At present, there is no regulatory capital requirement for the market risk exposures a bank takes in its trading account activities. Kupiec and O'Brien develop a "pre-commitment approach" under which the bank specifies an amount of capital adequate to cover its desired level of risk exposure over a fixed subsequent period, and commits to managing its trading portfolio so as to limit cumulative losses at any time during that period to an amount less than its capital allocation. In this scheme, a bank has incentives to allocate capital commensurate with the regulator's desired level of risk exposure, and to manage its losses within its capital commitment. The incentives come from penalties that are imposed if losses exceed the capital allocation, for example, a capital surcharge in the period(s) following a violation of the capital commitment, a pecuniary penalty, or a combination of the two.

Duffee reviews current practices for measuring the credit risks of derivative instruments. He argues that there are two major problems with the standard approach. First, it uses models of the stochastic behavior of financial variables, while ignoring both their inherent over-simplification and the uncertainty in their parameters. Second, it ignores the correlations among exposures on derivative instruments and the probabilities of counterparty default. He demonstrates that these practices can produce large errors in the estimation of distributions of both future credit exposures and future credit losses.

Das and Tufano develop a model for pricing credit-sensitive debt contracts. These contracts, including credit-sensitive notes, spread-adjusted notes, and floating-rate notes, adjust investors' exposures to three risks: fluctuating interest rates; changes in the credit rating of the issuer of the debt; and changes in spreads on the debt, even when ratings have not changed. Das and Tufano's pricing model incorporates all three risks, emphasizing credit risks in particular. It also allows for pricing contracts between parties with varying credit ratings, such as swaps.

Shiller and Athanasoulis decompose the variance of world national incomes into components that show the most important risk-sharing opportunities, and the most important risk markets that need to be established. Using data on national incomes for large countries from 1950 to 1990, they are unable to estimate the requisite variance matrix of national incomes. However, their results suggest important new markets that actually could be created, and show that there may be large welfare gains to creating some of them.

Also participating in this meeting were: Stephen G. Cecchetti, NBER and Boston College; Robert F. Engle, NBER and University of California, San Diego; Martin Feldstein and Kenneth A. Froot, NBER and Harvard University; Gary B. Gorton, NBER and University of Pennsylvania; Blake D. LeBaron, NBER and University of Wisconsin, Madison; Bonnie Loopesko, J. P. Morgan; and Stanley E. Zin, NBER and Carnegie-Mellon University.

About 30 NBER economists and their guests met at the Bureau's California offices on March 3-4 to discuss papers on behavioral labor economics. Robert S. Gibbons of the NBER and Cornell University, and Lawrence F. Katz, NBER and Harvard University, organized this program:

Linda Babcock and
Colin Camerer, California Institute of Technology;
Richard H. Thaler, NBER and MIT; and

George Loewenstein, Carnegie-Mellon University, "Daily Labor Supply Decisions of New York Cab Drivers: Why You Can't Find a Cab on a Rainy Day";

Discussant:
Henry S. Farber, NBER and Princeton University

Casey B. Mulligan, University of
Most New York cab drivers rent their cabs for a 12-hour period. They pay a flat rate and keep all their fares. Babcock, Camerer, Thaler, and Loewenstein investigate the daily decision of how long drivers work. The standard theory predicts that drivers work longer on days when wages are higher. But if they choose a daily income target, and quit when they reach it, then they will work shorter hours when wages are high. The authors find support for the target income theory, because the elasticity of hours with respect to the hourly wage rate is significantly negative. This implies that drivers could earn more, and drive less, by working the same number of hours every day. It also implies that when demand is particularly high—as on rainy days—wages are high, drivers quit early, and wages stay high.

Mulligan argues that changes in workers' budget sets cannot explain the dramatic increases in civilian work effort in the United States during World War II. Although money wages grew during that period, aftertax real wages were lower than either before or after the war. Evidence from the 1940s does not suggest other pecuniary explanations, such as the effects on wealth of government policies, unfulfilled expectations, or changes in the nonmarket price of time. Propaganda and patriotism emerge as tempting explanations for wartime work effort.

The distribution of compensation within firms is more compressed than the corresponding distribution of productivity. This may be explained either by workers' concerns about fairness or by their concerns about status. Frank finds that concerns about fairness alone cannot sustain a stable equilibrium with pay compression, because high-ranked workers in every firm would prefer to accept better-paid positions with lower rank that are available in firms with higher average productivity. By contrast, when certain workers value rank for its own sake, some of them will be willing to remain in high-ranked positions even though they could obtain higher salaries in firms with higher average productivity.

Heath and Knez study new customer service representatives at a telephone customer service center, and measure their job satisfaction, intention to stay in the organization, and sense of obligation toward the organization, their co-workers, and customers. The authors use these attitudes to predict performance on one objective measure: the average time it takes to handle a customer's call. During a stable period in the organization, they find, changes in employees' conscientiousness predict changes in performance. During an organizational change, though, the level of conscientiousness instead predicts which employees will respond most positively to the change.

Burt uses network data on a sample of senior managers to illustrate three conclusions: 1) social capital matters for the relative success of managers; 2) social capital matters more where individuals matter more; and 3) social capital matters differently for minorities, who are deemed suspect. The returns to social capital can be used to sort managers into those accept-
ed as legitimate players in the popu-
lation and those deemed suspect, 
most notably women in the popu-
lation Burt analyzes.

Baron and Podolny ask how 
the structure and content of indi-
viduals' on-the-job "networks" af-
fect their prospects for mobility 
and work-related satisfaction. In a 
random sample of 236 exempt em-
ployees of a high-technology firm, 
they observe that mobility pros-
tects are enhanced by large and 
sparse information networks. Large 
and sparse dependency networks 
hinder mobility prospects, and 
have a negative effect on work-re-
lated satisfaction. Further, the dura-
ton of ties to strategic information 
appears to enhance mobility pros-
tects, while long-lived ties to task-
advice hinder mobility. Finally, 
there is no net benefit for mobility 
from mentor relations, but there 
are strong socioemotional benefits 
for the protegé.

Roth and Xing consider the re-
jected job offers that must be eval-
uated before an equilibrium offer 
can be identified. After an initial 
phase in which many offers can be 
received at once, there is a stage in 
which a new offer cannot be made 
until an outstanding offer is reject-
ed. Then, even the little time re-
quired to process offers and rejec-
tions may cause bottlenecks. In 
many decentralized labor markets, 
this means that transactions have to 
be finalized before there is time for 
the market to clear (that is, before 
all of the potential transactions that 
would need to be evaluated in or-
der to reach a stable outcome can 
be considered). Roth and Xing fo-
cus on two specific forms of mar-
ket organization: the centralized 
entry-level market for American 
physicians, and the decentralized 
market for clinical psychologists.

**Health Care Program Meeting**

The NBER’s Program on Health 
Care met in Cambridge on March 
14. These papers, selected by 
Program Director Alan M. Garber, 
also of Stanford University, were 
discussed:

- **Michael D. Hurd**, NBER and 
  State University of New York, 
  Stony Brook, and
- **Kathleen M. McGarry**, NBER 
  and University of California, Los 
  Angeles, “Medical Insurance and 
  the Use of Health Care Services 
  by the Elderly”
- **Laurence C. Baker**, NBER and 
  Stanford University
- **Joel Cantor**, Robert Wood 
  Johnson Foundation
- **Stephen Long** and 
  **Susan Marquis**, RAND 
  Corporation, “Does Competition 
  from HMOs Lower Conventional 
  Insurance Premiums?” (NBER 
  Working Paper No. 4920)
- **Louise Sheiner**, Federal Reserve 
  Board, “Health Care Costs, 
  Wages, and Aging: The Impact of 
  Community Rating”
- **Martin Gaynor**, NBER and Johns 
  Hopkins University, and 
  **Stephen Parnell**, Project HOPE 
  Center for Health Affairs, 
  “Physician Effects in Medical 
  Technology Choice”

Discussion:

- **Alan M. Garber**
- **Mark B. McClellan**, NBER and 
  Harvard University, and 
  **Thomas E. Macurdy**, NBER and 
  Stanford University, “Update on 
  Health Care Program Research 
  Initiatives”

How does health care insurance 
influence the use of health care 
services by the elderly? Hurd and 
McGarry use the first wave of a 
new survey of those aged 70 and 
over, and find practically no re-
lation between either the propen-
sity to hold or to pay for pri-
ivate insurance and observable 
health measures, including self-as-
sessed health status and objective 
episodes of disease. Apparently the 
purchase of private insurance by 
the elderly is determined mainly by 
income and wealth: those with more 
HMO market share are associated 
with decreases of about $3.50 (2.5 
percent) in the monthly premium 
for a single individual. Using a sec-
ond methodology, they find that 
increments of 10 percent in HMO 
market share are associated with 
declines of about $5.00 (5.5 per-
cent) in the single premium.

The effect of mandating community 
 coverage of health insurance 
across age groups depends on how 
much of health insurance costs are 
 passed on to workers. Sheiner 
uses cross-sectional variation in
city health insurance costs and finds that older workers do pay for their higher health costs in the form of reduced wages. This implies that mandating community rating across age groups would involve significant redistribution from young and future workers to current older workers.

Gaynor and Parente use claims data from Blue Cross/Blue Shield of Rochester to analyze physicians' choices regarding C-sections versus vaginal deliveries. Since Blue Cross/Blue Shield has an 80 percent market share in the Rochester area, the vast majority of physicians and deliveries in that area are represented. The sample includes 3261 primary deliveries performed by 126 physicians. The authors find that physicians do tend to favor a particular delivery method, although the patient's condition (breach, fetal distress, and the like) has the greatest impact on the delivery method used. This study provides evidence on the existence of a "physician practice style," although the source of the practice style remains unexplained.

Also attending the meeting were: Ernst R. Berndt, NBER and MIT; David F. Bradford, NBER and Princeton University; David M. Cutler, Martin Feldstein, Richard Frank, Lawrence F. Katz, Brigitte C. Madrian, and David A. Wise, NBER and Harvard University; Daniel R. Feenberg and Richard Woodbury, NBER; Jonathan Gruber, NBER and MIT; Judith Hellerstein, NBER and Northwestern University; Jonathan S. Skinner, NBER and University of Virginia; and Amy Taylor, Agency for Health Care Policy.

International Finance and Macroeconomics

The NBER's Program in International Finance and Macroeconomics held its spring meeting in Cambridge on March 17. The organizers were Program Director Jeffrey A. Frankel, and Andrew K. Rose, both of the NBER and University of California, Berkeley. These papers were discussed:

Holger C. Wolf, NBER and New York University, and

Discussants:
Michael M. Knetter, NBER and Dartmouth College, and
Charles M. Engel, NBER and University of Washington

Allan Drazen, NBER and University of Maryland, and

Leonardo Bartolini, International Monetary Fund, "Capital Account Liberalization as a Signal"

Discussants:
Nouriel Roubini, NBER and Yale University, and
Marianne Baxter, NBER and University of Virginia

Linda S. Goldberg, NBER and New York University, and
Jose Campa, New York University, "Investment, Markups, and Exchange Rates: A Cross-Country Comparison"

Discussants:
Richard H. Clarida, NBER and Columbia University, and
Gordon Bodnar, NBER and University of Pennsylvania

Patrick K. Asea, NBER and University of California, Los Angeles, and
Colin Rose, Theoretical Research Institute (Sydney), "Sharks, Unnecessary Attacks, and the Hump-Shaped Distribution"

Discussants:
Robert J. Hodrick, NBER and Northwestern University, and
David Backus, NBER and New York University

Aaron Tornell and Andres Velasco, both of NBER and Harvard University, "Fixed Versus Flexible Exchange Rates: Which Provides More Fiscal Discipline?"

Discussants:
William H. Branson, NBER and Princeton University, and
Rudiger W. Dornbusch, NBER and MIT

In order to protect their market share, export firms may stabilize prices in the destination market in the face of changes in the nominal exchange rate. To see whether this actually occurs, Wolf and Ghosh examine the characteristics and determinants of changes in the cover price of The Economist magazine for a sample of 12 countries over the floating rate period. They find that the actual administrative costs of changing prices, rather than strategic pricing, appear to explain deviations from the law of one price.

Drazen and Bartolini present a model in which governments use liberalization of capital controls to signal their future policies. Controls on the outflows of capital evolve in response to news about technolo-
nergy, and depend on government attitudes toward the taxation of capital. When there is uncertainty about the type of government, removing controls on capital outflows sends a positive signal that actually may trigger an inflow of capital. This is what happened in several countries that recently liberalized their capital accounts.

Using data from the United States, Canada, the United Kingdom, and Japan, Goldberg and Campa show that the effects of exchange rates on physical investment and price-over-cost markups depend on the industry's competitive structure and on the variation over time in producers' exposure to exchange rates, through imported inputs, dependence on the export market, and import competition. The investment response to movements in actual and anticipated exchange rates differs across high- and low-markup sectors and is specific to countries. Investment in low-markup sectors is more responsive to exchange rates than investment in high-markup sectors. In the United States, Japan, and the United Kingdom, markups in high-markup sectors are significantly more responsive to exchange rates than markups in low-markup sectors.

Asea and Rose develop a model with two classes of foreign exchange traders: one class, called "fundamentalists," trade on a regular basis; the other class, "sharks," do not. Sharks are discretionary traders who enter the market only when they believe there is a high probability of a speculative attack on the currency. Sharks' beliefs are triggered by the position of the exchange rate within the bands. By examining the strategies available to the central bank in defending its currency against possible attack, Asea and Rose show that the most effective range of intervention is intramarginal, even in a regime that is ostensibly credible.

In recent years the conventional wisdom has held that fixed rates provide more fiscal discipline than flexible rates do. Tornell and Velasco show that this need not be true if fiscal policy is determined by a rational fiscal authority whose objectives need not coincide with those of the population at large. Under flexible rates, bad fiscal behavior has its costs: flexible rates allow the effects of unsound fiscal policies to manifest themselves immediately through movements in the exchange rate. If fiscal authorities are impatient, flexible rates—by forcing the costs to be paid up front—provide more fiscal discipline and higher welfare for the representative private agent than fixed rates do.

Also attending this meeting were: Richard E. Cumby, NBER and Georgetown University; Jorge Braga de Macedo, NBER and Universidade Nova de Lisboa; Kathryn M. E. Dominguez and Kenneth A. Froot, NBER and Harvard University; Michael P. Dooley, NBER and University of California, Santa Cruz; Jonathan Eaton, NBER and Boston University; Francesco Giavazzi, NBER and Università Bocconi; Tatsoshi Ito, visiting at the International Monetary Fund; Michael W. Klein, NBER and Tufts University; Karen K. Lewis and Richard C. Marston, NBER and University of Pennsylvania; Robert E. Lipsey, NBER; and Richard K. Lyons, NBER and University of California, Berkeley.

International Trade and Investment

Members and guests of the NBER's Program on International Trade and Investment met in Cambridge on March 25. Their agenda, organized by Program Director Robert C. Feenstra, also of the University of California, Davis, was:

James R. Markusen, NBER and University of Colorado, and
Anthony J. Venables, London School of Economics,
"Multinational Firms and the New Trade Theory" (NBER Working Paper No. 5036)

Robert W. Staiger, NBER and University of Wisconsin, and
Kyle Bagwell, Northwestern University, "Protection and the Business Cycle"

James E. Rauch, NBER and University of California, San Diego, "Trade and Search: Social Capital, Sogo Shosha, and Spillovers"

Michael M. Knetter, NBER and Dartmouth College, "Why Are Retail Prices in Japan So High? Evidence from German Export Prices" (NBER Working Paper No. 4894)
Markusen and Venables construct a model in which multinational firms may arise endogenously. In equilibrium, multinationals exist when transport and tariff costs are high, incomes are high, and firm-level scale economies are important relative to plant-level scale economies. Less obvious, multinationals are more important in total economic activity when countries are more similar in incomes, relative factor endowments, and technologies. This model may explain why direct investment becomes increasingly important over time relative to trade among the developed countries, and why the ratio of investment-to-trade among the developed countries is larger than the same ratio for “North–South” or “South–South” countries. The model also predicts that trade first rises and then falls as countries converge, in incomes, relative endowments, and technologies.

Staiger and Bagwell propose a business cycle model of protection, driven by cyclical variations in how effective countries are at avoiding inefficient beggar-thy-neighbor trade policies. They find theoretical support for countercyclical movements in protection levels: the rapid growth in trade volume associated with a boom facilitates maintaining more liberal trade policies than can be sustained during a recession, when growth is slow. However, the acyclical increases in the level of trade volume also give rise to protection. Thus whether rising imports are met with greater liberalization or increased protection depends on whether they are part of a cyclical upward trend in trade volume or an acyclical increase in import levels.

Rauch argues that, for differentiated products, prices are not informative enough to allow “globally scanning” traders to substitute for organized markets. Instead, connections between buyers and sellers are made through a search process; because of its costliness, it does not proceed until the best match is achieved. This search is conditioned by proximity and pre-existing “ties,” and results in trading networks rather than “markets.” Rauch shows that this can explain the importance of ethnic and extended family ties in trade, the success of diversified trading intermediaries, and the ubiquity of government export promotion policies, including subsidized trade missions.

Retail prices in Japan are higher than in other countries for similar products. The two main competing explanations for this fact are a relatively high degree of discriminatory practices against imports, and relatively high distribution costs associated with getting goods to the final point of sale in Japan. For the vast majority of the 37 seven-digit German export industries that Knetter studies, the data are consistent with the first explanation. Prices on shipments to Japan appear to be significantly higher than prices on shipments to the United States, the United Kingdom, and Canada.

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Program Meeting on Corporate Finance

The NBER's Program on Corporate Finance, directed by Robert W. Vishny, also of the University of Chicago, met in Cambridge on March 31. The agenda was:

Jeremy C. Stein, NBER and MIT, "Internal Capital Markets and the Competition for Corporate Resources"
Discussant: Bengt Holmstrom, MIT

Luigi Zingales, NBER and University of Chicago, "Survival of the Fittest or the Fattest? Exit and Financing in the Trucking Industry"
Discussant: Steven N. Kaplan, NBER and University of Chicago

Li-Lan Cheng, MIT, "Equity Issue Underperformance and the Timing of Security Issues"
Discussant: David Hirshleifer, University of Michigan

Michael J. Alderson, St. Louis University, and

Brian Betker, Ohio State University, "Liquidation Costs and Capital Structure"
Discussant: Raghuram G. Rajan, NBER and University of Chicago, and Luigi Zingales, "Power Struggles and Inefficiency"
Stein examines the role of corporate headquarters in allocating scarce resources to competing projects in an internal capital market. Unlike a bank lender, headquarters has control rights that give it both the authority and the incentive to engage in "winner picking": the practice of actively shifting funds from one project to another. By doing a good job in picking winners, headquarters can create value even when its own relationship with the outside capital market is fraught with agency problems, and it cannot help to relax firmwide credit constraints. Thus, internal capital markets may function more efficiently when companies choose relatively focused strategies.

Zingales analyzes the impact of imperfections in the capital market on the survival of firms in a changed competitive environment. He finds that highly leveraged trucking firms are less likely to survive the shock of deregulation; this is true even after he controls for the probability of default and for some measures of efficiency. This effect is somewhat stronger in the less competitive segment of the motor carrier industry. He also finds that the pre-deregulation level of leverage negatively impacts the price per ton-mile that a carrier charges during the price war that follows deregulation.

Cheng analyzes the performance of stocks of firms that made seasoned equity and bond issues. He finds that equity issuers that do not use the proceeds for capital investment severely underperform the market for three to five years after an issue; equity issuers that invest the proceeds do not. Firms that do not invest the proceeds may know that their stocks are overpriced, and issue when such overpricing is most severe. The use of proceeds can be predicted using such preissue information as issuers' stock price runups, yearly issue volumes, and short-term market reactions to issue events. This makes it possible to predict postissue performance at issue time without actually observing whether proceeds are invested. Furthermore, the stocks of bond issuers do not underperform the market after issue; and, the difference between the investing and the noninvesting bond issuers is not significant.

Alderson and Betker investigate the relationship between liquidation costs of assets and the composition of capital structure for firms that reorganized under Chapter 11 of the Bankruptcy Code. Firms with high liquidation costs emerge from Chapter 11 with relatively low debt ratios. The debt of these firms is more likely to be public and unsecured, and to have less restrictive covenant terms. These firms are also more likely to raise new equity capital. Assets with high liquidation costs thus lead firms to choose capital structures that make financial distress less likely.

Rajan and Zingales develop a theory of organizations based on the notion that resource allocation is the outcome of negotiations between subunits, each maximizing its own objective. Current investment decisions will affect a subunit's bargaining power in future negotiations, and hence its ability to appropriate future allocations. The authors show that organizations can be structured so that subunits' quest for power provides the incentives for investments that otherwise would not be rewarded in the marketplace. Unfortunately, such a structure also opens the door to inefficient power struggles.

Also attending this conference were: Geoffrey Carliner, NBER; Judith A. Chevalier, NBER and University of Chicago; Florencio Lopez-de-Silanes, Harvard University; and Richard S. Ruback and Peter Tufano, NBER and Harvard University.

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"The Economics of Health Care: What Have We Learned? What Have I Learned?" by Martin Feldstein

"Reserve Cycles," by Robert P. Flood, William Perraudin, and Paolo Vitale

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NBER Reporter Spring 1995 43.
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Bureau Books

Coordination and Information, Historical Perspectives on the Organization of Enterprise

Coordination and Information, edited by Naomi R. Lamoreaux and Daniel M. G. Raff, is available from the University of Chicago Press for $18.95. This volume, which concentrates on the period around the beginning of the 20th century, includes eight case studies on how firms coordinate economic activity within, at, and outside their borders. Methods of coordination vary with production technique; they also can be affected by intellectual movements; and regulation can have important consequences for coordination.

A sequel to Peter Temin's Inside the Business Enterprise, this volume should be of interest to economists and business historians who want to see what activities are coordinated better within firms, or among cooperating firms, and to determine the best form of coordination.

Lamoreaux is an NBER research associate and a professor of history at Brown University. Raff is an NBER faculty research fellow and an associate professor of management at the Wharton School, University of Pennsylvania.

This volume may be ordered directly from the University of Chicago Press, Order Department, 11030 South Langley Avenue, Chicago, IL 60628-2215; 1-800-621-2756. Academic discounts of 10 percent for individual volumes and 20 percent for standing orders for all NBER books published by the University of Chicago Press are available to university faculty; orders must be sent on university stationary.
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NBER Working Papers

The Causes and Effects of Liability Reform: Some Empirical Evidence
Daniel P. Kessler,
Thomas J. Campbell, and
George B. Shepherd
NBER Working Paper No. 4989
January 1995
Law and Economics

This paper provides empirical evidence on the causes and effects of liability reforms. Using a newly collected dataset of state tort laws and a panel dataset containing industry-level data by state for 1969–90, we first identify the characteristics of states that are associated with liability reforms, and then examine whether liability reforms influence productivity and employment.

We present two central findings. First, reductions in liability levels are associated with increases in measured productivity and employment in most industries that we studied. Second, liability reforms that reduce legal liability are generally correlated positively with measures of political conservatism.

Diversification, Integration, and Emerging Market Closed-End Funds
Geert Bekaert and
Michael S. Urias
NBER Working Paper No. 4990
January 1995
Asset Pricing

Using an extensive new dataset on U.S.- and U.K.-traded closed-end funds, we examine the diversification benefits from emerging equity markets, and the extent of their integration with global capital markets. We find significant diversification benefits for the U.K. country funds, but not for the U.S. funds. The difference appears to be related to portfolio holdings. To investigate global market integration, we compute the reduction in expected returns an investor would be willing to accept to avoid investment barriers in six countries. We find evidence of investment restrictions for Indonesia, Taiwan, and Thailand, but not for Korea, the Philippines, or Turkey.

Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime
Steven D. Levitt
NBER Working Paper No. 4991
January 1995
JEL Nos. K42, H72
Public Economics

Previous empirical studies typically have uncovered little evidence that police reduce crime. One problem with those studies is a failure to deal adequately with the "simultaneity" between police and crime: while police may or may not
reduce crime, there is little doubt that expenditures on police forces are an increasing function of the crime rate.

In this study, I use the timing of mayoral and gubernatorial elections to identify the effect of police on crime. I first demonstrate that increases in the size of police forces occur disproportionately in mayoral and gubernatorial election years. This relationship previously had gone undocumented. After controlling for changes in government spending on other social programs, there is little reason to think that elections will be correlated otherwise with crime.

Using a panel of large U.S. cities from 1970–92, I show that police reduce crime for six of the seven categories examined. I estimate that each additional police officer eliminates eight to ten serious crimes. Existing estimates of the costs of crime suggest that the social benefit of reduced crime is approximately $100,000 per officer per year, implying that the current number of police is below the optimal level.

Economic Risk and Political Risk in Fiscal Unions
Alberto Alesina and Roberto Perotti
MBER Working Paper No. 4992
January 1995
International Finance and Macroeconomics, Public Economics

A fiscal program that redistributes income from rich to poor individuals indirectly redistributes tax revenues from regions hit by a favorable shock to regions hit by an unfavorable one. Therefore centralized fiscal redistribution has been advocated as a way to insure individuals against region-specific shocks. In this paper, we argue that a centralized fiscal policy, while reducing the uncertainty about the tax base, creates uncertainty about the tax rate. This occurs because regions hit by different shocks have contrasting interests regarding the choice of the policy instrument. Using a simple model with two regions and linear taxes, we show that the higher uncertainty about the policy instrument might more than offset the lower uncertainty about the tax base, thus making a majority of agents in each region worse off in a centralized regime.

The model is a special case of a more general idea. Heterogeneous entities can reap numerous advantages from integration: for example, mutual insurance (on which we focus); economies of scale; and more bargaining power. However, the same process of integration can increase the unpredictability of any endogenous policy, because more diverse entities participate in the decision-making process. Therefore the opportunities for disagreement increase. In principle, this second effect might offset the advantages of integration.

The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy
Franklin R. Edwards and Frederic S. Mishkin
MBER Working Paper No. 4993
January 1995
JEL Nos. G21, G1
Monetary Economics

This paper outlines the fundamental economic forces that have led to the decline in traditional banking, that is, the process of making loans and funding them by issuing short-dated deposits. The declining competitiveness of traditional banking may threaten financial stability in two ways: by increasing bank failures; and by increasing the incentives for banks to take on more risk, either by making more risky loans, or by engaging in "nontraditional" financial activities that promise higher returns but greater risk.

We argue that most nontraditional activities, for example banks acting as derivatives' dealers, expose banks to risks and moral hazard problems that are similar to those associated with banks' traditional activities. Also, these activities can be regulated as effectively as traditional activities can.

One regulatory approach to maintaining financial stability and strengthening the banking system is to adopt a system of structured bank capital requirements with early corrective action by regulators. An important element in this approach is that market-value accounting principles be applied to banks, and that there be increased public disclosure by banks of the risks associated with their trading activities. With this regulatory structure in place, banks could be permitted greater freedom to expand into nontraditional activities.

Pollution Abatement Costs, Regulation, and Plant-Level Productivity
Wayne B. Gray and Ronald J. Shadbegian
MBER Working Paper No. 4994
January 1995
JEL Nos. D24, Q28
Productivity

We analyze the connection among productivity, pollution abatement expenditures, and other measures of environmental regulation for plants in three industries: paper, oil, and steel. We examine data from 1979 to 1990, considering both levels of total factor productivity and growth rates. Plants with higher abatement costs have sig-
significantly lower productivity. The magnitude of the impact is somewhat larger than expected: $1 higher abatement costs appear to be associated with the equivalent of $1.74 in lower productivity for paper mills, $1.35 for oil refineries, and $3.28 for steel mills. However, these results apply only to variation across plants in productivity levels.

Looking at productivity variation within plants over time, or using productivity growth rates, the estimates show a smaller (and insignificant) relationship between abatement costs and productivity. Other measures of environmental regulation faced by the plants—compliance status, enforcement activity, and emissions—are not significantly related to productivity.

**By Force of Habit: A Consumption-Based Explanation of Aggregate Stock Market Behavior**

*John Y. Campbell and John H. Cochrane*

NBER Working Paper No. 4995
January 1995

Asset Pricing, Economic Fluctuations

We present a consumption-based model that explains the procyclical variation of stock prices, the long-horizon predictability of excess stock returns, and the countercyclical variation of stock market volatility. Our model captures much of the history of stock prices, given only data on consumption. Since our model captures the equity premium, it implies that fluctuations have important welfare costs. Unlike many habit-persistence models, our model does not necessarily produce cyclical variation in the risk-free interest rate, nor does it produce an extremely skewed distribution or negative realizations of the marginal rate of substitution.

**Income and Wealth of Older American Households: Modeling Issues for Public Policy Analysis**

*Alan L. Gustman and F. Thomas Juster*

NBER Working Paper No. 4996
January 1995

JEL Nos. D31, H5, J14

Aging, Labor Studies

This paper evaluates the extent to which current knowledge of retirement, savings, pension, and related behavior is sufficient for determining the effects of major policy initiatives on the incomes and wealth of the aged population of the United States. We present data from two new surveys—the Health and Retirement Study, and the Asset and Health Dynamics Among the Oldest Old Survey—describing the distributions of the major components of income and wealth to be explained by these behavioral models. The data suggest that the amount of wealth held by the older population has been understated severely in earlier surveys. Disagreements and inconsistencies in models of savings indicate that there is no agreed-upon behavioral model on which to base policy analysis. Similar problems characterize the pension literature.

Most strikingly, central features of these three major branches of behavioral analysis are mutually inconsistent. Although there are important linkages among the behaviors that determine retirement, savings, and pension outcomes, in each area the research ignores or misspecifies the related behavior from other areas. Consequently, significant advances are required before we can confidently predict the effects on income and wealth in retirement of contemplated changes in policies.

**On the Predictability of Stock Returns: An Asset-Allocation Perspective**

*Shmuel Kandel and Robert F. Stambaugh*

NBER Working Paper No. 4997
January 1995

JEL Nos. G11, G12

Asset Pricing

We investigate the predictability of monthly stock returns from the perspective of a risk-averse investor who uses the data to update initially vague beliefs about the conditional distribution of returns. The investor's optimal allocation of stocks-versus-cash can depend on the current value of a predictive variable, such as dividend yield, even though such a variable may not be predictable. When viewed in this economic context, the empirical evidence indicates a strong degree of predictability in monthly stock returns.

**Antitrust and Higher Education: Was There a Conspiracy to Restrict Financial Aid?**

*Dennis W. Carlton, Gustavo E. Bamberger, and Roy J. Epstein*

NBER Working Paper No. 4998
January 1995

Industrial Organization

In 1991, the Antitrust Division sued MIT and the eight schools in the Ivy League under Section 1 of the Sherman Act for engaging in a conspiracy to fix the prices that students pay. The Antitrust Division claimed that the schools conspired on financial aid policies in an effort to reduce aid and to raise their revenues. The schools justified their cooperative behavior by explaining that it enabled them to concentrate aid on only those in need, and thereby helped the
schools to achieve their goals of need-blind admission, coupled with financial aid to all needy admittees.

This paper analyzes the empirical determinants of tuition, and finds that the schools’ agreement had no effect on average tuition paid. The paper also analyzes the appropriate application of the anti-trust laws to not-for-profit institutions. The Court of Appeals found that it is appropriate for the courts to consider nonprofit institutions’ justifications for collective action (in this case, to enable the poor to attend school) under a Rule of Reason. The Court of Appeals overturned the District Court’s opinion against MIT, citing the failure of the District Court to properly apply the Rule of Reason.

The Adding Up Problem: A Targeting Approach
Kala Krishna
NBER Working Paper No. 4999
January 1995
JEL No. F13
International Trade and Investment

This paper looks at the problem of making multiple lending decisions that affect the supply of the product when the consequences of those decisions are related through their effect on the world price of the product. This is termed the “adding up problem." I argue that thinking of this problem from the point of view of the targeting literature helps to clarify the nature of optimal policies.

First, though, three factors need to be specified: 1) the objective function of the lender (the bank) compared to that of the borrowers (the countries); 2) the extent of the lender’s ability to influence total investment in the product, and the instruments available to it; and 3) the distortions present in the environment.

The lender tries to implement policies that maximize its objective function, and distortions in the system prevent this function from being maximized automatically. These distortions could arise because the lender’s objectives do not match the borrowers’, or because of borrowers’ misconceptions about how the system operates, or a lack of access to funds on the part of the borrowers relative to the lender. The environment and policies available to the lender limit its ability to influence the outcome.

In this context, I argue that targeting models can be used to help guide policy. The basic rule is to correct the distortions where they occur using the appropriate instrument. If instruments are limited, those available are used to target multiple distortions, and the “first best” need not be attainable.

Behavioral Responses to Tax Rates: Evidence from TRA86
Martin Feldstein
NBER Working Paper No. 5000
January 1995
JEL Nos. H2, H31
Public Economics

This paper uses the experience after the Tax Reform Act of 1986 to examine how taxes affect three aspects of individual taxpayer behavior: labor supply, total taxable income, and capital gains. The substantial sensitivity of married women’s labor supply implies that the efficiency of the tax system could be increased significantly by reducing the marginal tax rates of these women relative to their husbands’ marginal tax rates. More generally, the sensitivity of taxable income to the net-of-tax share implies that lower marginal tax rates would involve much less revenue loss than is assumed traditionally, and would bring a much more substantial reduction in the deadweight loss of the tax system. The sharp fall in the real value of realized capital gains since the 1986 rise in tax rates on them confirms earlier research indicating the substantial sensitivity of capital gains realizations to tax rates. A comparison with projections by the Treasury and Congressional Budget Office made in 1988 shows that the current official model greatly understates the sensitivity of capital gains to tax rates.

Empirical Matching Functions: Estimation and Interpretation Using Disaggregate Data
Patricia M. Anderson and Simon M. Burgess
NBER Working Paper No. 5001
January 1995
JEL No. J6
Labor Studies

In this paper, we estimate matching functions using disaggregate data. We find strong support for the matching approach, with most specifications implying slightly increasing returns to scale. This finding does not appear to arise from our inclusion of additional controls, or from the level of disaggregation. Thus we conclude that earlier findings of constant returns in the United States may be the result of various approximations needed to construct an aggregate time series. We also find evidence of endogenous job competition between the employed and nonemployed, so that the estimated parameters from a matching function cannot be interpreted as structural parameters.
The Impact of Federal Spending on House Election Outcomes
Steven D. Levitt and James M. Snyder, Jr.
NBER Working Paper No. 5002
January 1995
JEL No. H50
Public Economics

While it is widely believed by academics, politicians, and the popular press that incumbent congressmen are rewarded by the electorate for bringing federal dollars to their district, the evidence supporting that claim is extremely weak. One explanation for the failure to find the expected relationship between federal spending and election outcomes is that incumbents who expect to have difficulty being reelected are likely to exert greater effort in obtaining federal outlays. Since it is generally impossible to adequately measure this effort, the estimated impact of spending is biased downward because of omitted variables.

We address this estimation problem using instrumental variables. For each House district, we use spending outside the district but inside the state containing the district as an instrument for spending in the district. Federal spending is affected by a large number of actors (for example, governors, senators, mayors, and other House members in the state delegation), leading to positive correlations in federal spending across the House districts within states. However, federal spending outside of a district is not likely to be correlated strongly with that district's electoral challenge. Thus, spending in other districts is a plausible instrument.

In contrast to previous studies, ours finds strong evidence that nontransfer federal spending benefits congressional incumbents: an additional $100 per capita in such spending is worth as much as 2 percent of the popular vote. Additional transfer spending, on the other hand, does not appear to have any electoral effects.

Public Employment, Taxes, and the Welfare State in Sweden
Sherwin Rosen
NBER Working Paper No. 5003
January 1995
Labor Studies

All employment growth in Sweden since the early 1960s is attributable to labor market entry of women, working in local public sector jobs that implement the welfare state. Sweden has "monetized" or "nationalized" the family. Women are paid at public expense to provide household services for other families. Subsidizing purchased household services encourages labor force participation of women through substitution of market services for self-provided services. It also reduces the marginal cost prices of household goods, and encourages substitution of household goods for material goods. A kind of social cross-hauling occurs: when subsidies are increased and taxes raised to finance them, production of material goods declines and production of household goods increases. Women enter the market and work more in each other's households and less in the material goods sector. Efficiency distortions of current child policies in Sweden may be as large as half of total expenditures on childcare. The current 90 percent subsidies to public childcare probably involve large deadweight losses. A 1 percent decline in the rate of subsidy, accompanied by balanced budget tax decreases, would reduce the deadweight losses of tax distortions by 1 percent, at current policy levels.

Spatial Productivity Spillovers from Public Infrastructure: Evidence from State Highways
Douglas Holtz-Eakin and Amy Ellen Schwartz
NBER Working Paper No. 5004
February 1995
JEL Nos. H54, H72, R5
Public Economics

Is public sector infrastructure a key determinant of productivity? Traditional, project-based analyses of costs and benefits typically do not find large rates of return on infrastructures. But proponents of infrastructure spending point to regression-based analyses that imply large productivity effects from public spending. The disparity in estimated returns often is attributed to geographic spillovers in productivity benefits that are not captured by disaggregated analyses.

We examine the degree to which state highways provide productivity benefits beyond the narrow confines of each state's borders. Despite the fact that state highways—especially the interstate highway system—are designed at least in part with interstate linkages in mind, we find no evidence of quantitatively important productivity spillovers.

Common Interests or Common Politics?
Reinterpreting the Democratic Peace
Henry S. Farber and Joanne Gowa
NBER Working Paper No. 5005
February 1995
JEL No. P02
Labor Studies

The central claim of a rapidly growing literature in international relations is that members of pairs of democratic states are much less
likely to engage each other in war or in serious disputes short of war than are members of other pairs of states.

Our analysis does not support this claim. Instead, we find that the dispute rate between democracies is lower than that of other country pairs only after World War II. Before 1914 and between the world wars, there is no difference between the war rates of members of democratic pairs of states and of members of other pairs of states. We also find that there is a higher incidence of serious disputes short of war between democracies than between nondemocracies before 1914.

We attribute this crosstemporal variation in dispute rates to changes in patterns of common and conflicting interests across time. We use alliances as an indicator of common interests to show that crosstemporal variation in dispute rates conforms to variations in interest patterns for two of the three time periods in our sample.

A Panel Project on Purchasing Power Parity: Mean Reversion Within and Between Countries

Jeffrey A. Frankel and Andrew K. Rose

NBER Working Paper No. 5006
February 1995
JEL No. F30
International Finance and Macroeconomics

Previous time-series studies have shown that there is mean reversion in real exchange rates. Deviations from purchasing power parity (PPP) appear to have half-lives of approximately four years. However, the long samples required for statistical significance are not available for most currencies, and may be inappropriate because of changes in regime.

In this study, we reexamine deviations from PPP using a panel of 150 countries and 45 annual observations. Our panel shows strong evidence of mean reversion similar to what is found in long time series. PPP deviations are eroded at a rate of approximately 15 percent annually: that is, their half-life is around four years. Such findings can be masked in time-series data, but are relatively easy to find in cross-sections.

Holdups, Standard Breach Remedies, and Optimal Investment

Aaron S. Edlin and Stefan Reichelstein

NBER Working Paper No. 5007
February 1995
JEL No. K1
Law and Economics

We consider a bilateral trading problem in which one or both parties make relationship-specific investments before trade. Without adequate contractual protection, the prospect of later holdups discourages investment. We postulate that the parties can sign noncontingent contracts prior to investing, and can freely renegotiate them after uncertainty about the desirability of trade is resolved. We find that such contracts can induce one party to invest efficiently when either a breach remedy of specific performance or expectation damages is applied. However, expectation damages are poorly suited to twoinvestor problems. Specific performance can induce both parties to invest efficiently if a separability condition holds.

Regional Cost-of-Living Adjustments in Tax-Transfer Schemes

Louis Kaplow

NBER Working Paper No. 5008
February 1995
JEL Nos. H24, H53
Public Economics

The federal income tax and major welfare programs do not take into account significant cost-of-living variations among regions. This paper considers what adjustments might be appropriate in light of the distributive purposes of tax and welfare systems and concerns about the efficiency of the interregional allocation of resources. I consider price index problems, differences in amenities, and heterogeneity of individuals' locational preferences.

Tax Projections and the Budget: Lessons from the 1980s

Alan J. Auerbach

NBER Working Paper No. 5009
February 1995
JEL Nos. H30, H61
Public Economics

Some economists have argued that the disincentive effects of increases in the marginal tax rate in the 1980s caused revenue to rise by less than had been anticipated. To evaluate that hypothesis, this paper considers revenue forecasts from the Office of Management and Budget and forecast errors for 1982–93. If the revenue gains from tax increases, and the revenue losses from tax cuts, were overstated because of inadequate allowance for behavioral responses, then the forecast errors should be related negatively to the initial revenue estimates of the impact of policy changes.

For both excise taxes and corporate income taxes, it turns out that the systematic overprediction of revenues during the period can be explained in part by an underestimate of behavioral responses to taxation.

NBER Reporter Spring 1995 51.
Differential Information and Dynamic Behavior of Stock Trading Volume
Hua He and Jiang Wang
NBER Working Paper No. 5010
February 1995
Asset Pricing

This paper develops a multi-period rational expectations model of stock trading in which investors have differential information concerning the underlying value of the stock. Investors trade competitively in the stock market based on their private information and the information revealed by the market-clearing prices, as well as other public news. We examine how trading volume is related to the information flow in the market, and how investors' trading reveals their private information.

Do Firms Smooth the Seasonal in Production In a Boom? Theory and Evidence
Stephen G. Cecchetti, Anil K. Kashyap, and David W. Wilcox
NBER Working Paper No. 5011
February 1995
JEL Nos. E32, O49
Economic Fluctuations, Monetary Economics

Using disaggregated production data, we show that the size of seasonal cycles will change significantly over the course of the complete business cycle. In particular, during periods of high activity throughout the economy, some industries will smooth seasonal fluctuations while others will exaggerate them. In our model, seasonal fluctuations can be disentangled from cyclical fluctuations safely only when the marginal cost of production is linear, and the variation in demand and cost satisfy certain (restrictive) conditions.

Our model also suggests that inventory movements can be used to isolate the role of demand shifts in generating any interaction between seasonal cycles and business cycles.

Thus, the empirical analysis involves studying the variation in seasonally unadjusted patterns of production and inventory accumulation over different phases of the business cycle. Our finding, that seasonals shrink during booms and that firms carry more inventories into high sales seasons during a boom, leads us to conclude that for several industries, marginal cost slopes up at an increasing rate. Conversely, in a couple of industries we find that seasonal swings in production are exaggerated during booms, and that inventories are drawn down prior to high sales seasons, suggesting that marginal costs curves flatten as production increases. Overall, we find considerable evidence that there are nonlinear interactions between business cycles and seasonal cycles.

Price, Tobacco Control Policies, and Smoking Among Young Adults
Frank J. Chaloupka and Henry Wechsler
NBER Working Paper No. 5012
February 1995
JEL No. 11
Health Economics

We estimate the effects of cigarette prices and tobacco control policies (including restrictions on smoking in public places, and limits on the availability of tobacco products to youths) on cigarette smoking among youths and young adults using data from a nationally representative survey of students in U.S. colleges and universities. Our estimates indicate that college students are quite sensitive to the price of cigarettes: the average estimated price elasticity of smoking participation is -0.66 and the overall average estimated price elasticity of cigarette smoking is -1.43. In addition, relatively stringent restrictions on smoking in public places reduce smoking participation rates among college students. The quantity of cigarettes consumed by smokers is lowered by any restrictions on public smoking. Finally, limits on the availability of tobacco products to underage youths have no impact on college students, almost all of whom can purchase these products legally.

Economic Growth in a Cross-Section of Cities
Edward L. Glaeser, José A. Scheinkman, and Andrei Shleifer
NBER Working Paper No. 5013
February 1995
JEL Nos. O40, R11
Growth

We examine the relationship between urban characteristics in 1960 and urban growth (income and population) between 1960 and 1990. Our major findings are that income and population growth move together. Both types of growth are positively related to initial schooling, negatively related to initial unemployment, and negatively related to the share of employment initially in manufacturing. These results are unchanged qualitatively if we examine cities (a smaller political unit), or Standard Metropolitan Statistical Areas (a larger "economic" unit). We also find that racial composition and segregation basically are uncorrelated with urban growth across all cities. But in communities with large nonwhite populations, segregation is correlated positively with white population growth. Government expenditures (except for sani-
tation) are uncorrelated with urban growth. Government debt is correlated positively with later growth.

Are Lifetime Jobs Disappearing? Job Duration in the United States, 1973–93
Henry S. Farber
NBER Working Paper No. 5014
February 1995
JEL No. J60
Labor Studies

The public believes that job security has deteriorated dramatically in the United States. In this study, I examine job durations from eight supplements to the Current Population Survey administered between 1973 and 1993 in order to determine if, in fact, there has been a systematic change in the likelihood of long-term employment. In order to measure changes in the distribution of job durations, I examine changes in selected quantiles (the median and the 0.9 quantile) of the distribution of duration of jobs in progress. I also examine selected points in the cumulative distribution function including the fraction of workers who have been with their employer less than one year, more than ten years, and more than 20 years.

The central findings are clear. By the measures I examine, there has been no systematic change in the overall distribution of job duration over the last two decades, but the distribution of long-term jobs across the population has changed in two ways. First, individuals, particularly men, with little education (less than 12 years) are substantially less likely to be in long jobs today than they were 20 years ago. Second, women with at least a high-school education are substantially more likely to be in long jobs today than they were 20 years ago.

The Deficit Gamble
Laurence M. Ball,
Douglas W. Elmendorf, and
N. Gregory Mankiw
NBER Working Paper No. 5015
February 1995
Economic Fluctuations

The historical behavior of interest rates and growth rates in the United States suggests that, with a high probability, the government can run temporary budget deficits and then roll over the resulting government debt forever. We document this finding and examine its implications. We show that whenever a perpetual rollover of debt succeeds, policy can make every generation better off. This does not imply that deficits are good policy, because an attempt to roll over debt forever might fail. But the adverse effects of deficits, rather than being inevitable, only occur with a small probability.

Measuring Aggregate Human Capital
Casey B. Mulligan and
Xavier Sala-i-Martin
NBER Working Paper No. 5016
February 1995
JEL Nos. C43, C82, O49
Growth

In this paper we construct a set of human capital indexes for the states of the United States for each Census year starting in 1940. In order to do so, we propose a new methodology for the construction of index numbers in panel data sets. Our method is based on an optimal approach with which we choose the "best" set index numbers by minimizing the expected estimation error subject to some search constraints.

We find that the stock of human capital in the United States grew twice as rapidly as the average years of schooling, and that human capital inequality across states went up during the 1980s (while the dispersion of schooling actually fell). We conclude that using the average years of schooling for the empirical study of existing growth models may be misleading.

The Illusion of Failure: Trends in the Self-Reported Health of the U.S. Elderly
Timothy Waidmann,
John Bound, and
Michael Schoenbaum
NBER Working Paper No. 5017
February 1995
Aging, Health Care, Health Economics

Data from the National Health Interview Survey and elsewhere showed a trend toward worsening (self-reported) health among American men and women in middle age and older during the 1970s. This evidence—combined with the significant declines in age-specific mortality observed since the 1960s—has led some researchers to suggest that, on average, the health of the older population is declining. We examine recent trends in self-reported health and find that the health declines observed during the 1970s generally reversed during the 1980s. This shift would appear to belie the notion that lower adult mortality necessarily implies worse health. We argue further that the reversals observed during the 1980s also call into question whether trends in self-reported health during the 1970s generally reflected actual health declines. We suggest that changes in the social and economic forces influencing the options available for responding to health problems, combined with earlier diagnosis of preexisting conditions, provide a more plausible explanation for these trends, an explana-
A Labor-Income-Based Measure of the Value of Human Capital: An Application to the States of the United States  
Casey B. Mulligan and Xavier Sala-i-Martin  
NBER Working Paper No. 5018  
February 1995  
JEL Nos. C82, O49  

growth

We argue that a sensible measure of the aggregate value of human capital is the ratio of total labor income per capita to the wage of a person with zero years of schooling. That is because total labor income incorporates not only human capital, but also physical capital; given human capital, regions with higher physical capital will tend to have higher wages for all workers and, therefore, higher labor income. We find that one way to net out the effect of aggregate physical capital on labor income is to divide labor income by the wage of a worker with no schooling.

For the average U.S. state, our measure suggests that the value of human capital during the 1980s grew at a much larger rate than schooling. The reason for this is movements in the relative productivity of the different workers: in some sense, some workers and some types of schooling became a lot more relevant in the 1980s; as a result, measured human capital increased.

The International Diversification Puzzle Is Worse Than You Think  
Marianne Baxter and Urban J. Jermann  
NBER Working Paper No. 5019

February 1995  
JEL Nos. F40, G11  
International Finance and Macroeconomics

Although international financial markets are highly integrated across the more well-developed countries, investors nevertheless hold portfolios that consist nearly exclusively of domestic assets. This violation of the predictions of standard theories of portfolio choice is known as the "international diversification puzzle." In this paper, we show that the presence of nontraded risk associated with variations in the return to human capital has dramatic implications for the optimal fraction of domestic assets in an individual's portfolio. Our analysis suggests that the returns to human capital are highly correlated with the returns to domestic financial assets. Hedging the risk associated with nontraded human capital involves a short position in national equities in an amount approximately 1.5 times the value of the national stock market. Thus, optimal and value-weighted portfolios very likely involve a short position in domestic marketable assets.

Strategic Trade Policy  
James A. Brander  
NBER Working Paper No. 5020  
February 1995  
JEL No. F10  
International Trade and Investment

This paper reviews the literature on strategic trade policy: trade policy that conditions or alters a strategic relationship between firms, implying that it focuses primarily on trade in the presence of oligopoly. The key point is that strategic relationships between firms introduce additional motives for trade policy, over and above terms of trade and other effects that arise in all market structures. This paper makes the well-known point that slight differences in the structure of a model can give rise to strikingly different implications for trade policy, but also seeks to emphasize the robust general points that emerge from the literature.

International Trade and Open-Access Renewable Resources: The Small Open Economy Case  
James A. Brander and M. Scott Taylor  
NBER Working Paper No. 5021  
February 1995  
JEL Nos. F10, Q20  
International Trade and Investment

This paper develops a two-sector general equilibrium model of an economy with an open-access renewable resource. We characterize the autarkic steady state, showing that autarky prices (and "comparative advantage") are determined by the ratio of intrinsic resource growth to labor. Under free trade, steady-state trade and production patterns for a small open economy are determined by whether the resource good's world price exceeds its autarky price. Strikingly, if the small country exports the resource good while remaining diversified, then steady-state utility is lower than in autarky, and increases in the world price of exports reduce welfare.

Measuring Business Cycles  
Approximate Band-Pass Filters for Economic Time Series  
Marianne Baxter and Robert G. King  
NBER Working Paper No. 5022  
February 1995  
JEL Nos. C82, E17, B32  
Economic Fluctuations

We develop a set of approxi-
mate band-pass filters designed for use in a wide range of economic applications. In particular, we design and implement a specific filter that isolates business-cycle fluctuations in macroeconomic time series. This filter was designed to isolate fluctuations in the data that persist for periods of two through eight years. This filter also "detrends" the data, in the sense that it will render stationary time series that are integrated of order two or less, or that contain deterministic time trends. We apply our filter to several of the key macroeconomic time series, and describe the picture of the U.S. postwar business cycle that emerges from our analysis. We also provide detailed comparisons with several alternative detrending methods.

Taxation and Labor Supply of Married Women: The Tax Reform Act of 1986 as a Natural Experiment
Nada Eissa
NBER Working Paper No. 5023
February 1995
JEL Nos. H24, H31
Public Economics

This paper uses the Tax Reform Act of 1986 as a natural experiment to identify the responsiveness of the labor supply of married women to changes in the tax rate. The Tax Reform Act of 1986 reduced the top marginal tax rate by 44 percent (from 50 percent to 28 percent), but created less of a change in the marginal tax rate for those further down the income distribution. I analyze the response of married women at or above the 99th percentile of the income distribution, using women from the 75th percentile as a control group. In that way, I can identify the tax effect as the difference between the change in labor supply of women with large versus small reductions in tax rates.

I find that the labor supply of high-income, married women increased because of the Tax Reform Act of 1986. The increase in total labor supply of married women at the top of the income distribution (relative to married women at the 75th percentile of the income distribution) implies an elasticity with respect to the after-tax wage of approximately 0.8. At least half of this elasticity is the result of changes in labor force participation. Use of a second control group supports the response in participation, but is inconclusive regarding the response in hours of work.

Sex Discrimination in Restaurant Hiring: An Audit Study
David Neumark, Roy J. Bank, and Kyle D. Van Nort
NBER Working Paper No. 5024
February 1995
JEL Nos. J16, J24, J71
Labor Studies

This paper reports on a small-scale audit study that investigates sex discrimination in restaurant hiring. Comparably matched pairs of men and women applied for jobs as waiters and waitresses at 65 restaurants in Philadelphia. The 130 applications led to 54 interviews and 39 job offers. The results provide statistically significant evidence of sex discrimination against women in high-price restaurants. In high-price restaurants, women who applied had an estimated probability of receiving a job offer that was about 0.5 lower, and an estimated probability of receiving an interview that was about 0.4 lower, than men who applied. These hiring patterns appear to have implications for sex differences in earnings, because informal survey evidence indicates that earnings are higher in high-price restaurants.

International Trade and Business Cycles
Marianne Baxter
NBER Working Paper No. 5025
February 1995
JEL Nos. F41, F52
International Finance and Macroeconomics, Economic Fluctuations

Virtually all economies experience recurrent fluctuations in economic activity that persist for periods of several quarters to several years. Further, there is a definite tendency for the business cycles of developed countries to move together: that is, there is a world component to business cycles. I argue that capital accumulation and international capital flows are central to understanding world trade and business cycles. In particular, fluctuations in net exports and the current account are dominated by trade in capital goods.

The paper develops a two-country model of international trade, within which capital accumulation and international investment flows play a central role. I explore the channels by which shocks and fiscal shocks are transmitted to the domestic and foreign economies, and discuss the extent to which these results are sensitive to individuals' opportunities for international trade in financial assets. Overall, I find that the models capture many of the salient features of international business cycles. However, it has proven consistently difficult to generate sufficient comovement across countries in labor input and investment.
Crime and Social Interactions
Edward L. Glaeser, Bruce Sacerdote, and José A. Scheinkman
NBER Working Paper No. 5026
February 1995
JEL Nos. K42, D00
Growth, Labor Studies

The high degree of variance of crime rates across space (and time) is one of the oldest puzzles in the social sciences. Our empirical work strongly suggests that this variance is not the result of geographic differences. We present a model in which social interactions create enough covariance across individuals to explain the high variance across cities in crime rates. This model provides a natural index of social interactions that can be used to compare the degree of social interaction across crimes, geographic units, and time. Our index gives similar results for different data samples, and suggests that the amount of social interaction is highest in petty crimes (such as larceny and auto theft), moderate in more serious crimes (assault, burglary, and robbery), and almost negligible in murder and rape. We also apply the index of social interaction to noncriminal activities, and find that there is substantial interaction in the choice of attending school.

Maximizing Predictability in the Stock and Bond Markets
Andrew W. Lo and A. Craig MacKinlay
NBER Working Paper No. 5027
February 1995
JEL No. G12
Asset Pricing

We construct portfolios of stocks and bonds that are maximally predictable with respect to a set of observable economic variables. We show that these levels of predictability are statistically significant, even after we control for data-snooping biases. We disaggregate the sources for predictability by using several asset groups, including industry-sorted portfolios. We find that the sources of maximal predictability shift considerably across asset classes and sectors as the return-horizon changes. Using three out-of-sample measures of predictability, we show that the predictability of the maximally predictable portfolio is genuine, and is economically significant.

Capital Income Taxation and Long-Run Growth: New Perspectives
Assaf Razin and Chi-Wa Yuen
NBER Working Paper No. 5028
February 1995
JEL Nos. F2, H2, O4
International Finance and Macroeconomics, Public Economics

We study the effects of capital income taxation on long-run growth in a framework in which population is endogenous and capital is internationally mobile. Endogenizing population growth introduces a new channel for taxes to affect economic growth. It also enables us to discriminate the effects of taxes on growth of total versus per capita income. Allowing for capital mobility in the open economy, we show how the effects of taxes on growth of both population and income will vary across countries in specific ways. This variation depends on the international income tax regimes and on the relative preferences of people toward the quantity and "quality" of children. Based on our model for the G-7 countries, we find that, although the effects of liberalizing capital flows on long-run growth may not be very sizable, the effects of changes in capital income tax rates can be magnified tremendously by cross-border capital flows and spillovers of policy effects.

Exploring New Markets: Direct Investment, Contractual Relations, and the Multinational Enterprise
Ignatius J. Horstm and James R. Marklesen
NBER Working Paper No. 5029
February 1995
JEL No. F3
International Trade and Investment

We consider the multinational firm's decision about whether to enter a new market immediately via direct investment, or to contract initially with a local agent and (possibly) invest later. Use of a local agent allows the multinational to avoid costly mistakes by finding out if the market is large enough to support direct investment. However, the agent is able to extract information rents from the multinational because of being better informed about market characteristics. We find that direct investment is the desirable mode of entry when the market is large on average, and there is little downside risk in expected profits.

Is High School Employment Consumption or Investment?
Christopher J. Ruhm
NBER Working Paper No. 5030
February 1995
JEL Nos. 12, 12
Labor Studies

Using data from the National Longitudinal Survey of Youth, I examine whether employment by high school students improves or
worsens economic attainment six to nine years after the scheduled date of high school graduation. There is no indication that light to moderate job commitments ever have a detrimental impact. Hours worked during the senior grade are correlated positively with future earnings, fringe benefits, and occupational status. These results hold for a variety of specifications. This suggests that employment increases net investments in human capital and facilitates the school-to-work transition, particularly toward the end of high school and for students not continuing on to college.

Some Lessons from the Yield Curve
John Y. Campbell
NBER Working Paper No. 5031
February 1995
JEL Nos. E43, G12
Asset Pricing, Monetary Economics

This paper reviews the literature on the relationship between short- and long-term interest rates. It summarizes the mixed evidence on the expectations hypothesis of the term structure: when long rates are high relative to short rates, short rates tend to rise as implied by the expectations hypothesis, but long rates tend to fall, which is contrary to the expectations hypothesis. This paper discusses the response of the U.S. bond market to shifts in monetary policy in the spring of 1994, and reviews the debate over the optimal maturity structure of the U.S. government debt.

Purchasing Power Disparity During the Floating Rate Period: Exchange Rate Volatility, Trade Barriers, and Other Culprits
Shang-Jin Wei and David C. Parsley
NBER Working Paper No. 5032
February 1995
JEL No. F21
International Finance and Macroeconomics

Using a panel of 12 tradable sectors in 91 OECD country pairs (14 countries), we study deviations from purchasing power parity (PPP) during the recent floating exchange rate period. We find some evidence that the deviations are related positively to exchange rate volatility, as well as to transportation costs. Once we have controlled for these two factors, free trade areas, including the EC and the EFTA, do not seem to reduce significantly the deviations from PPP relative to other OECD countries. Although using only the post-1973 data, we are able to find strong evidence of mean reversion toward PPP. The estimated half-lives of the deviation from PPP are about four and three-quarter years for the non-EMS countries in the sample, and four and one-quarter years for the EMS countries. We find evidence of nonlinearity in the rate of mean reversion, though: the convergence occurs faster for country pairs with larger initial deviations from PPP.

Is the Japanese Extended Family Altruistically Linked? A Test Based on Engel Curves
Fumio Hayashi
NBER Working Paper No. 5033
February 1995
JEL Nos. D11, D12, E21

Aging, Economic Fluctuations

Altruism has the well-known neutrality implication that the family's demand for commodities does not vary according to the division of resources within the family. We test this on a sample of Japanese extended families that are forming two-generation households. We find that the pattern of food expenditure is affected significantly by the division of resources. The budget share of certain food components—precisely those favored by the old, such as cereal, seafood, and vegetables—increases with the older generation's share of household income.

To Comfort Always: The Prospects of Expanded Social Responsibility for Long-Term Care
Alan M. Garber
NBER Working Paper No. 5034
February 1995
JEL No. I12
Health Care

Long-term care is an important means of providing basic and humanitarian treatment for elderly Americans who are severely disabled. The demand for long-term care is likely to increase dramatically as baby boomers begin to reach advanced ages. Long-term care has been a focus of health care reform because its current financing—largely a combination of out-of-pocket payments and Medicaid—is viewed as inadequate. Only a small fraction of long-term care is financed by private insurance, which is expensive, in part because moral hazard and adverse selection may create greater distortion in the utilization of long-term care than in the use of hospital and physician services. Increased government financing does not appear
to be a feasible option for the coming decades, since the ratio of retirees to working age adults will decline at the time the demand for long-term care rises. Furthermore, there is little prospect that the costs of existing federal entitlement programs can be reduced enough to finance a greatly expanded government role in long-term care. Although there are likely to be roles for private insurance, especially if it can be made more efficient, and for publicly funded catastrophic coverage, federal efforts to improve the financing of long-term care are more likely to be successful if they promote private savings.

**Multinational Firms and the New Trade Theory**

**James R. Markusen and Anthony J. Venables**

NBER Working Paper No. 5036
February 1995
JEL Nos. F12, F23
International Trade and Investment

We construct a model in which multinational firms may arise endogenously. Multinationals exist in equilibrium when transport and tariff costs and incomes are high, and when firm-level relative to plant-level scale economies are important. Less obvious, multinationals are more important in total economic activity when countries are more similar in incomes, relative factor endowments, and technologies. Thus the model may be useful in explaining several stylized facts, including: 1) the growing importance of direct investment relative to trade among the developed countries over time; and 2) the greater ratio of investment to trade among the developed countries relative to that ratio for "north-south" or "south-south" economic relationships. The model predicts the volume of trade, in contrast with the "new trade theory," as first rising and then falling as countries converge in incomes, relative endowments, and technologies. We also consider welfare, and show that direct investment makes the smaller (or high-cost) country better off, but may make the larger (or low-cost) country worse off.

**The Effects of Cocaine and Marijuana Use on Marriage and Marital Stability**

**Robert Kaestner**

NBER Working Paper No. 5038
February 1995
JEL No. J12
Health Economics

This paper examines the relationship between illicit drug use and marital status. It begins with an overview of the relevant economic theory for this problem. Then, using data from the National Longitudinal Survey of Labor Market Experiences, I present estimates of the effect of marijuana and cocaine use on marital status, age at first marriage, and duration of first marriage. The results indicate that, in general, drug users are more likely to be unmarried because they delay their first marriage, and their marriages are shorter. The findings are not uniform, however, and differ according to the gender, race, and age of the sample.

**The Effects of Trade and Foreign Direct Investment on Employment and Relative Wages**

**Robert E. Baldwin**

NBER Working Paper No. 5037
February 1995
JEL No. F10
International Trade and Investment, Labor Studies

This paper summarizes and assesses recent studies on the impact of current trends in trade and direct investment on employment and wages in OECD countries. The general conclusion is that factors such as changes in labor supplies, technology, and demand are more important than changes in trading patterns in explaining shifts in employment and relative wages. However, further studies are needed to understand better the employment and wage impact of foreign direct investment.

**Economic Convergence and Economic Policies**

**Jeffrey D. Sachs and Andrew M. Warner**

NBER Working Paper No. 5039
February 1995
International Finance and Macroeconomics, Growth

Many of the crucial debates in development economics are encapsulated in questions about \textit{economic convergence}: that is, is there a tendency for poorer countries to grow more rapidly than richer countries, and thereby to converge in living standards? Some recent research on growth has emphasized increasing returns as a possible reason not to expect convergence. Other research has suggested that convergence may be achieved only after poor countries attain a threshold level of income or human capital. This paper shows that a sufficient condition for higher-than-average growth of poorer countries, and therefore for convergence, is that poorer countries follow reasonably efficient economic policies, particularly open trade and protection of private property rights.

\textbf{Quality-Adjusted Cost Functions for Child Care Centers}

\textbf{H. Naci Mocan}

NBER Working Paper No. 5040
February 1995
JEL Nos. J13, L30
Health Economics, Labor Studies

Using a newly compiled dataset, this paper estimates cost functions for 399 child care centers in California, Colorado, Connecticut, and North Carolina. The quality of child care is measured by an index that is positively related to outcomes for children. Nonprofit centers that receive public money, either from the state or the federal government, have total variable costs that are 18 percent higher than other centers, keeping quality of services constant.

I find no statistically significant differences between general categories of for-profit and nonprofit centers. Furthermore, various types of nonprofits are not distinguishable from their for-profit counterparts. As shown in previous studies, the average quality of center-based child care is between "minimal" and "good." It costs 13 cents per hour per child to increase this average quality to the level considered developmentally appropriate by child care experts.

\textbf{Investment in New Activities and the Welfare Cost of Uncertainty}

\textbf{Joshua Aizenman}

NBER Working Paper No. 5041
February 1995
JEL Nos. F12, F15, F21
International Trade and Investment

Recent literature has highlighted the importance of "new activities" in development and growth. Trade distortions, including tariffs, are associated with costs that stem from the induced drop in the formation of new activities. I demonstrate here that uncertainty may induce similar costs.

I illustrate this argument in the context of Romer's model of a dependent economy, in which foreign direct investment is needed to enable the importation of capital goods and intermediate products used in domestic production. Uncertainty acts as an implicit tax on new activities, the incidence of which (in a certain sense) is worse than that of a tariff in Romer's framework. As with a tariff, uncertainty inhibits the formation of new activities. Unlike the tariff, however, uncertainty does not benefit the government with revenue. The welfare cost of uncertainty also applies for a closed economy. I show that entrepreneurs who are averse to uncertainty discount using a "hurdle rate" that exceeds the risk-free interest rate. The gap between the two rates increases with the uncertainty embodied in the investment, being determined by the vagueness of the information and by the range of possible outcomes. Hence, growth may be inhibited by business uncertainty, when the "rules of the game" for new activities are vague.

\textbf{Aggregate Employment Dynamics: Building from Microeconomic Evidence}

\textbf{Ricardo J. Caballero, Eduardo M. R. A. Engel, and John C. Haltiwanger}

NBER Working Paper No. 5042
February 1995
JEL Nos. E24, E30, J6
Economic Fluctuations, Labor Studies

We study the quarterly employment flows of approximately 10,000 large U.S. manufacturing establishments from 1972:1 to 1980:4. After estimating the extent of short-run substitution between employment and hours per worker (hours-week), we construct measures of the deviation between actual and desired employment based on the observed behavior of establishments' hours-week. These deviations then are used in firms' decisions about employment adjustments (or their microeconomic policy). We conclude that: 1) Microeconomic employment adjustment policies are nonlinear, with firms adjusting to large deviations proportionally more than to small ones. 2) Employment adjustments often are either large or nil, suggesting the presence of nonconvexities in the adjustment cost technologies. 3) Between 60 and 90 percent of aggregate employment fluctuations are caused by changes in the cross-sectional distribution of employment deviations, while the remainder are...
caused by changes in microeconomic policies. 4) The bulk of net aggregate employment fluctuations caused by changes in the cross-sectional distribution are explained by aggregate shocks. This holds in spite of significant fluctuations in the distribution of idiosyncratic shocks and the marked countercyclical nature of their second moment (that is, reallocation shocks). 5) Similarly, the bulk of net aggregate employment fluctuations caused by changes in microeconomic policies are explained by aggregate shocks. 6) Aggregate shocks also are the dominant source of job destruction, but account for less than half of the fluctuations in job creation. 7) A simple version of the aggregate model suggested by the microeconomic nonlinearities described here has a mean square error that is 50 percent lower than that of its linear counterpart.

NBER Working Paper No. 5043 February 1995
JEL No. E1
Economic Fluctuations, Monetary Economics

This review of Preston Miller’s The Rational Expectations Revolution, Readings from the Front Line focuses on the impact of his research on macroeconomic policymaking. Although policymakers generally have not accepted the equilibrium business cycle models advocated in many of the articles in the Miller volume, and even continue to use traditional Keynesian macroeconometric models for policy analysis, several of the lessons from the rational expectations revolution have become central in thinking about policymaking. Policymakers now recognize the importance of expectations and credibility to the outcomes of particular policies. This means that they are more cautious in their use of econometric models, and are less likely to advocate discretionary activist stabilization policies. They are also more willing to design policymaking to avoid the time-inconsistency problem and take a long rather than a short-run view, thereby avoiding myopic policies that produce undesirable outcomes.

Relative Income Concerns and the Rise in Married Women’s Employment
David Neumark and Andrew Postlewaite
NBER Working Paper No. 5044 February 1995
JEL Nos. D1, J16, J21
Labor Studies

We ask whether women’s decisions to be in the labor force may be affected by the decisions of other women in ways not captured by standard models. We develop a model that augments the simple neoclassical framework by introducing concerns about relative income into women’s (or families’) utility functions. In this model, the entry of some women into paid employment can spur the entry of other women, independent of wage and income effects. This mechanism may help to explain why, over some periods, women’s employment appeared to rise faster than could be explained by the simple neoclassical model.

In particular, we look at the effects of sisters’ employment on women’s own employment. We find strong evidence that women’s employment decisions are related positively to their sisters’ employment decisions. We also take account of the possibility that this positive relationship arises from differences across families in unobserved variables affecting the employment decision. We conduct numerous empirical analyses to reduce or eliminate this bias. Finally, we look at the relationship between husbands’ relative income and wives’ employment decisions. In our view, the evidence largely supports the relative income hypothesis.

Are Banks Dead? Or Are the Reports Greatly Exaggerated?
Mark Gertler and John H. Boyd
NBER Working Paper No. 5045
February 1995
Corporate Finance, Monetary Economics

This paper reexamines the conventional wisdom that commercial banking is an industry in severe decline. We find that a careful reading of the evidence does not justify this conclusion. It is true that on-balance-sheet assets held by commercial banks have declined as a share of total intermediary assets. But this measure overstates any drop in banking, for three reasons. First, it ignores the rapid growth in commercial banks’ off-balance-sheet activities. Second, it fails to take account of the substantial growth in offshore commercial and industrial lending by foreign banks. Third, it ignores the fact that over the last several decades financial intermediation has grown rapidly relative to the rest of the economy. After adjusting the measure of bank assets to account for these considerations, we find that there is no clear evidence of secular decline. To corroborate these findings, we
also construct an alternative measure of the importance of banking, using data from the national income accounts. Again, we find no clear evidence of a sustained decline. At most, the industry may have suffered a slight loss of market share over the last decade. But as we discuss, this loss may reflect a transitory response to a series of adverse shocks and the phasing in of new regulatory requirements, rather than the beginning of a permanent decline.

The Quantitative Analysis of the Basic Neomonetarist Model
Miles S. Kimball
NBER Working Paper No. 5046
February 1995
JEL Nos. E30, E50
Economic Fluctuations, Monetary Economics

I construct a dynamic macroeconomic model with less-than-perfect price flexibility and a real side that is consistent with Real Business Cycle Theory, augmented by investment adjustment costs, increasing returns to scale, and a new flexible formalization of imperfect competition. I then develop a new mode of approximation useful for any model in which one state variable adjusts quickly, while another state variable adjusts slowly. Even with investment adjustment costs, monetary expansions raise the real interest rate. Finally, I investigate the determinants of real rigidity and the macroeconomic rate of price adjustment.

Do Airlines in Chapter 11 Harm Their Rivals?
Bankruptcy and Pricing Behavior in U.S. Airline Markets
Severin Borenstein and Nancy L. Rose
NBER Working Paper No. 5047

February 1995
JEL Nos. L1, L93, G33
Industrial Organization

The behavior of firms in financial distress has attracted considerable interest in recent years. The turmoil in the U.S. airline industry has triggered much of the public policy discussion, as some observers have argued that airlines in financial distress, particularly those operating under Chapter 11 bankruptcy protection, reduce prices to the point of harming themselves and their competitors. This study investigates the pricing strategies of bankrupt airlines and their rivals. The data suggest that an airline's prices typically decline somewhat before it files for bankruptcy protection, and remain slightly depressed over the subsequent two or three quarters. We find no evidence that competitors of the bankrupt airline lower their prices, however, nor that they lose passengers to their bankrupt rival. These results indicate that bankrupt carriers do not harm the financial health of their competitors.

North–South R and D Spillovers
David T. Coe, Elhanan Helpman, and Alexander W. Hoffmaister
NBER Working Paper No. 5048
March 1995
International Trade and Investment, Productivity

We examine the extent to which developing countries that do little if any R and D themselves benefit from R and D that is performed in the industrial countries. When trading with an industrial country with large "stocks of knowledge" from its cumulative R and D activities, a developing country can boost its productivity by importing a larger variety of intermediate products and capital equipment that embody foreign knowledge, and by acquiring useful information that otherwise would be costly to obtain. Our empirical results, based on observations over 1971–90 for 77 developing countries, suggest that R and D spillovers from the industrial countries in the North to the developing countries in the South are substantial.

Trade in Ideas: Patenting and Productivity in the OECD
Jonathan Eaton and Samuel Kortum
NBER Working Paper No. 5049
March 1995
JEL Nos. F49, O14, O31
Growth, International Trade and Investment, Productivity

We develop and estimate a model of technological innovation and its contribution to growth at home and abroad. International patents indicate where innovations come from and where they are used. Countries grow at a common steady-state rate. A country's relative productivity depends upon its capacity to absorb technology. We estimate that, except for the United States, OECD countries derive almost all of their productivity growth from abroad.

On the Number and Size of Nations
Alberto Alesina and Enrico Spolaore
NBER Working Paper No. 5050
March 1995
Monetary Economics

This paper studies the equilibrium determination of the number of political jurisdictions in different political regimes, democratic or not, and in different economic environments, with more or less eco-
nomic integration. We focus on the trade-off between the benefits of large jurisdictions, in terms of economies of scale, and the costs of heterogeneity of large and diverse populations. Our model implies that: 1) democratization leads to secessions; 2) without an appropriate redistributive scheme (which we characterize) in equilibrium, there will be an inefficiently large number of countries; and 3) the equilibrium number of countries increases with the amount of economic integration. We also study the welfare effects of economic integration and free trade when the number of countries is endogenous.

Estimating the Effects of Trade Policy
Robert C. Feenstra
NBER Working Paper No. 5051
March 1995
JEL Nos. F12, F14
International Trade and Investment

This paper reviews empirical methods used to estimate the impact of trade policies under imperfect competition. We decompose the welfare effects of trade policy into four possible channels: 1) a deadweight loss from distorting consumption and production decisions; 2) a possible gain from improving the terms of trade; 3) a gain or loss caused by changes in the scale of firms; and 4) a gain or loss from shifting profits between countries. For each channel, we discuss the appropriate empirical methods for determining the sign or magnitude of the effect, and we illustrate the results using recent studies. We also discuss two other channels by which trade policy affects social or individual welfare: changes in wages, and changes in product variety. Finally, we review recent developments in the analysis of trade policies under perfect competition.

Health Insurance Eligibility, Utilization of Medical Care, and Child Health
Janet Currie and Jonathan Gruber
NBER Working Paper No. 5052
March 1995
JEL Nos. I18, H51
Health Care, Public Economics

The poor health of children in the United States relative to children in other industrialized nations has motivated recent efforts to extend insurance coverage to underprivileged children. However, there is little past evidence that extending eligibility for public insurance to previously ineligible groups will improve their health or even increase their use of medical resources. Using data from the Current Population Survey, the National Health Interview Survey, and state-level data on child mortality, we examine the effects on utilization and health of eligibility for public insurance. We focus on the recent expansions of the Medicaid program to low-income children. We find that these expansions roughly doubled the fraction of children eligible for Medicaid between 1984 and 1992; by 1992, almost one-third of all children were eligible. "Takeup" of these expansions was much less than complete, however, even among otherwise uninsured children.

Despite this problem with take-up, we find that eligibility for Medicaid significantly increased the utilization of medical care along a number of dimensions. Medicaid eligibility was associated with large increases in care delivered in physicians' offices; there was some increase in care in hospital settings as well. While eligibility had no effect on parentally assessed subjective health measures, it was linked with significant reductions in child mortality. Finally, we find that rising Medicaid eligibility is associated with reductions in racial disparities in the number of doctor and hospital visits and in child mortality. However, there is some evidence of increased racial disparities in the site at which care is delivered.

The Incidence of Payroll Taxation: Evidence from Chile
Jonathan Gruber
NBER Working Paper No. 5053
March 1995
JEL No. H22
Labor Studies, Public Economics

Despite the growing reliance worldwide on payroll taxation, there is limited evidence on the incidence of payroll taxes. To provide new evidence, I examine the experience of Chile before and after the privatization of its Social Security system. This change in policy led to a sharp exogenous reduction in the payroll tax burden on Chilean firms: the average payroll tax rate in my sample fell from 30 percent to 5 percent over this six-year period. I use data from a census of manufacturing firms, containing information on firm-specific tax payments and average wages. I find that payroll taxation had its full effect on wages, with no effect on employment. A potential weakness with this approach is that some of the variation in firm-specific tax rates may be spurious, for example because of measurement error in wages. I attempt to surmount this problem by using a variety of different estimators, all of which yield consistent evidence of full shifting.

Social Security and Saving: New Time-Series Evidence
Martin Feldstein
NBER Working Paper No. 5054
March 1995
JEL No. H55
Public Economics

This paper reexamines the results of my 1974 paper on Social Security and saving with the help of an additional 21 years of data. The estimates presented in this paper reconfirm that each dollar of Social Security wealth (SSW) reduces private saving by between two and three cents. The parameter estimates for the postwar period and for the entire sample since 1930 are very similar. Therefore, the correction of the error in the original SSW series between 1958 and 1971 does not affect the original results significantly. The estimated effect of SSW is robust with respect to the addition of a variety of variables that have been suggested in previous critiques of the original study. In the aggregate, the parameter values imply that the Social Security program currently reduces overall private saving by nearly 60 percent.

Tax Avoidance and the Deadweight Loss of the Income Tax
Martin Feldstein
NBER Working Paper No. 5055
March 1995
JEL No. H21
Public Economics

The traditional method of analyzing the distorting effects of the income tax greatly understimates the total and the incremental deadweight loss of an increase in income tax rates. Deadweight losses are substantially greater than these conventional estimates, because the traditional framework ignores the effect of higher income tax rates on tax avoidance through changes in the form of compensation (for example, employer-paid health insurance) and changes in the patterns of consumption (for example, owner-occupied housing). The deadweight loss caused by the increased use of exclusions and deductions can be calculated easily. Because the relative prices of leisure, excludable income, and deductible consumption are fixed, all of them can be treated as a single Hicksian composite good. The compensated change in taxable income induced by changes in tax rates therefore provides all of the information that is needed to evaluate the deadweight loss of the income tax.

Using TAXSIM calibrated to 1994, I estimate that the deadweight loss per dollar of revenue from the income tax rather than a lump-sum tax is more than 12 times as large as Harberger's classic estimate. A marginal increase in tax revenue achieved by a proportional rise in all personal income tax rates involves a deadweight loss of nearly two dollars per incremental dollar of revenue. Repealing the 1993 increase in tax rates for high income taxpayers would reduce the deadweight loss of the tax system by $24 billion while actually increasing tax revenue.

Collusion Over the Business Cycle
Kyle Bagwell and Robert W. Staiger
NBER Working Paper No. 5056
March 1995
JEL No. L1
Economic Fluctuations, Industrial Organization

We present a theory of collusive pricing in markets subject to business cycle fluctuations. In the business cycle model that we adopt, market demand alternates stochastically between fast- and slow-growth (boom and recession) phases. We provide a complete characterization of the most collusive prices and show that: 1) the most collusive prices may be procyclical (countercyclical) when growth rates of demand are positively (negatively) correlated through time; and 2) the amplitude of the collusive pricing cycle is larger when the expected duration of boom phases decreases and the expected duration of recession phases increases. We also offer a generalization of Rotemberg and Saloner's (1986) model, and interpret their findings in terms of transitory demand shocks that occur within broader business cycle phases.

How Does Foreign Direct Investment Affect Economic Growth?
Eduardo Borensztein, José De Gregorio, and Jong-Wha Lee
NBER Working Paper No. 5057
March 1995
JEL Nos. F43, O19, O40
Growth, International Trade and Investment

We test the effect of foreign direct investment (FDI) on economic growth in a cross-country regression framework, using data on FDI flows from industrial countries to 69 developing countries over the last two decades. Our results suggest that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment does. However, the higher productivity of FDI holds only when the host country has a minimum level of human capital stock. In addition, FDI increases total investment in the economy more than one for one, suggesting the predominance of complementarity effects with domestic firms.
Is Workers’ Compensation Covering Uninsured Medical Costs? Evidence from the “Monday Effect”
David Card and Brian P. McCall
NBER Working Paper No. 5058
March 1995
JEL No. J28
Labor Studies

Steady increases in the costs of medical care, coupled with a rise in the fraction of workers who lack medical insurance, have led to a growing concern that the workers’ compensation system is paying for off-the-job injuries. Many analysts have interpreted the high rate of “Monday injuries”—especially for hard-to-monitor ailments, such as back sprains—as evidence of this phenomenon. In this paper, we propose a test of the hypothesis that higher Monday injury rates are the result of fraudulent claims. Specifically, we compare the daily injury patterns for workers who are more and less likely to have medical insurance coverage, and the corresponding differences in the fraction of injury claims that are disputed by employers. Contrary to expectations, we find that workers without medical coverage are no more likely to report a Monday injury than other workers. Similarly, employers are no more likely to challenge a Monday injury claim, even for workers who lack medical insurance.

Public R and D Policies and Cost Behavior of the U.S. Manufacturing Industries
Theofanis P. Mamuneas and M. Ishaq Nadiri
NBER Working Paper No. 5059
March 1995
JEL Nos. O32, H25
Growth, International Trade and Investment

This paper estimates and evaluates the contributions of R and D tax incentives and publicly financed R and D investment policies in promoting growth of output and privately funded R and D investment in U.S. manufacturing industries. Publicly financed R and D induces cost savings, but crowds out privately financed R and D investment; the incremental R and D tax credit and the immediate deductibility provision of R and D expenditures have a significant impact on privately financed R and D investment. The optimal mix of both instruments is important to sustaining balanced growth in output and productivity in the manufacturing sector.

Government Interventions and Productivity Growth in Korean Manufacturing Industries
Jong-Wha Lee
NBER Working Paper No. 5060
March 1995
JEL Nos. O40, O53
Growth, International Trade and Investment

This paper investigates the impact of government industrial policy and trade protection of the manufacturing sector in Korea. Using four-period panel data for 1965–83 for 38 Korean industries, I show that trade protection reduced growth rates of labor productivity and total factor productivity. Industrial policies, such as tax incentives and subsidized credit, were not correlated with total factor productivity growth in the promoted sectors. Thus the evidence implies that less government intervention in trade is linked to higher growth in productivity.

Exact Hedonic Price Indexes
Robert C. Feenstra
NBER Working Paper No. 5061
March 1995
JEL No. C43
Productivity

This paper identifies conditions under which hedonic price indexes provide an exact measure of consumer welfare. The results provide a rationale for existing practices in the case in which prices equal marginal costs. In that case, both the marginal value of characteristics and a fixed-weight price index can be estimated from a hedonic regression.

Using the marginal value of characteristics, I show how to construct bounds on the exact hedonic price index. When prices are above marginal costs, the bounds still apply, but the value of characteristics cannot be measured as easily. Since the price–cost markups are an omitted variable in the hedonic regression, they will bias the coefficients obtained. For a special class of utility functions, a linear regression still will provide a measure of the marginal value of characteristics, but a log-linear regression will overstate these values.

Cumulation and ITC Decisionmaking: The Sum of the Parts Is Greater Than the Whole
Thomas J. Prusa and Wendy L. Hansen
NBER Working Paper No. 5062
March 1995
JEL Nos. F0, K2
International Trade and Investment

In 1984 Congress amended the antidumping (AD) and countervailing duty (CVD) laws, mandating that the International Trade Commission (ITC) “cumulate” imports across countries when determining
injury. Since 1984 the cumulation provision has been invoked in over 50 percent of the AD and CVD cases. We estimate that cumulation increases the probability of an affirmative injury determination by 20 to 30 percent, and has changed the ITC’s decision (from negative to affirmative) for about one-third of cumulated cases. We also show that the protective effect of cumulation increases as the number of countries involved increases, holding import market share constant. That is, cumulated imports have a super-additive effect on ITC decisionmaking.

Thomas J. Prusa and Reiko Aoki
NBER Working Paper No. 5063
March 1995
JEL Nos. F0, K2
International Trade and Investment

This paper examines the consequences of the differences in the timing of information disclosure between the U.S. and Japanese patent systems. Under the Japanese system it is possible for a firm to apply for a patent knowing the exact specifications of a rival’s patent application. In contrast, in the United States the only way a firm learns about a rival’s innovation is upon the actual granting of the rival’s patent. We argue that this difference enables Japanese firms to coordinate their efforts better than their U.S. counterparts. This, in turn, leads to smaller quality improvements under the Japanese system. We show that the creation/diffusion trade-off of patents can be influenced not only by the scope and length of patent protection but also by other features of the patenting process.

Modern Approaches to Central Banking
Stanley Fischer
NBER Working Paper No. 5064
March 1995
Monetary Economics

Modern theory has delivered both the conservative central banker and the principal-agent approaches as rationales for the independence of the central bank. The principal-agent approach directs attention to the importance of clearly defining both the goals of the central bank and its command in order to meet the targets assigned to it. The empirical evidence shows not only that greater independence is associated with lower inflation, but also that the central bank’s rights not to finance the government and to set interest rates independently increase its effectiveness. The role of inflation targeting and the distinction between price level and inflation targeting also are analyzed.

Parental Leave Policies in Europe and North America
Christopher J. Ruhm and Jackqueline L. Teague
NBER Working Paper No. 5065
March 1995
JEL Nos. I18, J38
Labor Studies

Despite widespread international implementation, there is limited information currently available on the economic impact of mandated family leave policies. This paper increases our understanding of the nature and effects of parental leave entitlements in several ways. First, we provide a brief history of family leave legislation in Europe and North America, and summarize arguments relating to the efficiency and incidence of mandated leave. Second, we have constructed a longitudinal dataset detailing durations of job-protected leave in 17 countries, during 1960–89, and we use this information to examine recent trends in the regulations. The data indicate that family leave durations grew rapidly during the 1970s, with more modest increases since that time. Third, we provide an exploratory investigation of the relationship between mandated leave policies and macroeconomic outcomes. The econometric estimates provide little support for the view that moderate periods of parental leave reduce economic efficiency, but rather hint at a modest beneficial impact, particularly when considering paid time off work.

The Effect of Medicaid Abortion Funding Restrictions on Abortions, Pregnancies, and Births
Phillip B. Levine, Amy B. Trainor, and David J. Zimmerman
NBER Working Paper No. 5066
March 1995
Labor Studies, Health Economics

We consider whether restrictions on state Medicaid abortion funding affect the likelihood of getting pregnant, having an abortion, and bearing a child. Both aggregate, state-level data and microdata from the National Longitudinal Survey of Youth are used in the empirical work. Changes in laws resulting from Supreme Court decisions create a natural experiment that we use to examine fertility choices. We find that restrictions on Medicaid funding are associated with a reduction in the number of both abortions and pregnancies, resulting in either no change or a reduction in births.
Production Functions: The Search for Identification
Zvi Griliches and Jacques Mairesse
NBER Working Paper No. 5067
March 1995
JEL Nos. B23, C33, D24
Productivity

We discuss some aspects of the econometric estimation of production functions, focusing primarily on the issue of simultaneity, and reviewing the stream of criticisms of Douglas's work and the response to it. In particular, we look at the work that uses panel data on microdata for plants or firms, and at some more recent multi-equation extensions of it. We find that researchers, in trying to evade the simultaneity problem, have shifted to the use of thinner and thinner slices of data, thereby exacerbating other problems and misspecifications. We describe the need for better data, especially on product prices at the individual observation level and on relevant cost and demand shifters, and for better behavioral theories that would encompass the large amount of heterogeneity observed at the micro level.

Universities as a Source of Commercial Technology: A Detailed Analysis of University Patenting, 1965–88
Rebecca Henderson, Adam B. Jaffe, and Manuel Trajtenberg
NBER Working Paper No. 5068
March 1995
JEL Nos. O31, O34, L31
Productivity

This paper explores changes in university patenting between 1965 and 1988. We show that university patents have increased 15-fold, while real research spending by universities almost tripled. The causes of this increase are unclear, but may include increased focus on commercially relevant technologies, increased industry funding of university research, a 1980 change in federal law that facilitated patenting of results from federally funded research, and the widespread creation of formal technology licensing offices at universities.

Up until approximately the mid-1980s, university patents were cited more, and by more technologically diverse patents, than a random sample of all patents. This difference is consistent with the notion that university inventions are more important and more basic than the average invention. The differences between the two groups disappeared, however, in the middle part of the 1980s, in part because of a decline in the citation rates for all universities, and in part because of an increasing share of patents going to smaller institutions, whose patents are cited less highly throughout this period. Moreover, at both large and small institutions there was a large increase in the fraction of university patents receiving no citations. Our results suggest that the rate of increase of important patents from universities is much less than the overall rate of increase of university patenting in the period covered by our data.

Debt Usage and Mortgage Choice: Sensitivity to Default Insurance Costs
Patric H. Hendershott and William C. LaFayette
NBER Working Paper No. 5069
March 1995
JEL Nos. G11, R20
Public Economics

Purchase of a house requires three interrelated household financial decisions: what level of debt to obtain; whether to select an adjustable- or fixed-rate mortgage (ARM or FRM); and whether to choose an FHA or a conventional loan. While some have analyzed the mortgage debt decision and the ARM/FRM choice, virtually no one has studied the FHA/conventional mortgage choice, or the interrelation among the decisions on mortgage debt and instrument. In our sample of 819 young home purchasers, debt and mortgage choice is driven by a need to both finesse the downpayment and payment-constraint ratios and to lower the costs of mortgage insurance.

Wealth Accumulation and Housing Choices of Young Households: An Exploratory Investigation
Donald R. Haurin, Patric H. Hendershott, and Susan M. Wachter
NBER Working Paper No. 5070
March 1995
JEL Nos. D91, R20
Public Economics

This paper describes the wealth accumulation of American youth, and relates this to their eventual choices of housing. We develop a dataset that links wealth profiles of youth with constant-quality house prices and tenure choice. We compile a panel dataset for individuals aged 20–33 in 1985 through 1990. We construct wealth profiles for each household over the six-year period, and indicate how wealth varies with labor supply, marriage, fertility, gender, education, race/ethnicity, and tenure choice. We find that renters' wealth accumulates rapidly in the year before and first year of homeownership. This increase in wealth is related to marriage, increased labor supply by married women, and gifts/inheritances.
Of particular interest, we find an inverse U-shaped relationship between the local real price of housing and the wealth of middle- and upper-income renters and the labor supply of married women. Also, youth in localities with high housing costs tend to live in groups at a greater rate than those in low-cost areas.

Selling Price and Selling Time: The Impact of Seller Motivation
Michel Glower, Donald R. Haurin, and Patric H. Hendershott
NBER Working Paper No. 5071
March 1995
JEL Nos. R21, D83
Public Economics

This study considers the role of seller motivation in determining home sales prices and selling times. We find that sale prices are related directly to the estimated value of the property and to the amount of overpricing, which is related directly to the seller's level of motivation. Further, a seller who has a planned date to move will overprice less (that is, set lower list prices relative to market value) and sell more quickly than a seller with no definite move date. A seller who is willing to move later will overprice more and sell more slowly than one who wants to move sooner.

The Effects of School and Family Characteristics on the Return to Education
Joseph G. Altonji and Thomas A. Dunn
NBER Working Paper No. 5072
March 1995
JEL Nos. J20, J24, J30
Labor Studies

We measure the effects of parental education on the education profile of wages, using sibling pairs from the Panel Study of Income Dynamics and the National Longitudinal Surveys of Labor Market Experience of Young Men and Young Women. We also use the variance in school characteristics across siblings to estimate the effects of school inputs on wages, holding family background constant. The evidence is mixed on whether parental education raises the return to education. We find that teacher's salary, expenditures per pupil, and a composite index of school quality measures have a substantial positive effect on the wages of high school graduates, though.

Are Apparent Productive Spillovers a Figment of Specification Error?
Susanto Basu and John G. Fernald
NBER Working Paper No. 5073
March 1995
JEL Nos. C43, D24, E32
Economic Fluctuations

Using data on gross output for two-digit manufacturing industries, we find that an increase in the output of one manufacturing sector has little or no significant effect on the productivity of other sectors. Using value-added data, however, we confirm the results of previous studies that find that output spillovers are large. We then explain these differences by showing that with imperfect competition, the use of value-added data leads to a spurious finding of large external effects.

Endogenous Mortgage Choice, Borrowing Constraints, and the Tenure Decision
William C. LaFayette, Donald R. Haurin, and Patric H. Hendershott
NBER Working Paper No. 5074

March 1995
JEL Nos. R20, G11
Public Economics

Earlier research has shown that lender income and wealth-constraint ratios discourage homeownership. This empirical research was based on home purchasers using an 80 percent loan-to-value (LTV) fixed-rate conventional loan. Under the same assumption, we find that the constraints lowered the ownership rate of our 1,919 young home purchasers by about 20 percentage points. However, households are not restricted to putting 20 percent down and choosing a fixed-rate loan. When we allow households to select the optimal LTV and mortgage type (adjustable- or fixed-rate, with FHA or conventional insurance), the percentage of our sample that is credit constrained declines from 71 to 49. Moreover, the measured impact on the homeownership rate of the constraints falls to only 4 percentage points. Further, FHA loans are estimated to increase homeownership by only 0.1 to 0.2 percentage points.

Two Fallacies Concerning Central Bank Independence
Bennett T. McCallum
NBER Working Paper No. 5075
March 1995
JEL Nos. E58, E31
Economic Fluctuations, Monetary Economics

This paper takes issue with two basic conclusions prevalent in the literature on central bank behavior. First, the paper argues that it is inappropriate to presume that central banks will, in the absence of any precommitment technology, necessarily behave in a "discretionary" fashion that implies an inflationary bias. Since there is no functional
connection between average rates of money creation (or inflation) and policy responsiveness to cyclical disturbances, it is entirely feasible for the bias to be avoided. In other words, there is no necessary trade-off between "flexibility and commitment."

Second, to the extent that the absence of any absolute precommitment technology is nevertheless a problem, it will apply to a consolidated central-bank-plus-government entity as well as to the central bank alone. Thus contracts between governments and central banks do not overcome the motivation for dynamic inconsistency; they merely relocate it.

The Growing Importance of Cognitive Skills in Wage Determination
Richard J. Murnane, John B. Willett, and Frank Levy
NBER Working Paper No. 5076
March 1995
JEL No. J3
Labor Studies

Using data from two longitudinal surveys of American high school seniors, we show that basic cognitive skills had a larger impact on wages for 24-year-old men and women in 1986 than in 1978. For women, the increase in the return to cognitive skills between 1978 and 1986 accounts for all of the increase in the wage premium associated with post-secondary education. We also show that high school seniors' mastery of basic cognitive skills had a much smaller impact on wages two years after graduation than on wages six years after graduation.

Product Quality and Worker Quality
John M. Abowd, Francis Kramarz, and Antoine Moreau
NBER Working Paper No. 5077
April 1995
JEL Nos. J30, L15
Labor Studies

We study the relationship between product quality and worker quality using an economic model that, under certain conditions, provides a direct link between product price, product quality, and workforce quality. Our measures of product quality are the evolution in the detailed product price relative to its product group, and the level of the product price relative to this group. Our measures of worker quality are the firm's average person effect, and the personal characteristics effect from individual wage rates. Using detailed firm-level data from the French Producer Price Index surveys, we find a very weak, generally positive, relationship between worker quality and product quality.

Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate
Karl E. Case, Robert J. Shiller, and Allan N. Weiss
NBER Working Paper No. 5078
April 1995
JEL No. G21
Asset Pricing

Using U.S. data on foreclosures by state from 1975–93, we show that periods of high default rates on home mortgages tend to follow real estate price declines, or interruptions in real estate price increases. When we model the relationship between price decline and foreclosure rates, we find that holders of residential mortgage portfolios could hedge some of the risk of default by taking positions in futures or options markets for residential real estate prices, if such markets were established.

Benefits of Control, Managerial Ownership, and the Stock Returns of Acquiring Firms
R. Glenn Hubbard and Darius Palia
NBER Working Paper No. 5079
April 1995
JEL No. G3
Corporate Finance

We examine the effect of the benefits to managers of corporate control on the relationship between managerial ownership and the stock returns of acquiring firms in corporate control transactions. At low levels of managerial ownership, the agency costs of equity (such as consumption of perquisites), reduce the returns earned by acquirers. As the managerial stake in the acquiring firm increases, the interests of managers are aligned more closely with those of shareholders, reducing the acquisition premium. At sufficiently high levels of managerial ownership, managers value a reduction in the risk of their nondiversified financial portfolio. However, managers enjoy nonassignable private benefits of control at high levels of ownership that they are not willing to lose by selling their ownership stake in the financial markets. These benefits of control increase with the managerial ownership stake, and can lead to managers "overpaying" even when they own a substantial fraction of the firm. Examining mergers that occurred from 1985 to 1991, we find a nonmonotonic relationship between the stock returns earned by acquirers and their level of man-
agerial ownership. Further, we find that acquiring firms with high levels of managerial ownership tend to diversify more than acquiring firms with low levels of managerial ownership.

An Empirical Examination of the Fisher Effect in Australia
Frederic S. Mishkin and John Simon
NBER Working Paper No. 5080
April 1995
JEL Nos. E4, G0
Economic Fluctuations, Monetary Economics

This paper analyzes the Fisher effect in Australia. Initial testing indicates that both interest rates and inflation contain unit roots. Furthermore, there are indications that the variables have nonstandard error processes. To overcome problems associated with this, and to derive the correct small sample distributions of test statistics, we use Monte Carlo simulations. These tests indicate that while a long-run Fisher effect seems to exist, there is no evidence of a short-run Fisher effect. This suggests that, while short-run changes in interest rates reflect changes in monetary policy, longer-run levels indicate inflationary expectations. Thus, the longer-run level of interest rates should not be used to characterize the stance of monetary policy.

Is There a Trade-Off Between Unemployment and Productivity Growth?
Robert J. Gordon
NBER Working Paper No. 5081
April 1995
JEL Nos. D24, E24
Economic Fluctuations, International Finance and Macroeconomics, Labor Studies, Productivity

This paper shows how misleading is the facile contrast of Europe—following a path of high productivity growth, high unemployment, and relatively greater income equality—to the United States, pursuing the opposite path. While structural shocks initially may create a positive trade-off between productivity and unemployment, they also set in motion a dynamic path of adjustment involving capital accumulation or decumulation that in principle can eliminate the trade-off.

The main theoretical contributions of this paper are to show how a productivity—unemployment trade-off might emerge, and how it might disappear subsequently as this dynamic adjustment path is set in motion. The empirical work develops a new database for levels and growth rates of output per hour, capital per hour, and multifactor productivity in the G-7 nations, both for the aggregate economy and for nine subsectors. Regression estimates decompose observed differences in productivity growth across sectors. I find that much of the productivity growth advantage of the four large European countries over the United States can be explained by convergence and by more rapid capital accumulation. The only significant effect of higher unemployment is to cause capital accumulation to decelerate, thus reducing the growth rate of output per hour relative to multifactor productivity.

Does Public Insurance Crowd Out Private Insurance?
David M. Cutler and Jonathan Gruber
NBER Working Paper No. 5082
April 1995
JEL No. H42
Health Care, Health Economics, Public Economics

One popular option for health care reform in the United States is to make particular groups, such as children, eligible for public health insurance coverage. A key question in assessing the cost of this option is the extent to which public eligibility will crowd out the private insurance coverage of these groups. We estimate the extent of crowding out arising from the dramatic expansions of the Medicaid program during 1987–92. Over this time period, Medicaid eligibility for children increased by 50 percent and eligibility for pregnant women doubled. We estimate that between 50 percent and 75 percent of the increase in Medicaid coverage was associated with a reduction in private insurance coverage. This occurred largely because employees took up employer-based insurance less frequently, although employers may have encouraged them to do so by contributing less for insurance. There is some evidence that workers dropped coverage for their family and switched into individual policies.

Credit Cycles
Nobuhiro Kiyotaki and John Moore
NBER Working Paper No. 5083
April 1995
JEL Nos. E32, E4
Economic Fluctuations

This paper is a theoretical study of how credit constraints interact with aggregate economic activity over the business cycle. We construct a model of a dynamic economy in which lenders cannot force borrowers to repay their debts unless the debts are secured. In such an economy, durable assets such as land, buildings, and machinery play a dual role: they are not only factors of production, but they also serve as collateral for loans. Bor-
rowers' credit limits are affected by the prices of the collateralized assets. At the same time, these prices are affected by the size of the credit limits. The dynamic interaction between credit limits and asset prices turns out to be a powerful transmission mechanism by which the effects of shocks persist, amplify, and spill over to other sectors. We show that small, temporary shocks to technology or income distribution can generate large, persistent fluctuations in output and asset prices.

**Free Trade Agreements Versus Customs Unions**

Anne O. Krueger

NBER Working Paper No. 5084

April 1995

International Trade and Investment, International Finance and Macroeconomics

Until NAFTA, analyses of preferential trading arrangements began by assuming a customs union with a common external tariff. The differences between customs unions and free trade agreements (FTAs) have not been analyzed much. This paper points to some of the differences between FTAs and customs unions, and shows that a customs union is always Pareto-superior on welfare grounds to an FTA. Moreover, the political economy of FTAs will lead to more opposition to further multilateral trade liberalization than customs union will.

**Supply-Side Economics in a Global Economy**

Enrique G. Mendoza and Linda L. Tesar

NBER Working Paper No. 5086

April 1995

JEL Nos. E62, F41

International Finance and Macroeconomics, Public Economics

Recent quantitative studies predict large welfare gains from reducing tax distortions in a closed economy, despite the costly dynamics of transition to more efficient tax systems. This paper examines transitional dynamics and the gains of tax reforms for countries in a global economy. In a global economy, tax reforms cause cross-country externalities through capital flows in response to consumption-smoothing and debt-serving effects. Taxes on world payments affect the distribution of welfare gains. Within the class of tax rates that do not vary over time, the gains of replacing income taxes with consumption taxes are large. In the absence of taxes on foreign assets, the monopoly distortion separating cooperative and noncooperative equilibriums is negligible. Our analysis starts from a benchmark reflecting current G-7 fiscal policies, and considers the effects of tax reforms on real exchange rates and interest differentials.

**Generational Accounts, Aggregate Saving, and Intergenerational Distribution**

Willem H. Buiter

NBER Working Paper No. 5087

April 1995

JEL Nos. E62, E44, E21, H62

Public Economics

Are generational accounts informative about the effect of the budget on the intergenerational distribution of resources and (when augmented with generation-specific propensities to consume out of lifetime resources) on aggregate consumption and saving? This paper makes three points: First, the usefulness of generational accounts lives or dies with the strict life-cycle model of household consumption. Voluntary intergenerational gifts or liquidity constraints therefore may affect adversely or even destroy their informativeness. Second, even when the life-cycle model holds, generational accounts only measure the effect of the budget on the lifetime consumption of private goods and services. They ignore the intergenerational (re)distribution associated with the government's provision of public
goods and services. Third, generational accounting ignores the effect of the budget on before-tax and before-transfer quantities and prices, including before-tax and -transfer distribution of lifetime resources across generations and intertemporal relative prices. That is, it does not handle incidence or general equilibrium repercussions very well. Although useful, generational accounts therefore should carry the label "handle with great care."

We attribute the difference between the two periods to the merger movement in Canada after 1900. This allowed the Canadian banking system to evolve from one with incomplete regional diversification, and hence subject to a significant risk of an occasional failure by a large bank, to one characterized by national diversification and greater stability. The greater stability in turn allowed the financial structure of the banking system to evolve in a more efficient direction.

Historical Factors in Long-Run Growth

A Comparison of the Stability and Efficiency of the Canadian and American Banking Systems, 1870–1925
Michael D. Bordo, Angela Redish, and Hugh Rockoff
NBER Historical Paper No. 67
January 1995
JEL Nos. N21, N22
Monetary Economics

We compare the performance, in terms of stability and efficiency, of the U.S. and Canadian banking systems from 1870–1925. In an earlier study, we found that between 1920 and 1980 the Canadian banking system, based on nationwide branch banking, dominated the U.S. system, based on unit banking, on both criteria. In this study, we find that there is little significant difference between the two systems in the earlier 50 years.

Technical Papers

Jackknife Instrumental Variables Estimation
Joshua D. Angrist, Guido W. Imbens, and Alan B. Krueger
NBER Technical Paper No. 172
February 1995
Labor Studies

Two-stage-least-squares (2SLS) estimates are biased toward ordinary-least-squares (OLS) estimates. This bias grows with the degree of overidentification, and can generate highly misleading results. In this paper, we propose two simple alternatives to 2SLS and limited-information-maximum-likelihood (LIML) estimators for models with more instruments than endogenous regressors. These estimators can be interpreted as instrumental variables procedures using an instrument that is independent of disturbances, even in finite samples. Independence is achieved by using a "leave-one-out" jackknife-type fitted value in place of the usual first-stage equation. The new estimators are first-order equivalent to 2SLS but with finite-sample properties superior to those of 2SLS and similar to LIML when there are many instruments. Moreover, the jackknife estimators appear to be less sensitive than LIML to deviations from the linear reduced form used in classical simultaneous equations models.

Modeling Volatility Dynamics
Francis X. Diebold and Jose A. Lopez
NBER Technical Paper No. 173
February 1995
JEL No. C1
Asset Pricing, Economic Fluctuations

Recently there has been a great deal of interest in modeling fluctuations in volatility. ARCH models, among others, provide parsimonious approximations to the dynamics of volatility. In this paper, we discuss certain aspects of conditional volatility modeling that are particularly relevant in macroeconomics and finance. First, we sketch the rudiments of a rather general univariate time-series model, allowing for dynamics in both the conditional mean and the variance. Then, we discuss both the economic and the statistical motivation for the models, characterize their properties, and discuss issues related to estimation and testing. Finally, we discuss a variety of applications and extensions of the basic models.