# Literature Report

张晨峰,华东理工大学商学院

#### Abstract

#### **Industrial Policy and Competition**

 American Economic Journal: Macroeconomics---2015---Philippe Aghion, Jing Cai, Mathias Dewatripont, Luosha Du, Ann Harrison, Patrick Legros

Using a comprehensive dataset of all medium and large enterprises in China between 1998 and 2007, we show that industrial policies allocated to competitive sectors or that foster competition in a sector increase productivity growth. We measure competition using the Lerner Index and include as industrial policies subsidies tax holidays, loans, and tariffs. Measures to foster competition include policies that are more dispersed across firms in a sector or measures that encourage younger and more productive enterprises. (JEL L11, L25, L52, O14, O25, O47, P31)

# Rounding the Corners of the Policy Trilemma: Sources of Monetary Policy Autonomy

 American Economic Journal: Macroeconomics---2015---Michael Klein, Jay Shambaugh

A central result in international macroeconomics is that a government cannot simultaneously opt for open financial markets, fixed exchange rates, and monetary autonomy; rather, it is constrained to choosing no more than two of these three. This paper considers whether partial capital controls and limited exchange rate flexibility allow for full monetary policy autonomy. We find partial capital controls do not generally allow for greater monetary control than with open capital accounts, unless they are quite extensive, but a moderate amount of exchange rate flexibility does allow for some degree of monetary autonomy, especially in emerging and developing economies. (JEL E52, F32, F33)

# Asset Pricing with Concentrated Ownership of Capital and Distribution Shocks

 American Economic Journal: Macroeconomics---2015---Kevin Lansing

This paper develops a production-based asset pricing model with two types of agents and concentrated ownership of physical capital. A temporary but persistent "distribution shock" causes the income share of capital owners to fluctuate in a procyclical manner, consistent with US data. The concentrated ownership model significantly magnifies the equity risk premium relative to a representative-agent model because the capital owners' consumption is more-strongly linked to volatile dividends from equity. With a steady-state risk aversion coefficient around 4, the model delivers an unleveled equity premium of 3.9 percent relative to short-term bonds and a premium of 1.2 percent relative

to long-term bonds. (JEL D31, E13, E25, E32, E44, Happiness and the Persistence of Income G12)

#### Sectoral Technology and Structural **Transformation**

• American Economic Journal: Macroeconomics---2015---Berthold Herrendorf, Christopher Herrington, Akos Valentinyi

We assess how the properties of technology affect structural transformation, i.e., the reallocation of production factors across the broad sectors of agriculture, manufacturing, and services. To this end, we estimate sectoral constant elasticity of substitution (CES) and Cobb-Douglas production functions on postwar US data. We find that differences in technical progress across the three sectors are the dominant force behind structural transformation whereas other differences across sectoral technology are of second order importance. Our findings imply that Cobb-Douglas sectoral production functions that differ only in technical progress capture the main technological forces behind the postwar US structural transformation. (JEL E16, E25, O33, O47)

#### The Few Leading the Many: Foreign Affiliates and Business Cycle Comovement

• American Economic Journal: Macroeconomics---2015---Jörn Kleinert, Julien Martin, Farid Toubal

This paper argues that the correlation of business cycles across countries is largely due to linkages between multinational firms and their foreign affiliates. There are very few foreign affiliates in France, but they contribute considerably to aggregate economic activities. We exploit the heterogeneity in the presence and origin of foreign affiliates across French regions to identify their impact on comovement. We find a positive impact of foreign affiliates' presence on the comovement of business cycles between their regions of location and their countries of origin. This effect is not primarily driven by foreign affiliates' trade with their countries of origin. (JEL E32, F14, F23, F44)

## **Shocks**

• American Economic Journal: Macroeconomics---2015---Christian Bayer, Falko Juessen

We reassess the empirical effects of income and employment on self-reported well-being. Our analysis makes use of a two-step estimation procedure that allows us to apply instrumental variable regressions with ordinal observable data. As suggested by the theory of incomplete markets, we differentiate between the effects of persistent and transitory income shocks. In line with this theory, we find that persistent shocks have a significant impact on happiness while transitory shocks do not. This also has consequences for inference about the happiness effect of employment. We find that employment per se is associated with a nonsignificant decline in happiness. (JEL D12, D52, I31, J22)

### How Much of South Korea's Growth Miracle Can Be Explained by Trade Policy?

• American Economic Journal: Macroeconomics---2015---Michelle Connolly, Kei-Mu Yi

This paper assesses the importance of trade policy reforms in South Korea, as well as the General Agreement on Tariffs and Trade (GATT) tariff reductions, in explaining Korea's growth miracle. We develop a model of neoclassical growth and trade in which lower tariffs lead to increased gross domestic product (GDP) per worker via comparative advantage and specialization, and capital accumulation. We calibrate the model and simulate the tariff reductions that occurred between early 1962 and 1989. The model can explain 17 percent of South Korea's catch-up to the G7 countries in value-added per worker in the manufacturing sector. These gains, as well as most of the welfare gains, are driven by two key transmission channels: multistage production and imported investment goods. (JEL F13, F43, L60, O47)

# **Labor Market Heterogeneity and the Aggregate Matching Function**

 American Economic Journal: Macroeconomics---2015---Régis Barnichon, Andrew Figura

We estimate an aggregate matching function and find that the regression residual, which captures movements in matching efficiency, displays procyclical fluctuations and a dramatic decline after 2007. Using a matching function framework that explicitly takes into account worker heterogeneity as well as market segmentation, we show that matching efficiency movements can be the result of variations in the degree of heterogeneity in the labor market. Matching efficiency declines substantially when, as in the Great Recession, the average characteristics of the unemployed deteriorate substantially, or when dispersion in labor market conditions—the extent to which some labor markets fare worse than others—increases markedly. (JEL E24, E32, J41, J42)

# Aggregate Implications of a Credit Crunch: The Importance of Heterogeneity

• American Economic Journal: Macroeconomics---2015---Francisco J. Buera, Benjamin Moll

We take an off-the-shelf model with financial frictions and heterogeneity, and study the mapping from a credit crunch, modeled as a shock to collateral constraints, to simple aggregate wedges. We study three variants of this model that only differ in the form of underlying heterogeneity. We find that in all three model variants a credit crunch shows up as a different wedge: efficiency, investment, and labor wedges. Furthermore, all three model variants have an undistorted Euler equation for the aggregate of firm owners. These results highlight the limitations of using representative agent models to identify sources of business cycle fluctuations. (JEL E22, E23, E32, E43, E44)

#### **Elasticity Optimism**

• American Economic Journal: Macroeconomics---2015---Jean Imbs,Isabelle Mejean

On average, estimates of trade elasticities are smaller in aggregate data than at sector level. This is an artifact of aggregation. Estimations performed on aggregate data constrain sector elasticities to homogeneity, which creates a heterogeneity bias. The paper shows such a bias exists in two prominent approaches used to estimate elasticities, which has meaningful consequences for the calibration of the trade elasticity in one-sector, aggregative models. With elasticities calibrated to aggregate data, macroeconomic models can have predictions at odds with the implications of their multi-sector counterparts. They do not when elasticities are calibrated using a weighted average of sector elasticities. (JEL C51, F13, F14, F41, O19)

#### Offshoring and Directed Technical Change

 American Economic Journal: Macroeconomics---2015---Daron Acemoglu, Gino Gancia, Fabrizio Zilibotti

We study the implications of offshoring on innovation, technology, and wage inequality in a Ricardian model with directed technical change. Profit maximization determines both the extent of offshoring and the direction of technological progress. A fall in the offshoring cost induces technical change with an ambiguous factor bias. When the initial cost of offshoring is high, an increase in offshoring opportunities causes a fall in the real wages of unskilled workers in industrial countries, skill-biased technical change and rising skill premia. When the offshoring cost is sufficiently low, instead, offshoring induces technical change biased in favor of the unskilled workers. (JEL J24, J31, L24, O33)

# A Behavioral Model of the Popularity and Regulation of Demandable Liabilities

 American Economic Journal: Macroeconomics---2015---Julio Rotemberg

Overoptimism regarding one's ability to arrive early in a queue is shown to rationalize deposit contracts in which people can withdraw their funds on demand even if consumption takes place later. Capitalized institutions serving overoptimistic depositors emerge in equilibrium even if depositors and bank owners have identical preferences and investment opportunities. Consistent with the evidence, runs can lead people to move their deposits from one intermediary to another. Regulatory policies, including deposit insurance, minimum capital requirements and restrictions on the assets held by depository institutions can increase the ex ante welfare of depositors. (JEL G21, G28, G32, L51)

#### Interest Rates, Leverage, and Business Cycles in Emerging Economies: The Role of Financial Frictions

 American Economic Journal: Macroeconomics---2015---Andrés Fernández Martin, Adam Gulan

Countercyclical country interest rates have been shown to be an important characteristic of business cycles in emerging markets. In this paper we provide a microfounded rationale for this pattern by linking interest rate spreads to the dynamics of corporate leverage. For this purpose we embed a financial accelerator into a business cycle model of a small open economy and estimate it on a novel panel dataset for emerging economies that merges macroeconomic and financial data. The model accounts well for the empirically observed countercyclicality of interest rates and leverage, as well as for other stylized facts. (JEL E13, E32, E43, E44, F41, O11)

### The Economic and Demographic Transition, Mortality, and Comparative Development

 American Economic Journal: Macroeconomics---2015---Matteo Cervellati, Uwe Sunde

This paper develops a quantifiable unified growth theory to investigate cross-country comparative development. The calibrated model can replicate the historical development dynamics in forerunner countries like Sweden and the patterns in cross-country panel data. The findings suggest a crucial role of the timing of the onset of the economic and demographic transition for explaining differences in development. Country-specific differences in extrinsic mortality are a candidate explanation for differences in the timing of the take-off across countries and the resulting worldwide comparative development patterns, including the bimodal distribution of the endogenous variables across countries. (JEL I12, J11, J13, N33, N34, O41, O47)

# The Missing Food Problem: Trade, Agriculture, and International Productivity Differences

 American Economic Journal: Macroeconomics---2015---Trevor Tombe

Agriculture in poor countries has low productivity, high employment, and negligible trade flows relative to other sectors. These facts motivate a multisector, openeconomy view of international productivity differences. With a quantitative multicountry model featuring non-homothetic preferences, multiple interrelated sectors, distorted labor markets, and costly trade, I find: trade amplifies the negative effect of labor market distortions; trade costs—large for poor countries, especially in agriculture—significantly contribute to international productivity differences; and explicitly modeling agriculture reveals additional channels through which poor countries may gain from trade. (JEL F41, J24, J43, O13, O19, Q11, Q17)

#### Structural Change, Growth, and Volatility

 American Economic Journal: Macroeconomics---2015---Alessio Moro

I construct a two-sector general equilibrium model of structural change to study the impact of sectoral composition of gross domestic product (GDP) on cross-country differences in GDP growth and volatility. For an empirically relevant parametrization of sectoral production functions, an increase in the share of services in GDP reduces both aggregate total factor productivity (TFP) growth and volatility, thus reducing GDP growth and volatility. When the model is calibrated to the US manufacturing and service sector, the rise of the service sector occurring as income grows can account for a large fraction of the differences in per capita GDP growth and volatility between high-income

economies and upper middle income economies. (JEL Welfare Cost of Business Cycles with E23, E25, E32, L60, L80)

#### A New History of Banking Panics in the United States, 1825-1929: Construction and Implications

• American Economic Journal: Macroeconomics---2015---Andrew J. Jalil

There are two major problems in identifying the output effects of banking panics of the pre-Great Depression era. First, it is not clear when panics occurred because prior panic series differ in their identification of panic episodes. Second, establishing the direction of causality is tricky. This paper addresses these two problems (i) by deriving a new panic series for the 1825-1929 period and (ii) by studying the output effects of major banking panics via vector autoregression (VAR) and narrative-based methods. The new series has important implications for the history of financial panics in the United States. (JEL E32, E44, G21, N11, N12, N21, E32) N22)

#### **Sharing High Growth across Generations: Pensions and Demographic Transition in China**

• American Economic Journal: Macroeconomics---2015---Zheng Song, Kjetil Storesletten, Yikai Wang, Fabrizio Zilibotti

We analyze intergenerational redistribution in emerging economies with the aid of an overlapping generations model with endogenous labor supply. Growth is initially high but declines over time. A version of the model calibrated to China is used to analyze the welfare effects of alternative pension reforms. Although a reform of the current system is necessary to achieve financial sustainability, delaying its implementation implies large welfare gains for the (poorer) current generations, imposing only small costs on (richer) future generations. In contrast, a fully funded reform harms current generations, with small gains to future generations. (JEL E13, H55, J11, O11, O15, P24, P36)

### Idiosyncratic Consumption Risk and a **Preference for Robustness**

• American Economic Journal: Macroeconomics---2015---Martin Ellison, Thomas Sargent

The welfare cost of random consumption fluctuations is known from De Santis (2007) to be increasing in the level of uninsured idiosyncratic consumption risk. It is known from Barillas, Hansen, and Sargent (2009) to increase if agents care about robustness to model misspecification. We calculate the cost of business cycles in an economy where agents face idiosyncratic consumption risk and fear model misspecification, finding that idiosyncratic risk has a greater impact on the cost of business cycles if agents already fear model misspecification. Correspondingly, endowing agents with fears about misspecification is more costly when there is already idiosyncratic risk. (JEL D81, E13, E21,

#### **Demographic Patterns and Household Saving in** China

 American Economic Journal: Macroeconomics----2015---Chadwick Curtis, Steven Lugauer, Nelson Mark

This paper studies how demographic variation affects the aggregate household saving rate. We focus on China because it is experiencing an historic demographic transition and has had a massive increase in household saving. We conduct a quantitative investigation using a structural overlapping generations model that incorporates parental care through support for dependent children and financial transfers to retirees. The saving decisions in the parameterized model mimic many of the features observed in the Chinese household saving rate time series from 1955 to 2009. Demographic change alone accounts for over half of the saving rate increase. (JEL D12, D91, E21, J11, O12, O16, P36)

### Consumption Volatility, Marketization, and Expenditure in an Emerging Market Economy

 American Economic Journal: Macroeconomics---2015---Daniel Hicks

In response to income fluctuations, households smooth consumption by substituting between market expenditure and time inputs. This paper provides evidence of this substitution in the context of food consumption over transitory and permanent income fluctuations in Mexico. Household time investments drive a wedge between consumption and expenditure, amplifying measured expenditure volatility. Volatility decompositions for Mexico and the United States suggest that the extent of bias in expenditure-based measures induced by changes in marketization is relatively larger in the Mexican setting. These findings imply that volatility comparisons between commodities or across countries are misleading when consumption measures ignore home production. (JEL D12, D91, E21, E32, O11, O12)

#### **Optimal Labor-Market Policy in Recessions**

 American Economic Journal: Macroeconomics---2015---Philip Jung, Keith Kuester

Within a search and matching model with risk-averse workers, endogenous hiring and separation, and unobservable search effort, we show how to decentralize the constrained-efficient allocation by a combination of a production tax and three labor-market policy instruments: vacancy subsidies, layoff taxes, and unemployment benefits. We derive analytical expressions for the optimal mix of these over the business cycle. Calibrating the model to the US economy under the assumption that wages are rigid, we find that hiring subsidies and layoff taxes should rise considerably and persistently in recessions. The optimal variation in unemployment benefits, in contrast, is quantitatively small and short-lived. (JEL E24, E32, J24, J63, J64, J65)

#### **Understanding Markups in the Open Economy**

• American Economic Journal: Macroeconomics---2015---Beatriz de Blas, Katheryn N. Russ This paper presents a new model of Bertrand competition between heterogeneous firms in the open economy where the macroeconomic distribution of markups responds to the degree of trade openness and the underlying level of technology in each trading partner. The model's simple closed-form distributions for markups and pricing yield predictions that coincide with a number of stylized facts from the empirical literature on markups, pass-through, and trade openness which previously could be illustrated only through numerical simulations. (JEL D43, F12, F41, L13)

## **Measured Aggregate Gains from International Trade**

 American Economic Journal: Macroeconomics---2015---Ariel Burstein, Javier Cravino

We examine the implications of workhorse trade models for how aggregate productivity, real GDP and real consumption, as measured by statistical agencies, respond to changes in trade costs. In a range of models, changes in measured productivity are equal to the inverse of an export-share weighted average of changes in variable trade costs incurred domestically. Under certain conditions, despite the multiple biases in the CPI, measured real consumption captures the first-order effects of changes in variable trade costs on welfare. Through the lens of these results, we interpret some of the empirical work on measured gains from trade. (JEL E21, E23, F11, F43)

# Optimal Mirrleesean Taxation in a Ben-Porath Economy

 American Economic Journal: Macroeconomics---2015---Marek Kapicka

I characterize optimal taxes in a life-cycle economy where ability and human capital are unobservable. I show that unobservable human capital effectively makes preferences over labor nonseparable across age. I generalize the static optimal tax formulas to account for such nonseparabilities and show how they depend both on own-Frisch labor elasticities and cross-Frisch labor elasticities. I calibrate the economy to US data.

I find that the optimal marginal income taxes decrease with age, in contrast to both the US tax code and to a model with observable human capital. I demonstrate that the behavior of cross Frisch elasticities is essential in explaining the decline. (JEL D91, H21, H24, J24)

**Unemployment Insurance Fraud and Optimal Monitoring** 

 American Economic Journal: Macroeconomics---2015---David Fuller, B Ravikumar, Yuzhe Zhang

An important incentive problem for the design of unemployment insurance is the fraudulent collection of unemployment benefits by workers who are gainfully employed. We show how to efficiently use a combination of tax/subsidy and monitoring to prevent such fraud. The optimal policy monitors the unemployed at fixed intervals. Employment tax is nonmonotonic: it increases between verifications but decreases after a verification. Unemployment benefits are relatively flat between verifications but decrease sharply after a verification. Our quantitative analysis suggests that the optimal monitoring cost is 60 percent of the cost in the current US system. (JEL D82, H24, J64, J65)

# Conventional and Unconventional Monetary Policy with Endogenous Collateral Constraints

 American Economic Journal: Macroeconomics---2015---Aloisio Araujo,Susan Schommer,Michael Woodford

We consider the effects of central bank purchases of a risky asset as an additional dimension of policy along-side "conventional" interest rate policy in a general-equilibrium model of asset pricing with endogenous collateral constraints. The effects of asset purchases depend on the way that they affect collateral constraints. We show that under some circumstances, central bank purchases relax financial constraints, increase aggregate demand, and may even achieve a Pareto improvement; but in other cases, they tighten financial constraints, reduce aggregate demand, and lower welfare. The latter case is almost certainly the one that arises if central

bank purchases are sufficiently large. (JEL D51, E43, E44, E52, E58)

# Monetary Policy Surprises, Credit Costs, and Economic Activity

 American Economic Journal: Macroeconomics---2015---Mark Gertler, Peter Karadi

We provide evidence on the transmission of monetary policy shocks in a setting with both economic and financial variables. We first show that shocks identified using high frequency surprises around policy announcements as external instruments produce responses in output and inflation that are typical in monetary VAR analysis. We also find, however, that the resulting "modest" movements in short rates lead to "large" movements in credit costs, which are due mainly to the reaction of both term premia and credit spreads. Finally, we show that forward guidance is important to the overall strength of policy transmission. (JEL E31, E32, E43, E44, E52, G01)

#### Monetary Policy and Real Borrowing Costs at the Zero Lower Bound

 American Economic Journal: Macroeconomics---2015---Simon Gilchrist, David Lopez-Salido, Egon Zakrajsek

This paper compares the effects of conventional monetary policy on real borrowing costs with those of the unconventional measures employed after the target federal funds rate hit the zero lower bound (ZLB). For the ZLB period, we identify two policy surprises: changes in the two-year Treasury yield around policy announcements and changes in the ten-year Treasury yield that are orthogonal to those in the two-year yield. The efficacy of unconventional policy in lowering real borrowing costs is comparable to that of conventional policy, in that it implies a complete pass-through of policy-induced movements in Treasury yields to comparable-maturity private yields. (JEL E31, E43, E44, E52)

#### **Understanding the Great Recession**

 American Economic Journal: Macroeconomics---2015---Lawrence J. Christiano, Martin Eichenbaum, Mathias Trabandt

We argue that the vast bulk of movements in aggregate real economic activity during the Great Recession were due to financial frictions. We reach this conclusion by looking through the lens of an estimated New Keynesian model in which firms face moderate degrees of price rigidities, no nominal rigidities in wages, and a binding zero lower bound constraint on the nominal interest rate. Our model does a good job of accounting for the joint behavior of labor and goods markets, as well as inflation, during the Great Recession. According to the model the observed fall in total factor productivity and the rise in the cost of working capital played critical roles in accounting for the small drop in inflation that occurred during the Great Recession. (JEL E12, E23, E24, E31, E32, E52)

# Inflation in the Great Recession and New Keynesian Models

• American Economic Journal: Macroeconomics---2015---Marco Del Negro, Marc Giannoni, Frank Schorfheide

Several prominent economists have argued that existing DSGE models cannot properly account for the evolution of key macroeconomic variables during and following the recent Great Recession. We challenge this argument by showing that a standard DSGE model with financial frictions available prior to the recent crisis successfully predicts a sharp contraction in economic activity along with a protracted but relatively modest decline in inflation, following the rise in financial stress in 2008:IV. The model does so even though inflation remains very dependent on the evolution of economic activity and of monetary policy. (JEL E12, E31, E32, E37, E44, E52, G01)

# Is the Phillips Curve Alive and Well after All? Inflation Expectations and the Missing Disinflation

 American Economic Journal: Macroeconomics---2015---Olivier Coibion, Yuriy Gorodnichenko

We evaluate explanations for the absence of disinflation during the Great Recession and find popular explanations to be insufficient. We propose a new explanation for this puzzle within the context of a standard Phillips curve. If firms' inflation expectations track those of households, then the missing disinflation can be explained by the rise in their inflation expectations between 2009 and 2011. We present new econometric and survey evidence consistent with firms having similar expectations as households. The rise in household inflation expectations from 2009 to 2011 can be explained by the increase in oil prices over this time period. (JEL D84, E24, E32, E52, E58, Q35)

# The Effects of Monetary Policy on Stock Market Bubbles: Some Evidence

 American Economic Journal: Macroeconomics---2015---Jordi Galí, Luca Gambetti

We estimate the response of stock prices to monetary policy shocks using a time-varying coefficients VAR. Our evidence points to protracted episodes in which stock prices end up increasing persistently in response to an exogenous tightening of monetary policy. That response is at odds with the "conventional" view on the effects of monetary policy on bubbles, as well as with the predictions of bubbleless models. We also argue that it is unlikely that such evidence can be accounted for by an endogenous response of the equity premium to the monetary policy shock. (JEL E43, E44, E52, G12, G14)

# The Possible Unemployment Cost of Average Inflation below a Credible Target

• American Economic Journal: Macroeconomics---2015---Lars Svensson If inflation expectations become firmly anchored at the inflation target even when average inflation deviates from the target, the long-run Phillips curve becomes nonvertical. During 1997-2011, average inflation expectations in Sweden have been close to the inflation target of 2 percent, whereas average inflation has fallen short of the target by 0.6 percentage points. The estimates reported suggest that the slope of the long-run Phillips curve is about 0.75. Then the average unemployment rate has been about 0.8 percentage points higher than if average inflation had been on target. This is a large unemployment cost of undershooting the inflation target. (JEL D84, E24, E31, E52, E58)

### International Credit Flows and Pecuniary Externalities

 American Economic Journal: Macroeconomics---2015---Markus Brunnermeier, Yuliy Sannikov

This paper develops a dynamic two-country neoclassical stochastic growth model with incomplete markets. Short-term credit flows can be excessive and reverse suddenly. The equilibrium outcome is constrained inefficient due to pecuniary externalities. First, an undercapitalized country borrows too much since each firm does not internalize that an increase in production capacity undermines their output price, worsening their terms of trade. From an ex ante perspective each firm undermines the natural "terms of trade hedge". Second, sudden stops and fire sales lead to sharp price drops of illiquid capital. Capital controls or domestic macro-prudential measures that limit short-term borrowing can improve welfare. (JEL F32, F43, G15, O41)

# **Economic Shocks and Conflict: Evidence from Commodity Prices**

 American Economic Journal: Macroeconomics---2014---Samuel Bazzi, Christopher Blattman

Higher national incomes are correlated with political stability. Is this relationship causal? We test three theories linking income to conflict with new data on export price shocks. Price shocks have no effect on

new conflict, even large shocks in high-risk nations. Rising prices, however, weakly lead to shorter, less deadly wars. This evidence contradicts the theory that rising state revenues incentivize state capture, but supports the idea that rising revenues improve counterinsurgency capacity and reduce individual incentives to fight in existing conflicts. Conflict onset and continuation follow different processes. Ignoring this time dependence generates mistaken conclusions about income and instability.

## Trade in Intermediate Inputs and Business Cycle Comovement

 American Economic Journal: Macroeconomics---2014---Robert Johnson

Does input trade synchronize business cycles across countries? I incorporate input trade into a dynamic multisector model with many countries, calibrate the model to match bilateral input-output data, and estimate trade-comovement regressions in simulated data. With correlated productivity shocks, the model yields high trade-comovement correlations for goods, but near-zero correlations for services and thus low aggregate correlations. With uncorrelated shocks, input trade generates more comovement in gross output than real value added. Goods comovement is higher when (i) the aggregate trade elasticity is low, (ii) inputs are more substitutable than final goods, and (iii) inputs are substitutable for primary factors.

### Consumption, Income Changes, and Heterogeneity: Evidence from Two Fiscal Stimulus Programs

 American Economic Journal: Macroeconomics---2014---Kanishka Misra, Paolo Surico

Almost half of American families did not adjust their consumption following receipt of the 2001 or 2008 tax rebates. Another 20 percent, with low income and more likely to rent, spent a small but significant amount. Households with large spending propensity held high levels of mortgage debt. The heterogeneity is concentrated in a few nondurable categories and a handful

of "new vehicle" purchases. The cumulated predictions of the heterogeneous response model tend to be smaller and more accurate than their homogeneous response model counterparts, offering new insights on the evaluation of the two fiscal stimulus programs.

#### **Fiscal Policy and MPC Heterogeneity**

 American Economic Journal: Macroeconomics---2014---Tullio Jappelli, Luigi Pistaferri

We use responses to survey questions in the 2010 Italian Survey of Household Income and Wealth that ask consumers how much of an unexpected transitory income change they would consume. The marginal propensity to consume (MPC) is 48 percent on average. We also find substantial heterogeneity in the distribution, as households with low cash-on-hand exhibit a much higher MPC than affluent households, which is in agreement with models with precautionary savings, where income risk plays an important role. The results have important implications for predicting household responses to tax reforms and redistributive policies.

# Monetary Policy without Interest Rates: Evidence from France's Golden Age (1948 to 1973) Using a Narrative Approach

• American Economic Journal: Macroeconomics---2014---Eric Monnet

Central banking in France from 1948 to 1973 was a paradigmatic example of a policy that relied on quantities rather than interest rates. Standard SVAR analyses support the common view that monetary policy was ineffective during this period. However, this approach fails to identify the stance of monetary policy since it does not account for the specificity of quantitative controls on money and credit. An alternative identification strategy based on a narrative approach suggests that monetary policy shocks had strong and lasting effects in the conventional direction and accounted for nearly half of the variance in output and price levels.

# Government Spending Multipliers in Developing Countries: Evidence from Lending by Official Creditors

 American Economic Journal: Macroeconomics---2014---Aart Kraay

I use a novel loan-level dataset covering lending by official creditors to developing country governments to construct an instrument for government spending. Loans from official creditors typically finance multiyear public spending projects, with disbursements linked to the stages of project implementation. The identification strategy exploits the long lags between approval and eventual disbursement of these loans to isolate a predetermined component of public spending associated with past loan approval decisions taken before the realization of contemporaneous shocks. In a large sample of 102 developing countries over the period 1970-2010, the one-year spending multiplier is reasonably-precisely estimated to be around 0.4.

## Medium Term Business Cycles in Developing Countries

 American Economic Journal: Macroeconomics---2014---Diego Comin, Norman Loayza, Farooq Pasha, Luis Servén

We study the transmission of business cycle fluctuations for developed (N ) to developing economies (S ) with a two-country, asymmetric, DSGE model with endogenous development of new technologies in N, and sunk costs of exporting and transferring the production of the intermediate goods to S. Consistent with the data, the flow of technologies from N to S co-moves positively with output in N and S; shocks to N have a large effect on S; business cycles in N lead over medium term fluctuations in S; the cross-correlation of outputs is larger than consumption; and interest rates in S are countercyclical.

#### Welfare Reversals in a Monetary Union

 American Economic Journal: Macroeconomics---2014---Stéphane Auray, Aurélien Eyquem We show that welfare can be lower under complete financial markets than under autarky in a monetary union with home bias, sticky prices, and asymmetric shocks. Such a monetary union is a second- best environment in which the structure of financial markets affects risk-sharing but also shapes the dynamics of inflation rates and the welfare costs from nominal rigidities. Welfare reversals arise for a variety of empirically plausible degrees of price stickiness when the Marshall-Lerner condition is met. These results carry over a model with active fiscal policies, and hold within a medium-scale model, although to a weaker extent.

## The Political Economy of the Greek Debt Crisis: A Tale of Two Bailouts

 American Economic Journal: Macroeconomics---2014---Silvia Ardagna, Francesco Caselli

We review the events that led to the May 2010 and July 2011 bailout agreements. We interpret the bailouts as outcomes of political-economy equilibria. We argue that these equilibria were likely not on the Pareto frontier, and sketch political-economy arguments for why collective policymaking in the Euro area may lead to suboptimal outcomes.

### Persistence of Fortune: Accounting for Population Movements, There Was No Post-Columbian Reversal

 American Economic Journal: Macroeconomics---2014---Areendam Chanda, Justin Cook, Louis Putterman

Using data on place of origin of today's country populations and the indicators of level of development in 1500 used by Acemoglu, Johnson, and Robinson (2002), we confirm a reversal of fortune for colonized countries as territories, but find persistence of fortune for people and their descendants. Persistence results are at least as strong for three alternative measures of early development, for which reversal for territories, however, fails to hold. Additional exercises lend support to Glaeser et al.'s (2004) view that human capital is a more fundamental channel of influence of precolonial

conditions on modern development than is quality of institutions.

#### The Impact of Medical and Nursing Home Expenses on Savings

 American Economic Journal: Macroeconomics---2014---Karen Kopecky, Tatyana Koreshkova

We consider a life-cycle model with idiosyncratic risk in earnings, out-of-pocket medical and nursing home expenses, and survival. Partial insurance is available through welfare, Medicaid, and social security. Calibrating the model to the United States we show that savings for old-age, out-of-pocket expenses account for 13.5 per- cent of aggregate wealth, half of which is due to nursing home expenses; cross-sectional out-of-pocket nursing home risk accounts for 3 percent of aggregate wealth and substantially slows down wealth decumulation at older ages; and all newborns would benefit if social insurance for nursing home stays was made more generous.

# Public Communication and Information Acquisition

 American Economic Journal: Macroeconomics---2014---Ryan Chahrour

This paper models the tradeoff, perceived by central banks and other public actors, between providing the public with useful information and the risk of overwhelming it with excessive communication. An information authority chooses how many signals to provide regarding an aggregate state and agents respond by choosing how many signals to observe. When agents desire coordination, the number of signals they acquire may decrease in the number released. The optimal quantity of communication is positive but does not maximize agents' acquisition of information. In contrast to a model without information choice, the authority always prefers to provide more precise signals.

#### Growth and Capital Flows with Risky Entrepreneurship

 American Economic Journal: Macroeconomics---2014---Damiano Sandri

We show that the behavior of entrepreneurs facing incomplete financial markets and risky investment can explain why accelerations of productivity growth in developing countries tend to be associated with current account improvements. Under uninsurable investment risk, entrepreneurs have to largely rely on self-financing so that, when productivity growth rises, entrepreneurs increase saving to finance new investment. The key insight is that saving has to increase more than investment to also allow for the accumulation of precautionary assets that entrepreneurs hold for self-insurance against investment risk. Numerical simulations show that this net saving increase can generate a current account improvement in line with the empirical evidence.

# Competition as a Discovery Procedure: Schumpeter Meets Hayek in a Model of Innovation

 American Economic Journal: Macroeconomics---2014---Pedro Bento

I incorporate an insight of Friedrich Hayek—that competition allows a thousand flowers to bloom, and discovers the best among them—into a model of Schumpeterian innovation. Firms face uncertainty about the optimal direction of innovation, so more innovations implies a higher expected value of the "best" innovation. The model accounts for two seemingly contradictory relationships reported in recent empirical studies—a positive relationship between competition and industry-level productivity growth, and an inverted-U relationship between competition and firm-level innovation. Notwithstanding the positive relationship between competition and growth, I find antitrust policy reduces industry-level growth.

# The Global Welfare Impact of China: Trade Integration and Technological Change

 American Economic Journal: Macroeconomics---2014---Julian di Giovanni, Andrei Levchenko, Jing Zhang

This paper evaluates the global welfare impact of China's trade integration and technological change in a multi-country quantitative Ricardian-Heckscher-Ohlin model. We simulate two alternative growth scenarios: a "balanced" one in which China's productivity grows at the same rate in each sector, and an "unbalanced" one in which China's comparative disadvantage sectors catch up disproportionately faster to the world productivity frontier. Contrary to a well-known conjecture (Samuelson 2004), the large majority of countries experience significantly larger welfare gains when China's productivity growth is biased toward its comparative disadvantage sectors. This finding is driven by the inherently multilateral nature of world trade.

#### **Accounting for Crises**

• American Economic Journal: Macroeconomics---2014---Venky Nagar, Gwen Yu

We provide among the first empirical evidence, consistent with recent macro global game crisis models, that shows that the precision of public signals can coordinate crises. In these models, self-fulfilling crises independent of fundamentals can occur only when publicly disclosed signals of fundamentals have high precision; poor fundamentals are the sole driver of crises only in low precision settings. We exploit a key publicly disclosed signal of fundamentals, namely accounting data, for 68 currency and systemic banking crises in 17 countries. We find that precrisis accounting signals of fundamentals are significantly lower only in low-precision countries.

# "Fisher Dynamics" in US Household Debt, 1929-2011

 American Economic Journal: Macroeconomics---2014---J. W. Mason, Arjun Jayadev The evolution of debt-income ratios over time depends on income growth, inflation, and interest rates, independent of any changes in borrowing. We examine the effect of these "Fisher dynamics" on household debt-income ratios in the United States over the period 1929–2011. Adapting a standard decomposition of public debt to household sector debt, we show that these factors explain, in accounting terms, a large fraction of the changes in household debt-income ratios observed historically. More recently, debt defaults have also been important. Changes in household debt-income ratios over time cannot be straightforwardly interpreted as reflecting shifts in the supply and demand of household credit.

### Resolving Debt Overhang: Political Constraints in the Aftermath of Financial Crises

 American Economic Journal: Macroeconomics---2014---Atif Mian, Amir Sufi, Francesco Trebbi

Countries become more politically polarized and fractionalized following financial crises, reducing the likelihood of major financial reforms precisely when they might have especially large benefits. The evidence from a large sample of countries provides strong support for the hypotheses that following a financial crisis, voters become more ideologically extreme and ruling coalitions become weaker, independently of whether they were initially in power. The evidence that increased polarization and weaker governments reduce the chances of financial reform and that financial crises lead to legislative gridlock and anemic reform is less clear-cut. The US debt overhang resolution is discussed as an illustration.

# Free Trade Agreements and the Consolidation of Democracy

 American Economic Journal: Macroeconomics---2014---Xuepeng Liu, Emanuel Ornelas

We study the relationship between participation in free trade agreements (FTAs) and the sustainability of democracy. Our model shows that FTAs can critically reduce the incentive of authoritarian groups to seek

power by destroying protectionist rents, thus making democracies last longer. This gives governments in unstable democracies an extra motive to form FTAs. Hence, greater democratic instability induces governments to boost their FTA commitments. In a dataset with 116 countries over 1960-2007, we find robust support for these predictions. They help to rationalize the rapid simultaneous growth of regionalism and of worldwide democratization since the late 1980s.

#### Persistent Liquidity Effects and Long-Run Money Demand

American Economic Journal: Macroeconomics--- 2014---Fernando Alvarez, Francesco Lippi

We present a monetary model with segmented asset markets that implies a persistent fall in interest rates after a once and for all increase in liquidity. The gradual propagation mechanism produced by our model is novel in the literature. We provide an analytical characterization of this mechanism, showing that the magnitude of the liquidity effect on impact, and its persistence, depend on the ratio of two parameters: the long-run interest rate elasticity of money demand and the intertemporal substitution elasticity. The model simultaneously explains the short-run "instability" of money demand estimates as-well-as the stability of long-run interest-elastic money demand.

# Fertility and Wars: The Case of World War I in France

 American Economic Journal: Macroeconomics---2014---Guillaume Vandenbroucke

During World War I the birth rate in France fell by 50%. Why? I build a model of fertility choices where the war implies a positive probability that a wife remains alone, a partially-compensated loss of a husband's income, and a temporary decline in productivity followed by faster growth. I calibrate the model's key parameters using pre-war data. I find that it accounts for 91% of the decline of the birth rate. The main determinant of this result is the loss of expected income associated with the risk that a wife remains alone.

#### **How Frequent Are Small Price Changes?**

 American Economic Journal: Macroeconomics---2014---Martin Eichenbaum, Nir Jaimovich, Sergio Rebelo, Josephine Smith

Recent empirical work suggests that small price changes are relatively common. This evidence has been used to criticize classic menu-cost models. In this paper, we use scanner data from a national supermarket chain and micro data from the Consumer Price Index to reassess the importance of small price changes. We argue that the vast majority of these changes are due to measurement error. We conclude that the evidence on the prevalence of small price changes is much too weak to be used as a litmus test of nominal rigidity models.

# Missing Import Price Changes and Low Exchange Rate Pass-Through

 American Economic Journal: Macroeconomics---2014---Etienne Gagnon, Benjamin Mandel, Robert Vigfusson

A large body of empirical work has found that exchange rate movements have only modest effects on U.S. inflation. However, exchange rate pass-through may be underestimated because some price changes are missed when constructing price indexes. We investigate downward biases that arise when items exit or enter the U.S. import price index. Using Bureau of Labor Statistics microdata we find that, although potentially large in theory, the empirical biases are modest over typical forecast horizons. As such, the empirical evidence continues to support the conclusion that pass-through to U.S. import prices is low.

# The Effects of Global Shocks on Small Commodity-Exporting Economies: Lessons from Canada

 American Economic Journal: Macroeconomics---2014---Valery Charnavoki, Juan Dolado

We propose a structural dynamic factor model of a small commodity-exporting economy, using Canada as

a representative case study. Combining large panel data sets of the global and do- mestic economies, sign restrictions are used to identify relevant demand and supply shocks that explain volatility in real commodity prices. We quantify their dynamic e ffects on a wide variety of Canadian macro variables. We are able to reproduce all the main stylized features at business-cycle frequencies documented in the literature on this type of economies. These include a Dutch disease effect which has proven hard to find in empirical studies.

#### **Estimating Models with Dispersed Information**

 American Economic Journal: Macroeconomics---2014---Leonardo Melosi

We conduct likelihood evaluation of a DSGE model in which firms have imperfect common knowledge. Imperfect common knowledge is found to be more successful than price stickiness? la Calvo to account for the highly persistent effects of nominal shocks on output and inflation. Our likelihood analysis suggests that firms pay little attention to aggregate nominal conditions. This paper shows that such allocation of attention is plausible because it is optimal for firms with a reasonably small size of information frictions and a size of idiosyncratic uncertainty that is in line with the micro evidence on price changes.

# Credit Constraints and Self-Fulfilling Business Cycles

 American Economic Journal: Macroeconomics---2014---Zheng Liu, Pengfei Wang

We argue that credit constraints not only amplify fundamental shocks, they can also lead to self-fulfilling business cycles. We study a model with heterogeneous firms, in which imperfect contract enforcement implies that productive firms face binding credit constraints, with the borrowing capacity limited by expected equity value. A drop in equity value tightens credit constraints and reallocates resources from productive to unproductive firms. Such reallocation reduces aggregate productivity, further depresses equity value,

generating a financial multiplier. Aggregate dynamics are isomorphic to those in a representative-agent economy with increasing returns. For sufficiently tight credit constraints, the model generates self-fulfilling business cycles.

# Some Evidence on the Importance of Sticky Wages

 American Economic Journal: Macroeconomics---2014---Alessandro Barattieri, Susanto Basu, Peter Gottschalk

We present evidence on the frequency of nominal wage adjustment using SIPP data adjusted for measurement error. The SIPP is a representative sample of the US population. Our main results are: (i) The average quarterly probability of a nominal wage change is between 21.1 and 26.6 percent, depending on the assumptions used. (ii) Wage changes are much more likely when workers change jobs. (iii) The frequency of wage adjustment does not display significant seasonal patterns. (iv) The hazard of a nominal wage change first increases and then decreases, with a peak at 12 months.

## Wage Rigidity and Disinflation in Emerging Countries

 American Economic Journal: Macroeconomics---2014---Julian Messina, Anna Sanz- de-Galdeano

We present evidence on the frequency of nominal wage adjustment using SIPP data adjusted for measurement error. The SIPP is a representative sample of the US population. Our main results are: (i) The average quarterly probability of a nominal wage change is between 21.1 and 26.6 percent, depending on the assumptions used. (ii) Wage changes are much more likely when workers change jobs. (iii) The frequency of wage adjustment does not display significant seasonal patterns. (iv) The hazard of a nominal wage change first increases and then decreases, with a peak at 12 months.

# **Quantifying the Contribution of Search to Wage Inequality**

 American Economic Journal: Macroeconomics---2014---Volker Tjaden, Felix Wellschmied

We empirically establish that one-third of job transitions leads to wage losses. Using a quantitative on-the-job search model, we find that 60 percent of them are movements down the job ladder. Accounting for them, our baseline calibration matches the large residual wage inequality in US data while attributing only 13.7 percent of overall wage inequality to the presence of search frictions in the labor market. We can trace the difference between ours and previous much higher estimates to our explicit modeling of nonvalue improving job-to-job transitions.

### Can Tax Rebates Stimulate Consumption Spending in a Life-Cycle Model?

 American Economic Journal: Macroeconomics---2014---Jonathan Huntley, Valentina Michelangeli

We build a life-cycle model with earnings risk, liquidity constraints, and portfolio choice over tax-deferred and taxable assets to evaluate how household consumption changes in response to shocks to transitory anticipated income, such as the 2001 income tax rebate. Households optimally invest in tax-deferred assets, which are encumbered by withdrawal penalties, and exchange taxable precautionary savings for higher after-tax returns. The model predicts a higher marginal propensity to consume out of a rebate than is predicted by a standard frictionless life-cycle model. Liquidity-constrained households?with few financial assets or portfolios expensive to reallocate?consume a higher fraction of the rebates.

#### A Theory of Countercyclical Government Multiplier

 American Economic Journal: Macroeconomics---2014---Pascal Michaillat

I develop a New Keynesian model in which a type of government multiplier doubles when unemployment

rises from 5 percent to 8 percent. This multiplier indicates the additional number of workers employed when one worker is hired in the public sector. Graphically, in equilibrium, an upward-sloping quasi-labor supply intersects a downward-sloping labor demand in a (employment, labor market tightness) plane. Increasing public employment stimulates labor demand, which increases tightness and therefore crowds out private employment. Critically, the quasi-labor supply is convex. Hence, when labor demand is depressed and unemployment is high, the increase in tightness and resulting crowding-out are small.

# Time-Varying Effects of Oil Supply Shocks on the US Economy

 American Economic Journal: Macroeconomics---2013---Christiane Baumeister, Gert Peersman

Using time-varying BVARs, we find a substantial decline in the shortrun price elasticity of oil demand since the mid-1980s. This finding helps explain why an oil production shortfall of the same magnitude is associated with a stronger response of oil prices and more severe macroeconomic consequences over time, while a similar oil price increase is associated with smaller output effects. Oil supply shocks also account for a smaller fraction of real oil price variability in more recent periods, in contrast to oil demand shocks. The overall effects of oil supply disruptions on the US economy have, however, been modest.

#### Aggregate Implications of Lumpy Investment: New Evidence and a DSGE Model

 American Economic Journal: Macroeconomics---2013---Ruediger Bachmann, Ricardo Caballero, Eduardo Engel

The sensitivity of US aggregate investment to shocks is procyclical. The response upon impact increases by approximately 50 percent from the trough to the peak of the business cycle. This feature of the data follows naturally from a DSGE model with lumpy microeconomic capital adjustment. Beyond explaining this specific time variation, our model and evidence

rises from 5 percent to 8 percent. This multiplier indicates the additional number of workers employed conomic investment lumpiness is inconsequential for when one worker is hired in the public sector. Graphmacroeconomic analysis.

#### **Safety Traps**

 American Economic Journal: Macroeconomics---2013---Kenza Benhima, Baptiste Massenot

Fear of risk provides a rationale for protracted economic downturns. We develop a real business cycle model where investors with decreasing relative risk aversion choose between a risky and a safe technology that exhibit decreasing returns. Because of a feedback effect from the interest rate to risk aversion, two equilibria can emerge: a standard equilibrium and a "safe" one in which investors invest in safer assets. We refer to the dynamics of this second equilibrium as a safety trap because it is self-reinforcing as investors accumulate more wealth and show it to be consistent with Japan's lost decade.

# The Wrong Shape of Insurance? What Cross-Sectional Distributions Tell Us about Models of Consumption Smoothing

 American Economic Journal: Macroeconomics---2013---Tobias Broer

This paper shows how two standard models of consumption risk-sharing?self-insurance through borrowing and saving and limited commitment to insurance contracts?replicate similarly well the standard, second-moment measures of insurance observed in US micro data. A nonparametric analysis, however, reveals strongly contrasting and counterfactual joint distributions of consumption, income and wealth. Method of moments estimation shows how measurement error in consumption eliminates excessive skewness and smoothness of consumption growth. Moreover, counterfactual nonlinearities disappear at high-estimated risk aversion under selfinsurance, but are a robust feature of limited commitment. Its "shape of insurance" thus argues in favor of the self-insurance model.

# A Pitfall with Estimated DSGE-Based Government Spending Multipliers

 American Economic Journal: Macroeconomics---2013---Patrick F?ve,Julien Matheron,Jean-Guillaume Sahuc,Patrick Fève

This paper examines issues related to the estimation of the government spending multiplier (GSM) in a DSGE context. We stress a source of bias in the GSM arising from the combination of endogenous government expenditures and Edgeworth complementarity between private consumption and government expenditures. Due to cross-equation restrictions, omitting the endogenous component of government policy at the estimation stage would lead an econometrician to underestimate the degree of Edgeworth complementarity and, consequently, the long-run GSM. An estimated version of our model with US postwar data shows that this bias matters quantitatively. The results are robust to a number of perturbations.

## Democracy and Reforms: Evidence from a New Dataset

American Economic Journal: Macroeconomics---2013---Paola Giuliano, Prachi Mishra, Antonio Spilimbergo

Empirical evidence on the relationship between democracy and economic reforms is limited to few reforms, countries, and years. This paper studies the effect of democracy on the adoption of economic reforms using a new dataset on reforms in the financial, capital and banking sectors, product markets, agriculture, and trade for 150 countries over the period 1960-2004. Democracy has a positive and significant impact on the adoption of economic reforms, but there is scarce evidence that economic reforms foster democracy. Our results are robust to the inclusion of a large variety of controls and estimation strategies.

# Weak States and Steady States: The Dynamics of Fiscal Capacity

• American Economic Journal: Macroeconomics---2013---Timothy Besley, Ethan Ilzetzki, Torsten

#### Persson

Investments in fiscal capacity?economic institutions for tax compliance?are an important feature of economic development. This paper develops a dynamic model to study the evolution of fiscal capacity over time. We contrast a social planner's investment path with politically feasible paths. Three types of states emerge in the long run: a common-interest state where public resources are devoted to public goods, a redistributive state where additional fiscal capacity is used for transfers, and a weak state with no transfers and a low level of public goods provision. We also present some preliminary evidence consistent with the theory.

#### **Credit Risk and Disaster Risk**

 American Economic Journal: Macroeconomics---2013---Francois Gourio

Credit spreads are large, volatile, and countercyclical, and recent empirical work suggests that risk premia, not expected credit losses, are responsible for these features. Building on the idea that corporate debt, while fairly safe in ordinary recessions, is exposed to economic depressions, this paper embeds a trade-off theory of capital structure into a real business cycle model with a small, exogenously timevarying risk of economic disaster. The model replicates the level, volatility and cyclicality of credit spreads, and variation in the corporate bond risk premium amplifies macroeconomic fluctuations in investment, employment, and GDP.

# Crises and Recoveries in an Empirical Model of Consumption Disasters

We estimate an empirical model of consumption disasters using new data on consumption for 24 countries over more than 100 years, and study its implications for asset prices. The model allows for partial recoveries after disasters that unfold over multiple years. We find that roughly half of the drop in consumption

due to disasters is subsequently reversed. Our model the import intensity of demand components by using generates a sizable equity premium from disaster risk, but one that is substantially smaller than in simpler models. It implies that a large value of the intertemporal elasticity of substitution is necessary to explain stock-market crashes at the onset of disasters.

#### The Financial Crisis: Lessons for International **Macroeconomics**

• American Economic Journal: Macroeconomics---2013---Matthieu Bussiere, Jean Imbs, Robert Kollmann, Romain Ranciere

This article introduces a special section of the American Economic

#### Sovereign Defaults: The Price of Haircuts

• American Economic Journal: Macroeconomics---2013---Juan J. Cruces, Christoph Trebesch

A main puzzle in the sovereign debt literature is that defaults have only minor effects on subsequent borrowing costs and access to credit. This paper comes to a different conclusion. We construct the first complete database of investor losses ("haircuts†) in all restructurings with foreign banks and bondholders from 1970 until 2010, covering 180 cases in 68 countries. We then show that restructurings involving higher haircuts are associated with significantly higher subsequent bond yield spreads and longer periods of capital market exclusion. The results cast doubt on the widespread belief that credit markets "forgive and forget.â€

### **Estimating Trade Elasticities: Demand** Composition and the Trade Collapse of 2008-2009

• American Economic Journal: Macroeconomics---2013---Matthieu Bussiere, Giovanni Callegari, Fabio Ghironi, Giulia Sestieri.Norihiko Yamano

This paper introduces a new empirical model of international trade flows based on an import intensityadjusted measure of aggregate demand. We compute

the OECD Input-Output tables. We argue that the composition of demand plays a key role in trade dynamics because of the relatively larger movements in the most import-intensive categories of expenditure (especially investment, but also exports). We provide evidence in favor of these mechanisms for a panel of 18 OECD countries, paying particular attention to the 2008†"2009 Great Trade Collapse.

#### International Contagion through Leveraged **Financial Institutions**

American Economic Journal: Macroeconomics---2013---Eric van Wincoop

The 2008 †"2009 financial crises, while originating in the United States, witnessed a drop in asset prices and output that was at least as large in the rest of the world. We investigate, in the context of a simple twocountry model, whether this could have been the result of transmission through leveraged financial institutions. The paper highlights what the various transmission mechanisms associated with balance sheet losses are. For realistic parameters we find that the model cannot account for the global nature of the crisis, both in terms of the size of the impact and the extent of transmission.

#### Sharing the Burden: Monetary and Fiscal Responses to a World Liquidity Trap

 American Economic Journal: Macroeconomics---2013---David Cook, Michael Devereux

This paper analyzes optimal policy responses to a global liquidity trap. The key feature of this environment is that relative prices respond perversely. A fall in demand in one country causes an appreciation of its terms of trade, exacerbating the initial shock. At the zero bound, this country cannot counter this shock. Then it may be optimal for the partner country to raise interest rates. The partner may set a positive policy interest rate, even though its "natural interest rateâ<br/>€ is below zero. An optimal policy response requires a mutual interaction between monetary and fiscal policy.

# Capital Controls with International Reserve Accumulation: Can This Be Optimal?

 American Economic Journal: Macroeconomics---2013---Philippe Bacchetta, Kenza Benhima, Yannick Kalantzis

Motivated by the Chinese experience, we analyze an economy where the central bank has access to international capital markets, but the private sector does not. The central bank is modeled as a Ramsey planner who can choose the domestic interest rate and the level of international reserves. Consumers are credit-constrained as in Woodford (1990). We find that a rapidly growing economy has a higher welfare without capital mobility. In the Chinese context, we argue that the domestic interest rate should be temporarily above the international rate and that there should be more foreign asset accumulation than in an open economy.

### Is There a Trade-Off between Inflation and Output Stabilization?

 American Economic Journal: Macroeconomics---2013---Alejandro Justiniano, Giorgio Primiceri, Andrea Tambalotti

We find that the answer is no in an estimated DSGE model of the US economy in which exogenous movements in workers' market power are not a major driver of observed economic fluctuations. If they are, the tension between the conflicting stabilization objectives of monetary policy increases, but with negligible effects on the equilibrium behavior of the economy under optimal policy. (JEL E12, E23, E24, E31, E32, E52)

#### **Importing Skill-Biased Technology**

 American Economic Journal: Macroeconomics---2013---Ariel Burstein, Javier Cravino, Jonathan Vogel

The production of capital equipment is concentrated among a small group of countries, and many countries import a large share of their equipment. If capital-skill complementarity is an important feature of technology, international trade may have important effects on the skill premium through its impact on equipment accumulation. In this paper we propose a tractable framework for evaluating this effect, provide simple analytic expressions linking observable changes in import shares by sector to changes in real wages of skilled and unskilled workers (and, therefore, the skill premium), and quantify the importance of this effect for a large set of countries. (JEL E22, F11, F16, J24, L64)

# Capital-Skill Complementarity and the Skill Premium in a Quantitative Model of Trade

 American Economic Journal: Macroeconomics---2013---Fernando Parro

Technological change has reduced the relative price of capital goods. Reductions in trade costs make it cheaper to import capital goods. With capital-skill complementarity, both can increase the skill premium. I construct a general-equilibrium trade model with capital-skill complementarity to study the impact of changing worldwide trade costs and technologies on the skill premium. The impacts of trade costs and technical change are comparable, especially in developing countries, and much larger than Stolper-Samuelson effects. I find that both skilled and unskilled labor gain from trade, and that larger gains from trade are associated with larger increases in the skill premium. (JEL E22, F11, F16, J24, O33)

#### **Input Sourcing and Multinational Production**

 American Economic Journal: Macroeconomics---2013---Stefania Garetto

I propose a general equilibrium framework where firms decide whether to outsource or integrate input manufacturing, domestically or abroad. By outsourcing, firms may benefit from suppliers' technologies, but pay mark-up prices. By sourcing intrafirm, they save on mark-ups and pay possibly lower foreign wages. Multinational corporations arise when firms integrate production abroad. The model predicts that intrafirm imports are positively correlated with the mean and variance of the firms' productivity distribution and with the degree of input differentiation. I use the model

to quantify the US welfare gains from intrafirm trade, Uncertainty and Economic Activity: Evidence which amount to about 0.23 percent of consumption per-capita. (JEL D21, F12, F23, F41, L11, L24)

#### **Blunt Instruments: Avoiding Common Pitfalls in** Identifying the Causes of Economic Growth

• American Economic Journal: Macroeconomics---2013---Samuel Bazzi, Michael Clemens

Concern has intensified in recent years that many instrumental variables used in widely-cited growth regressions may be invalid, weak, or both. Attempts to remedy this general problem remain inadequate. We show how a range of published studies can offer more evidence that their results are not spurious. Key steps include: grounding growth regressions in more generalized theoretical models, deployment of new methods for estimating sensitivity to violations of exclusion restrictions, opening the "black box" of GMM with supportive evidence of instrument strength, and utilization of weak-instrument robust tests and estimators. (JEL C52, E23, F35, O41, O47)

### **Monetary Commitment and Fiscal Discretion:** The Optimal Policy Mix

• American Economic Journal: Macroeconomics---2013---Stefano Gnocchi

We study a noncooperative policy game between monetary and fiscal policy, where only monetary policy can commit to future actions. The equilibrium outcome of the game depends on the strategies available to the monetary policymaker. If strategies are left unrestricted, the central bank can alter the incentives of the fiscal authority in a way that replicates the full commitment solution. If the central bank cannot commit to respond to fiscal policy, the fiscal authority generates fluctuations in government expenditure that undermine the stabilization goals of the central bank. (JEL E12, E23, E31, E52, E58, E62)

# from Business Survey Data

• American Economic Journal: Macroeconomics---2013---Ruediger Bachmann, Steffen Elstner, Eric Sims

This paper uses survey expectations data to construct empirical proxies for time-varying business-level uncertainty. Access to the micro data from the German IFO Business Climate Survey permits construction of uncertainty measures based on both ex ante disagreement and ex post forecast errors. Ex ante disagreement is strongly correlated with dispersion in expost forecast errors. Surprise movements in either measure lead to significant reductions in production that abate fairly quickly. We extend our analysis to US data, measuring uncertainty with forecast disagreement from the Business Outlook Survey. Surprise increases in forecast dispersion lead to more persistent reductions in production than in the German data. (JEL C53, C83, D81, E23, E27, E32, E37)

#### Marginal Jobs, Heterogeneous Firms, and **Unemployment Flows**

• American Economic Journal: Macroeconomics---2013---Michael Elsby, Ryan Michaels

This paper introduces a notion of firm size into a search and matching model with endogenous job destruction. The outcome is a rich, yet analytically tractable framework that can be used to analyze a broad set of features of both the cross-section and aggregate dynamics of the labor market. The model provides a coherent account of the distributions of employer size and employment growth across establishments, the amplitude and propagation of cyclical fluctuations in worker flows, the negative comovement of unemployment and vacancies, and the dynamics of the distribution of employer size over the business cycle. (JEL E24, E32, J63, J64)

### Oil and Conflict: What Does the Cross Country **Evidence Really Show?**

• American Economic Journal: Macroeconomics---2013---Anca M. Cotet, Kevin Tsui

This paper re-examines the effect of oil wealth on political violence. Using a unique historical panel dataset of oil discoveries, we show that simply controlling for country fixed effects removes the statistical association between the value of oil reserves and civil war onset. Other macro-political violence measures, such as coup attempts, are also uncorrelated with oil wealth. To further address endogeneity concerns, we exploit changes in oil reserves due to randomness in the success of oil explorations. We find little robust evidence that oil discoveries increase the likelihood of political violence. Rather, oil discoveries increase military spending in nondemocratic countries. (JEL D74, H56, O17, Q34, Q41)

# Identifying the Effects of Bank Failures from a Natural Experiment in Mississippi during the Great Depression

 American Economic Journal: Macroeconomics---2013---Nicolas L. Ziebarth

I examine the causal effect of bank failures during the Great Depression using the quasi-experimental setup of Richardson and Troost (2009). The experiment is based on Mississippi being divided into two Federal Reserve districts, which followed different policies for liquidity provision. This translated into variation in bank failures across the state. Employing a plant-level sample from the Census of Manufactures, I find that banking failures had a negative effect on revenue stemming from a fall in physical output. I find no effect on employment at the plant-level and a large decline at the county-level. (JEL E32, E44, G21, G33, N12, N22, N92)

## Hedging against the Government: A Solution to the Home Asset Bias Puzzle

 American Economic Journal: Macroeconomics---2013---Tiago Berriel, Saroj Bhattarai

We explain why international nominal bonds and equity portfolios are biased domestically. In our model, holding domestic government nominal debt provides a hedge against shocks to bond returns and the impact

on taxes they induce. For this result, only two features are essential: nominal risk and taxes only on domestic agents. A third feature explains domestically biased equity holdings: government spending falls on domestic goods. Then, an increase in government spending raises the returns on domestic equity, providing a hedge against the subsequent increase in taxes. A calibrated version of the model predicts asset holdings that quantitatively match the data. (JEL F30, G11, G15, H61, H63)

# On the Real Effects of Bank Bailouts: Micro Evidence from Japan

 American Economic Journal: Macroeconomics---2013---Mariassunta Giannetti, Andrei Simonov

Exploiting the Japanese banking crisis of the 1990s as a laboratory, we investigate the effects of bank bailouts on the supply of credit and the performance of banks' clients. Our findings indicate that the size of capital injections relative to the initial financial condition of banks is crucial for the success of bank bailouts. Capital injections that are large enough to reestablish bank capital requirements increase the supply of credit and spur investment. In contrast, not only do capital injections that are too small fail to increase the supply of credit, but they also encourage the evergreening of nonperforming loans. (JEL E44, G21, G28, G32, G34)

#### Taxes and Time Use: Fiscal Policy in a Household Production Model

 American Economic Journal: Macroeconomics---2013---Kelly S. Ragan

Time use data on work and leisure is presented for a broad group of OECD countries. The home production model explicitly accounts for taxes and public expenditures on day care and elder care, substitutes for work households perform at home. Taxes are important for matching time use patterns in Canada, the UK, and continental Europe, but cannot explain the high levels of market work and low levels of home work observed in Scandinavia. Subsidies of services like day care that

substitute for home work are shown to be quantitatively important for bringing both market and home work predictions in line with the data. (JEL D13, E62, J13, J14)

#### The Cyclical Volatility of Labor Markets under Frictional Financial Markets

 American Economic Journal: Macroeconomics---2013---Nicolas Petrosky-Nadeau, Etienne Wasmer

We provide a dynamic extension of an economy with search on credit and labor markets (Wasmer and Weil 2004). Financial frictions create volatility. They add an additional, almost acyclical, entry cost to procyclical job creation costs, thus increasing the elasticity of labor market tightness to productivity shocks by a factor of five to eight, compared to a matching economy with perfect financial markets. We characterize a dynamic financial multiplier that is increasing in total financial costs and minimized under a credit market Hosios-Pissarides rule. Financial frictions are an element of the solution to the volatility puzzle. (JEL C78, E24, E32, E44, G21, J63)

# The Geography of Conflicts and Regional Trade Agreements

 American Economic Journal: Macroeconomics---2012---Philippe Martin, Thierry Mayer, Mathias Thoenig

In addition to standard trade gains, regional trade agreements (RTAs) can promote peaceful relations by increasing the opportunity cost of conflicts. Country pairs with large trade gains from RTAs and a high probability of conflict should be more likely to sign an RTA. Using data from 1950 to 2000, we show that this complementarity between economic and politics determines the geography of RTAs. We disentangle trade gains from political factors by a theory-driven empirical estimation and find that country pairs with higher frequency of past wars are more likely to sign RTAs, the more so the larger the trade gains. (JEL D72, D74, F15, N70)

# Measuring What Employers Do about Entry Wages over the Business Cycle: A New Approach

 American Economic Journal: Macroeconomics---2012---Pedro Martins, Gary Solon, Jonathan Thomas

Rigidity in real hiring wages plays a crucial role in some recent macroeconomic models. But are hiring wages really so noncyclical? We propose using employer/employee longitudinal data to track the cyclical variation in the wages paid to workers newly hired into specific entry jobs. Illustrating the methodology with 1982-2008 data from the Portuguese census of employers, we find real entry wages were about 1.8 percent higher when the unemployment rate was 1 percentage point lower. Like most recent evidence on other aspects of wage cyclicality, our results suggest that the cyclical elasticity of wages is similar to that of employment. (JEL E24, E32, J31, J64)

# Evidence on the Incidence of Wage Posting, Wage Bargaining, and On-the-Job Search

 American Economic Journal: Macroeconomics---2012---Robert Hall, Alan Krueger

Some workers bargain with prospective employers before accepting a job. Others face a posted wage as a take-it-or-leave-it opportunity. Both modes of wage determination have generated large bodies of research. We surveyed a representative sample of US workers to inquire about the wage determination process at the time they were hired into their current or most recent jobs. A third of the respondents reported bargaining over pay before accepting their current jobs. Almost a third of workers had precise information about pay when they first met with their employers, a sign of wage posting. About 40 percent of workers were onthe-job searchers-they could have remained at their earlier jobs at the time they accepted their current jobs, indicating a more favorable bargaining position than is held by unemployed job-seekers. About half of all workers reported that their employers had learned

their pay in their earlier jobs before making the offer Why Are Target Interest Rate Changes So that led to the current job. (JEL C83, J31, J52, J64)

#### **Exogenous versus Endogenous Separation**

• American Economic Journal: Macroeconomics---2012---Shigeru Fujita, Garey Ramey

This paper assesses how various approaches to modeling the separation margin affect the quantitative ability of the Mortensen-Pissarides labor matching model. The model with a constant separation rate fails to produce realistic volatility and productivity responsiveness of the separation rate and worker flows. The specification with endogenous separation succeeds along these dimensions. Allowing for on-the-job search enables the model to replicate the Beveridge curve. All specifications, however, fail to generate sufficient volatility of the job finding rate. While adopting the Hagedorn-Manovskii calibration remedies this problem, the volume of job-to-job transitions in the on-the-job search specification becomes essentially zero. (JEL E24, J41, J64)

### Home Equity Lending and Retail Spending: **Evidence from a Natural Experiment in Texas**

American Economic Journal: Macroeconomics---2012---Chadi S. Abdallah, William D Lastrapes

We estimate how spending in Texas responded to a 1997 constitutional amendment that relaxed severe restrictions on home equity lending. We use this event as a natural experiment to estimate the importance of credit constraints. If households are credit-constrained, such an increase in credit availability will increase their spending. We find that Texas retail sales at the county and state levels increased significantly after the amendment, lending support to the credit-constraint hypothesis. We confirm these findings and refine our interpretation of the estimated aggregate-level responses using household-level data on home equity loans. (JEL D14, E21, G21, G28)

## Persistent?

• American Economic Journal: Macroeconomics---2012---Olivier Coibion, Yuriy Gorodnichenko

While the degree of policy inertia in central banks' reaction functions is a central ingredient in theoretical and empirical monetary economics, the source of the observed policy inertia in the United States is controversial, with tests of competing hypotheses, such as interest-smoothing and persistent-shocks, being inconclusive. This paper employs real time data; nested specifications with flexible time series structures; narratives; interest rate forecasts of the Fed, financial markets, and professional forecasters; and instrumental variables to discriminate between competing explanations of policy inertia. The evidence strongly favors the interest-smoothing explanation and thus can help resolve a key puzzle in monetary economics. (JEL C53, E43, E47, E52, E58)

#### Financial Contracts and the Political Economy of **Investor Protection**

• American Economic Journal: Macroeconomics---2012---Pavel Ševčík

This paper studies the joint dynamics of investor protection and economic development in a political economy model with capital accumulation and occupational choice. Less investor protection implies higher costs of external financing for entrepreneurs. This excludes poorer agents from entrepreneurship, increasing the profits of the remaining entrepreneurs. The main determinants of investor protection policy preferences are the agent's net worth and the expected return from entrepreneurship. When the policy is chosen by the simple majority rule, the model generates several implications consistent with the observed variation of investor protection over time and across countries. (JEL D72, E22, E32, G18, G38, J24, L26)

## Sticky Wages: Evidence from Quarterly Microeconomic Data

 American Economic Journal: Macroeconomics---2012---Hervé Le Bihan, Jérémi Montornès, Thomas Heckel

Using an original micro-dataset from France, we investigate nominal wage stickiness. Nominal wage changes are found to occur at a quarterly frequency of around 38 percent over our sample period, and to be to a large extent staggered across establishments, and very synchronized within establishments. We carry out an econometric analysis of wage changes based on a two-threshold sample selection model. Our results are that the timing of wage adjustments is time-dependent as opposed to state-dependent, there is evidence of predetermination in wage changes, and both backward and forward-looking behavior is relevant in wage setting. (JEL E24, E52, J31)

# Ambiguity Aversion: Implications for the Uncovered Interest Rate Parity Puzzle

 American Economic Journal: Macroeconomics---2012---Cosmin Ilut

High interest rate currencies tend to appreciate in the future relative to low interest rate currencies instead of depreciating as uncovered interest parity (UIP) predicts. I construct a model of exchange rate determination in which ambiguity-averse agents face a dynamic filtering problem featuring signals of uncertain precision. Solving a max-min problem, agents act upon a worst-case signal precision and systematically underestimate the hidden state that controls payoffs. Thus, on average, agents next periods perceive positive innovations, which generates an upward re-evaluation of the strategy's profitability and implies ex post departures from UIP. The model also produces predictable expectational errors, negative skewness, and time-series momentum for currency speculation payoffs. (JEL D81, F31, G15)

# Temperature Shocks and Economic Growth: Evidence from the Last Half Century

 American Economic Journal: Macroeconomics---2012---Melissa Dell,Benjamin F. Jones,Benjamin Olken

This paper uses historical fluctuations in temperature within countries to identify its effects on aggregate economic outcomes. We find three primary results. First, higher temperatures substantially reduce economic growth in poor countries. Second, higher temperatures may reduce growth rates, not just the level of output. Third, higher temperatures have wide-ranging effects, reducing agricultural output, industrial output, and political stability. These findings inform debates over climate's role in economic development and suggest the possibility of substantial negative impacts of higher temperatures on poor countries. (JEL E23, O13, Q54, Q56)

# Social Security Reforms: Benefit Claiming, Labor Force Participation, and Long-Run Sustainability

 American Economic Journal: Macroeconomics---2012---Selahattin Imrohoroglu, Sagiri Kitao

This paper develops a general equilibrium life-cycle model with endogenous labor supply in both intensive and extensive margins, consumption, saving, and benefit claiming to measure the long-run effects of a proposed Social Security reform. Agents in the model face medical expenditure, wage, health, and survival shocks. Raising the normal retirement age by two years increases labor supply by 2.8 percent and the capital stock by 12.6 percent, showing that both margins of adjustment are critical. General equilibrium effects are important to account for the effects of reform on savings, although the effects on labor supply are less important. (JEL D91, E21, H55, I13, J22)

## The Cyclicality of Skill Acquisition: Evidence from Panel Data

 American Economic Journal: Macroeconomics---2012---Fabio Mendez, Facundo Sepúlveda This paper presents new empirical evidence regarding the cyclicality of skill acquisition activities. The paper studies both training and schooling episodes at the individual level using quarterly data from the NLSY79 for a period of 19 years. We find that aggregate schooling is strongly countercyclical, while aggregate training is acyclical. Several training categories, however, behave procyclically. The results also indicate that firmfinanced training is procyclical, while training financed through other means is countercyclical; and that the cyclicality of skill acquisition investments depends significantly on the educational level and the employment status of the individual. (JEL E24, E32, I20, J24)

## A Quantitative Theory of Information and Unsecured Credit

 American Economic Journal: Macroeconomics---2012---Kartik Athreya, Xuan Tam, Eric Young

Important changes have occurred in unsecured credit markets over the past three decades. Most prominently, there have been large increases in aggregate consumer debt, the personal bankruptcy rate, the size of bankruptcies, the dispersion of interest rates paid by borrowers, and the relative discount received by those with good credit ratings. We find that improvements in information available to lenders on household-level costs of bankruptcy can account for a significant fraction of what has been observed. The ex ante welfare gains from better information are positive but small. (JEL D14, D82, G21)

#### **Speculative Bubbles and Financial Crises**

• American Economic Journal: Macroeconomics---2012---Pengfei Wang, Yi Wen

Are asset prices unduly volatile and often detached from their fundamentals? Does the bursting of financial bubbles depress the real economy? This paper addresses these issues by constructing a DSGE model with speculative bubbles. We characterize conditions under which storable goods, regardless of their intrinsic values, can carry bubbles, and agents are willing to invest in such bubbles despite their positive probability of bursting. The results show that systemic risk, commonly perceived changes in the bubble's probability of bursting, can generate boom-bust cycles with hump-shaped output dynamics and produce asset price movements many times more volatile than the economy's fundamentals. (JEL E13, E23, E32, E44, G01, G12).

## Are the Effects of Monetary Policy Shocks Big or Small?

 American Economic Journal: Macroeconomics---2012---Olivier Coibion

This paper studies the small estimated effects of monetary policy shocks from standard VARs versus the large effects from the Romer and Romer (2004) approach. The differences are driven by three factors: the different contractionary impetus, the period of reserves targeting, and lag length selection. Accounting for these factors, the real effects of policy shocks are consistent across approaches and most likely medium. Alternative monetary policy shock measures from estimated Taylor rules also yield medium-sized real effects and indicate that the historical contribution of monetary policy shocks to real fluctuations has been significant, particularly during the 1970s and early 1980s. (JEL E32, E43, E52)

## Political Pressures on Monetary Policy during the US Great Inflation

 American Economic Journal: Macroeconomics---2012---Charles Weise

Drawing on an analysis of Federal Open Market Committee (FOMC) documents, this paper argues that political pressures on the Federal Reserve were an important contributor to the rise in inflation in the United States in the 1970s. Members of the FOMC understood that a serious attempt to tackle inflation would generate opposition from Congress and the executive branch. Political considerations contributed to delays in monetary tightening, insufficiently aggressive anti-inflation policies, and the premature abandonment of

attempts at disinflation. Empirical analysis verifies that references to the political environment at FOMC meetings are correlated with the stance of monetary policy during this period. (JEL D72, E32, E52, E58, N12)

#### Learning in a Medium-Scale DSGE Model with Expectations Based on Small Forecasting Models

 American Economic Journal: Macroeconomics---2012---Sergey Slobodyan, Raf Wouters

This paper evaluates the empirical performance of a medium-scale DSGE model with agents forming expectations using small forecasting models updated by the Kalman filter. The adaptive learning model fits the data better than the rational expectations (RE) model. Beliefs about the inflation persistence explain the observed decline in the mean and the volatility of inflation as well as Phillips curve flattening. Learning about inflation results in lower estimates for the persistence of the exogenous shocks that drive price and wage dynamics in the RE version of the model. Expectations based on small forecasting models are closely related to the survey evidence on inflation expectations. (JEL C53, D83, D84, E13, E17, E31)

#### **Capital Market Integration and Wages**

 American Economic Journal: Macroeconomics---2012---Anusha Chari, Peter Blair Henry, Diego Sasson

For three years after the typical emerging economy opens its stock market to inflows of foreign capital, the average annual growth rate of the real wage in the manufacturing sector increases by a factor of three. No such increase occurs in a control group of countries that do not liberalize. The temporary increase in wage growth drives up the level of the average worker's annual compensation by US \$487—an increase equal to nearly one-fifth of their annual pre-liberalization salary. Overall, the results suggest that trade in capital may have a larger impact on wages than trade in goods. (JEL E25, E44, F16, F43, G18, O16)

# Real Wages and the Business Cycle: Accounting for Worker, Firm, and Job Title Heterogeneity

 American Economic Journal: Macroeconomics---2012---Anabela Carneiro, Paulo Guimaraes, Pedro Portugal

Using a longitudinal matched employer-employee dataset for Portugal over the 1986-2007 period, this study analyzes the wage responses to aggregate labor market conditions for newly hired workers and existing workers within the same firm. Accounting for worker, firm, and job title heterogeneity, the data support the hypothesis that entry wages are more procyclical than wages of stayers. A one point increase in the unemployment rate decreases wages of newly hired workers within a given firm-job title by around 2.7 percent and by 2.2 percent for stayers within the same firm-job title. Finally, the results reveal a one-for-one wage response to changes in labor productivity. (JEL: E24, E32, J64)

### Rebalancing Frequency and the Welfare Cost of Inflation

 American Economic Journal: Macroeconomics---2012---Andre Silva

Cash-in-advance models usually require agents to reallocate money and bonds in fixed periods. Every month or quarter, for example. I show that fixed periods underestimate the welfare cost of inflation. I use a model in which agents choose how often they exchange bonds for money. In the benchmark specification, the welfare cost of 10 percent instead of 0 inflation increases from 0.1 percent of income with fixed periods to 1 percent with optimal periods. The results are robust to different preferences, to different compositions of income in bonds or money, and to the introduction of capital and labor. (JEL: E30, E40, E50)

#### Imperfect Competition in the Interbank Market for Liquidity as a Rationale for Central Banking

 American Economic Journal: Macroeconomics---2012---Viral Acharya, Denis Gromb, Tanju Yorulmazer We study interbank lending and asset sales markets in which banks with surplus liquidity have market power vis-à-vis banks needing liquidity, frictions arise in lending due to moral hazard, and assets are bank-specific. Surplus banks ration lending and instead purchase assets from needy banks, an inefficiency more acute during financial crises. A central bank acting as a lender-of-last-resort can ameliorate this inefficiency provided it is prepared to extend potentially loss-making loans or is better informed than outside markets, as might be the case if it also performs a supervisory role. This rationale for central banking finds support in historical episodes. (JEL E58, G01, G21, G28, L13, N21)

### How Important Is Technology Capital for the United States?

 American Economic Journal: Macroeconomics---2012---Marek Kapicka

I construct measures of technology capital and country openness for the US economy and the rest of the world for 1982-2007. The key identifying assumption is that firms equalize returns on tangible and technology capital. For the US economy, technology capital is about one-third of tangible capital, and the degree of openness is between 0.61 and 0.70. I provide both a two-country estimation and a multicountry estimation, and find that the US estimates are almost identical in both cases. The welfare loss from totally closing the US economy is small, but the welfare gain from totally opening the US economy is large. (JEL E22, F41, O30)

#### **Contagious Adverse Selection**

 American Economic Journal: Macroeconomics---2012---Stephen Morris, Hyun Song Shin

We illustrate the corrosive effect of even small amounts of adverse selection in an asset market and show how it can lead to the total breakdown of trade. The problem is the failure of "market confidence," defined as approximate common knowledge of an upper bound on expected losses. Small probability events can unravel

market confidence. We discuss the role of contagious adverse selection and the problem of "toxic assets" in the recent financial crisis. (JEL D82, G01, G12, G14)

#### **Effects of Fiscal Stimulus in Structural Models**

American Economic Journal: Macroeconomics--2012---Günter Coenen, Christopher Erceg, Charles
Freedman, Davide Furceri, Michael Kumhof, René
Lalonde, Douglas Laxton, Jesper Lindé, Annabelle
Mourougane, Dirk Muir, Susanna Mursula, Carlos
de Resende, John Roberts, Werner Roeger, Stephen
Snudden, Mathias Trabandt, Jan in 't Veld

The paper subjects seven structural DSGE models, all used heavily by policymaking institutions, to discretionary fiscal stimulus shocks using seven different fiscal instruments, and compares the results to those of two prominent academic DSGE models. There is considerable agreement across models on both the absolute and relative sizes of different types of fiscal multipliers. The size of many multipliers is large, particularly for spending and targeted transfers. Fiscal policy is most effective if it has moderate persistence and if monetary policy is accommodative. Permanently higher spending or deficits imply significantly lower initial multipliers. (JEL E12, E13, E52, E62)

### How Does the US Government Finance Fiscal Shocks?

 American Economic Journal: Macroeconomics---2012---Antje Berndt, Hanno Lustig, & Scedil; evin Yeltekin

We develop a method for identifying and quantifying the fiscal channels that help finance government spending shocks. We define fiscal shocks as surprises in defense spending and show that they are more precisely identified when defense stock data are used in addition to aggregate macroeconomic data. Our results show that in the postwar period, about 9 percent of the US government's unanticipated spending needs were financed by a reduction in the market value of debt and more than 70 percent by an increase in primary surpluses. Additionally, we find that long-term debt is

debt. (JEL E62, H56, and H63)

### The Bond Premium in a DSGE Model with Long-Run Real and Nominal Risks

• American Economic Journal: Macroeconomics---2012---Glenn Rudebusch, Eric Swanson

The term premium in standard macroeconomic DSGE models is far too small and stable relative to the data —an example of the "bond premium puzzle." However, in endowment economy models, researchers have generated reasonable term premiums by assuming investors have recursive Epstein-Zin preferences and face long-run economic risks. We show that introducing Epstein-Zin preferences into a canonical DSGE model can also produce a large and variable term premium without compromising the model's ability to fit key macroeconomic variables. Long-run nominal risks further improve the model's empirical fit, but do not substantially reduce the need for high risk aversion. (JEL E13, E31, E43, E44)

### International Portfolio Allocation under Model Uncertainty

• American Economic Journal: Macroeconomics---2012---Pierpaolo Benigno, Salvatore Nisticò

This paper revisits an old argument, hedging real exchange rate risk, as an explanation of the international home bias in equity. In a dynamic model, the relevant risk to be hedged is the long-run risk as opposed to the short-run risk. Domestic equity is indeed a good hedge with respect to long-run real-exchange-rate risk. Two new frameworks are able to explain a large share of the observed US home bias: a model with Hansen-Sargent preferences in which agents fear model misspecification and a model with Epstein-Zin preferences. These two models are also immune to the risk-free rate puzzle. (JEL C58, F31, G11, G15)

#### **Innovation Can Cause Bubbles and Crashes**

• American Economic Journal: Macroeconomics---2012---Ana Fostel, John Geanakoplos

We show how the timing of financial innovation might have contributed to the mortgage bubble and then to the crash of 2007-2009. We show why tranching and leverage first raised asset prices and why CDS lowered them afterward. This may seem puzzling, since it implies that creating a derivative tranche in the securitization whose payoffs are identical to the CDS will raise the underlying asset price, while the CDS outside the securitization lowers it. The resolution of the puzzle is that the CDS lowers the value of the underlying asset since it is equivalent to tranching cash. (JEL E32, E44, G01, G12, G13, G21).

### Stories of the Twentieth Century for the **Twenty-First**

• American Economic Journal: Macroeconomics---2012---Pierre-Olivier Gourinchas, Maurice Obstfeld

A key precursor of twentieth-century financial crises in emerging and advanced economies alike was the rapid buildup of leverage. Those emerging economies that avoided leverage booms during the 2000s also were most likely to avoid the worst effects of the twenty-first century's first global crisis. A discrete-choice panel analysis using 1973-2010 data suggests that domestic credit expansion and real currency appreciation have been the most robust and significant predictors of financial crises, regardless of whether a country is emerging or advanced. For emerging economies, however, higher foreign exchange reserves predict a sharply reduced probability of a subsequent crisis. (JEL E44, F34, F44, G01, G21, O19)

#### The Optimal Conduct of Monetary Policy with Interest on Reserves

• American Economic Journal: Macroeconomics---2012---Anil Kashyap, Jeremy C. Stein

has two distinct tools that it can use to raise the shortterm policy rate: it can either increase the interest it pays on reserve balances, or it can reduce the quantity of reserves in the system. We argue that by using both of these tools together, and by broadening the scope of reserve requirements, the central bank can simultaneously pursue two objectives: it can manage the inflation-output tradeoff using a Taylor-type rule, and it can regulate the externalities created by socially excessive shortterm debt issuance on the part of financial intermediaries. (JEL E43, E52, E58, G21)

#### **Corrigendum: Emerging Market Currency Excess Returns**

• American Economic Journal: Macroeconomics---2012---Stephen Gilmore, Fumio Hayashi

#### Taxes, Social Subsidies, and the Allocation of **Work Time**

• American Economic Journal: Macroeconomics---2011---L. Rachel Ngai, Christopher Pissarides

We examine the allocation of hours of work across industrial sectors in OECD countries. We find large disparities across three sector groups, one that produces goods without home substitutes, and two others that have home substitutes but are treated differently by welfare policy. We attribute the disparities to the countries' tax and subsidy policies. High taxation substantially reduces hours in sectors that have close home substitutes but less so in other sectors. Subsidies increase hours in the subsidized sectors that have home substitutes. We compute these policy effects for 19 OECD countries. (JEL H24, H31, J22)

#### Forces Shaping Hours Worked in the OECD, 1960-2004

• American Economic Journal: Macroeconomics---2011---Cara McDaniel

The goal of this paper is to examine the role of taxes and productivity growth as forces influencing market

In a world with interest on reserves, the central bank hours. To achieve this goal, the paper considers a calibrated growth model extended to include home production and subsistence consumption, both of which are found to be key features influencing market hours. The model is simulated for 15 OECD countries. The primary force driving changes in market hours is found to be changing labor income tax rates. Productivity catch-up relative to the United States is found to be an important secondary force. (JEL E24, H24, H31, J22, J24)

#### **Exchange Rates and Wages in an Integrated** World

 American Economic Journal: Macroeconomics---2011---Prachi Mishra, Antonio Spilimbergo

We analyze how the pass-through from exchange rate to domestic wages depends on the degree of integration between domestic and foreign labor markets. Using data from 66 countries over the period 1981-2005, we find that the elasticity of domestic wages to real exchange rate is 0.15 after a year for countries with high barriers to external labor mobility, but about 0.40 in countries with low barriers to mobility. The result is robust to the inclusion of various controls, different measures of exchange rates, and definitions of labor market integration. These findings call for including labor mobility in macro models of external adjustment. (JEL F16, F31, J31)

#### **Emerging Market Currency Excess Returns**

• American Economic Journal: Macroeconomics---2011---Stephen Gilmore, Fumio Hayashi

We consider the excess return from 20 internationally tradable emerging market (EM) currencies against the US dollar. It has two contributions. First, we document stylized facts about EM currencies. EM currencies have provided significant equity-like excess returns against major currencies, but with low volatility. Picking EM currencies with a relatively high forward premium raises the portfolio return substantially. Second, our calculation incorporates institutional features

of the foreign exchange market, such as lags in set- Input and Output Inventory Dynamics tling spot contracts, FX swaps, and bid/offer spreads. Transaction costs arising from bid/offer spreads are less than one-fifth of what is typically presumed in the literature. (JEL C58, F31, G15)

#### Monetary Policy and the Financing of Firms

• American Economic Journal: Macroeconomics---2011---Fiorella De Fiore, Pedro Teles, Oreste Tristani

How should monetary policy respond to changes in financial conditions? We consider a simple model where firms are subject to shocks which may force them to default on their debt. Firms' assets and liabilities are nominal and predetermined. Monetary policy can therefore affect the real value of funds used to finance production. In this model, allowing for inflation volatility in response to aggregate shocks can be optimal; the optimal response to adverse financial shocks is to lower interest rates and to engineer some inflation; and the Taylor rule may implement allocations that have opposite cyclical properties to the optimal ones. (JEL G32, E31, E43, E44, E52)

#### **Contrasting Trends in Firm Volatility**

• American Economic Journal: Macroeconomics---2011---David Thesmar, Mathias Thoenig

Over the past decades, the real and financial volatility of listed firms has increased, while the volatility of private firms has decreased. We first provide panel data evidence that, at the firm level, sales and employment volatility are impacted by changes in the degree of ownership concentration. We then construct a model with private and listed firms where risk-taking is a choice variable at the firm-level. Due to general equilibrium feedback, we find that both an increase in stock market participation and integration in international capital markets generate opposite trends in volatility for private and listed firms. (JEL G15, G32, L25)

• American Economic Journal: Macroeconomics---2011---Yi Wen

This paper develops an analytically tractable general equilibrium model of inventory dynamics based on a precautionary stockout-avoidance motive. The model's predictions are broadly consistent with the US business cycle and key features of inventory behavior. It is also shown that technological improvement of inventory management can increase, rather than decrease, the volatility of aggregate output. Key to this seemingly counterintuitive result is that a stockout-avoidance motive leads to a procyclical shadow value of inventories, which acts as an automatic stabilizer that discourages sales in booms and encourages demand in recessions, thereby reducing the variability of GDP. (JEL D92, E22, E23, E32, G31)

#### **Estimating the Market-Perceived Monetary Policy** Rule

• American Economic Journal: Macroeconomics---2011---James Hamilton, Seth Pruitt, Scott Borger

We introduce a novel method for estimating a monetary policy rule using macroeconomic news. We estimate directly the policy rule agents use to form their expectations by linking news' effects on forecasts of both economic conditions and monetary policy. Evidence between 1994 and 2007 indicates that the marketperceived Federal Reserve policy rule changed: the output response vanished, and the inflation response path became more gradual but larger in long-run magnitude. These response coefficient estimates are robust to measurement and theoretical issues with both potential output and the inflation target. (JEL C51, E31, E43, E52, E58)

#### **Optimal Inflation for the US Economy**

American Economic Journal: Macroeconomics---2011---Roberto Billi

This paper studies the optimal long-run inflation rate (OIR) in a small New Keynesian model, where the only

policy instrument is a short-term nominal interest rate that may occasionally run against a zero lower bound (ZLB). The model allows for worst-case scenarios of misspecification. The analysis shows first, if the government optimally commits, the OIR is below 1 percent annually. Second, if the government re-optimizes each period, the OIR rises markedly to 17 percent. Third, if the government commits only to an inertial Taylor rule, the inflation bias is eliminated at very low cost in terms of welfare for the representative household. (JEL E12, E31, E43, E52, E58)

#### **CONDI: A Cost-of-Nominal-Distortions Index**

 American Economic Journal: Macroeconomics---2011---Stefano Eusepi, Bart Hobijn, Andrea Tambalotti

We construct a PCE-based price index whose weights minimize the welfare costs of nominal distortions: a cost-of-nominal-distortions index. We compute these weights in a multi-sector New Keynesian model, calibrated to match US data on price stickiness, labor shares, and inflation across sectors. The CONDI weights mostly depend on price stickiness. Moreover, CONDI stabilization leads to negligible welfare losses compared to the optimal policy and is better approximated by core rather than headline inflation targeting. An even better approximation can be obtained with an adjusted core index. (JEL C14, E12, E25, E31, E52).

### Education and Catch-Up in the Industrial Revolution

 American Economic Journal: Macroeconomics---2011---Sascha Becker, Erik Hornung, Ludger Woessmann

Research increasingly stresses the role of human capital in modern economic development. Existing historical evidence -- mostly from British textile industries -- however, rejects that formal education was important for the Industrial Revolution. Our new evidence from technological follower Prussia uses a unique school enrollment and factory employment database linking 334 counties from pre-industrial 1816 to two industrial

phases in 1849 and 1882. Using pre-industrial education as instrument for later education and controlling extensively for pre-industrial development, we find that basic education is significantly associated with nontextile industrialization in both phases of the Industrial Revolution. Panel data models with county fixed effects confirm the results. (JEL I20, J24, N13, N33, N63)

### Structural Change Out of Agriculture: Labor Push versus Labor Pull

 American Economic Journal: Macroeconomics---2011---Francisco Alvarez-Cuadrado, Markus Poschke

A declining agricultural employment share is a key feature of economic development. Its main drivers are: improvements in agricultural technology combined with Engel's law release resources from agriculture ("labor push"), and improvements in industrial technology attract labor out of agriculture ("labor pull"). We present a model with both channels and evaluate the importance using data on 12 industrialized countries since the nineteenth century. Results suggest that the "pull" channel dominated until 1920 and the "push" channel dominated after 1960. The "pull" channel mattered more in countries in early stages of the structural transformation. This contrasts with modeling choices in recent literature. (JEL E23, N10, N53, O10, O47).

# Learning about Risk and Return: A Simple Model of Bubbles and Crashes

 American Economic Journal: Macroeconomics---2011---William Branch, George Evans

This paper demonstrates that an asset pricing model with least-squares learning can lead to bubbles and crashes as endogenous responses to the fundamentals driving asset prices. When agents are risk-averse they need to make forecasts of the conditional variance of a stock's return. Recursive updating of both the conditional variance and the expected return implies several mechanisms through which learning impacts

stock prices. Extended periods of excess volatility, bubbles, and crashes arise with a frequency that depends on the extent to which past data is discounted. A central role is played by changes over time in agents' estimates of risk. (JEL D81, D83, E32, G01, G12)

#### Interest Rate Risk and Other Determinants of Post-WWII US Government Debt/GDP Dynamics

 American Economic Journal: Macroeconomics---2011---George Hall, Thomas Sargent

This paper uses a sequence of government budget constraints to motivate estimates of returns on the US Federal government debt. Our estimates differ conceptually and quantitatively from the interest payments reported by the US government. We use our estimates to account for contributions to the evolution of the debt-GDP ratio made by inflation, growth, and nominal returns paid on debts of different maturities. (JEL E23, E31, E43, G12, H63)

### Intermediate Goods and Weak Links in the Theory of Economic Development

 American Economic Journal: Macroeconomics---2011---Charles Jones

What explains the enormous differences in incomes across countries? This paper returns to two old ideas: linkages and complementarity. First, linkages between firms through intermediate goods deliver a multiplier similar to the one associated with capital in a neoclassical growth model. Because the intermediate goods share of output is about one-half, this multiplier is substantial. Second, just as a chain is only as strong as its weakest link, problems along a production chain can sharply reduce output under complementarity. These forces considerably amplify distortions to the allocation of resources, bringing us closer to understanding large income differences across countries.(JEL: D57, E23, O1O, O47)

# stock prices. Extended periods of excess volatility, bubbles, and crashes arise with a frequency that depends Less with More in Singapore

 American Economic Journal: Macroeconomics---2011---John Fernald, Brent Neiman

We show that in a two-sector economy with heterogeneous capital subsidies and monopoly power, primal and dual measures of TFP growth can diverge from each other as well as from true technology. These distortions give rise to dynamic reallocation effects that imply technology growth needs to be measured from the bottom up rather than from the top down. Using Singapore as an example, we show how incomplete data can be used to estimate aggregate and sectoral technology growth as well as reallocation effects. Our framework can reconcile divergent TFP estimates in Singapore and can resolve other empirical puzzles regarding Asian development. (JEL E22, E23, E25, O33, O41, O47)

#### How Sovereign Is Sovereign Credit Risk?

 American Economic Journal: Macroeconomics---2011---Francis Longstaff, Jun Pan, Lasse Pedersen, Kenneth Singleton

We study the nature of sovereign credit risk using an extensive set of sovereign CDS data. We find that the majority of sovereign credit risk can be linked to global factors. A single principal component accounts for 64 percent of the variation in sovereign credit spreads. Furthermore, sovereign credit spreads are more related to the US stock and high-yield markets than they are to local economic measures. We decompose credit spreads into their risk premium and default risk components. On average, the risk premium represents about a third of the credit spread. (JEL F34, G15, O16, O19, P34)

# Are Long-Run Inflation Expectations Anchored More Firmly in the Euro Area Than in the United States?

 American Economic Journal: Macroeconomics---2011---Meredith Beechey, Benjamin K. Johannsen, Andrew Levin This paper compares the evolution of long-run inflation expectations in the euro area and the United States, using evidence from financial markets and surveys of professional forecasters. Survey data indicate that long-run inflation expectations are reasonably well anchored in both economies but reveal substantially greater dispersion across forecasters' long-horizon projections of US inflation. Analysis of daily data on inflation swaps and nominal-indexed bond spreads, which gauge compensation for expected inflation and inflation risk, also suggests that long-run inflation expectations are more firmly anchored in the euro area than in the United States. (JEL D84, E31, E37, E52, E58)

#### Welfare-Based Optimal Monetary Policy with Unemployment and Sticky Prices: A Linear-Quadratic Framework

 American Economic Journal: Macroeconomics---2011---Federico Ravenna, Carl Walsh

We derive a linear-quadratic model that is consistent with sticky prices and search and matching frictions in the labor market. We show that the second-order approximation to the welfare of the representative agent depends on inflation and "gaps" that involve current and lagged unemployment. Our approximation makes explicit how welfare costs are generated by the presence of search frictions. These costs are distinct from the costs associated with relative price dispersion and fluctuations in consumption that appear in standard new Keynesian models. We show the labor market structure has important implications for optimal monetary policy. (JEL E24, E31, E52)

# **Product Market Regulation and Market Work: A Benchmark Analysis**

 American Economic Journal: Macroeconomics---2011---Lei Fang, Richard Rogerson

Recent empirical work finds a negative correlation between product market regulation and aggregate employment. We examine the effect of product market regulations on hours worked in a benchmark model of time allocation. Product market regulations affect

market work in effectively the same fashion as labor or consumption taxes. For product market regulations to affect aggregate market work, the key driving force is the size of income transfers associated with the regulations, and the key propagation mechanism is the labor supply elasticity. We show that industry level analysis is of little help in assessing the aggregate effects of product market regulation. (JEL E24, J22, L51)

### Did Improvements in Household Technology Cause the Baby Boom? Evidence from Electrification, Appliance Diffusion, and the Amish

 American Economic Journal: Macroeconomics---2011---Martha Bailey, William Collins

We examine the hypothesis that advances in household technology caused the US baby boom, and we find no support for this claim. Advances in household technology occurred before the baby boom, while fertility declined. From 1940 to 1960, levels/changes in county-level appliance ownership and electrification negatively predict levels/changes in fertility rates. Exposure to electricity in early adulthood and children-ever-born are negatively correlated for the relevant cohorts. The Amish, who used modern technologies much less than other US households, experienced a coincident baby boom. This evidence can be reconciled with economic theory if other home-produced goods are substitutes with children. (JEL D12, J13, N32, N92, O33)

#### **Family Firms and Labor Relations**

 American Economic Journal: Macroeconomics---2011---Holger M. Mueller, Thomas Philippon

This paper examines the relationship between family ownership and the quality of labor relations. We find that family ownership is more prevalent in countries in which labor relations are hostile, consistent with the notion that family firms are particularly effective at coping with difficult labor relations. Our results are robust to controlling for minority shareholder protection and other potential determinants of family ownership.

To address endogeneity issues, we show that, controlling for industry- and country-fixed effects, industries that are more labor dependent have relatively more family ownership in countries with worse labor relations. (JEL G32, G34, J52, J53)

# **Evaluating the Classification of Economic Activity into Recessions and Expansions**

 American Economic Journal: Macroeconomics---2011---Travis Berge, Oscar Jorda

The Business Cycle Dating Committee of the National Bureau of Economic Research provides a historical chronology of business cycle turning points. We investigate three central aspects of this chronology. How skillful is the Dating Committee when classifying economic activity into expansions and recessions? Which indices of economic conditions best capture the current but unobservable state of the business cycle? And which indicators best predict future turning points, and at what horizons? We answer each of these questions in detail using methods specifically designed to assess classification ability. In the process, we clarify several important features of the business cycle. (JEL C82, E32)

### Simple Analytics of the Government Expenditure Multiplier

 American Economic Journal: Macroeconomics---2011---Michael Woodford

This paper explains the key factors that determine the output multiplier of government purchases in New Keynesian models, through a series of simple examples that can be solved analytically. Sticky prices or wages allow for larger multipliers than in a neoclassical model, though the size of the multiplier depends crucially on the monetary policy response. A multiplier well in excess of one is possible when monetary policy is constrained by the zero lower bound, and in this case welfare increases if government purchases expand to partially fill the output gap that arises from the inability to lower interest rates. (JEL E12, E23, E32, E62, H20, H50)

### To address endogeneity issues, we show that, controlling for industry- and country-fixed effects, industries Spending

• American Economic Journal: Macroeconomics---2011---Christopher Nekarda, Valerie Ramey

This paper investigates the effects of government purchases at the industry level in order to shed light on the transmission mechanism for government spending on the aggregate economy. We create a new panel dataset that matches output and labor variables to industry-specific shifts in government demand. An increase in government demand raises output and hours, lowers real product wages and labor productivity, and has no effect on the markup. The estimates also imply approximately constant returns to scale. The findings are more consistent with the effects of government spending in the neoclassical model than the textbook New Keynesian model. (JEL E12, E23, E62, H50)

# Sticky Prices versus Monetary Frictions: An Estimation of Policy Trade-Offs

 American Economic Journal: Macroeconomics---2011---S. Boragan Aruoba, Frank Schorfheide

We develop a two-sector monetary model with a centralized and decentralized market. Activities in the centralized market resemble those in a standard New Keynesian economy with price rigidities. In the decentralized market agents engage in bilateral exchanges for which money is essential. This paper is the first to formally estimate such a model, evaluate its fit based on postwar US data, and assess its money demand properties. Steady-state welfare calculations reveal that the distortions created by the monetary friction may be of similar magnitude as the distortions created by the New Keynesian friction. (JEL C54, E12, E31, E41, E52)

# Pricing-to-Market and the Failure of Absolute PPP

 American Economic Journal: Macroeconomics---2011---George Alessandria, Joseph Kaboski We show that deviations from the law of one price in tradable goods are an important source of violations of absolute purchasing power parity. Using highly disaggregated export data, we document systematic international price discrimination: at the US dock, low-income countries pay lower prices. This pricing-to-market is about twice as important as local nontraded inputs for differences in tradable prices. We propose a model of consumer search and pricing-to-market in which consumers in low-income countries have a comparative advantage in nontraded, nonmarket search activities. Evidence from cross-country time-use studies and US export prices supports the model. (JEL E31, F14)

### Worker Heterogeneity and Endogenous Separations in a Matching Model of Unemployment Fluctuations

 American Economic Journal: Macroeconomics---2011---Mark Bils, Yongsung Chang, Sun-Bin Kim

We model worker heterogeneity in the rents from being employed in a Diamond-Mortensen-Pissarides model of matching and unemployment. We show that heterogeneity, reflecting differences in match quality and worker assets, reduces the extent of fluctuations in separations and unemployment. We find that the model faces a trade-off—it cannot produce both realistic dispersion in wage growth across workers and realistic cyclical fluctuations in unemployment. (JEL D31, E24, E32, J41, J63)

# **Bank Integration and Transmission of Financial Shocks: Evidence from Japan**

 American Economic Journal: Macroeconomics---2011---Masami Imai, Seitaro Takarabe

This paper investigates whether banking integration plays an important role in transmitting financial shocks across geographical boundaries by using a dataset on the branch network of nationwide city banks and prefecture-level dataset on the formation and collapse of the real estate bubble in Japan. The results show that the credit and economic cycle of financially integrated prefectures exhibits higher sensitivity to fluctuation in land prices in cities relative to financially isolated ones. These results suggest nationwide banks can be a source of economic volatility when they pass on the impacts of financial shocks to host economies. (JEL E44, G21, R30)

# Professional Forecasters' View of Permanent and Transitory Shocks to GDP

• American Economic Journal: Macroeconomics---2011---Spencer Krane

This paper examines how the professional forecasters comprising the Blue Chip Economic Consensus view shocks to GDP. I use an unobserved components model of the forecast revisions to identify forecasters' perceptions of permanent and transitory shocks to GDP. The model indicates forecasters: attribute about two-thirds of the variance in current-period revisions to permanent shocks; view the relative importance of permanent shocks similar to the estimates of some simple univariate econometric models; see high-frequency indicators of economic activity as being informative about both permanent and transitory shocks; and react to incoming data differently during periods of economic weakness. (JEL C51, C53, E23, E27, E32, E37)

#### **Housing Bubbles**

 American Economic Journal: Macroeconomics---2011---Oscar Arce, David Lopez-Salido

We use the notion of a housing bubble as an equilibrium in which some investors hold houses for resale purposes only and not with the expectation of receiving a dividend, either in the form of rent or utility. We show that an economy with looser collateral constraints is less prone to bubbles, which, in turn, have smaller size, but are more fragile in the face of credit-crunch shocks. Our environment also allows for the existence of pure bubbles on unproductive assets. We find that multiple equilibria, in which the economy moves endogenously from a pure bubble to a housing bubble and vice versa, are possible. (JEL G12, R21, R31)

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 American Economic Journal: Macroeconomics---2011---Reto Foellmi, Josef Zweimüller

We explore how the underemployment problem of less-developed economies is related to income inequality. Consumers have nonhomothetic preferences over differentiated products of formal-sector goods and thus inequality affects the composition of aggregate demand via the price-setting behavior of firms. We find that high inequality divides the formal sector into mass producers and exclusive producers (which serve only the rich); high inequality generates an equilibrium where many workers are crowded into the informal economy; and an increase in subsistence productivity raises the unskilled workers' wages and boosts employment due to the higher purchasing power of poorer households. (JEL D31, D43, E24, E26, J24)

## **Understanding PPPs and PPP-Based National Accounts**

 American Economic Journal: Macroeconomics---2010---Angus Deaton, Alan Heston

We provide an overview of the theory and practice of constructing PPPs. We focus on four practical areas: how to handle international differences in quality; the treatment of urban and rural areas of large countries; how to estimate prices for government services, health, and education; and the effects of the regional structure of the latest International Comparison Program for 2005. We discuss revisions of the Penn World Table, and their effects on econometric analysis, and include health warnings. Some international comparisons are close to impossible, even in theory, and in others, the practical difficulties make comparison exceedingly hazardous. (JEL C43, E01, E31, O57).

# **Understanding PPPs and PPP-Based National Accounts: Comment**

• American Economic Journal: Macroeconomics---2010---Walter Diewert

#### Understanding PPPs and PPP-Based National Accounts: Comment

 American Economic Journal: Macroeconomics---2010---Martin Ravallion

## How Much Consumption Insurance beyond Self-Insurance?

 American Economic Journal: Macroeconomics---2010---Greg Kaplan, Giovanni Violante

We assess the degree of consumption smoothing implicit in a calibrated life-cycle version of the standard incomplete-markets model, and we compare it to the empirical estimates of Richard Blundell, Luigi Pistaferri, and Ian Preston (2008) (BPP hereafter) on US data. Households in the data have access to more consumption insurance against permanent earnings shocks than in the model. BPP estimate that 36 percent of permanent shocks are insurable, whereas the model's counterpart of the BPP estimator varies between 7 percent and 22 percent, depending on the tightness of debt limits. We also show that the BPP estimator has a downward bias that grows as borrowing limits become tighter. (JEL D31, D91, E21).

### Unmeasured Investment and the Puzzling US Boom in the 1990s

 American Economic Journal: Macroeconomics---2010---Ellen McGrattan, Edward Prescott

For the 1990s, the basic neoclassical growth model predicts a depressed economy, when in fact the US economy boomed. We extend the base model by introducing intangible investment and non-neutral technology change with respect to producing intangible investment goods and find that the 1990s are not puzzling in light of this new theory. There is microeconomic and macroeconomic evidence motivating our extension, and the theory's predictions are in conformity with US national accounts and capital gains. We compare accounting measures with corresponding measures for our model economy and find that standard accounting measures greatly understate the 1990s boom. (JEL E22, E23, O33, O47)

# **Do Output Contractions Trigger Democratic Change?**

 American Economic Journal: Macroeconomics---2010---Paul Burke, Andrew Leigh

Does faster economic growth increase pressure for democratic change, or reduce it? Using data for 154 countries for the period 1963-2007, we examine the short-run relationship between economic growth and moves toward and away from greater democracy. To address the potential endogeneity of economic growth, we use variation in precipitation, temperatures, and commodity prices as instruments for a country's rate of economic growth. Our results indicate that more rapid economic growth reduces the short-run likelihood of institutional change toward democracy. Output contractions due to adverse weather shocks appear to have a particularly important impact on the timing of democratic change. (JEL D72, E23, E32, O11, O17, O47)

#### The Structure of Tariffs and Long-Term Growth

 American Economic Journal: Macroeconomics---2010---Nathan Nunn, Daniel Trefler

We show that the "skill bias" of a country's tariff structure is positively correlated with long-term per capita GDP growth. Testing for causal mechanisms, we find evidence consistent with the existence of real benefits from tariffs focused in skill-intensive industries. However, this only accounts for a quarter of the total correlation between skill-biased tariffs and growth. Turning to alternative explanations, we extend the standard Grossman-Helpman "protection-for- sale" model and show how the skill bias of tariffs can reflect the extent of domestic rent-seeking activities in the economy. We provide evidence that the remaining variation is explained by this endogeneity. (JEL D72, F13, F43, O17, O19, O24, O47)

# Value-Added Taxes, Chain Effects, and Informality

• American Economic Journal: Macroeconomics---2010---Áureo de Paula, Jose Scheinkman

We present an equilibrium model of tax avoidance and test its implications using a survey of firms in Brazil. In the model, the credit method used to collect value-added tax (VAT) creates informality chains-clients or suppliers of informal firms are more likely to be informal. An increase in enforcement in a production stage increases formality downstream and upstream. Various empirical measures of formality of suppliers and buyers, and of enforcement downstream and upstream, are positively correlated with formality. When the VAT is applied in a single stage of production at a rate estimated by the authorities, these chain effects disappear. (JEL H25, H26, L14, L21, O14, O17)

## Determinants of Economic Growth: Will Data Tell?

 American Economic Journal: Macroeconomics---2010---Antonio Ciccone, Marek Jarociński

Many factors inhibiting and facilitating economic growth have been suggested. Can agnostics rely on international income data to tell them which matter? We find that agnostic priors lead to conclusions that are sensitive to differences across available income estimates. For example, the PWT 6.2 revision of the 1960-1996 income estimates in the PWT 6.1 leads to substantial changes regarding the role of government, international trade, demography, and geography. We conclude that margins of error in international income estimates appear too large for agnostic growth empirics. (JEL O41, O47)

# International Competition and Inflation: A New Keynesian Perspective

 American Economic Journal: Macroeconomics---2010---Luca Guerrieri, Christopher Gust, David Lopez-Salido

We develop and estimate an open economy New Keynesian Phillips Curve (NKPC) in which variable demand elasticities give rise to movements in desired markups in response to changes in competitive pressure from abroad. A parametric restriction yields the standard NKPC under constant elasticity and no role for foreign

competition to influence domestic inflation. Foreign competition plays an important role in accounting for the behavior of traded goods price inflation. Foreign competition accounted for more than half of a 4 percentage point decline in domestic goods price inflation in the 1990s. Our results also provide evidence against demand curves with a constant elasticity. (JEL E12, E22, E31, F14, F41)

## Risk-Sensitive Consumption and Savings under Rational Inattention

 American Economic Journal: Macroeconomics---2010---Yulei Luo, Eric Young

This paper studies the consumption-savings behavior of households who have risk-sensitive preferences and suffer from limited information-processing capacity (rational inattention or RI). We first solve the model explicitly and show that RI increases precautionary savings by interacting with income uncertainty and risk sensitivity. Given the closed-form solutions, we find that the RI model displays a wide range of observational equivalence properties, implying that consumption and savings data cannot distinguish between risk sensitivity, robustness, or the discount factor, in any combination. We then show that the welfare costs from RI are larger for risk-sensitive households than any other observationally-equivalent settings. (JEL D11, D81, D82, E13, E21)

#### **Amplification Mechanisms in Liquidity Crises**

 American Economic Journal: Macroeconomics---2010---Arvind Krishnamurthy

I describe two amplifications mechanisms that operate during crises and discuss the benefits of policy given each mechanism. The first mechanism involves asset prices and balance sheets. A negative shock to agents' balance sheets causes them to liquidate assets, lowering prices, further deteriorating balance sheets and amplifying the shock. The second mechanism involves investors' Knightian uncertainty. Unusual shocks to untested financial innovations increase agents' uncertainty about their investments, causing them to disen-

gage from markets and amplifying the crisis. Liquidity provision by the central bank alleviates the crisis in both mechanisms. Ex ante policies such as liquidity/capital requirements may also be beneficial. (JEL E32, E44, G01, G21, G32)

# The Effect of Corporate Taxes on Investment and Entrepreneurship

American Economic Journal: Macroeconomics---2010---Simeon Djankov, Tim Ganser, Caralee McLiesh, Rita Ramalho, Andrei Shleifer

We present new data on effective corporate income tax rates in 85 countries in 2004. The data come from a survey, conducted jointly with PricewaterhouseCoopers, of all taxes imposed on "the same" standardized mid-size domestic firm. In a cross-section of countries, our estimates of the effective corporate tax rate have a large adverse impact on aggregate investment, FDI, and entrepreneurial activity. Corporate tax rates are correlated with investment in manufacturing but not services, as well as with the size of the informal economy. The results are robust to the inclusion of many controls. (JEL E22, F23, G31, H25, H32, L26)

## Was the Wealth of Nations Determined in 1000 BC?

 American Economic Journal: Macroeconomics---2010---Diego Comin, William Easterly, Erick Gong

We assemble a dataset on technology adoption in 1000 bc, 0 ad, and 1500 AD for the predecessors to today's nation states. Technological differences are surprisingly persistent over long periods of time. Our most interesting, strong, and robust results are for the association of 1500 AD technology with per capita income and technology adoption today. We also find robust and significant technological persistence from 1000 BC to 0 AD, and from 0 AD to 1500 AD. The evidence is consistent with a model where the cost of adopting new technologies declines sufficiently with the current level of adoption. (JEL N10, O33, O47)

# Labor Contracts, Equal Treatment, and Wage-Unemployment Dynamics

• American Economic Journal: Macroeconomics---2010---Andy Snell, Jonathan Thomas

This paper analyses a model in which firms cannot pay discriminate based on year of entry. It is assumed that workers can costlessly quit at any time, while firms are committed to contracts. We solve for the dynamics of wages and unemployment, and show that real wages display a degree of downward rigidity and do not necessarily clear the labor market. Using sectoral productivity data from the post-war US economy, we assess the ability of the model to match the actual unemployment series. We also show that equal treatment follows from the assumption of at-will employment contracting in our model. (JEL E24, E32, J31, J41)

# Relative Goods' Prices, Pure Inflation, and the Phillips Correlation

 American Economic Journal: Macroeconomics---2010---Ricardo Reis, Mark Watson

This paper uses a dynamic factor model for the quarterly changes in consumption goods' prices in the United States since 1959 to separate them into three independent components: idiosyncratic relative-price changes, a low-dimensional index of aggregate relative-price changes, and an index of equiproportional changes in all inflation rates that we label "pure" inflation. We use the estimates to answer two questions. First, what share of the variability of inflation is associated with each component, and how are they related to conventional measures of monetary policy and relative-price shocks? Second, what drives the Phillips correlation between inflation and measures of real activity? (JEL E21, E23, E31, E52)

# Financiers versus Engineers: Should the Financial Sector Be Taxed or Subsidized?

• American Economic Journal: Macroeconomics---2010---Thomas Philippon

I study the allocation of human capital in an economy with production externalities, financial constraints, and career choices. Agents choose to become entrepreneurs, workers, or financiers. Entrepreneurship has positive externalities but requires the services of financiers. In the second best solution, the financial sector should be taxed in exactly the same way as the nonfinancial sector. When direct subsidies to investment and scientific education are not feasible, subsidizing the financial sector increases growth if externalities are driven by physical capital as in Paul M. Romer (1986), and decreases growth if externalities are driven by human capital as in Robert E. Lucas, Jr. (1988). (JEL E44, H21, H25, L26, O41)

### Do Expectations Matter? The Great Moderation Revisited

 American Economic Journal: Macroeconomics---2010---Fabio Canova, Luca Gambetti

We examine the role of expectations in the Great Moderation episode. We derive theoretical restrictions in a New-Keynesian model and test them using measures of expectations obtained from survey data, the Greenbook and bond markets. Expectations explain the dynamics of inflation and interest rates but their importance is roughly unchanged over time. Systems with and without expectations display similar reduced form characteristics. Results are robust to changes in the structure of the empirical model. (JEL E23, E24, E31, E32)

#### Confucianism and the East Asian Miracle

• American Economic Journal: Macroeconomics---2010---Ming-Yih Liang

We examine two behavioral traits essential to Confucianism, and put forward hypotheses as to whether these behavioral traits impede or are conducive to "leading" or "follower" mode growth. A dynamic leader-follower general equilibrium model with appropriately specified "Confucian" parameters is shown to generate results that correspond to some of the main features

of East Asian economies: their miracle growths, sub- bank faces a trade-off between inflation and unemploysequent slowdowns, trade surpluses, and persistent accumulations of foreign exchange reserves. We calibrate the model to assess the quantitative importance of these cultural effects and examine their implications for future evolution of these economies. (JEL E23, O17, O41, O47, P24, Z12, Z13)

#### **Central Bank Communication and Expectations** Stabilization

• American Economic Journal: Macroeconomics---2010---Stefano Eusepi, Bruce Preston

The value of communication is analyzed in a model in which agents' expectations need not be consistent with central bank policy. Without communication, the Taylor principle is not sufficient for macroeconomic stability: divergent learning dynamics are possible. Three communication strategies are contemplated to ensure consistency between private forecasts and monetary policy strategy: communicating the precise details of policy; communicating only the variables on which policy decisions are conditioned; and communicating the inflation target. The former strategies restore the Taylor principle as a sufficient condition for anchoring expectations. The latter strategy, in general, fails to protect against expectations-driven fluctuations. (JEL E32, E43, E52, E58)

### Labor Markets and Monetary Policy: A New **Keynesian Model with Unemployment**

• American Economic Journal: Macroeconomics---2010---Olivier Blanchard, Jordi Gali

We construct a utility-based model of fluctuations with nominal rigidities and unemployment. We first show that under a standard utility specification, productivity shocks have no effect on unemployment in the constrained efficient allocation. That property is also shown to hold, despite labor market frictions, in the decentralized equilibrium under flexible prices and wages. Inefficient unemployment fluctuations arise when we introduce real-wage rigidities. As a result, in the presence of staggered price setting by firms, the central (JEL E23, E43, E44, F31, F32, F34)

ment stabilization, which depends on labor market characteristics. We draw the implications for optimal monetary policy. (JEL E12, E24, E52)

#### **How Much Does Immigration Boost Innovation?**

• American Economic Journal: Macroeconomics---2010---Jennifer Hunt, Marjolaine Gauthier-Loiselle

We measure the extent to which skilled immigrants increase innovation in the United States. The 2003 National Survey of College Graduates shows that immigrants patent at double the native rate, due to their disproportionately holding science and engineering degrees. Using a 1940-2000 state panel, we show that a 1 percentage point increase in immigrant college graduates' population share increases patents per capita by 9-18 percent. Our instrument for the change in the skilled immigrant share is based on the 1940 distribution across states of immigrants from various source regions and the subsequent national increase in skilled immigration from these regions. (JEL J24, J61, O31, O33)

#### Financial Stability, the Trilemma, and **International Reserves**

• American Economic Journal: Macroeconomics---2010---Maurice Obstfeld, Jav Shambaugh, Alan Taylor

The rapid growth of international reserves, a development concentrated in the emerging markets, remains a puzzle. In this paper, we suggest that a model based on financial stability and financial openness goes far toward explaining reserve holdings in the modern era of globalized capital markets. The size of domestic financial liabilities that could potentially be converted into foreign currency (M2), financial openness, the ability to access foreign currency through debt markets, and exchange rate policy are all significant predictors of reserve stocks. Our empirical financial-stability model seems to outperform both traditional models and recent explanations based on external short-term debt.

# Putting the Parts Together: Trade, Vertical Linkages, and Business Cycle Comovement

 American Economic Journal: Macroeconomics---2010---Julian di Giovanni, Andrei Levchenko

Countries that trade more with each other exhibit higher business cycle correlation. This paper examines the mechanisms underlying this relationship using a large cross-country, industry-level panel dataset of manufacturing production and trade. We show that sector pairs that experience more bilateral trade exhibit stronger comovement. Vertical linkages in production are an important explanation behind this effect: bilateral international trade increases comovement significantly more in cross-border industry pairs that use each other as intermediate inputs. Our estimates imply that these vertical production linkages account for some 30 percent of the total impact of bilateral trade on the business cycle correlation. (JEL E32, F14, F43)

## Housing Market Spillovers: Evidence from an Estimated DSGE Model

 American Economic Journal: Macroeconomics---2010---Matteo Iacoviello, Stefano Neri

We study sources and consequences of fluctuations in the US housing market. Slow technological progress in the housing sector explains the upward trend in real housing prices of the last 40 years. Over the business cycle, housing demand and housing technology shocks explain one-quarter each of the volatility of housing investment and housing prices. Monetary factors explain less than 20 percent, but have played a bigger role in the housing cycle at the turn of the century. We show that the housing market spillovers are nonnegligible, concentrated on consumption rather than business investment, and have become more important over time. (JEL E23, E32, E44, O33, R31)

### Accounting for the Rise in Consumer Bankruptcies

• American Economic Journal: Macroeconomics---2010---Igor Livshits,James (Jim) MacGee,Michele Tertilt

Personal bankruptcies in the United States have increased dramatically, rising from 1.4 per thousand working age adults in 1970 to 8.5 in 2002. We use a heterogeneous agent life-cycle model with competitive lenders to evaluate several commonly offered explanations. We find that increased uncertainty (income shocks, expense uncertainty) cannot account quantitatively for the rise in bankruptcies. Instead, the rise in filings appears mainly to reflect changes in the credit market environment: a decrease in the transaction cost of lending and in the cost of bankruptcy. We also argue that the abolition of usury laws and other legal changes were unimportant. (JEL D14, E44, G21, G28)

#### Globalization and Innovation in Emerging Markets

 American Economic Journal: Macroeconomics---2010---Yuriy Gorodnichenko, Jan Svejnar, Katherine Terrell

Globalization brings opportunities and pressures for domestic firms in emerging markets to innovate and improve their competitive position. Using data from 27 emerging market economies, we estimate the effects of foreign competition and linkages with foreign firms on innovation by domestic firms. We provide robust evidence of a positive relationship between foreign competition and innovation, broadly defined. The supply chain of multinational enterprises and trade are also important channels. There is no evidence for an inverted U relationship between innovation and foreign competition. Moreover, the relationship between globalization and innovation does not differ across the manufacturing and service sectors. (JEL F02, F23, M16, O33)

#### Offshoring in a Ricardian World

 American Economic Journal: Macroeconomics---2010---Andres Rodriguez-Clare

This paper proposes a Ricardian model to understand the short-run and long-run aggregate effects of increased fragmentation and offshoring on rich and poor countries. The short-run analysis shows that, when offshoring is sufficiently high, further increases in off- the military may facilitate democratic consolidation. shoring benefit the poor country and hurt the rich country. But these effects may be reversed in the long run as countries adjust their research efforts in response to increased offshoring. In particular, in the long run, the rich country always gains from increased offshoring, whereas poor countries see their static gains partially eroded by a decline in their research efforts. (JEL F12, F23, L24, M16)

#### Business Volatility, Job Destruction, and Unemployment

• American Economic Journal: Macroeconomics---2010---Steven Davis, Jason Faberman, John Haltiwanger, Ron Jarmin, Javier Miranda

Unemployment inflows fell from 4 percent of employment per month in the early 1980s to 2 percent by the mid 1990s. Using low frequency movements in industry-level data, we estimate that a 1 percentage point drop in the quarterly job destruction rate lowers the monthly unemployment inflow rate by 0.28 points. By our estimates, declines in job destruction intensity account for 28 (55) percent of the fall in unemployment inflows from 1982 (1990) to 2005. Slower job destruction accounts for similar fractions of long-term declines in the rate of unemployment. (JEL E24, E32, J64)

#### A Theory of Military Dictatorships

• American Economic Journal: Macroeconomics---2010---Daron Acemoglu, Davide Ticchi, Andrea Vindigni

We investigate how nondemocratic regimes use the military and how this can lead to the emergence of military dictatorships. The elite may build a strong military and make the concessions necessary for the military to behave as their perfect agent, or they may risk the military turning against them. Once the transition to democracy takes place, a strong military poses a threat against the nascent democratic regime until it is reformed. We study the role of income inequality and natural resources in the emergence of military dictatorships and show how the national defense role of (JEL D72, H56)

#### Inflation-Gap Persistence in the US

• American Economic Journal: Macroeconomics---2010---Timothy Cogley, Giorgio Primiceri, Thomas Sargent

We estimate vector autoregressions with drifting coefficients and stochastic volatility to investigate whether US inflation persistence has changed. We focus on the inflation gap, defined as the difference between inflation and trend inflation, and we measure persistence in terms of short- to medium-term predictability. We present evidence that inflation-gap persistence increased during the Great Inflation and that it fell after the Volcker disinflation. We interpret these changes using a dynamic new Keynesian model that highlights the importance of changes in the central bank's inflation target. (JEL E12, E31, E52, E58)

#### The TIPS Yield Curve and Inflation Compensation

• American Economic Journal: Macroeconomics---2010---Refet Gürkaynak, Brian Sack, Jonathan H. Wright

For over ten years, the Treasury has issued indexlinked debt. This paper describes the methodology for fitting a smoothed yield curve to these securities that is used at the Federal Reserve Board every day, and makes the estimates public. Comparison with the corresponding nominal yield curve allows measures of inflation compensation to be computed. We discuss the interpretation of inflation compensation, and provide evidence that it is not a pure measure of inflation expectations being distorted by inflation risk premium and liquidity premium components. We attempt to estimate the TIPS liquidity premium and to extract underlying inflation expectations. (JEL E31, E43, H63)

### Why Are Saving Rates of Urban Households in China Rising?

• American Economic Journal: Macroeconomics---2010---Marcos Chamon, Eswar Prasad

From 1995 to 2005, the average urban household sav-sources of within-country and between-country differings rate in China rose by 7 percentage points, to about one-quarter of disposable income. Savings rates increased across all demographic groups, and the age profile of savings has an unusual pattern in recent years, with younger and older households having relatively high savings rates. We argue that these patterns are best explained by the rising private burden of expenditures on housing, education, and health care. These effects and precautionary motives may have been amplified by financial underdevelopment, including constraints on borrowing against future income and low returns on financial assets. (JEL D14, E21, O12, O18, P25, P36)

#### Firm Heterogeneity and the Long-Run Effects of **Dividend Tax Reform**

• American Economic Journal: Macroeconomics---2010---Francois Gourio, Jianjun Miao

To study the long-run effect of dividend taxation on aggregate capital accumulation, we build a dynamic general equilibrium model in which there is a continuum of firms subject to idiosyncratic productivity shocks. We find that a dividend tax cut raises aggregate productivity by reducing the frictions in the reallocation of capital across firms. Our baseline model simulations show that when both dividend and capital gains tax rates are cut from 25 and 20 percent, respectively, to the same 15 percent level permanently, the aggregate long-run capital stock increases by about 4 percent. (JEL D21, E22, E62, G32, G35, H25, H32)

#### **Productivity Differences between and within Countries**

• American Economic Journal: Macroeconomics---2010---Daron Acemoglu, Melissa Dell

We document substantial within-country (crossmunicipality) differences in incomes for a large number of countries in the Americas. A significant fraction of the within-country differences cannot be explained by observed human capital. We conjecture that the

ences are related. As a first step toward a unified framework, we propose a simple model incorporating differences in technological know-how across countries and differences in productive efficiency within countries. (JEL E23, I31, J31, O15, O18, O47, R23)

#### Why Does Misallocation Persist?

• American Economic Journal: Macroeconomics---2010---Abhijit V. Banerjee, Benjamin Moll

Recent papers argue that the misallocation of resources can explain large cross-country TFP differences. This argument is underpinned by empirical evidence documenting substantial dispersion in the marginal products of resources, particularly capital, in developing countries. But why does misallocation persists? That is, why don't distortions disappear on their own? This is particularly true for capital misallocation, a point we illustrate in a simple model of capital accumulation with credit constraints. We distinguish between misallocation on the intensive and the extensive margin, and show that the former should disappear asymptotically under general conditions, while the latter may persist. We conclude by discussing possible theories of persistent misallocation. (JEL D24, E22, G31, G32, L26)

#### **Development Accounting**

• American Economic Journal: Macroeconomics---2010---Chang-Tai Hsieh, Pete Klenow

Researchers have made much progress in the past 25 years in accounting for the proximate determinants of income levels: physical capital, human capital, and Total Factor Productivity (TFP). But we still know little about why these factors vary. We argue that TFP exerts a powerful influence on output not only directly, but also indirectly, through its effect on physical and human capital accumulation. We discuss why TFP varies across countries, highlighting misallocation of inputs across firms and industries as a key determinant. (JEL E22, E23, F21, F35, O10, O40)

# The New Kaldor Facts: Ideas, Institutions, Population, and Human Capital

• American Economic Journal: Macroeconomics---2010---Charles Jones, Paul Romer

In 1961, Nicholas Kaldor highlighted six "stylized" facts to summarize the patterns that economists had discovered in national income accounts and to shape the growth models being developed to explain them. Redoing this exercise today shows just how much progress we have made. In contrast to Kaldor's facts, which revolved around a single state variable, physical capital, our updated facts force consideration of four far more interesting variables: ideas, institutions, population, and human capital. Dynamic models have uncovered subtle interactions among these variables, generating important insights about such big questions as: Why has growth accelerated? Why are there gains from trade? (JEL D01, E01, E22, E23, E24, J11)