that equals the economic depreciation rate. The implications of a difference between tax depreciation and economic depreciation are investigated in an optimal control model for the determination of the firm's optimal investment policy over time.

Wilcox, David W.

TI Quality Improvement in Health Care: A Framework for Price and Output Measurement. **AU** Shapiro, Irving; Shapiro, Matthew D.; Wilcox, David W.

Williams, Joy

TI New Upper Bounds for Maximum-Entropy Sampling. **AU** Hoffman, Alan; Lee, Jon; Williams, Joy.

Williams, Roberton C., III.

TI The Usual Excess-Burden Approximation Usually Doesn't Come Close. **AU** Goulder, Lawrence H.; Williams, Roberton C., III..

Williamson, Jeffrey G.

TI Capital Goods Prices, Global Capital Markets and Accumulation: 1870- 1950. **AU** Collins, William J.; Williamson, Jeffrey G.

PD May 1999. **TI** The Impact of Globalization on Pre-Industrial, Technologically Quiescent Economies: Real Wages, Relative Factor Prices, and Commodity Price Convergence in the Third World Before 1940. **AA** Harvard University and NBER. **SR** National Bureau of Economic Research Working Paper: 7146; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 29. **PR** $5.00. **JE** F41, N10, N30, O19, O40. **KW** Wages. Factor Prices. Economic History. Development. Commodity Prices.

AB This paper uses a new pre-1940 Third World data base documenting real wages and relative factor prices to explore their determinants. There are three possibilities: external price shocks, factor endowment changes, and technological change. As the paper's title suggests, technological change is an unlikely explanation. The paper lays out an explicit econometric agenda for the future, although more casual empiricism suggests that external price shocks were doing most of the work, and declining-transport-cost-induced commodity price convergence in particular. Real wages in Asia, the Middle East, and Latin America never showed any signs of catching up with the European industrial leaders prior to 1914, but they did hold their own. The ratio of wages to land rents, on the other hand, declined up to World War I, and so did the ratio of wages to GDP per capita. The trend reversed thereafter. These relative factor price movements help sharpen our understanding of the sources of growth (or lack of it) in Asia and Latin America prior to 1940. They also offer strong hints about changes in income distribution there.

Winter, Eyal

TI Subscription Mechanisms for Network Formation. **AU** Mutuswami, Suresh; Winter, Eyal.

Woitek, Ulrich

TI Are These Classical Business Cycles? **AU** Reiter, Michael; Woitek, Ulrich.

Wolman, Alexander L.

TI Does State-Dependent Pricing Imply Coordination Failure? **AU** John, A. Andrew; Wolman, Alexander L.

Wolsey, Laurence

TI Non-Standard Approaches to Integer Programming. **AU** Aardal, Karen; Weismantel, Robert; Wolsey, Laurence.

TI On The Cut Polyhedron. **AU** Conforti, Michele; Rinaldi, Giovanni; Wolsey, Laurence.

TI Modelling Practical Lot-Sizing Problems as Mixed Integer Programs. **AU** Belvaux, Gaetan; Wolsey, Laurence.

TI On The Wagner-Whitin Lot-Sizing Polyhedron. **AU** Pereira, Olivier; Wolsey, Laurence.

Woodford, Michael

TI The Cyclical Behavior of Prices and Costs. **AU** Rotemberg, Julio J.; Woodford, Michael.

Wraith, Philip

TI Dimensions of National Culture and the Accounting Environment -- The Spanish Case. **AU** Amat, Oriol; Blake, John; Wraith, Philip; Oliveras, Ester.

TI Environmental Factors Giving Rise to Variations in National Management Accounting Practice. **AU** Amat, Oriol; Blake, John; Wraith, Philip.

Wren-Lewis, Simon

TI Are Our FEERs Justified? **AU** Barisone, Giacomo; Driver, Rebecca L.; Wren-Lewis, Simon.

TI A Note on the Determinants of UK Business Cycles. **AU** Day, Alexander; Leith, Campbell; Wren-Lewis, Simon.

TI Interactions Between Monetary and Fiscal Policy Rules. **AU** Leith, Campbell; Wren-Lewis, Simon.

TI New Trade Theory and Aggregate Export Equations: An Application of Panel Cointegration. **AU** Driver, Rebecca L.; Wren-Lewis, Simon.

Yang, Min

PD December 1999. **TI** Random Effects Models for Ordered Category Responses and Complex Structures in Educational Progress. **AU** Yang, Min; Fielding, Antony. **AA** Yang: University of London. Fielding: University of Birmingham. **SR** University of Birmingham, Department of Economics Discussion Paper: 99/20; Department of Economics School of Social Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom. Website: www.bham.ac.uk/economics. **PG** 39. **PR** 2 pounds ($4); no charge to academics. **JE** C35, C51, C52, C87, I21. **KW** Education. Educational Progress. Generalized Least Squares. Random Effects. Ordered Categories.

AB This paper first of all discusses some substantive and methodological issues concerned with disentangling the nature of effects in educational progress. We deal with criterion outcomes which are a limited set of ordered category grades for which multi-level generalized linear models are proposed. We consider utilizing the iterative generalized least squares procedures embodied in the procedure in MIwin. Extensions to the MIwin macro MULTICAT are considered for cross-classified random effects. These are applied to effectiveness of teaching groups in GCE Advanced level provision. Well specified models enable the separation of teaching group, student, and teacher effects. Some methodological issues surrounding the quasi-likelihood estimation procedures are addressed. Of particular focus is the effect of sparseness of the cross-classified data structure on the results.

Yang, Zaifu

TI Variational Inequality Problems With a Continuum of Solutions: Existence and Computation. **AU** Herings, P. Jean-Jacques; Talman, Dolf; Yang, Zaifu.

TI Surjective Function Theorems. **AU** Sun, Ning; Yang, Zaifu.

TI Existence and Welfare Properties of Equilibrium in an Exchange Economy with Multiple Divisible, Indivisible Commodities and Linear Production Technologies. **AU** Van der Laan, Gerard; Talman, Dolf; Yang, Zaifu.

Yaron, Amir

TI Asset Pricing with Idiosyncratic Risk and Overlapping Generations. **AU** Storesletten, Kjetil; Telmer, Chris; Yaron, Amir.

Yeldan, Erinc

TI Challenges and Choices in Post-Crisis East-Asia: Simulations of Investment Policy Reform in an Intertemporal, Global Model. **AU** Diao, Xinshen; Li, Wenli; Yeldan, Erinc.

Yeung, Bernard

TI The Information Content of Stock Markets: Why Do Emerging Markets Have Synchronous Stock Price Movements? **AU** Morck, Randall; Yeung, Bernard; Yu, Wayne.

Yu, Wayne

TI The Information Content of Stock Markets: Why Do Emerging Markets Have Synchronous Stock Price Movements? **AU** Morck, Randall; Yeung, Bernard; Yu, Wayne.

Yuan, Mingwei

TI Can a Matching Model Explain the Long-Run Increase in Canada's Unemployment Rate? **AU** Hornstein, Andreas; Yuan, Mingwei.

PD August 1998. **TI** The Dynamic Effects of Government Spending Shocks on Employment and Work Hours. **AU** Yuan, Mingwei; Li, Wenli. **AA** Yuan: Bank of Canada. Li: Federal Reserve Bank of Richmond. **SR** Federal Reserve Bank of Richmond Working Paper: 98/09; Ms. Tanya A. Hockaday, Research Department, Federal Reserve Bank of Richmond, P.O. Box 27622, Richmond, VA 23261. Website: www.rich.frb.org/pubs/wpapers. **PG** 31. **PR** no charge. **JE** E24, E62, E32, J23, J64. **KW** Employment. Government Spending. Job Search. Hours Worked. Consumption.

AB In this paper, we analyze the dynamic behavior of employment and hours worked per worker in a stochastic general equilibrium model with a matching mechanism between vacancies and unemployed workers. The model is estimated for the U.S. using the Generalized Method of Moments (GMM) estimation technique. An increase in government spending raises hours worked per worker, and crowds out private consumption due to a negative wealth effect. On the path converging towards the steady state, private consumption is below its long run average and increases, which implies that the interest rate is above its long run average and declines. The interest rate effect dominates the pure economic rent effect on the capital value of a hired worker to the firm, causing a reduction of job openings and consequently a decrease in employment. These results are contrasted with the predictions of a version of Burnside, Eichenbaum and Rebelo's (1993) labor hoarding model.

Yuen, Chi-Wa

TI An Information-Based Model of Foreign Direct Investment: The Gains from Trade Revisited. **AU** Razin, Assaf; Sadka, Efraim; Yuen, Chi-Wa.

Zarnowitz, Victor

PD March 1999. **TI** Theory and History Behind Business Cycles: Are the 1990s the Onset of a Golden Age? **AA** Foundation for International Business and Economic Business and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 7010; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. Website: www.nber.org. **PG** 39. **PR** $5.00. **JE** E22, E31, E32. **KW** Business Cycles. Investment. Inflation. Stock Markets.

AB A recurrent concern about the present is that expectations of business profits and market returns may be outrunning the economy's potential to deliver. The theory presented in this paper ties together profits, investments, credit, stock prices, inflation and interest rates. The author discusses new estimates of profit and investment functions with important roles for growth of demand and productivity, price and cost levels, risk perception, credit volume and credit difficulties. The relationship among these endogenous variables are viewed as constituting an enduring core of business cycles, the exogenous shocks and policy effects as more transitory and peripheral. The U.S. upswing of the past three years provides a vivid example of how profits, investment, and an exuberant stock market can reinforce each other. Long business expansions benefit society in several ways but they generate imbalances and are difficult to sustain. After a deterioration in the 1970s and early 1980s, U.S. business cycles moderated again, as in the first two post-WWII decades. But globally recessions became more frequent and more severe in the second half of the postwar era. The arguments in favor of a new Golden Age are generally not persuasive.

Zilibotti, Fabrizio

TI Productivity Differences. **AU** Acemoglu, Daron; Zilibotti, Fabrizio.

Zimmermann, Heinz

TI On Benchmarks and the Performance of DEM Bond Mutual Funds. **AU** Maag, Felix; Zimmermann, Heinz.