# Literature Report

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#### Abstract

# To bi, or not to bi? Differences between spillover estimates from bilateral and multilateral multi-country models

• Journal of International Economics---2017---Georgios Georgiadis

Asymptotic analysis and Monte Carlo simulations show that spillover estimates obtained from widely-used bilateral (such as two-country VAR) models are in general less accurate both in terms of bias and mean squared error than those obtained from multilateral (such as global VAR) models. In particular, the accuracy of spillover estimates obtained from bilateral models depends on two aspects of economies' integration with the rest of the world. First, accuracy worsens as direct bilateral transmission channels become less important, for example when the spillover-sender accounts only for a small share of the spillover-recipient's overall integration with the rest of the world. Second, accuracy worsens as indirect higher-order spillovers and spillbacks become more important, for example when the spillover-recipient is more integrated with the rest of the world overall. Empirical evidence on the global output spillovers from US monetary policy is consistent with these generic results: Spillover estimates obtained from two-country VAR models are systemati-

cally smaller than those obtained from a global VAR model; and the differences between spillover estimates obtained from two-country VAR models and a global VAR model are more pronounced for economies for which the US accounts for a smaller share of their overall trade and financial integration with the rest of the world, and for economies which are more integrated with the rest of the world overall.

# The impact of export promotion on export market entry

• Journal of International Economics---2017---Annette Broocks, Johannes Van Biesebroeck

For small open economies, it is essential that many firms find their way to the export market and most governments provide some form of export promotion assistance. We use detailed firm-level data for Flanders, the largest region in Belgium, to evaluate whether its program raises firms' propensity to start exporting outside the EU single market. We find robust evidence for such an effect by relying on the selection-on-observables assumption which we implement using various estimators. We address a likely upward bias due to self-selection into support using two strategies: (i) focus on sub-samples of firms where endogenous selection into treatment is less likely, and (ii) use firms that receive the weakest form of support as controls

for firms receiving more extensive support. The effects remain positive and statistically significant, but are smaller in magnitude and in the second case estimated much less precisely.

# On the comparative advantage of U.S. manufacturing: Evidence from the shale gas revolution

• Journal of International Economics---2017---Rabah Arezki, Thiemo Fetzer, Frank Pisch

This paper provides novel empirical evidence of the effects of a plausibly exogenous change in relative factor prices on U.S. manufacturing production and trade. The shale gas revolution has led to (very) large and persistent differences in the price of natural gas between the U.S. and the rest of the world reflecting differences in endowment of difficult-to-trade natural gas. Guided by economic theory, empirical tests on output, factor reallocation and international trade are conducted. Results show that U.S. manufacturing exports have grown by about 10% on account of their energy intensity since the onset of the shale revolution. We also document that the U.S. shale revolution is operating both at the intensive and extensive margins.

# Skill acquisition and the dynamics of trade-induced inequality

 Journal of International Economics---2017---Eliav Danziger

I develop and calibrate a dynamic general-equilibrium trade model with endogenous skill demand and supply. Simulations show that removing US trade barriers would lead to aggregate gains in the United States of 4.5%. Individual workers' gains, however, depend on their education, age and birth cohort. The biggest winners, the oldest educated workers alive during trade liberalization, gain 6.7%, while their uneducated peers gain the least, only 1.2%. A major finding is that ignoring either the endogeneity of the skill supply or the post-liberalization dynamics, as the existing literature does, leads to a substantial bias in the quantitative assessment of trade liberalization.

#### Identifying FDI spillovers

• Journal of International Economics---2017---Yi Lu,Zhigang Tao,Lianming Zhu

This paper improves on the strategy used in the literature to identify the spillover effect of horizontal foreign direct investment (FDI) by taking advantage of the plausibly exogenous relaxation of FDI regulations on China's World Trade Organization accession at the end of 2001. In addition, to understand the (aggregate) FDI spillover effect, the paper evaluates two underlying explanations (the agglomeration effect versus the competition effect, the former of which is further moderated by the absorptive capacity of domestic firms) by distinguishing different types of FDI along various dimensions. Finally, the analysis uses an array of performance measures, including total factor productivity, exporting performance, wages, R&D investment, and firm survival, with one single data set to offer a fuller and more nuanced picture of the impact of FDI on domestic firms.

#### **Default premium**

 Journal of International Economics---2017----Luis Catão, Rui Mano

The literature has found that sovereigns with a history of default are charged only a small and/or short-lived premium on the interest rate warranted by observable fundamentals. We re-assess this view using a metric of such a "default premium" (DP) that nests previous metrics and applying it to a much broader dataset. We find a sizeable and persistent DP: in 1870–1938, it averaged 250bps upon market re-entry, tapering to around 150bps five years out; in 1970-2014 the respective estimates are about 350 and 200bps. We also find that: (i) the DP accounts for between 30 and 60% of the sovereign spread within five years of market re-entry, and its contribution to the spread remains non-negligible thereafter; (ii) The DP is higher for countries that take longer to settle with creditors and is on average higher for serial defaulters; (iii) our estimates are robust to many controls including realized "haircuts". These findings help reconnect theory and

evidence on why sovereigns default only infrequently and, when they do, why earlier debt settlements are typically sought.

#### International trade, risk and the role of banks

• Journal of International Economics---2017---Friederike Niepmann, Tim Schmidt-Eisenlohr

International trade exposes exporters and importers to substantial risks. To mitigate these risks, firms can buy special trade finance products from banks. Based on unique data with global coverage, this paper explores under which conditions and to what extent firms use these products. 15% or \$2.5 trillion of world exports are settled with letters of credit and documentary collections. Letters of credit are employed the most for exports to countries with intermediate contract enforcement, and they are used for riskier destinations than documentary collections. The 2007/2008 financial crisis affected firms' payment choices, pushing them to use more letters of credit. These patterns follow naturally from a model of payment contracts in international trade.

#### **Exchange rate forecasting with DSGE models**

Journal of International Economics---2017---Ca'
 Zorzi, Michele, Marcin Kolasa, Michał Rubaszek

We run an exchange rate forecasting "horse race", which highlights that three principles hold. First, forecasts should not replicate the high volatility of exchange rates observed in sample. Second, models should exploit the mean reversion of the real exchange rate over long horizons. Third, they should account for the international price co-movement seen in the data. Abiding by the first two principles an open-economy dynamic stochastic general equilibrium (DSGE) model performs well in forecasting the real but not the nominal exchange rate. Only approaches that conform to all three principles tend to outperform the random walk.

# The effects of domestic merger on exports: A case study of the 1998 Korean automobile industry

• Journal of International Economics---2017---Hiroshi Ohashi, Yuta Toyama

This paper examines the economic consequences of a horizontal merger between Korean automakers that took place in 1998, with a particular emphasis on export market behavior. Estimates of structural demand and supply reveal that the merger enhanced production efficiency of the merged party by 3.8%. Simulations, based on these estimates, indicate that while the merger increased domestic prices, the export volume of the merged party was more than doubled. Moreover, the effects of the merger are found to differ by auto model according to the model's pre-merger export status. It is shown that efficiency gains from the merger are likely to increase export volumes for models that were already exported prior to the merger, and to offset domestic market power for those that were not exported even after the merger. Finally, the paper compares the actual merger's effects to those of alternative counterfactual mergers, finding that the actual merger brought greater benefits to producers and fewer to domestic consumers.

#### External balances, trade and financial conditions

• Journal of International Economics---2017---Martin Evans

I present a new model for the U.S. external position that accounts for the accumulation of international debt over the past 60 years. The model is based on the present value restriction that links a country's external position to future trade flows and financial conditions in the absence of arbitrage opportunities and Ponzi schemes. It features the role played by the stochastic discount factor, the trade and valuation adjustment channels and provides a decomposition of the U.S. external position into secular and cyclical components. The model shows that shocks operating via the valuation channel are the dominant drivers of cyclical dynamics, accounting for approximately 80% of the

variance over the 60-year sample. This channel works primarily via capital gains and losses on U.S. foreign assets and is closely tied to the international value of the U.S. dollar. In contrast, there is no evidence that valuation channel adjustments contribute to the secular dynamics, but differences between the average returns on foreign assets and liabilities raise the steady-state debt-to-GDP ratio from approximately 12 to 15%. The long-term deterioration in the U.S. position represents a move towards the steady-state before the early 1990s and a move away from the steady-state thereafter. I quantify the expected improvement in future U.S. trade balances needed to justify this as a sustainable path and show that they are very different from its actual behavior during the last 60 years. I also study the behavior of the U.S. position during the 2007-2008 financial crisis.

#### Trade policy preferences and factor abundance

Journal of International Economics---2017---Ina
 C. Jäkel, Marcel Smolka

This paper provides a theoretical and empirical analysis of public opinion towards free trade, investigating cleavages both between and within countries. We study the distributional effects of trade policy in a neoclassical Heckscher-Ohlin economy with not just two, but many input factors in production. We demonstrate that the factor price changes induced by trade policy are negatively associated with the factor content of free trade (and therefore factor abundance). Using large-scale international survey data, we test whether these predicted distributional effects are reflected in the trade policy preferences of workers with different labor market skills. In order to isolate the effects of factor abundance from other skill-related confounding factors, we employ a within-skill-group estimator that exploits the cross-country variation in factor abundance. In line with theory, the data show that individuals whose skills are in more abundant domestic supply have significantly more positive attitudes towards trade.

### Trade policy uncertainty and exports: Evidence from China's WTO accession

• Journal of International Economics---2017---Ling Feng, Zhiyuan Li, Deborah Swenson

This paper studies how reduction in trade policy uncertainty affects firm export decisions. Using a firm-product level dataset on Chinese exports to the United States and the European Union in the years surrounding China's WTO accession, we provide strong evidence that reduction in trade policy uncertainty simultaneously induced firm entries to and firm exits from export activity within fine product-level markets. In addition, we uncover accompanying changes in export product prices and quality that coincided with this reallocation: firms that provided higher quality products at lower prices entered the export market, while firms that had higher prices and provided lower quality products prior to the changes, exited. To explain the simultaneous export entries and exits, as well as the fact that new entrants are more productive than exiters, we provide a model of heterogeneous firms which incorporates trade policy uncertainty, tracing the effects of the changes in policy uncertainty on firm-level payoffs and the resulting selection effects.

### Fair weather or foul? The macroeconomic effects of El Niño

 Journal of International Economics---2017---Paul Cashin, Kamiar Mohaddes, Mehdi Raissi

This paper employs a dynamic multi-country framework to analyze the international macroeconomic transmission of El Niño weather shocks. This framework comprises 21 country/region-specific models, estimated over the period 1979Q2 to 2013Q1, and accounts for not only direct exposures of countries to El Niño shocks but also indirect effects through third-markets. We contribute to the climate—macroeconomy literature by exploiting exogenous variation in El Niño weather events over time, and their impact on different regions cross-sectionally, to causatively identify the effects of El Niño shocks (direct and total) on growth, inflation, energy and non-fuel commodity prices. The results show that

there are considerable heterogeneities in the responses of different countries to El Niño shocks. While Australia, Chile, Indonesia, India, Japan, New Zealand and South Africa face a short-lived fall in economic activity in response to an El Niño shock, for other countries (including the United States and European region), an El Niño occurrence has a growth-enhancing effect. Furthermore, most countries in our sample experience short-run inflationary pressures as both energy and non-fuel commodity prices increase. Given these findings, macroeconomic policy formulation should take into consideration the likelihood and effects of El Niño weather episodes.

# The Balassa–Samuelson relationship: Services, manufacturing and product quality

• Journal of International Economics---2017---Qi Zhang

The Balassa-Samuelson relationship, i.e. the positive relationship between a country's per capita income and its national price level, represents an apparent violation of Purchasing Power Parity (PPP) and is not expected to hold for manufactures according to the explanation of this relationship proposed by Balassa and Samuelson. This paper shows that at the level of the products used in constructing national price levels, the relationship is present in both 'services' and 'manufactures' and the specification of the relationship is different for the two. It further offers a new candidate explanation for the B-S relationship in manufactures, which is based on an appeal to product quality. This explanation yields a second, distinctive, testable prediction: controlling for per capita income, a non-monotonic relationship should exist between a country's income inequality and its national price level. The second prediction is shown to be consistent with empirical evidence. The explanation also implies that mismeasured quality exaggerates the B-S relationship and hence the observed cross-country income differences are likely to be underestimated.

# Revealed comparative advantage: What is it good for?

 Journal of International Economics---2017---Scott French

This paper applies a widely-used class of quantitative trade models to evaluate the usefulness of measures of revealed comparative advantage (RCA) in academic and policy analyses. I find that, while commonly-used indexes are generally not consistent with theoretical notions of comparative advantage, certain indexes can be usefully employed for certain tasks. I explore several common uses of RCA indexes and show that different indexes are appropriate when attempting to (a) uncover countries' fundamental patterns of comparative advantage, (b) evaluate the differential effect of changes in trade barriers across producers of different products, or (c) identify countries who are relatively close competitors in a given market.

### Does inequality drive the Dutch disease? Theory and evidence

 Journal of International Economics---2017---Nazanin Behzadan, Richard Chisik, Harun Onder, Bill Battaile

In this paper we show that the Dutch disease can arise solely from inequality in the distribution of natural resource rents. Given two otherwise identical countries that differ only in the ownership shares of the natural resource rents, the country with the less equal distribution will have less production of manufacturing goods and less development of learning-by-doing in this sector. As opposed to conventional models, where income distribution has no effect on economic outcomes, an unequal distribution of the resource wealth can generate the Dutch disease dynamics even in countries with an initial comparative advantage in manufacturing. We also provide a range of empirical tests of our model, including both difference and system GMM estimators in a dynamic panel. To disentangle the effects of inequality and institutional quality we purge our inequality measure of any linear or higher order correlations with institutional quality and repeat our system

and difference GMM estimations. Our empirical analy- Understanding the cross-country effects of U.S. sis supports the hypothesis that inequality indeed plays a significant role in whether being resource-rich is a blessing or a curse for a country. The more unequal is the distribution of natural resource rents, the stronger is the disease.

#### Sovereign default and capital accumulation

• Journal of International Economics---2017---JungJae Park

This paper introduces endogenous capital accumulation into an otherwise standard quantitative sovereign default model à la Eaton and Gersovitz (1981). We find that conditional on a level of debt, default incentives are U-shaped in the capital stock: the economy with too small or too large amounts of capital is likely to default. Even without using an ad-hoc output cost of default, the calibrated model generally well matches business cycle facts of emerging economies and generates defaults in "good" and "bad" times, with a frequency of 25.5% and 74.5%, respectively, consistent with Tomz and Wright (2007)' s empirical findings. Simulation results show that the economy defaults in good times when it has "overinvested" in capital during booms before default.

#### Protection in government procurement auctions

• Journal of International Economics---2017---Matthew Cole, Ronald Davies, Todd Kaplan

Discrimination against foreign bidders in procurement auctions has typically been achieved by price preferences. We demonstrate that in the bidding game, each level of protection via a price preference can be achieved by an equivalent tariff. When government welfare depends only on net expenditures, this equivalence carries over to the government's decision. As such, this equivalence provides a justification that agreements to eliminate price preferences to be taken in tandem with agreements to lower tariffs; e.g., the Government Procurement Agreement (GPA) in the broader context of the WTO.

# technology shocks

• Journal of International Economics---2017---Wataru Miyamoto, Thuy Lan Nguyen

Business cycles are substantially correlated across countries. Yet, most existing models are not able to generate substantial transmission through international trade. We show that the nature of such transmission depends fundamentally on the features determining the responsiveness of labor supply and labor demand to international relative prices. We augment a standard international macroeconomic model to incorporate three key features: a weak short-run wealth effect on labor supply, variable capital utilization, and imported intermediate inputs for production. This model can generate large and significant endogenous transmission of technology shocks through international trade. We demonstrate this by estimating the model using data for Canada and the United States with limitedinformation Bayesian methods. We find that this model can account for the substantial transmission of permanent U.S. technology shocks to Canadian aggregate variables such as output and hours, documented in a structural vector autoregression. Transmission through international trade is found to explain the majority of the business cycle comovement between the United States and Canada.

### Globalization and human capital investment: **Export composition drives educational** attainment

• Journal of International Economics---2017---Emily J. Blanchard, William Olnev

Human capital is among the most important drivers of long-run economic growth, but its macroeconomic determinants are still not well understood. This paper demonstrates the importance of a key demand-side driver of education, using exogenously-driven changes in the composition of a country's exports as a lens to study how shifting patterns of production influence subsequent educational attainment. Using a panel of 102 countries and 45 years, we find that growth in less

skill-intensive exports depresses average educational to disentangle the impacts of the i) release gap effect, attainment while growth in skill-intensive exports increases schooling. These results provide insight into which types of sectoral growth are most beneficial for long-run human capital formation and suggest that trade liberalization could exacerbate initial differences in factor endowments across countries.

#### The effect of patents on trade

• Journal of International Economics---2017---Alfons Palangkaraya, Paul H. Jensen, Elizabeth Webster

In contrast with quotas and tariffs, it is theoretically ambiguous whether fewer (or 'weaker') rules over intellectual property rights will increase or decrease trade in patentable goods. The prevailing view is that anticipation of imitation reduces exporters' incentive to export goods to jurisdictions with 'weak' patent regimes. This empirical paper uses new measures of how the destination-country patent system can affect trade. In contrast with existing studies which assume would-be exporters can always get a patent in the target foreign market, we construct measures of the bias against foreign patent applicants and patents which may block imported goods. We find evidence that the presence of destination-country blocking patents has the larger (negative) impact on international trade. Being refused a patent also has a negative impact on trade but the magnitude is smaller.

### Strategic decision-making in Hollywood release gaps

• Journal of International Economics---2017---John Dalton, Tin Cheuk Leung

before other foreign markets. The release gaps have declined significantly over time and varied greatly across countries. While movie piracy has been suggested as an important determinant for the release gap decision of distributors, theory and evidence suggest that there are other important determinants. In this paper, we use a discrete choice release gap decision game model which includes factors that provide incentives for a distributor to shorten the release gap; ii) word-of-mouth effect, which provides incentives for a distributor to lengthen the release gap; and iii) competition effect, which accounts for the incentives blockbusters have to avoid each other. We obtain box office and release gap data from the private industry source Boxofficemojo.com. We provide results on the economically significant impact of these three factors on distributors' release gap decisions and box office revenue.

#### Product cycles and growth cycles

• Journal of International Economics---2017---Tatsuro Iwaisako, Hitoshi Tanaka

This paper theoretically shows that shifts in production from developed countries (the North) to developing countries (the South) through imitation by the South can cause endogenous growth cycles. On the equilibrium path, the world economy continues to grow, but innovation, imitation, and the growth rate may permanently fluctuate. To show this, we construct a two-country overlapping generations model where the North develops new goods and the South imitates these goods endogenously. A key assumption is international knowledge spillover in the imitation process. The model implies that growth cycles tend to emerge when imitation in the South is more active.

### Pass-through of competitors' exchange rates to **US** import and producer prices

• Journal of International Economics---2017---Steven Pennings

This paper shows that in theory and BLS microdata, Hollywood blockbusters are usually released in the U.S. the prices of imported goods respond to the exchange rates (ER) of the producer's foreign competitors. In contrast, standard models have no role for competitors' ERs. Excluding the effects of competitors' exchange rates typically biases upwards estimates of bilateral exchange rate pass-through because competitors' ERs and bilateral ERs are positively correlated. A multicountry version of Atkeson and Burstein's (2008) industry aggregation model is able to explain a sizable proportion of pass-through of competitors' exchange rates to import prices, and also predicts pass-through of foreign competitors' prices and pass-through of competitors' ERs to US producer prices — both of which are supported in the data. The results suggest that pass-through will be larger for ER movements shared by a greater fraction of foreign competitor countries.

#### Suspiciously timed trade disputes

 Journal of International Economics---2017---Paola Conconi, David DeRemer, Georg Kirchsteiger, Lorenzo Trimarchi, Maurizio Zanardi

This paper shows that electoral incentives crucially affect the initiation of trade disputes. Focusing on WTO disputes filed by the United States during the 1995–2014 period, we find that U.S. presidents are more likely to initiate a dispute in the year preceding their re-election. Moreover, U.S. trade disputes are more likely to involve industries that are important in swing states. To explain these regularities, we develop a theoretical model in which re-election motives can lead an incumbent politician to file trade disputes to appeal to voters motivated by reciprocity.

### News-driven business cycles in small open economies

• Journal of International Economics---2017---Gunes Kamber, Konstantinos Theodoridis, Christoph Thoenissen

The focus of this paper is on news-driven business cycles in small open economies. We make two significant contributions. First, we develop a small open economy model where the presence of financial frictions permits the replication of business cycle co-movements in response to news shocks. Second, we use VAR analysis to identify news shocks using data on four advanced small open economies. We find that expected shocks about the future Total Factor Productivity generate business cycle co-movements in output, hours, consumption and investment. We also find that news shocks are associated with countercyclical current account dynamics.

Our findings are robust across a number of alternative identification schemes.

# Balanced-budget income taxes and aggregate stability in a small open economy

 Journal of International Economics---2017----Kevin Huang, Qinglai Meng, Jianpo Xue

In a closed economy, a balanced-budget fiscal policy rule with endogenous income tax rates can generate aggregate instability due to self-fulfilling expectations (e.g., Schmitt-Grohé and Uribe, 1997). This paper shows, both analytically and numerically, that beliefs-driven aggregate instability associated with such a balanced-budget rule is less of a problem in a small open economy integrated in the world asset and goods markets. This is because cross-border capital flows and endogenous international price adjustments produce income effects that reduce the likelihood of sunspot equilibria. From a policy perspective, our results relieve possible concerns that balanced-budget rules and reliance on income taxes to achieve budget objective could have destabilizing effects on the economy.

#### Capital flow deflection

 Journal of International Economics---2017---Paolo Giordani, Michele Ruta, Hans Weisfeld, Ling Zhu

This paper focuses on the coordination problem among countries imposing controls on capital inflows. In a simple model of capital flows and controls, we show that inflow restrictions distort international capital flows to other countries and that, in turn, such capital flow deflection may lead to a policy response. We then test the theory using data on inflow restrictions and gross capital inflows for a large sample of developing countries between 1995 and 2009. Our estimation yields strong evidence that capital controls deflect capital flows to other countries with similar economic characteristics. Notwithstanding these strong cross-border spillover effects, we do not find evidence of a policy response.

### Import sourcing of Chinese cities: Order versus randomness

• Journal of International Economics---2017---Keith Head,Ran Jing,John Ries

Capitalizing on the geographic detail of Chinese customs data, we show that buyer heterogeneity plays a major role in import sourcing. Hierarchy compliance, a core prediction of supply-focused models, is tested by measuring the frequency with which cities import a narrowly defined good from the country observed to be the preferred source in the province. Hierarchy violation is widespread: 92% of province goods have at least one non-compliant city. We show that introducing granular importers into a standard heterogeneous firm model leads to a prediction of 73% compliance, close to the observed average of 66%. Extending the model to allow buyers from a city to share an orientation towards specific source countries, we calibrate a heterogeneity parameter to match the average observed compliance rate. The results imply that the supply side explains on average 44% of the variance in city-level sourcing probabilities, leaving the majority of variation due to heterogeneity in buyers across cities.

# Trade liberalization and the environment: Evidence from NAFTA and U.S. manufacturing

• Journal of International Economics---2017---Jevan Cherniwchan

The unobserved responses of individual polluters are often used to rationalize the aggregate effects of international trade on the environment. In this paper, I provide the first evidence of these responses. I estimate the effects of NAFTA on the emissions of particulate matter (PM10) and sulfur dioxide (SO2) from manufacturing plants in the United States. My findings suggest that trade liberalization led to significant reductions of these pollutants at affected plants. On average, nearly two-thirds of the reductions in PM10 and SO2 emissions from the U.S. manufacturing sector between 1994 and 1998 can be attributed to trade liberalization following NAFTA.

# Domestic gains from offshoring? Evidence from TAA-linked U.S. microdata

 Journal of International Economics---2017---Ryan Monarch, Jooyoun Park, Jagadeesh Sivadasan

We construct a new linked data set with over one thousand offshoring events by matching Trade Adjustment Assistance (TAA) program petition data to U.S. Census Bureau microdata. We exploit these data to study the short- and long-term effects of offshoring on domestic firm-level employment, output, wages, and productivity in this large sample of offshoring events. As implied by heterogeneous firm models with high fixed costs of offshoring, we find that the average offshoring firm in the TAA sample is larger, more productive, older, and more likely to be an exporter, than the average non-offshorer. After initiating offshoring, TAA-certified offshorers experience large declines in employment (0.38 log points), output (0.33log points) and capital (0.25log points), and a concomitant increase in capital and skill intensity, relative to their industry peers. We find no significant change in average wages or productivity measures. Even six years after the initial offshoring event, we find no recovery in employment, output, or capital, and a higher probability of exit. We find similar results (including decline in output, and unchanged wages and productivity) for the aggregate of non-TAA certified plants of multi-plant offshoring firms. We find that the substitution of domestic activity by offshoring is stronger for relatively lower wage, lower capital intensity, lower productivity offshorers. Our results are consistent across two separate difference-in-differences (DID) approaches, and a number of robustness checks.

# Exchange rate fluctuations and immigrants' labour market outcomes: New evidence from Australian household panel data

• Journal of International Economics---2017---Ha Nguyen, Alan Duncan

In this paper, we exploit plausibly exogenous changes in exchange rates across home countries over time and panel data to identify the causal impact of exchange rate fluctuations on Australian immigrants' labour market outcomes. We present new and robust evidence that, unlike immigrants in the US, those in Australia as a whole do not reduce their yearly labour market outcomes when the local currency appreciates. While female immigrants don't adjust their labour activities, male immigrants reduce their weekly labour supply and hence earn less when the Australian dollar appreciates. This work also highlights the importance of controlling for individual heterogeneity as well as gender when modelling the labour market behaviour of immigrants.

# Importers and exporters in exchange rate pass-through and currency invoicing

 Journal of International Economics---2017---Michael Devereux, Wei Dong, Ben Tomlin

We explore the role of product market structure on exchange rate pass-through and currency of invoicing in international trade, using very detailed transactionlevel data on Canadian imports over a six-year period. A novel feature of the study is the importance of market share on both sides of the importing relationship that of the exporting and importing firms. We find that exchange rate pass-through and the currency of invoicing are dependent on the size (or market share) of both importers and exporters. Very small or very large exporters have higher rates of pass-through and tend to invoice in the foreign currency, while it is the opposite for exporters in the middle range. By contrast, for larger importers, pass-through is lower and local currency invoicing is more prevalent. These findings are consistent with a simple model of trade pricing under monopolistic competition with endogenous markups and heterogeneity in firm size (on both sides of the transaction).

# Common and country specific economic uncertainty

• Journal of International Economics---2017---Haroon Mumtaz, Konstantinos Theodoridis

We use a factor model with stochastic volatility to decompose the time-varying variance of macroeconomic

and financial variables into contributions from country-specific uncertainty and uncertainty common to all countries. We find that the common component plays an important role in driving the time-varying volatility of nominal and financial variables. The cross-country co-movement in volatility of real and financial variables has increased over time with the common component becoming more important over the last decade. Simulations from a two-country DSGE model featuring Epstein-Zin preferences suggest that increased globalisation and trade openness may be the driving force behind the increased cross-country correlation in volatility.

#### Non-defaultable debt and sovereign risk

 Journal of International Economics---2017---Juan Carlos Hatchondo, Leonardo Martinez, Yasin Onder

We quantify gains from introducing limited financing through non-defaultable debt into a model of equilibrium sovereign risk. For an initial sovereign spread of 4.2%, introducing the possibility of issuing non-defaultable debt for up to 10% of aggregate income reduces immediately the spread to 1.5%, and implies a welfare gain equivalent to a permanent consumption increase of 0.8%. Nevertheless, the spread reduction achieved by the introduction of non-defaultable debt is short lived. Our findings shed light on different aspects of proposals to introduce common euro-area sovereign bonds that could be virtually non-defaultable.

### Imported inputs, irreversibility, and international trade dynamics

• Journal of International Economics---2017---Ananth Ramanarayanan

In aggregate data, international trade volumes adjust slowly in response to relative price changes, an observation at odds with static models. This paper develops a model of trade in intermediate inputs in which heterogeneous producers face irreversibilities in adjusting their importing status. Changes in aggregate imports are accounted for by adjustment within importing plants, through reallocation between non-importers and importers, and through changes in the importing decisions of new and existing plants. When calibrated to Chilean plant-level data, the model shows that irreversibilities are important for generating aggregate and plant-level dynamics of trade flows in line with the data. In response to a permanent trade reform, increased importing at existing plants crowds out entry, raising consumption above its long-run level, and leading to welfare gains larger than a static model would imply.

# Financial frictions and policy cooperation: A case with monopolistic banking and staggered loan contracts

 Journal of International Economics---2017---Ippei Fujiwara, Yuki Teranishi

Do financial frictions call for cross-border policy cooperation? This paper investigates the implications of financial frictions in the form of staggered loan contracts supplied by monopolistic banks, for monetary policy. Using the linear quadratic (LQ) framework, we show that policy cooperation yields long-run gains in addition to gains from stabilizing inefficient fluctuations over the business cycle, as usually found in models with price rigidities. The Ramsey optimal steady states differ between cooperation and noncooperation. Such gains from cooperation arise irrespective of capital account liberalization.

# A tale of two tails: Productivity distribution and the gains from trade

• Journal of International Economics---2017---Sergey Nigai

I use firm-level data to show that neither the Lognormal nor the Pareto distribution can approximate the shape of the productivity distribution along the entire support. While the former underpredicts the thickness of the right tail, the latter does not capture the shape of the left one. Using empirical distribution as a benchmark, I show that such inaccuracies lead to sizable errors in the estimates of the gains from trade in models featuring firm selection. I propose using a

through reallocation between non-importers and importers, and through changes in the importing decisions of new and existing plants. When calibrated to errors in quantitative analysis.

### Financial imperfections, product quality, and international trade

 Journal of International Economics---2017---Rosario Crinò, Laura Ogliari

We study how financial imperfections affect product quality across countries and industries, and analyze the implications for trade flows and prices. To this purpose we assemble a unique data set, which contains estimates of export quality, financial development, and financial vulnerability, for all countries and manufacturing industries over the last three decades. We find the interplay between cross-country differences in financial frictions and cross-industry differences in financial vulnerability to be an important determinant of the geographical and sectoral variation in average product quality. We show that this effect mostly occurs along an intensive margin, whereby financial imperfections distort the quality of existing exports to a given destination market. Finally, we provide evidence that quality adjustments are an important mechanism through which financial development shapes the variation in trade flows and export prices across countries and industries.

#### Tariffs and the organization of trade in China

 Journal of International Economics---2017---Loren Brandt, Peter M. Morrow

This paper examines the impact of China's falling import tariffs on the organization of its exports between ordinary and processing trade. These trade forms differ in terms of tariff treatment and the ability of firms to sell on the domestic market. At the industry level, we find that falling input tariffs cause the share of ordinary trade in gross exports to increase, with both the intensive and extensive margins playing roles. The choice of trade form is tied to a lesser degree to the size of the domestic market, which processing firms cannot access. Consistent with the literature, we show that

changes in the organization of trade linked to input Sovereign debt signals tariff cuts caused the share of Chinese domestic content in gross exports to increase at the industry-province level.

### Learning via sequential market entry: Evidence from international releases of U.S. movies

• Journal of International Economics---2017---Isaac R. Holloway

Most U.S. movies are not distributed simultaneously to all of their foreign markets and many do not recoup the costs of market entry. In theory, sequential entry allows distributors to learn about their movies' quality from performance in successive markets. I find empirical evidence consistent with recent trade models of learning about export profitability: a one-standarddeviation increase in the update to expected box-office revenues from the previous round is associated with an increase in the probability of entry to a given market of approximately 20%. This effect is robust to controls for other potential determinants of entry, including extended gravity, seasonality of demand, academy award nominations, and competition from local and imported pictures.

### How you export matters: Export mode, learning and productivity in China

• Journal of International Economics---2017---Xue Bai, Kala Krishna, Hong Ma

This paper shows that how firms export (directly or indirectly via intermediaries) matters. We develop and estimate a dynamic discrete choice model that allows learning-by-exporting on the cost and demand side as well as sunk/fixed costs to differ by export mode. We find that demand and productivity evolve more favorably under direct exporting, though the fixed/sunk costs of this option are higher. Our results suggest that had China not liberalized its direct trading rights when it joined the WTO, its exports and export participation would have been 26 and 33% lower respectively.

• Journal of International Economics---2017---Toan Phan

This paper develops a theory of sovereign borrowing, where the interaction between the asymmetry of information and the lack of commitment for repayment leads to a novel signaling motive for the issuance of sovereign debt. If the government is more informed than foreign investors about a fundamental of the domestic economy, then debt provides the government an option to credibly signal good news in the future by repaying. Thus, the government has an incentive to issue debt, even in the absence of the traditional consumption smoothing or tilting motives.

### Services trade policy and manufacturing productivity: The role of institutions

• Journal of International Economics---2017---Cosimo Beverelli, Matteo Fiorini, Bernard Hoekman

We study the effect of services trade restrictions on manufacturing productivity for a broad cross-section of countries at different stages of economic development. Decreasing services trade restrictiveness has a positive impact on the manufacturing sectors that use services as intermediate inputs in production. We identify a critical role of institutions in importing countries in shaping this effect. Countries with high institutional quality benefit the most from lower services trade restrictions in terms of increased productivity in downstream industries. We show that the conditioning effect of institutions operates through services trade that involves foreign establishment (investment), as opposed to cross-border arms-length trade in services.

### Does standardized information in online markets disproportionately benefit job applicants from less developed countries?

• Journal of International Economics---2016---Ajay Agrawal, Nicola Lacetera, Elizabeth Lyons

We examine trade in services between employers from developed countries (DCs) and workers from less developed countries (LDCs) on an online platform for contract labor. We report evidence that 1) DC employers are less likely to hire LDC compared to DC workers even after controlling for a wide range of observables, 2) workers with standardized and verified work history information are more likely to be hired, and 3) information on verified work history disproportionately benefits LDC contractors. The LDC premium also applies to additional outcomes including wage bids, obtaining an interview, and being shortlisted. In addition, the evidence suggests that informational limits to trade may be addressed through a variety of market design approaches; for instance, an online monitoring tool substitutes for verified work history information.

### Policy uncertainty, irreversibility, and cross-border flows of capital

• Journal of International Economics---2016---Brandon Julio, Youngsuk Yook

We examine the effects of political uncertainty on cross-border capital flows using election timing as a source of fluctuations in political uncertainty. FDI flows from US companies to foreign affiliates drop significantly during the period just before an election and increase after the uncertainty is resolved, consistent with the view that political uncertainty deters foreign investment. The electoral patterns in FDI flows are more pronounced when elections are more competitive. The impact of political uncertainty on FDI flows depends on the level of institutional quality. Countries with higher levels of institutional quality experience significantly less variation in FDI around election cycles.

# Capital market integration and consumption risk sharing over the long run

• Journal of International Economics---2016---Jesper Rangvid, Pedro Santa-Clara, Maik Schmeling

We empirically investigate time variation in capital market integration and consumption risk sharing using data for 16 countries from 1875 to 2012. We show that there has been considerable variation over time in the degrees of capital market integration and consumption risk sharing and that higher capital market integration forecasts more consumption risk sharing in the future. This finding is robust to controlling for trade openness and exchange rate volatility as alternative drivers of risk sharing. Finally, we calculate the welfare costs of imperfect consumption risk sharing and find that these costs vary over time, line up with variation in risk sharing, and are quite substantial during periods of low risk sharing.

# A theory of rollover risk, sudden stops, and foreign reserves

• Journal of International Economics---2016---Sewon Hur, Illenin Kondo

Emerging economies have accumulated very large foreign reserve holdings since the turn of the century. We argue that this policy is an optimal response to an increase in foreign debt rollover risk. In our model, reserves play a key role in endogenously reducing debt rollover crises ("sudden stops") by allowing governments to be solvent in more states of the world. Using a dynamic multi-country environment with learning, we find that a relatively small unanticipated increase in rollover risk jointly accounts for (i) the outburst of sudden stops in the late 1990s, (ii) the increase in foreign reserves holdings, and (iii) the subsequent reduction of sudden stops in emerging economies. We also show that a policy of pooling reserves may substantially reduce reserves because mutual insurance across countries dampens rollover risk.

# Globalization and risk averse workers: The roles of labor market and trade policies

 Journal of International Economics---2016---Priya Ranjan

This paper studies the implications of globalization for aggregate output and welfare when risk averse workers face the risk of unemployment. The impact of globalization on the welfare of workers and aggregate output mestic workers and imported inputs. When the degree of substitutability is high (low), then globalization reduces (increases) wages and increases (reduces) unemployment. Irrespective of the substitutability, free trade doesn' t maximize the aggregate output. A small tariff (import subsidy) increases aggregate output when the substitutability is low (high), however, it can exacerbate the distributional conflict. Domestic labor market policies such as unemployment benefits and severance payments can protect workers against labor income risk but the firing restrictions do not. Free trade is optimal when labor market policies provide insurance against unemployment.

### The dynamic impact of unilateral environmental policies

• Journal of International Economics---2016---David Hemous

This paper builds a two-country, two-sector (polluting, nonpolluting) trade model with directed technical change, examining whether unilateral environmental policies can ensure sustainable growth. The emission rate of the polluting sector depends on its relative use of a clean and a dirty input. A unilateral policy combining clean research subsidies and a trade tax can ensure sustainable growth, while unilateral carbon taxes alone increase innovation in the polluting sector abroad and generally cannot ensure sustainable growth. Relative to autarky and exogenous technical change respectively, trade and directed technical change accelerate environmental degradation either under laissez-faire or with unilateral carbon taxes, yet both help reduce environmental degradation under the appropriate unilateral policy. I characterize the optimal unilateral policy analytically and numerically using calibrated simulations. Knowledge spillovers have the potential to reduce the otherwise large welfare costs of restricting policy to one country.

#### Coordination and the fight against tax havens

• Journal of International Economics---2016---Kai Konrad, Tim B.M. Stolper

depends on the degree of substitutability between do- The success or failure of the fight against tax havens is the outcome of a many player coordination game between a tax haven and its potential investors. Key determinants are the costly international pressure and the size of the haven country's revenue pool. The latter is determined endogenously by the decisions of many individual investors. Our analysis suggests a non-standard market model that explains why haven countries would ever comply with international standards of transparency despite the large empirically observable returns in the tax haven business. It also alludes to why service fees in tax havens can be positive despite a competitive financial market with multiple tax havens. Furthermore, we identify a trade-off between the fight against tax havens and high tax rates. Finally, low fines for disclosed offshore tax evasion, e.g. in special programs for tax evaders who voluntarily report their offshore wealth, strengthen haven countries against international pressure.

#### Gradualism in aid and reforms

• Journal of International Economics---2016---Parimal Bag, Prabal Roy Chowdhury

Dynamic strategic interaction between an international donor and a recipient government is analyzed to review the efficacy of aid conditionality for governance reforms in LDCs. It is shown that irrespective of whether the donor can fully commit to the aid program or not, for maximal improvement in governance the aid should be disbursed in increments with each subsequent tranche being conditional on prior reforms, demonstrating aid gradualism. While the attraction of future aid incentivizes authorities to push through reforms, these reforms in turn also make aid diversion less feasible. Further, under full commitment, the optimal aid package may involve offering scope for interim aid diversion to the elite for long-term improvement in governance, with such aid diversion being more likely to happen when the total aid budget is large. With only partial commitment (so that time consistency requires the donor to reconfigure aid in each round), it is shown that (a) interim aid diversion is no longer viable, and (b) both aid and reforms exhibit strong gradualism, principle in commitment models.

#### Could tariffs be pro-cyclical?

• Journal of International Economics---2016---James Lake, Maia Linask

Conventional wisdom says that tariffs are countercyclical. We analyze the relationship between business cycles and applied MFN tariffs using a disaggregated product-level panel dataset covering 72 countries between 2000 and 2011. Strikingly, and counter to conventional wisdom, we find that tariffs are pro-cyclical. Further investigation reveals that this pro-cyclicality is driven by the tariff setting behavior of developing countries; tariffs are acyclical in developed countries. We present evidence that pro-cyclical market power drives the pro-cyclicality of tariffs in developing countries, providing further evidence of the importance of terms of trade motivations in explaining trade policy.

### Relational contracts and supplier turnover in the global economy

• Journal of International Economics---2016---Fabrice Defever, Christian Fischer, Jens Suedekum

Headquarters and their specialized component suppliers have a vital interest in establishing long-term collaborations. When formal contracts are not enforceable, such efficiency-enhancing cooperations can be established via informal agreements, but relational contracts have been largely ignored in the literature on the international organization of value chains. In this paper, we develop a dynamic property rights model of global sourcing. A domestic headquarter collaborates with a foreign input supplier and makes two decisions in every period: i) whether to engage in a costly search for a better partner, and ii) whether to make a nonbinding offer to overcome hold-up problems. Our key result is that the possibility to switch partners crucially affects the contractual nature of buyer-supplier relationships. In particular, some patient firms do not immediately establish a relational contract, but only when they decide to stop searching and thus launch

or what is known as the starting small and grow later a long-term collaboration with their supplier. Using firm-product-level data of fresh Chinese exporters to the US, we obtain empirical evidence in line with the predictions of our theory.

### Intermediate input imports and innovations: Evidence from Chinese firms' patent filings

• Journal of International Economics---2016---Qing Liu, Larry Qiu

Innovation plays a key role in economic growth. In this paper, we investigate the effects of intermediate input tariff reduction on the innovation activities of domestic firms. Input tariff reduction has two opposite effects on the innovation decision of a firm: it may promote innovation because the cost of innovation activities decreases, but it may also result in a decrease in innovation because foreign technologies become cheaper. We use Chinese firm-level data from 1998 to 2007, which features a drastic input tariff cut in 2002 because of China's WTO accession, and find that input tariff cut results in less innovation undertaken by Chinese firms. The findings are obtained using the difference-in-differences technique and are robust to various specifications checks of the model. We also provide a theoretical framework to generate insights to the empirical findings.

### Remittances, entrepreneurship, and employment dynamics over the business cycle

• Journal of International Economics---2016---Alan Finkelstein Shapiro, Federico S. Mandelman

We incorporate remittances and microentrepreneurship (self-employment) into a small open economy business cycle model with capital and labor market frictions. Countercyclical remittances moderate the decline of households' consumption during recessions. These remittances also are used to finance the start-up costs of microenterprises that bolster households' income during economic downturns. We show that the positive income effect from countercyclical remittances also leads to a decrease in salaried labor supply, which generates

offsetting upward pressure on wages during recessions and adversely affects the recovery of the economy. Consistent with the microeconomic evidence, the behavior of remittances decisively affects labor force participation and the composition of employment between non-salaried and salaried employment over the business cycle. The model delivers labor market and aggregate cyclical dynamics that are consistent with the Mexican data, including a highly volatile and countercyclical unemployment rate.

### Financial globalisation and monetary policy effectiveness

• Journal of International Economics---2016---Georgios Georgiadis, Arnaud Mehl

In theory financial globalisation has an ambiguous effect on monetary policy effectiveness. On the one hand, exposure to global financial cycles dampens the output effect of a tightening in monetary policy in financially integrated economies and thereby reduces monetary policy effectiveness. On the other hand, another salient feature of financial globalisation is that economies have become increasingly net long in foreign currency, which amplifies monetary policy effectiveness: economies experience larger valuation losses and wealth effects on their external balance sheets in response to an exchange rate appreciation when monetary policy is tightened, hence triggering stronger output effects. We quantify empirically the net impact of financial globalisation on monetary policy effectiveness through these two opposing channels. We find that since the 1990s the second channel has dominated so that financial globalisation has amplified monetary policy effectiveness in the typical advanced and emerging market economy. By our estimates, the output effect of a tightening in monetary policy has increased by 25% due to financial globalisation. Our results imply that financial globalisation has modified the transmission of monetary policy by strengthening the importance of the exchange rate channel.

# On the different geographic characteristics of Free Trade Agreements and Customs Unions

• Journal of International Economics---2016---James Lake, Halis Yildiz

Casual observation reveals a striking phenomenon of Preferential Trade Agreements (PTAs): while Customs Unions (CUs) are only intra-regional, Free Trade Agreements (FTAs) are inter and intra-regional. Using a farsighted dynamic model, we endogenize the equilibrium path of PTAs among two close countries and one far country. Rising transport costs mitigate the cost of discrimination faced by the far country as a CU non-member and diminish the value of preferential access as a CU member. Thus, sufficiently large transport costs imply that an FTA is the only type of PTA that can induce the far country's participation in PTA formation. Unlike CU formation, FTA formation can induce participation because FTAs provide a flexibility benefit: an FTA member can form further PTAs with non-members but a CU member must do so jointly with all existing members. Hence, in equilibrium, CUs are intra-regional while FTAs are intra- and inter-regional.

# Tariff pass-through, firm heterogeneity and product quality

• Journal of International Economics---2016---Rodney D. Ludema, Zhi Yu

The pass-through of tariffs to prices has critical implications for trade policy, but studies at the industry level mask potentially important firm-level heterogeneity in pass-through behavior. This paper investigates the response of U.S. export prices to changes in foreign tariffs at the firm level, accounting for firm productivity and endogenous product quality. In our model, exporting firms respond to foreign tariff reductions by upgrading product quality and increasing prices, resulting in incomplete tariff pass-through and in some cases a "quasi-Metzler paradox" (quality-unadjusted, tariff-inclusive prices increase). The upgrading response is greater for high productivity firms; however, the greater a product's scope for quality differentiation, the greater is the tendency for high productivity firms

ity, resulting in a smaller tariff absorption elasticity (log increase in the tariff-exclusive price). Using U.S. transaction-level export data, plant-level manufacturing data, and multiple measures of scope for quality differentiation, we confirm several predictions of the theory, including an average firm-level quasi-Metzler paradox, an inverse relationship between the tariff absorption elasticity and firm productivity for products with high quality scope, and the reverse for products with low quality scope.

### Credit decomposition and business cycles in emerging market economies

• Journal of International Economics---2016---Berrak Bahadir,Inci Gumus

This paper analyzes the differential effects of household and business credit dynamics on business cycles in emerging market economies. We first provide evidence that existing results relating credit expansions to economic expansions, real exchange rate appreciations and trade deficits hold more strongly for household credit than business credit. Then, using a two-sector real business cycle model of a small open economy, we study the model dynamics generated by shocks to household credit and business credit, the latter further divided into credit to tradable and nontradable sectors. The results show that the three types of credit shocks generate different dynamics in sectoral input and output levels as well as the real exchange rate. The model successfully generates the comovement between the cycle and different credit types, matching the strong positive correlation of household credit with output and real exchange rate, and the negative correlation with net exports. Our results underline the importance of distinguishing between household and business credit in studying credit dynamics.

### Population aging and comparative advantage

• Journal of International Economics---2016---Jie Cai, Andrey Stoyanov

In this paper we show that demographic differences

to have higher initial prices due to higher initial qual- between countries are a source of comparative advantage in international trade. Since many skills are agedependent, population aging decreases the relative supply and increases the relative price of skills which depreciate with age. Thus, industries relying on skills in which younger workers are relatively more efficient will be more productive in countries with a younger labor force and less productive in countries with an older population. Building upon the neuroscience and economics literature, we construct industry-level measures of intensities in various age-dependent skills and show that population aging leads to specialization in industries which use age-appreciating skills intensively and erodes comparative advantage in industries for which age-depreciating skills are more important.

#### Cross-border alliances and risk management

• Journal of International Economics---2016---Andriv Bodnaruk, Alberto Manconi, Massimo Massa

We study U.S. firms' foreign expansion choices, and investigate alliances as risk management devices used to mitigate partner risk. Firms venturing abroad are constrained by the availability of potential partners. One set of partners are foreign companies the firm shares the venture with (direct partners). The second set of partners is the institutions/government of the host country (indirect partners). Firms are more likely to choose alliances (over M&As) when indirect (direct) partner risk is high (low). The sensitivity to direct partner risk varies in the cross-section, and is weakened by financial constraints and greater ease of monitoring foreign partners.

### Winners and losers from a commodities-for-manufactures trade boom

• Journal of International Economics---2016---Francisco Costa, Jason Garred, João Paulo Pessoa

A recent boom in commodities-for-manufactures trade between China and other developing countries has led to much concern about the losers from rising import competition in manufacturing, but little attention on

the winners from growing Chinese demand for com- bring gains by increasing the number of product varimodities. Using census data for Brazil, we find that local labour markets more affected by Chinese import competition experienced slower growth in manufacturing wages between 2000 and 2010. However, we observe faster wage growth in locations benefiting from rising Chinese commodity demand during the same period.

### Regionalism and falling external protection in high and low tariff members

• Journal of International Economics---2016---Pramila Crivelli

This paper provides evidence that the reduction in applied most-favoured nation (MFN) tariffs resulting from a decrease in preferential tariffs is restricted to (or significantly larger in) high-tariff members of preferential trade agreements (PTAs). This heterogeneous impact is observed only when the share of preferential imports increases, leading to a decline in tariff revenue. This makes countries which tend to heavily depend on tariff revenue as a source of government funding more likely to reduce their MFN tariffs, which is also observed in the data. These results that are consistent with a mechanism operating through trade deflection and the associated loss of tariff revenue therefore lend support to the building bloc view of regionalism in countries applying high external tariffs before the agreement. In contrast, driven by other factors, the impact in low-tariff countries remains unclear with either insignificant effects or tariff substitution.

### Optimal trade policy with monopolistic competition and heterogeneous firms

• Journal of International Economics---2016---Jan I. Haaland, Anthony Venables

This paper derives optimal trade and domestic taxes for a small open economy containing a monopolistically competitive (MC) sector in which firms may have heterogeneous productivity levels. Analysis encompasses cases in which the domestic MC sector is able to expand or contract flexibly, or is constrained to be of fixed size. In the former case domestic protection can

eties on offer; these gains (and the corresponding rates of domestic subsidy or of import tariffs) are reduced by heterogeneity of foreign exporters some of whom may withdraw from the market. In the latter case gains from protection arise from terms-of-trade effects; since various margins of substitution are switched off, only the relative values of domestic taxes, import tariffs and export taxes matter. In general, policies work through both a terms-of-trade and a variety effect, and the paper shows how the relative importance of each depends on the structure of the economy.

### Exchange rate regimes and wage comovements in a Ricardian model with money

• Journal of International Economics---2016---Yoshinori Kurokawa, Jiaren Pang, Yao Tang

We construct a Ricardian model of trade with money and trade costs. The model predicts that the nominal wages of the trading countries exhibit stronger positive comovements when the countries fix their bilateral exchange rates, while comovements of real wages are not affected by exchange rate regimes. Our numerical experiments suggest that a reduction in trade costs increases both nominal and real wage comovements, regardless of regimes. When downward nominal wage rigidity is introduced, nominal wage comovements under the fixed regime remain stronger than under the flexible regime and the difference is smaller on the shorter time horizon, while a slight difference in real wage comovements between the two regimes shows up and is larger on the shorter time horizon. When we consider membership in the Economic and Monetary Union of the European Union as a fixed exchange rate regime, panel regression results based on data from OECD countries are broadly consistent with our model and numerical experiments.

### Dynamics of global business cycle interdependence

• Journal of International Economics---2016---Lorenzo Ductor, Danilo Leiva-Leon

the time-varying interdependence among the economic cycles of the major world economies during the post-Great Moderation period. We document a significant increase in the global business cycle interdependence occurred in the early 2000s. Such increase is mainly attributed to the emerging market economies, since their business cycles became more synchronized with the rest of the world around that time. Moreover, we find that the increase in global interdependence is highly related to decreasing differences in sectoral composition among countries.

### Buyer-seller relationships in international trade: Do your neighbors matter?

• Journal of International Economics---2016---Fariha Kamal, Asha Sundaram

Using confidential U.S. customs data on trade transactions between U.S. importers and Bangladeshi exporters between 2003 and 2009, and information on the geographic location of Bangladeshi exporters, we show that the presence of neighboring exporters that previously transacted with a U.S. importer is associated with a greater likelihood of matching with the same U.S. importer for the first time. This suggests a role for neighbors in generating importer-exporter matches. Our research design permits us to isolate potential gains from neighborhood exporter presence that are partner-specific, from overall gains previously documented in the literature.

### Regionalism and conflict: Peace creation and peace diversion

 Journal of International Economics---S. 2016---Costas Hadjiyiannis, Maria Heracleous, Chrysostomos Tabakis

We investigate the implications of preferential trade agreements (PTAs) for interstate conflict. We set up a two-stage game with three competing importers, where first, two of the countries decide on whether to initiate war against each other, and subsequently, all three countries select their import tariffs. We show

In this paper, we provide a comprehensive analysis of that PTAs produce both a "peace-creation" effect and a "peace-diversion" effect, whereby they reduce the likelihood of conflict between member countries (peace creation), but render the eruption of war between member and non-member countries more likely (peace diversion). This paper is the first to identify and explicitly model the peace-diversion effect of PTAs, and is also the only one in this literature to endogenize countries' terms of trade. We use data from the Correlates of War project to empirically test these predictions, and after controlling for endogeneity, we find robust evidence of both peace creation and peace diversion in relation to PTA establishment.

### The effects of import competition on worker health

• Journal of International Economics---2016---Thomas McManus, Georg Schaur

Occupational health is an important determinant of workers' welfare. Existing mechanisms and evidence from the international trade and occupational safety literatures combine to predict that import competition impacts work place injuries, especially at small firms that are most affected by foreign imports. We examine this prediction with novel data on injuries at US manufacturers using Chinese import growth in 1996–2007 as a shock to competition. The data show that injury rates in the competing US industries increase over the short to medium run, particularly at smaller establishments. Back-of-the-envelope calculations show that injury risk increases by 13% at the smallest establishments, the equivalent of a 1% to 2% reduction in workers' wages.

### Micro, macro, and strategic forces in international trade invoicing: Synthesis and novel patterns

• Journal of International Economics---2016---Linda Goldberg, Cédric Tille

The currency used in invoicing international trade matters for the impact of exchange rate movements in the presence of price rigidities. We present stylized facts

on specific macro, micro and other drivers of invoicing based on 45 million Canadian import transactions. Four main results emerge. First, a large share of invoicing takes place in "vehicle" currencies that are neither the exporters nor the importers. Second, we document a novel link between the size of individual transactions and invoicing. Both the absolute value of a transaction and its relative size at the industry level matter. Third, the exchange rate plays an important role along three dimensions: exchange rate volatility, exchange rate regime, and currency transaction volumes in foreign exchange markets. Finally, we confirm the role of the market share of an exporting country at the industry level. Our results identify the most salient patterns in order to guide further developments in theoretical models of invoicing currency choice.

### Technical trading: Is it still beating the foreign exchange market?

 Journal of International Economics---2016---Po-Hsuan Hsu, Mark P. Taylor, Zigan Wang

We carry out a large-scale investigation of technical trading rules in the foreign exchange market, using daily data over 45 years for 30 developed and emerging market currencies. Employing a stepwise test to counter data-snooping bias and examining over 21,000 technical rules, we find evidence of substantial predictability and excess profitability in both developed and emerging currencies, measured against a variety of performance metrics. We cross-validate our results using out-of-sample analysis. We find time series and cross-sectional variation in subperiods and cultural and/or geographic groups, respectively, suggesting that temporarily not-fully-rational behavior and market immaturity generate technical predictability and potential excess profitability.

#### A global view of productivity growth in China

• Journal of International Economics---2016---Chang-Tai Hsieh,Ralph Ossa

How does a country's productivity growth affect worldwide real incomes through international trade? In this

paper, we take this classic question to the data by measuring the spillover effects of China's productivity growth. Using a quantitative trade model, we first estimate China's productivity growth between 1995 and 2007 and then isolate what would have happened to real incomes around the world if only China's productivity had changed. We find that the spillover effects are small for all countries in our sample, ranging from a cumulative real income loss of at most 0.2% to a cumulative real income gain of at most 0.2%.

#### Imbalances and fiscal policy in a monetary union

• Journal of International Economics---2016---Ida Hjortsoe

This paper analyses optimal fiscal policy within a model of a monetary union in which agents cannot perfectly insure themselves against country-specific shocks. I show that optimal cooperative fiscal policies consist in more than just stabilizing output gaps: policy makers can increase welfare by responding to sub-optimal intra-union imbalances. Numerical analysis reveals that if traded goods are little substitutable, optimal cooperative fiscal policies consist in setting government spending in each country so as to reduce intra-union imbalances, potentially at the expense of higher output gaps. Optimal fiscal policies reduce the welfare losses from business cycle fluctuations considerably.

# Does importing intermediates increase the demand for skilled workers? Plant-level evidence from Indonesia

 Journal of International Economics---2016---Hiroyuki Kasahara, Yawen Liang, Joel Rodrigue

This paper examines whether starting to import contributes to skill upgrading among Indonesian plants. Our data records the distribution of years of employee schooling in each plant. We examine how starting to import affects the demand for highly educated workers within and across production and non-production occupations categories at the plant level. We estimate a model of importing and skill-biased technological change in which selection into importing arises due

to unobservable heterogenous returns from importing. Both instrumental variable regression and marginal treatment effect estimates confirm that importing has substantially increased the relative demand for educated workers within each occupation. In contrast, we do not consistently estimate a significant impact of importing on the relative demand for non-production workers.

#### Survival in export markets

• Journal of International Economics---2016---Facundo Albornoz. Sebastián Fanelli, Juan Hallak

This paper explores the determinants of firm survival in export markets. We build an exporter dynamics model where firms need to pay market-specific sunk and fixed costs to operate abroad and where firm export profitability in each foreign market follows a geometric Brownian motion. Firms also differ ex ante by a constant market-specific profitability shifter. We derive the probability of export survival upon entry in a market and show that it increases with the ratio of sunk to fixed costs and is insensitive to the profitability shifters. Also, we show that the survival probability is unaffected by fixed costs if sunk costs are zero. We take the model to the data using firm-level Argentine export information. We find that survival rates decrease with distance, which the model rationalizes with sunk costs that increase with distance proportionally less than fixed costs. Estimated sunk costs are small. In fact, a counterfactual exercise shows that removing those costs increases aggregate exports by less than 1.5%. Finally, we also find that survival increases with a firm's export experience. Analogously to distance, the model's implication of this empirical result is that experience reduces sunk costs proportionally less than fixed costs.

# Quality upgrading and price heterogeneity: Evidence from Brazilian exporters

• Journal of International Economics---2016---Lisandra Flach

This paper uses producer quality information to investigate whether firms segment markets and adapt product quality and prices according to destination country characteristics. Using detailed price and quality data for Brazilian exporters over time, the results document quality-based market segmentation, by which firms raise quality and prices to high-income destinations. A major exchange rate shock and further robustness analysis reinforce the hypothesis that adjustments in quality and prices happen within the firm and that differences in prices across destinations may be driven by investments in product quality and demand for high quality.

### The price of development: The Penn–Balassa–Samuelson effect revisited

• Journal of International Economics---2016---Fadi Hassan

The Penn–Balassa–Samuelson effect is the stylized fact about the positive correlation between cross-country price level and per-capita income. This paper provides evidence that the price-income relation is actually nonlinear and turns negative among low income countries. The result is robust along both cross-section and panel dimensions. Additional robustness checks show that biases in PPP estimation and measurement error in low-income countries do not drive the result. Rather, the different stage of development between countries can explain this new finding. The paper shows that a model linking the price level to the process of structural transformation captures the non-monotonic pattern of the data. This provides additional understanding of real exchange rate determinants in developing countries.

#### Taxes and international risk sharing

• Journal of International Economics---2016---Brendan Epstein,Rahul Mukherjee,Shanthi Ramnath

We extend a standard model of international risk sharing to include an empirically plausible distortion: Taxes. The tax-inclusive theory implies, even under full risk sharing, a predictable relationship between consumption growth and the consumption and capital income tax rates, both within and across countries. We find strong empirical evidence in favor of this relationship. While idiosyncratic output fluctuations account for substantially more of cross-country consumption growth variability than do taxes, trends in tax differentials are found to be informative about the dynamic evolution of international risk sharing. In particular, adjusting for capital taxes reveals a marked improvement in risk sharing over the last three decades that is absent in baseline measures. This improvement has been driven by the convergence of average tax rates on capital income across OECD countries toward the United States average capital tax rate.

### The welfare impact of global migration in OECD countries

 Journal of International Economics---2016---Amandine Aubry, Michal Burzynski, Frédéric Docquier

This paper quantifies the effect of global migration on the welfare of non-migrant OECD citizens. We develop an integrated, multi-country model that accounts for the interactions between the labor market, fiscal, and market size effects of migration, as well as for trade relations between countries. The model is calibrated to match the economic and demographic characteristics of the 34 OECD countries and the rest of the world, as well as trade flows between them in the year 2010. We show that recent migration flows have been beneficial for 69% of the non-migrant OECD population, and for 83% of non-migrant citizens of the 22 richest OECD countries. Winners are mainly residing in traditional immigration countries; their gains are substantial and are essentially due to the entry of immigrants from non-OECD countries. Although labor market and fiscal effects are non-negligible in some countries, the greatest source of gain comes from the market size effect, i.e. the change in the variety of goods available to consumers.

#### Offshoring with endogenous NGO activism

 Journal of International Economics---2016---Sebastian Krautheim, Thierry Verdier

The process of globalization is characterized by an impressive growth of global value chains, as well as the proliferation of non-governmental organizations (NGOs) interacting with multinational firms. This paper presents a model of offshoring and NGO-firm interactions in which offshoring to a low-regulation country allows a monopolist to implement a "dirty" technology undesired by consumers. Consumers can reduce the incentive for dirty production by financing an NGO monitoring the firm. NGO emergence and offshoring can arise as joint and interacting outcomes. For a range of trade costs, NGO emergence allows firms to capture gains from globalization, which would otherwise be unattainable. Somewhat paradoxically, NGO emergence can be at the expense of consumers possibly leading to welfare losses through offshoring.

#### Cross-border trade in electricity

• Journal of International Economics---2016---Werner Antweiler

This paper develops a novel economic theory of two-way trade in a homogenous good, electricity. In this model of 'reciprocal load smoothing,' international trade provides insurance. As electricity demand is stochastic and correlated across jurisdictions, electric utilities can reduce their cost during peak periods by importing cheaper off-peak electricity from neighbouring jurisdictions. Two-way trade emerges in the presence of strongly convex marginal costs. Observed trade between Canadian provinces and US states strongly supports the theoretical model. Reciprocal load smoothing provides an economic rationale for integrating North America's fragmented interconnections into a continental 'supergrid' if technological progress in long-distance bulk transmission continues to reduce costs.

### Exchange rate flexibility under the zero lower bound

 Journal of International Economics---2016---David Cook, Michael Devereux

An independent monetary policy and a flexible exchange rate generally help a country in adjusting to macroeconomic shocks. But recently in many countries, interest rates have been pushed down close to the lower bound, limiting the ability of policy-makers to accommodate shocks, even with flexible exchange rates. This paper argues that when the zero bound constraint on nominal interest rates is binding and policy lacks an effective 'forward guidance' mechanism, a flexible exchange rate system may be inferior to a single currency area. With monetary policy constrained by the zero bound, a flexible exchange rate exacerbates the impact of shocks. Remarkably, this may hold true even if only a subset of countries are constrained by the zero bound, and other countries optimally adjust their interest rate targets. For a regime of multiple currencies to dominate a single currency in a zero bound environment, it is necessary to have effective forward guidance in monetary policy.

#### Gravity with unemployment

• Journal of International Economics---2016---Benedikt Heid, Mario Larch

Quantifying the welfare effects of trade liberalization is a core issue in international trade. Existing frameworks assume perfect labor markets and therefore ignore the effects of aggregate employment changes for welfare. We develop a quantitative trade framework which explicitly models labor market frictions. To illustrate, we assess the effects of trade and labor market reforms for 28 OECD countries. Welfare effects of trade agreements are typically magnified when accounting for employment changes. While employment and welfare increase in most countries, some experience higher unemployment and lower welfare. Labor market reforms in one country have small positive spillover effects on trading partners.

# The connection between imported intermediate inputs and exports: Evidence from Chinese firms

 Journal of International Economics---2016---Ling Feng, Zhiyuan Li, Deborah Swenson

We use Chinese manufacturing firm data to estimate the causal effect of increased imported intermediate input use on firm export outcomes. To account for the endogeneity of import decisions, we pursue an IV strategy that utilizes instruments for import costs connected to intermediate input import tariffs, exchange rates, and firm differences in fixed trade costs. We find that firms that expanded their intermediate input imports expanded the volume and scope of their exports. Further, we find that the benefit of imported inputs differed along a number of dimensions including initial trade status, import source country, export destination, firm ownership, and industry R&D intensity. Although increased imports of intermediates boosted exports by all firms, we find that the effects were largest when they were purchased by private firms or firms that started out as non-traders. In addition, intermediate inputs from the higher-income G7 countries were especially helpful in facilitating firm exports to the presumably more-demanding G7 export markets. Taken together, these results suggest that product upgrading facilitated by technology or quality embedded in imported inputs helped Chinese firms to increase the scale and breadth of their participation in export markets.

# Food prices and the multiplier effect of trade policy

 Journal of International Economics---2016---Paolo Giordani, Nadia Rocha, Michele Ruta

This work studies the relationship between trade policy and food prices. We show that when individuals are loss averse, governments may use trade policy to shield the domestic economy from large food price shocks. This creates a complementarity between the price of food in international markets and trade policy. Specifically, unilateral actions give rise to a "multiplier effect": when a shock drives up the price of food, exporters respond by imposing restrictions, while importers wind

and soliciting further trade policy activism. We test the key prediction of the theory with a new dataset that comprises monthly information on trade measures across 77 countries and 32 food products for the period 2008–11, finding evidence of a multiplier effect in food trade policy. These findings contribute to inform the broader debate on the proper regulation of food trade policy within the multilateral trading system.

#### Relational contracts and global sourcing

• Journal of International Economics---2016---Bohdan Kukharskyy

Relational contracts – informal agreements sustained by the value of future relationships – are integral parts of global production processes. This paper develops a repeated-game model of global sourcing in which final good producers decide whether to engage with their suppliers in relational contracting and whether to integrate a supplier into a firm's boundaries or deal with the latter at arm's-length. The model predicts that the relative prevalence of vertical integration increases in the long-term orientation of the headquarters' and suppliers' managers. It further suggests that the share of a foreign subsidiary owned by a final good producer increases in the headquarters' long-term orientation. Combining industry-level data from the U.S. Census Bureau's Related Party Trade database with measures for long-term orientation from Hofstede et al. (2010) and the World Management Survey, I find empirical evidence supportive of the positive link between the long-term orientation of cooperation parties and the relative prevalence of vertical integration. Using information on managerial composition of firms and ownership stakes from the Bureau van Dijk's Orbis database, I find that firms led by long-term oriented managers own higher shares of their foreign subsidiaries.

#### Goods trade, factor mobility and welfare

• Journal of International Economics---2016---Stephen Redding

down protection, thus exacerbating the initial shock We develop a quantitative spatial model that incorporates a rich geography of trade costs and labor mobility with heterogeneous worker preferences across locations. We provide comparative statics for the unique equilibrium with respect to the primitives of the model. We show how the model can be used to undertake counterfactuals using only data in an initial equilibrium. In these counterfactuals, the welfare gains from trade depend on changes in both domestic trade shares and reallocations of population across locations. We show that factor mobility introduces quantitatively relevant differences in the counterfactual predictions of constant and increasing returns to scale models.

### Firms' heterogeneity, incomplete information, and pass-through

• Journal of International Economics---2016---Stefania Garetto

A large body of empirical work documents that prices of traded goods change by a smaller proportion than real exchange rates between the trading countries (incomplete pass-through). I present a Ricardian model of trade and international price-setting with heterogeneous firms, Bertrand competition and incomplete information. The model implies that: 1) firm-level pass-through is incomplete and a U-shaped function of firm-level productivity and market share; and 2) controlling for firm market share, producers operating under incomplete information, like for example new entrants in a market, exhibit lower pass-through rates than producers operating under complete information. Estimates from a panel data set of cars prices support the predictions of the model.

### Trust, firm organization, and the pattern of comparative advantage

• Journal of International Economics---2016---Federico Cingano, Paolo Pinotti

Interpersonal trust favors the delegation of decisions and tasks within firms, allowing the expansion of more productive units. We show that this interaction between trust and firm organization contributes to shaping the pattern of comparative advantage: high-trust regions and countries exhibit larger value-added and export shares in delegation-intensive industries relative to other industries. Consistent with the idea that trust allows firms to expand beyond a narrow circle of family members and friends, such effects are driven by an increase in average firm size, reflecting in turn a shift of the size distribution away from the smallest firms and toward the small-to-medium ones. According to our estimates, trust is no less relevant than human or physical capital, or institutions in shaping the pattern of comparative advantage.

# Endogenous trade participation with price rigidities

• Journal of International Economics---2016---Yuko Imura

This paper investigates the interaction of endogenous export participation and nominal rigidities and its implications for the dynamics of intensive and extensive margins of trade. I develop a two-country dynamic stochastic general equilibrium model wherein firms make state-dependent decisions on entry and exit in the export market, and where price adjustments are staggered across firms and time.

### Offshore production and business cycle dynamics with heterogeneous firms

• Journal of International Economics---2016---Andrei Zlate

To examine the effect of offshoring through vertical FDI on the international transmission of business cycles, I propose a two-country model in which firms endogenously choose the location of their production plants over the business cycle. Firms face a sunk cost to enter the domestic market and an additional fixed cost to produce offshore. As such, the offshoring decision depends on the firm-specific productivity and on fluctuations in the relative cost of effective labor. The model generates a procyclical pattern of offshoring and dynamics along its extensive margin that are consistent with data from Mexico's maquiladora sector. The

extensive margin enhances the procyclical response of the value added offshore to expansions in the home economy, as the number of offshoring firms mirrors the dynamics of firm entry at home. As a result, offshoring increases the comovement of output across economies, in line with the empirical evidence.

### Import exposure and human capital adjustment: Evidence from the U.S

Journal of International Economics---2016-- Andrew Greenland, John Lopresti

We exploit variation in exposure to Chinese import competition to identify the effect of trade-induced changes in labor market conditions on human capital accumulation in the U.S. from 1990 to 2007. We document large increases in U.S. high school graduation rates in the labor markets most affected by import competition. After controlling for established predictors of high school completion, demographic shifts, and coincident labor market changes unrelated to trade with China, we estimate that a movement from the 25th to the 75th percentile in Chinese import exposure led to an average increase in the graduation rate of 3.64 percentage points. Consistent with an environment in which students weigh increases in future earnings potential from further education against current labor market opportunities foregone, we find that growth in Chinese imports led to declines in wages for all educational groups, and reductions in employment for individuals without a high school degree both in absolute terms and relative to their more educated peers.

#### Quality, trade, and exchange rate pass-through

 Journal of International Economics---2016---Natalie Chen, Luciana Juvenal

We investigate theoretically and empirically the effects of real exchange rate changes on the behavior of firms exporting multiple products with heterogeneous levels of quality. Our model, which features a demand elasticity that falls with quality, predicts more pricing-to-market and a smaller response of export volumes to a real depreciation for higher quality goods. We

provide strong support for the model predictions using a unique data set of Argentinean firm-level wine export values and volumes between 2002 and 2009 combined with experts wine ratings to measure quality. The heterogeneity we find in the response of export prices and volumes to changes in exchange rates remains robust to alternative measures of quality, samples, and specifications.

### The higher costs of doing business in China: Minimum wages and firms' export behavior

• Journal of International Economics---2016---Li Gan, Manuel Hernandez, Shuang Ma

This paper examines the relationship between changes in the minimum wage and firms' export behavior in China using detailed firm-level data of medium and large manufacturing enterprises between 1998 and 2007. We find that a 10% increase in the minimum wage is associated with a 0.9 percentage-points decrease in the probability of exporting goods and a 0.9% decline in export sales, conditional on exporting. These findings are generally robust to alternative estimation methods and data sources. We further observe a larger decline among firms with lower average wages and a lower capital–labor ratio. The results suggest that Chinese exports and comparative advantage in international markets are not negligibly affected by higher local labor costs and regulations measured through raises in minimum wage standards.

# Ex Tridenti Mercatus? Sea-power and maritime trade in the age of globalization

• Journal of International Economics---2016---Darrell Glaser, Ahmed Rahman

This paper tests an implication of the hypothesis that hegemons provide increased global stability and thus promote international commerce. Specifically, we measure the influence of naval power projections on global trade during the latter 19th and early 20th centuries, a time of relative peace and robust commercial activity. We use archival data on the navies of Britain, France, the United States and Germany, capturing longitudinal

measures of ship deployment, tonnage, and ship personnel. First we develop an empirical naval arms race model, and demonstrate that the navies of Britain and France in particular responded rigorously to each other. We then use our estimates of naval power projected around the world by Britain and France to measure their effects on bilateral trade in a panel-data gravity model. Results indicate that while navies had some positive impact on their own nation's trade, other nations' trade suffered. Our results show that rather than bolster globalization, the first global arms race damaged commercial interests and lowered trade potential around the world.

# Markets with untraceable goods of unknown quality: Beyond the small-country case

 Journal of International Economics---2016---Timothy McQuade, Stephen Salant, Jason Winfree

When importing durables and nondurables, consumers often cannot discern quality prior to purchase. If they cannot also identify the individual producer, exporters have diminished incentives to produce high quality goods. To raise the quality of traded experience goods, previous international literature has proposed consolidation of export firms and the imposition of export quotas, policies that may be appropriate for tiny Taiwan but not a colossus like China. We contribute to this literature in three ways. First, we explicitly model the way in which consumers of experience goods rely on the reviews of previous buyers (who in turn rely on the reviews of buyers before them...) when deciding whether to purchase an experience good. Second, we endogenize the price of any given quality. Third, we assume that firms may exercise market power. As we show, once the "small country" assumption is dropped, policies advocated in the literature such as the merger of exporters or the imposition of export quotas can have adverse consequences on the profits of domestic exporters and on the welfare of all consumers. On the other hand, the unilateral imposition of minimum quality standards will increase the profits of domestic exporters while improving the welfare of all consumers.

### How firms export: Processing vs. ordinary trade with financial frictions

• Journal of International Economics---2016---Kalina Manova, Zhihong Yu

The fragmentation of production across borders allows firms to make and export final goods, or to perform only intermediate stages of production by processing imported inputs for re-exporting. We examine how financial frictions affect companies' choice between processing and ordinary trade - implicitly a choice of production technology and position in global supply chains – and how this decision affects performance. We exploit matched customs and balance sheet data from China, where exports are classified as ordinary trade, import-and-assembly processing trade (processing firm sources and pays for imported inputs), and pure assembly processing trade (processing firm receives foreign inputs for free). Value added, profits, and profitability rise from pure assembly to processing with imports to ordinary trade. However, more profitable trade regimes require more working capital because they entail higher up-front costs. As a result, credit constraints induce firms to conduct more processing trade and pure assembly in particular and preclude them from pursuing higher value-added, more profitable activities. Financial market imperfections thus impact the organization of production across firms and countries and inform optimal trade and development policy in the presence of global production networks.

# The impact of banking deregulation on inbound foreign direct investment: Transaction-level evidence from the United States

 Journal of International Economics---2016---Ivan Kandilov, Asli Leblebicioglu, Neviana Petkova

We evaluate the effects of state-level banking deregulation that resulted in improved access to cheaper local finance on foreign firms investing in the U.S. We provide direct, micro-level evidence from U.S. inbound foreign direct investment transactions showing that interstate banking, but not intrastate branching, deregulation increased the number of transactions, reduced

the average transaction value, and boosted overall investment by foreign multinationals. We also show that lower cost of local credit and greater local bank competition in each state, following the interstate banking deregulation, are potential mechanisms that stimulated FDI activity. Finally, we demonstrate that after the adoption of the interstate banking deregulation, both the number and the average value of transactions increased in industries that are more dependent on external finance relative to industries that are less dependent.

# Multiproduct firms and product scope adjustment in trade

 Journal of International Economics---2016---John Lopresti

A recent theoretical literature has emphasized the importance of multiproduct firms in trade. However, models within this literature have reached contradictory conclusions regarding the product-level response of firms to changes in trade costs. This paper attempts to resolve these contradictions by employing Bayesian techniques to estimate the product portfolio response throughout the distribution of US firms following the Canada–US Free Trade Agreement of 1989. I find evidence of a differential response among firms that are heterogeneous in terms of their involvement in foreign markets. Firms with less than 10–20% of total sales accounted for by foreign markets reduced product diversification as trade costs fell, while more foreign-oriented firms increased diversification.

#### **Gravity with scale effects**

Journal of International Economics---2016-- James Anderson, Mykyta Vesselovsky, Yoto Yotov

This paper extends the structural gravity model to incorporate scale effects and exchange rate passthrough. Bilateral scale effects in cross-border trade are inferred from the difference in distance elasticities between cross border and inter-provincial bilateral trade in a majority of 28 goods and services sectors for Canada's provinces. Bilateral-specific relationship investment is a possible

explanation. Incomplete passthrough of large exchange rate changes from 1997 to 2007, amplified by scale effects, produces direct effects on bilateral trade for 12 of 19 goods sectors but none of 9 services sectors.

### Trade and growth with heterogeneous firms revisited

 Journal of International Economics---2016---Guzmán Ourens

In a recent paper, Baldwin and Robert-Nicoud (2008) explore the growth and welfare effects of trade liberalization in a model with firm heterogeneity that allows for endogenous growth and a diversity of innovation mechanisms. Their main welfare conclusion is that freer trade has an unambiguously positive static effect while the sign of the dynamic effect, stemming from the change in the growth rate of varieties, depends on the type of technology imposed for innovations. This paper revisits these conclusions. By carefully following algebraic expressions in the original work, we point at inaccuracies and explore their consequences. Our main finding is that the sign of the static effect is not always positive. Consumers may experience an immediate loss from openness if the value of the firms they own decreases due to greater import competition. Moreover, the sign of the static effect on expenditure is always the opposite to that of the dynamic effect stemming from variety growth, so the results presented here highlight the existing tension between static and dynamic effects. Our results speak to the most recent literature on welfare effects in trade models.

# Distribution capital and the short- and long-run import demand elasticity

 Journal of International Economics---2016---Mario Crucini, Jonathan Davis

The elasticity of substitution between home and foreign goods is one of the most important parameters gains to almost every household across the per capita in international economics. The international macro expenditure spectrum, and that the distributional efliterature, which is primarily concerned with shortrun business cycle fluctuations, assigns a low value to this parameter. The international trade literature, to be 7.3%. The distributional effect through higher

which is more concerned with long-run changes in trade flows following a change in relative prices, assigns a high value to this parameter. This paper constructs a model where this discrepancy between the short- and long-run elasticities is due to frictions in distribution. Goods need to be combined with a local non-traded input, distribution capital, which is good specific. Home and foreign goods may be close substitutes, but if distribution capital is slow to adjust then agents cannot shift their consumption in the short run following a change in relative prices, and home and foreign goods appear as poor substitutes in the short run. In the long run this distribution capital can be reallocated, and agents can shift their purchases following a change in relative prices. Thus the observed substitutability gets larger as time passes.

### Market structure, imperfect tariff pass-through, and household welfare in Urban China

 Journal of International Economics---2016---Jun Han,Runjuan Liu,Beyza Ural Marchand,Junsen Zhang

This paper investigates the tariff pass-through mechanism and the distributional effects of trade liberalization in urban China. We study how market structure, specifically the size of the private sector, affects tariff pass-through, and how this mechanism influenced the extent to which households benefited from the trade liberalization. Our results suggest that a higher share of private sector in Chinese cities is associated with higher levels of tariff pass-through rates. This effect works both through the distribution sector, and through the production of final goods. By incorporating the changes in consumer prices of tradable and non-tradable goods, we next investigate the impact of WTO accession on household welfare through changes in the cost of consumption. The results show that WTO accession of China was associated with welfare gains to almost every household across the per capita expenditure spectrum, and that the distributional effect is strongly pro-poor. The average welfare gain of WTO accession on Chinese households is estimated

levels of privatization was also pro-poor, indicating that privatization enhanced the pro-poor impact of trade liberalization.

# Fundamentals news, global liquidity and macroprudential policy

 Journal of International Economics---2016----Javier Bianchi, Chenxin Liu, Enrique Mendoza

We study optimal macroprudential policy in a model in which unconventional shocks, in the form of news about future fundamentals and regime changes in world interest rates, interact with collateral constraints in driving the dynamics of financial crises. These shocks strengthen incentives to borrow in good times (i.e. when "good news" about future fundamentals coincide with a low-world-interest-rate regime), thereby increasing vulnerability to crises and enlarging the pecuniary externality due to the collateral constraints. Quantitatively, an optimal schedule of macroprudential debt taxes can lower the frequency and magnitude of financial crises, but the policy is complex because it features significant variation across interest-rate regimes and news realizations.

#### Sovereign debt with heterogeneous creditors

• Journal of International Economics---2016---Harris Dellas, Dirk Niepelt

We develop a sovereign debt model with heterogeneous creditors (private and official) where the probability of default depends on both the level and the composition of debt. Higher exposure to official lenders improves incentives to repay due to more severe sanctions but it is also costly because it lowers the value of the sovereign's default option. The model can account for the co-existence of private and official lending, the time variation in their shares in total debt as well as the low rates charged on both. It also produces intertwined default and debt-composition choices.

#### Capital controls or macroprudential regulation?

• Journal of International Economics---2016---Anton Korinek, Damiano Sandri

International capital flows can create significant financial instability in emerging economies. Does this make it optimal to impose capital controls or should policymakers rely on domestic macroprudential regulation in their quest for greater financial stability? This paper shows that it is desirable to employ both instruments to mitigate contractionary exchange rate depreciations: Macroprudential regulation reduces the amount and riskiness of financial liabilities, no matter whether they are financed by domestic or foreign lenders; capital controls increase the aggregate net worth of the economy by reducing net inflows. Both types of policy measures make the economy more stable and reduce the incidence and severity of crises. They should be set higher the greater an economy's debt burden and the higher domestic inequality. In a calibration based on the East Asian crisis countries, we find that it is optimal to impose both capital controls and macroprudential regulation that amount to a 2% tax on debt flows or equivalent quantity regulations. In advanced countries where the risk of contractionary exchange rate depreciations is more limited, the role for capital controls subsides. However, macroprudential regulation remains essential to mitigate booms and busts in asset prices.

# Not so disconnected: Exchange rates and the capital stock

• Journal of International Economics---2016---Tarek Hassan, Thomas M. Mertens, Tony Zhang

We investigate the link between stochastic properties of exchange rates and differences in capital-output ratios across industrialized countries. To this end, we endogenize capital accumulation within a standard model of exchange rate determination with nontraded goods. The model predicts that currencies of countries that are more "systemic" for the world economy (countries that face particularly volatile shocks or account for a large share of world GDP) appreciate when the price of traded goods in world markets is high. These currencies are better hedges against consumption risk faced by international investors because they appreciate in "bad" states of the world. As a consequence,

more systemic countries face a lower cost of capital and accumulate more capital per worker. We estimate our model using data from seven industrialized countries with freely floating exchange rate regimes between 1984 and 2010 and show that cross-country variation in the stochastic properties of exchange rates accounts for 72% of the cross-country variation in capital-output ratios. In this sense, the stochastic properties of exchange rates map to fundamentals in the way predicted by the model.

# Correlated beliefs, returns, and stock market volatility

 Journal of International Economics---2016---Joel David, Ina Simonovska

Firm-level stock returns exhibit comovement above that in fundamentals, and the gap tends to be higher in developing countries. We investigate whether correlated beliefs among sophisticated, but imperfectly informed, traders can account for the patterns of return correlations across countries. We take a unique approach by turning to direct data on market participants' information — namely, real-time firm-level earnings forecasts made by equity market analysts. The correlations of firm-level forecasts exceed those of fundamentals and are strongly related to return correlations across countries. A calibrated information-based model demonstrates that the correlation of beliefs implied by analyst forecasts leads to return correlations broadly in line with the data, both in levels and across countries — the correlation between predicted and actual is 0.63. Our findings have implications for market-wide volatility — the model-implied correlations alone can explain 44% of the cross-section of aggregate volatility. The results are robust to controlling for a number of alternative factors put forth by the existing literature.

# Human capital and international portfolio diversification: A reappraisal

 Journal of International Economics---2016---Lorenzo Bretscher, Christian Julliard, Carlo Rosa

We study the implications of human capital hedging for

international portfolio choice. First, we document that, at the household level, the degree of home country bias in equity holdings is increasing in the labor income to financial wealth ratio. Second, we show that a heterogeneous agent model in which households face short selling constraints and labor income risk, calibrated to match both micro and macro labor income and asset returns data, can both rationalize this finding and generate a large aggregate home country bias in portfolio holdings. Third, we find that the empirical evidence supporting the belief that the human capital hedging motive should skew domestic portfolios toward foreign assets, is driven by an econometric misspecification rejected by the data.

#### **Cultural Differences and Institutional Integration**

 Journal of International Economics---2016---Luigi Guiso, Helios Herrera, Massimo Morelli

If citizens of different countries belonging to an economic union adhere to different and deeply rooted cultural norms, when these countries interact they may find it impossible to agree on efficient policies, especially in hard times. Political leaders are bound to follow policies that do not violate their country's cultural norms. This paper provides a simple positive theory and a compelling case study of the Euro area crisis to highlight the importance of cultural clashes when economies integrate. We also provide a normative argument about the desirability of institutional integration: a political union, with a common enforcement agency, is the more beneficial the greater is cultural diversity in an economic union.

# Shocking language: Understanding the macroeconomic effects of central bank communication

• Journal of International Economics---2016---Stephen Hansen, Michael McMahon

We explore how the multi-dimensional aspects of information released by the FOMC has effects on both market and real economic variables. Using tools from computational linguistics, we measure the information

ditions, as well as the guidance the FOMC provides about future monetary policy decisions. Employing these measures within a FAVAR framework, we find that shocks to forward guidance are more important than the FOMC communication of current economic conditions in terms of their effects on market and real variables. Nonetheless, neither communication has particularly strong effects on real economic variables.

### Cross-border M&As and innovative activity of acquiring and target firms

• Journal of International Economics---2016---Joel Stiebale

This paper analyzes the effects of cross-border mergers and acquisitions (M&As) on the innovation of European firms. The results indicate a considerable increase in post-acquisition innovation in the merged entity. This is mainly driven by inventors based in the acquirer's country, while innovation in the target's country tends to decline. The asymmetry of effects between acquiring and target firms increases with preacquisition differences in knowledge stocks, indicating a relocation of innovative activities towards more efficient usage within multinational firms. Instrumental variable techniques as well as a propensity-score matching approach indicate that the effect of cross-border M&As on innovation is causal.

### The internationalization process of firms: From exports to FDI

• Journal of International Economics---2016---Paola Conconi, Andre Sapir, Maurizio Zanardi

We examine how uncertainty affects firms' internationalization choices. We begin by unveiling a new empirical regularity: using a unique dataset that allows us to study the dynamics of firms' exports and foreign direct investments (FDI) in individual destinations, we show that most firms serve a market via exports before investing there. To rationalize this pattern, we describe a model in which firms are uncertain about their profitability in a foreign market and may experiment

released by the FOMC on the state of economic convia exports before engaging in FDI. In line with this idea, we show that the probability that a firm starts investing in a foreign country increases with its export experience in that country. In more uncertain destinations, firms delay FDI entry, experimenting longer with exports before establishing foreign affiliates.

#### International fiscal spillovers

• Journal of International Economics---2016---Renato Faccini, Haroon Mumtaz, Paolo Surico

A two-country business cycle model featuring nominal rigidities, countercyclical mark-ups, rule of thumb consumers and government spending reversals is used to identify inequality predictions that are robust across a range of empirically plausible parameterizations. These robust inequality restrictions are imposed onto a regime-change factor model for the United States and its main trade partners to estimate the international fiscal spillovers. The effects of U.S. government spending on foreign real activity are found to be sizable and significant, operating mainly by lowering real interest rates rather than boosting trade balances. In contrast, there seems to be only limited evidence of state dependence in the international transmission of fiscal policy.

#### Source-country earnings and emigration

• Journal of International Economics---2016---Slobodan Djajic, Murat Kırdar, Alexandra Vinogradova

While higher wages at home reduce the incentive to emigrate by increasing the opportunity cost of working abroad, they also facilitate emigration for liquidityconstrained individuals. Our theoretical model examines the interaction between these two effects. We show that (i) the relationship between the home-country wage and emigration pressure is hump-shaped, (ii) the hump is more pronounced the lower the cost of migration, and (iii) the ratio of high to low-skilled emigrants is decreasing in the home-country wage. We test our model empirically for three different skill groups of emigrants and find strong evidence in support of the

three hypotheses. The peak emigration rate for the low skilled is estimated at \$4000 at 2000 PPP-adjusted prices. A rise in the annual per-capita income of the source country from \$231 of the poorest economy in our sample to \$4000, is associated with an increase in the emigration rate of its low-skilled workers from about 2.7% to 5.0%.

### Government spending shocks in open economy VARs

• Journal of International Economics---2016---Mario Forni,Luca Gambetti

By using the Survey of Professional Forecasters, we provide new evidence on the open-economy effects of government spending, focusing on a well-known puzzle in the literature, that the real exchange rate depreciates in response to a fiscal expansion. Much of government spending is well anticipated over a one year horizon. Once news and surprise shocks are treated as different shocks, there is no depreciation puzzle for news shocks while it is still there for surprise shocks. Fiscal foresight seems to lie at the heart of the different exchange rate responses to news and surprise shocks, depending on the timing of the anticipated budget adjustment following the shock. Indeed, the results are broadly consistent with the prediction of a DSGE model with spending reversals.

### Bubble thy neighbour: Portfolio effects and externalities from capital controls

 Journal of International Economics---2016---Kristin Forbes, Marcel Fratzscher, Thomas Kostka, Roland Straub

We use changes in Brazil's tax on capital inflows from 2006 to 2013 to test for direct portfolio effects and externalities from capital controls on investor portfolios. We find that an increase in Brazil's tax on foreign investment in bonds causes fund managers to significantly decrease their portfolio allocations to Brazil in both bonds and equities. Fund managers simultaneously increase allocations to other countries that have substantial exposure to China and decrease allocations

to countries viewed as more likely to adjust their capital controls. Much of the effect of capital controls on portfolio allocation appears to occur through signalling — i.e., changes in investor expectations about future policies — rather than the direct cost of the controls. This evidence of significant externalities from capital controls suggests that any assessment of controls should consider their effects on portfolio flows to other countries.

# External trade diversion, exclusion incentives and the nature of preferential trade agreements

 Journal of International Economics---2016---Paul Missios, Kamal Saggi, Halis Yildiz

In a game of endogenous trade agreements between three countries, we show that while the pursuit of customs unions (CUs) prevents global free trade from emerging as a coalition-proof Nash equilibrium, the pursuit of free trade agreements (FTAs) does not. This result reflects the relatively flexible nature of FTAs: whereas each FTA member can independently undertake further trade liberalization with respect to the non-member, CU members must do so as a group due to their common external tariff. By diverting members' exports away from the non-member, both types of trade agreements induce the non-member to voluntarily lower its import tariffs.

# Market deregulation and optimal monetary policy in a monetary union

• Journal of International Economics---2016---Matteo Cacciatore, Giuseppe Fiori, Fabio Ghironi

This paper addresses the consequences of product and labor market deregulation for monetary policy in a two-country monetary union with endogenous product creation and labor market frictions. We show that when regulation is high in both countries, optimal policy requires significant departures from price stability both in the long run and over the business cycle. The adjustment to market reform requires expansionary policy to reduce transition costs, but deregulation reduces static and dynamic inefficiencies, making price

stability more desirable once the transition is complete. effect is larger when a representative's constituents International synchronization of reforms can eliminate policy tradeoffs generated by asymmetric deregulation. re-election risk.

are more at risk or the representative faces greater

### Optimal international agreement and restriction on domestic efficiency

• Journal of International Economics---2016---Gea M. Lee

The WTO's strict treatment of domestic subsidies has not been well received in the existing literature. An essential reason is that the consequent restriction on domestic efficiency is hardly compatible with the existing theory of government intervention under which the primary objective of using domestic subsidies, domestic efficiency, is not sacrificed for another objective. We develop a trade-agreement model in which the magnitude of a legitimate domestic subsidy with which to address a production externality is private information. We find that an optimal agreement substantially restricts domestic efficiency for the international objective of expanding market access.

### An empirical analysis of trade-related redistribution and the political viability of free trade

• Journal of International Economics---2016---James Lake, Daniel Millimet

Even if free trade creates net welfare gains for a country as a whole, the associated distributional implications can undermine the political viability of free trade. We show that trade-related redistribution—as presently constituted—modestly increases the political viability of free trade in the US. We do so by assessing the causal effect of expected redistribution associated with the US Trade Adjustment Assistance program on US Congressional voting behavior on eleven Free Trade Agreements (FTAs) between 2003 and 2011. We find that a one standard deviation increase in expected redistribution leads to an average increase in the probability of voting in favor of an FTA of 1.8 percentage points. Although this is a modest impact on average, we find significant heterogeneities; in particular, the

### Does political conflict hurt trade? Evidence from consumer boycotts

• Journal of International Economics---2016---Kilian Heilmann

I estimate the impact of international conflict on bilateral trade relations using several incidents of politically motivated boycotts: The boycott of Danish goods by Muslim countries following the Muhammad Comic Crisis in 2005/2006, the Chinese boycott of Japanese goods in response to the Senkaku/Diaoyu Island conflict in 2012, the boycott of French products in the US over the Iraq War in 2003, and Turkey's boycott of Israel over the Gaza conflict in 2014. The results from difference-in-differences regressions and the synthetic control group method show that boycotts can have strong negative effects on bilateral trade in both goods and services. I estimate an average one-year trade disruption of 18.8% in the case of Denmark, 2.7% for Japan, and 1.7% for French imports, where in the latter two cases this effect is only short term. For all boycott instances, this is only a minor share of overall exports of the boycotted country over the same period. For the Iraq and Gaza conflicts, there is a reciprocal negative effect on the boycotted countries' imports from the boycotter. Product-level results are in line with intuition: Boycotts are most effective for consumer goods, especially highly-branded signature export goods such as Japanese cars, while having at most a temporary effect on intermediates and capital goods. An event study on Japanese stock market returns suggests that the Chinese boycott depressed stock values of explicitly boycotted Japanese firms only temporarily.

### Systemic risk, international regulation, and the limits of coordination

• Journal of International Economics---2016---Gazi Kara

This paper examines the incentives of national regulators to coordinate capital adequacy requirements in the presence of systemic risk in global financial markets. In a two-country model, correlated asset fire sales by banks generate systemic risk across national financial markets. Absent coordination, national regulators choose inefficiently low levels of macro-prudential regulation. Thus, symmetric countries always benefit from relinquishing their authority to a central regulator that establishes uniform regulations across countries. I also consider the separate case of asymmetric countries: while there is a limit to coordination when countries are sufficiently asymmetric in a single dimension, existence of asymmetries in multiple dimensions might actually relax this limit or even eliminate it.

# Capital heterogeneity as a source of comparative advantage: Putty-clay technology in a ricardian model

• Journal of International Economics---2016---Hirokazu Ishise

This paper considers how heterogeneity in capital goods affects international trade patterns, and shows a novel source of comparative advantage: the magnitude of heterogeneity in capital goods. Capital goods are heterogeneous in their vintage and productivity, and due to capacity constraints, only productive capital goods are activated in the equilibrium. Through this selection, the distribution of capital goods determines industry-level productivity: industry-level productivity is higher in an industry with relatively larger variation in capital goods. Hence in a perfectly competitive twocountry, two-good, two-factor equilibrium, the industry has Ricardian comparative advantage. An extension of the model, which includes fixed trade cost, describes a sorting situation in which the most productive production units (which are generally newer vintage) export, the moderately productive units serve the domestic market, and the least productive units (older) do not operate.

# Imported inputs and invoicing currency choice: Theory and evidence from UK transaction data

• Journal of International Economics---2016---Wanyu Chung

A significant proportion of international trade is in intermediate goods. This paper considers theoretically and empirically how exporters' dependence on imported inputs affects their choice of invoicing currency. The model predicts that exporters that depend more on foreign currency-denominated inputs are less likely to price in their home currency. I test this and other theoretical results using a novel dataset that covers UK trade transactions with non-EU countries. I find considerable support for the model's predictions. A 10 percentage point higher share of foreign currency-denominated inputs is associated with a 20 percentage point higher probability of pricing in the same foreign currency relative to the producer's currency.

### Value-added trade and business cycle synchronization

• Journal of International Economics---2016---Romain Duval,Nan Li,Richa Saraf,Dulani Seneviratne

Ever since Frankel and Rose's (1998) seminal paper, the literature on trade and business cycle synchronization has relied on gross trade data, with weak results in recent papers that carefully address omitted variable bias. This paper re-examines this relationship using new value-added trade data for 63 advanced and emerging economies during 1995–2013. In a panel framework, we identify a significantly positive impact of bilateral (value-added) trade intensity on business cycle synchronization—controlling for global common shocks, country-pair heterogeneity and other covariates -that is absent when gross trade data are used. There is also some evidence that the impact of value-added trade on synchronization increases with the degree of (value-added) intra-industry trade. We provide a theoretical rationale for the role of value-added trade for synchronization using a simple international business

cycle model that features cross-country input linkages in production.

#### Trade, education, and the shrinking middle class

• Journal of International Economics---2016---Emily Blanchard, Gerald Willmann

We develop a new model of trade in which educational institutions drive comparative advantage and the distribution of human capital within and across countries. Our framework exploits a multiplicity of sectors and a continuous support of human capital choices to demonstrate that freer trade can induce crowding out of the middle occupations toward the skill acquisition extremes in one country and simultaneous expansion of middle-income industries in another. Individual gains from trade may be non-monotonic in workers' ability, and middle ability agents can lose the most from trade liberalization. Comparing trade and education policies, our model indicates that targeted education subsidies like Trade Adjustment Assistance are the most effective mechanism to bolster the middle class.

# Terms of trade and global efficiency effects of free trade agreements, 1990–2002

• Journal of International Economics---2016---James Anderson, Yoto Yotov

This paper infers the terms of trade effects of free trade agreements (FTAs) implemented in the 1990s. We estimate large FTA effects on bilateral trade volume in 2 digit manufacturing goods from 1990–2002, using panel data gravity methods to resolve two way causality. The terms of trade changes implied by these volume effects are deduced for 40 countries plus a rest-of-the-world aggregate using an endowments general equilibrium model. Some countries gain over 5% of real manufacturing income, some lose less than 0.3%. Global efficiency of manufactures trade rises 0.9% based on a distance function measure of iceberg melting.

#### Institutions and export dynamics

• Journal of International Economics---2016---Luis Araujo, Giordano Mion, Emanuel Ornelas

We study how contract enforcement and export experience shape firm export dynamics in an environment with incomplete information. We show that exporters start with higher volumes and sell for longer periods in countries with better contracting institutions and when they have prior foreign experience. However, conditional on survival, firm export growth decreases with the quality of the country's institutions. Controlling for time-varying firm unobservables and other factors, we confirm these and other predictions using a panel of Belgian exporting firms from 1995 to 2008. The results highlight the manifold implications of export experience and contracting institutions for firm dynamics in foreign markets.

### High-income export destinations, quality and wages

• Journal of International Economics---2016---Irene Brambilla, Guido G. Porto

This paper establishes a link between the income level of the destination countries and the level of average wages in the exporting country across the world economy. We use cross-country panel data to set up an instrumental variable model of high-income export destinations and wages. We find robust evidence that, worldwide, industries that ship products to high-income destinations do pay higher average wages. Our IV results indicate this is a causal relationship. We also explore the operating mechanisms, and find robust evidence in support of a dual link. First, industries that ship products to high-income destination export higher quality goods (as measured by the average unit value of exports within industries). This is because high-income countries demand high-quality products. Second, the provision of quality is costly and requires more intensive use of higher-wage skilled labor. As a result, the production of higher quality products at the industry level creates a wage premium and conduces to higher average industry wages.

### Estimating the effects of the container revolution on world trade

 Journal of International Economics---2016- -Daniel Bernhofen, Zouheir El-Sahli, Richard Kneller

Many historical accounts have asserted that containerization triggered complementary technological and organizational changes that revolutionized global freight transport. We are the first to suggest an identification strategy for estimating the effects of the container revolution on world trade. Our empirical strategy exploits time and cross-sectional variation in countries' first adoption of container facilities and combines it with product-level variation in containerizability and container usage. Applying our container variables on a large panel of product level trade flows for the period 1962–1990, our estimates suggest economically large concurrent and cumulative effects of containerization and lend support for the view of containerization being a driver of 20th century economic globalization.

# Intrafirm trade and vertical fragmentation in U.S. multinational corporations

• Journal of International Economics---2016---Natalia Ramondo, Veronica Rappoport, Kim Ruhl

Using firm-level data, we document two new facts regarding intrafirm trade and the activities of the foreign affiliates of U.S. multinational corporations. First, intrafirm trade is concentrated among a small number of large affiliates within large multinational corporations; the median affiliate ships nothing to the rest of the corporation. Second, we find that the input-output coefficient linking the parent's and affiliate's industries of operation — a characteristic commonly associated with production fragmentation — is not related to a corresponding intrafirm flow of goods.

# Market structure and exchange rate pass-through

• Journal of International Economics---2016---Raphael Auer, Raphael S. Schoenle

We study firm-level pricing behavior through the lens of exchange rate pass-through and provide new evidence on how firm-level market shares and price complementarities affect pass-through decisions. Using U.S. import price micro data, we identify two facts: First, exactly the firms that react the most with their prices to changes in their own costs are also the ones that react the least to changing prices of competing importers. Second, the response of import prices to exchange rate changes is U-shaped in our proxy for market share while it is hump-shaped in response to the prices of competing importers. We show that both facts are consistent with a model based on Dornbusch (1987) that generates variable markups through a nested-CES demand system. Finally, based on the model, we find that direct cost pass-through and price complementarities among importers play approximately equally important roles in determining pass-through but also partly offset each other. This suggests that equilibrium feedback effects in import pricing are large. Omission of either channel in an empirical analysis results in a failure to explain how market structure affects pricesetting in industry equilibrium.

# Global versus local shocks in micro price dynamics

• Journal of International Economics---2016---Philippe Andrade.Marios Zachariadis

A number of recent papers point to the importance of distinguishing between the price reaction to macro and micro shocks. We emphasize instead the importance of distinguishing between global and local shocks. We exploit a panel of 276 micro price levels collected on a semi-annual frequency over two decades in 59 countries around the world, that enables us to distinguish between different types (global and local) of macro and micro shocks. We find that global macro and micro shocks are always associated with a slower response of prices than the respective local shocks. Focusing on structural monetary macro shocks, we show that prices reach their long-run value much slower in response to a global macro shock, as compared to the time it takes for prices to reach their long-run value in response to

a local macro shock.

#### Fire-sale FDI or business as usual?

• Journal of International Economics---2016---Ron Alquist,Rahul Mukherjee,Linda Tesar

Motivated by a set of stylized facts, we develop a model of cross-border mergers and acquisitions (M&As) to study foreign direct investment (FDI) in emerging markets. We compare acquisitions undertaken during financial crises – so called fire-sale FDI – with acquisitions made during non-crisis periods to examine whether the outcomes differ in the ways predicted by the model. Foreign acquisitions are driven by two sources of value creation. First, acquisitions by a foreign firm relax the target's credit constraint (i.e., a liquidity motive). Second, acquisitions exploit operational synergies between the target and the acquirer (i.e., a synergistic motive). During crises credit conditions tighten in the target economy and the liquidity motive dominates. The model predicts that during crisis relative to noncrisis periods, (1) the likelihood of foreign acquisitions is higher; (2) the proportion of foreign acquisitions in the same industry is lower; (3) the average size of ownership stakes is lower; and (4) the duration of acquisitions is lower (i.e., acquisition stakes are more likely to be flipped). We find support for (1) but not for the other three predictions. The results thus suggest that foreign acquisitions in emerging markets do not differ in these important ways between crisis and normal periods.

### The composition of trade flows and the aggregate effects of trade barriers

• Journal of International Economics---2016---Scott French

A widely used class of quantitative trade models implicitly assumes that patterns of comparative advantage take a specific form such that they have no influence over the effect of trade barriers on aggregate trade flows and welfare. In this paper, I relax this assumption, developing a framework in which to analyze the role of interactions among countries' patterns of comparative

advantage in determining the aggregate effects of trade barriers. My model preserves much of the tractability of standard aggregate quantitative trade models while allowing for the effects of any pattern of comparative advantage, across many products and countries, to be taken into account. After fitting my model to product-level trade data, I find that the composition of trade flows is quantitatively important in determining the welfare gains from trade and the aggregate effects of trade barriers. A key finding is that the welfare gains from trade tend to be larger and more skewed in favor of low-income countries than an aggregate model would suggest.

### Crisis-proof services: Why trade in services did not suffer during the 2008–2009 collapse

• Journal of International Economics---2016--Andrea Ariu

During the 2008–2009 crisis, trade in goods fell by almost 30%. In contrast, trade in business, telecommunication and financial services continued growing at their pre-crisis rates and only services related to transport declined. Using trade data at the firm-product-destination level for Belgium, I show that during the crisis the elasticity of services exports with respect to GDP growth in destination countries was significantly different from that of goods exports. In particular, the negative income shock in partner countries affected exports of goods but not exports of services. This difference is economically sizable: if goods exports had had the same elasticity to GDP growth as services exports, their fall during the 2008–2009 collapse would have been only half what was observed.

### Sufficient statistics for tariff reform when revenue matters

• Journal of International Economics---2016---James Anderson, J. Peter Neary

What kinds of tariff reform are likely to raise welfare in situations where tariff revenue is important? General conditions for welfare to rise without reducing tariff revenue are opaque. We show that they can be greatly primarily the generalized mean and variance of tariffs. We present sufficient conditions for a class of linear tariff reform rules that guarantee higher welfare without a loss in revenue. The rules consist of convex combinations of (i) trade-weighted-average-tariff-preserving cuts in dispersion; and (ii) uniform tariff cuts that preserve domestic relative prices among tariff-ridden goods.

### Importing, exporting, and firm-level employment volatility

• Journal of International Economics---2016---Christopher Kurz, Mine Senses

In this paper, we use detailed trade and transactions data for the U.S. manufacturing sector to document a new set of stylized facts on the theoretically ambiguous relationship between the volatility of employment growth and the trade exposure of a firm. We find that, on average, firms that export are less volatile than non-traders, while importers are more volatile. The substantial variation we document across trading firms, in terms of the duration of time and the intensity with which they trade, the number and type of products they trade, and in terms of the number and characteristics of their trading partners, plays an integral role in explaining the robust association between trading and employment volatility. For trading firms, the frequency of trade is negatively associated with employment volatility. Importers with a higher share of imported inputs (especially manufactured imports) and those that source from more countries and from countries with lower per-capita income experience higher levels of volatility. A higher share of exports, fewer number of export destinations and, export destinations that are further away, and with lower average incomes are associated with higher levels of volatility for exporters.

### A quantitative model of sovereign debt, bailouts and conditionality

• Journal of International Economics---2016---Fabian Fink, Almuth Scholl

simplified using a small number of sufficient statistics, In times of sovereign debt crises, International Financial Institutions provide temporary financial support contingent on the implementation of specific macroeconomic policies. This paper develops a model of sovereign debt and default with endogenous participation rates in bailout programs. Conditionality enters as a constraint on fiscal policy. In the model, the insurance character of bailouts generates incentives for debt accumulation. Quantitative results suggest that bailouts prevent sovereign defaults in the short-run but may come at a cost of a greater default probability in the long-run. Increasing the intensity of conditionality lowers the bailout participation rate and generates a hump-shaped pattern of sovereign default risk.

### Sticky prices and deviations from the Law of One Price: Evidence from Mexican micro-price data

• Journal of International Economics---2016---Andrés Elberg

This paper uses a novel dataset of weekly sampled store-level prices to study the impact of sticky prices on the volatility and persistence of intranational deviations from the Law of One Price (LOP). The volatility of LOP deviations is found to be increasing both on the distance separating two locations and on the degree of price stickiness. Sticky prices are also found to be systematically related to the persistence of LOP deviations: Half-lives of LOP deviations are systematically larger for goods with stickier prices. These observations are shown to accord well with the predictions of a dynamic general equilibrium model featuring real market segmentation and Calvo pricing. I also find evidence of remarkably fast convergence to the LOP (average half-lives of LOP deviations are in the order of 3-6weeks) and show that previously reported convergence estimates may be afflicted by a positive temporal aggregation bias.

### Parameter drifts, misspecification and the real exchange rate in emerging countries

• Journal of International Economics---2016---Hernán D. Seoane

This paper reviews the baseline framework for the analysis of emerging economies. Using Argentinean data, I estimate a small open economy model with stochastic trend, working capital constraint and augmented with time-varying parameters. I find that "structural" technological and financial parameters of one-sector model are time-varying during 1936–2006. Time-varying parameters correlate with the real exchange rate, suggesting potential misspecification of the one-sector model. Therefore, I propose a two-sector model that endogenously accounts for the real exchange rate. In this model, stationary productivity shocks and the country premium together explain a large share of the variability observed in the data.

#### Specialization across goods and export quality

• Journal of International Economics---2016---Francisco Alcalá

This paper explores the link between specialization across goods and specialization within goods along the quality dimension. It develops a tractable many-country, many-industry Ricardian model with an integer number of heterogeneous firms producing each good, under a generic assumption about the distributions of firm efficiencies. In equilibrium, each country exports a range of qualities for each good that overlaps with the ranges of other countries following patterns that relate to wage differences, trade frictions, and absolute advantage. Under plausible assumptions and conditional on wages, the average quality of a country's exports within an industry increases with the country's revealed comparative advantage in the industry.

#### Trade and the political economy of redistribution

• Journal of International Economics---2016---Gonzague Vannoorenberghe, Eckhard Janeba

This paper shows how international trade affects the support for policies which redistribute income between workers across sectors, and how the existence of such policies changes the support for trade liberalization. Workers, who are imperfectly mobile across sectors, vote on whether to subsidize ailing sectors, thereby

redistributing income but also distorting the labor allocation. We present three main findings. First, redistributive policies are more "likely" to arise in a small open than in a closed economy for a broad range of parameters. Second, if a redistributive policy is adopted in both situations, income differences across sectors tend to be lower in the open economy. Third, the possibility to redistribute income across sectors raises the political support for trade liberalization in the first place.

### The impact of foreign liabilities on small firms: Firm-level evidence from the Korean crisis

 Journal of International Economics---2015---Yun Jung Kim, Linda L. Tesar, Jing Zhang

Using Korean firm-level data on publicly-listed and privately-held firms together with firm exit data, we find strong evidence that holdings of foreign-currency denominated debt negatively affected the economic performance of small firms during the 1997–98 crisis. The large exchange rate depreciation that occurred during the crisis resulted in a decline in net worth for firms with foreign-currency denominated debt on their balance sheets. Small firms with more short-term foreign debt were more likely to declare bankruptcy. Conditional on surviving the crisis, small firms that had more short-term foreign debt experienced larger declines in sales. The exit (bankruptcy) margin accounts for a large fraction of small firms' adjustment during the crisis.

#### Transmission of sovereign risk in the Euro crisis

• Journal of International Economics---2015---Filippo Brutti, Philip Sauré

We assess the role of financial linkages for the transmission of sovereign risk in the Euro crisis. Building on the narrative approach by Romer and Romer (1989, 2010) and augmented by Mertens and Ravn (2013), we use financial news to identify structural shocks in a vector autoregressive model of daily sovereign CDS premia for eleven European countries. To estimate how these shocks transmit across borders, we use data on

cross-country bank exposures to sovereign debt. Our results indicate that cross-border financial exposures constitute important transmission channels: a reduction of exposure to overall Greek debt by one standard deviation is associated with a reduction in the response of the sovereign CDS to a shock to Greek sovereign risk by about three quarter in the average country. Decomposing these effects, we find that exposures to sovereign debt constitute significant transmission channels, while we find no robust support for transmission through bank-to-bank lending.

### Imperfect mobility of labor across sectors: a reappraisal of the Balassa–Samuelson effect

• Journal of International Economics---2015---Olivier Cardi,Romain Restout

This paper investigates the relative price and relative wage effects of a higher productivity in the traded sector compared with the non traded sector in a two-sector open economy model with imperfect substitutability in hours worked across sectors. The Balassa–Samuelson (1964) model predicts that a rise in the sectoral productivity ratio by 1% raises the relative price of non tradables by 1% while leaving the non traded wagetraded wage ratio unchanged. Applying cointegration methods to a panel of fourteen OECD countries over the period 1970–2007, our estimates show that the relative price rises by only 0.78% and the relative wage falls by 0.27%. While our first set of empirical findings cast doubt on the quantitative predictions of the Balassa–Samuelson model, our second set of evidence highlights the role of imperfect labor mobility: the relative price responds more to a productivity differential between tradables and non tradables while the reaction of the relative wage is more muted in countries with higher intersectoral reallocation of labor. We show that the ability of the two-sector model to account for our evidence quantitatively relies upon two ingredients: i) imperfect mobility of labor across sectors, and ii) physical capital accumulation. Finally, our numerical results reveal that the model predicts the relative price response fairly well, and to a lesser extent the relative wage response.

#### Why trade matters after all

 Journal of International Economics---2015----Ralph Ossa

I show that accounting for cross-industry variation in trade elasticities greatly magnifies the estimated gains from trade. The main idea is as simple as it is general: while imports in the average industry do not matter too much, imports in some industries are critical to the functioning of the economy, so that a complete shutdown of international trade is very costly overall.

### Trade policy and wage inequality: A structural analysis with occupational and sectoral mobility

• Journal of International Economics---2015---Erhan Artuc, John McLaren

A number of authors have argued that a worker's occupation of employment is at least as important as the worker's industry of employment in determining whether the worker will be hurt or helped by international trade. We investigate the role of occupational mobility on the effects of trade shocks on wage inequality in a dynamic, structural econometric model of worker adjustment. Each worker in our specification can switch either industry, occupation, or both, paying a time-varying cost to do so in a rational-expectations optimizing environment. We also specify a novel model of offshoring based on task-by-task comparative advantage that collapses to a very simple form for simulation. We find that the costs of switching industry and occupation are both high, and of similar magnitude. In simulations we find that a worker's industry of employment is much more important than either the worker's occupation or skill class in determining whether or not she is harmed by a trade shock, but occupation is crucial in determining who is harmed by an offshoring shock.

### The welfare consequences of import tariffs: A quantitative perspective

 Journal of International Economics---2015---Gabriel Felbermayr, Benjamin Jung, Mario Larch The quantitative trade literature often does not distinguish between tariffs and iceberg trade costs. This paper explores qualitatively and quantitatively how this distinction matters for the gains from trade. Most obviously, tariffs generate government revenues, while icebergs do not. In models of monopolistic competition, they may also affect entry. Finally, depending on whether they are modeled as cost or demand shifters, tariffs may have different implications on profits, entry, and, in turn, on the elasticity of trade flows and welfare. We show that the welfare formula by Arkolakis, Costinot, and Rodriguez-Clare (2012) requires qualification, even in the simple single-sector case. We find that the quantitative welfare consequences of costversus demand-shifting tariffs can be important.

#### Are the benefits of export support durable? **Evidence from Tunisia**

 Journal of International Economics---2015--Cadot, Ana Fernandes, Julien Gour--Olivier don, Aaditya Mattoo

This paper evaluates the effects of the FAMEX export promotion program in Tunisia on the performance of beneficiary firms. While most studies assess only the short-term impact of such programs, we consider also the longer-term impact. Our estimates suggest that the average beneficiary initially saw both higher overall export levels and greater diversification across destinations and products. However, three years after the intervention, beneficiaries' export levels and diversification were no longer significantly different from those of a control group. Furthermore, the effects were heterogeneous across firms: small and large firms saw no positive impact on export levels, and even the positive impact on medium sized firms was temporary. The temporariness of the impact was not due to spillovers to non-beneficiary firms which helped them to catch up, or to greater exposure of beneficiaries to crisis-affected economies. Rather, the impact may be transient because the program did not lead to the enhancements in product quality or sophistication which could have strengthened competitiveness durably. Notwithstanding its transient effect, the relatively low-cost FAMEX county-level in response to immigration as predicted

still generated two Tunisian Dinars of private profits per Dinar of program expenditure, and the additional corporate tax revenue just covered the public cost of the program.

#### Benefits of foreign ownership: Evidence from foreign direct investment in China

• Journal of International Economics---2015---Jian Wang, Xiao Wang

To examine the effect of foreign direct investment, this paper compares the post-acquisition performance changes of foreign- and domestic-acquired firms in China. Unlike previous studies, we investigate the purified effect of foreign ownership by using domesticacquired firms as the control group. After controlling for the acquisition effect that exists in domestic acquisitions, we find no evidence that foreign ownership can bring additional productivity gains to target firms, though both foreign and domestic acquisitions bring productivity improvements to target firms. In contrast, a strong and robust finding is that foreign ownership significantly improves target firms' financial conditions and exports relative to domestic-acquired firms. Foreign acquisition is also found to improve output, employment and wages for target firms. These findings conflict with the conventional view of productivitydriven FDI and highlight the financial channel through which FDI benefits the host countries.

### More hands, more power? Estimating the impact of immigration on output and technology choices using early 20th century US agriculture

• Journal of International Economics---2015---Jeanne Lafortune, José Tessada, Carolina González-Velosa

We study the impact of immigration-induced changes in labor supply within agriculture in the US during early 20th century, a sector where shifting output mix may be easier than in previously studied industries (manufacturing), on output and production choices. We find evidence of output mix adjustments at the by trade models. Moreover, that response is only visible in diversified counties. Counties with higher initial specialization, likely with higher degree of factor (land) specificity, responded instead through input mixes and organizational changes. Suggestive evidence indicates that crop mix adjustments alone, without organizational changes, absorbed an important part of changes in labor endowments in diversified counties.

### Firm heterogeneity, trade, multinationals, and growth: A quantitative evaluation

• Journal of International Economics---2015---Tommy Wu

In this paper I study and quantify the long-run effects of openness to trade and multinational production in a model of endogenous innovation with firm heterogeneity. When trade is liberalized, some multinationals find it more profitable to export and forgo the costs of maintaining capacities in foreign markets. I examine how this trade-off can have long-run effects on growth and welfare. The model emphasizes the importance of firms' ability to access multiple markets in providing incentives to innovate and highlights the role of the quality of technology in international technology spillovers for promoting growth. I find that by shutting down openness to both trade and multinational production with other OECD countries, the US would experience a welfare cost that is equivalent to a 39% drop in consumption, with the dynamic effect accounting for at least 40% of the estimated welfare cost. Since multinationals tend to use relatively high quality technology, trade liberalization alone can lead to an adverse effect on economic growth and consumer welfare by reducing the level of multinational production.

### Love for quality, comparative advantage, and trade

• Journal of International Economics---2015---Esteban Jaimovich, Vincenzo Merella

We propose a Ricardian trade model with horizontal and vertical differentiation, where willingness to pay for quality rises with income, and productivity differentials across countries are stronger for high-quality varieties of goods. Our theory predicts that the scope for trade widens and international specialisation intensifies as incomes grow and wealthier consumers raise the quality of their consumption baskets. This implies that comparative advantages strengthen gradually over the path of development as a by-product of the process of quality upgrading. The evolution of comparative advantages leads to specific trade patterns that change over the growth path, by linking richer importers to more specialised exporters. We provide empirical support for this prediction, showing that the share of imports originating from exporters exhibiting a comparative advantage in a specific product correlates positively with the importer's GDP per head.

### Firm investment and exporting: Evidence from China's value-added tax reform

• Journal of International Economics---2015---Qing Liu, Yi Lu

This paper contributes to the literature by identifying the causal effect of firm investment on exporting behavior. The identification hinges on regional variations in the 2004 value-added tax pilot reform in China, which generated positive investment shocks. The instrumental variable estimation results show that firm investment significantly and substantially increases the likelihood of exporting, and this effect is largely due to the positive effect of firm investment on firm productivity. Finally, the paper documents some heterogeneity of the effect across industries with different degrees of competition and financial constraints.

### International portfolios: A comparison of solution methods

 Journal of International Economics---2015---Katrin Rabitsch, Serhiy Stepanchuk, Viktor Tsyrennikov

We compare the performance of the perturbation-based (local) portfolio solution method of Devereux & Sutherland (2010a, 2011) with a global solution method. As a test suite we use model specifications that broadly

capture features of international financial trade, between advanced economies, and between advanced and emerging economies. We consider both symmetric fied by country characteristics. The primary empirical country setups and asymmetric setups, that capture important empirical facts such as differences in macroesconomic volatility, differences in portfolio composition, and high equity premia. We find that the local method performs well at business cycle frequencies, both in the symmetric and asymmetric settings, while significant differences arise at long horizons in asymmetric settings.

industrial countries is used for the analysis. Panel VAR models are estimated for the groups of countries classified by country characteristics. The primary empirical findings are as follows. First, positive government consumption shocks lead, if anything, to real exchange rate depreciation, but the direction of the current account response varies across samples. In particular, positive government consumption shocks lead to real exchange rate depreciation under a floating exchange rate regime. Second, international capital mobility has a significant impact on the effects of government

### Neoclassical growth and the natural resource curse puzzle

• Journal of International Economics---2015----María Guilló,Fidel Perez-Sebastian,Fidel Perez Sebastian

We advance a novel mechanism that helps to explain the puzzling evidence on the natural resource curse. The new channel arises in a standard dynamic Heckscher–Ohlin model composed of small-open economies that take international output prices as given. Within this framework, a more capital-intensive primary sector implies that natural-resource abundant economies grow more slowly along the adjustment path. This effect might be only temporary because the natural input also affects long-run income, and not necessarily in the same direction as transitional growth. We produce quantitative results that show that the new mechanism can account for a significant fraction of the observed output growth gap between resource rich and resource poor U.S. states.

# Country characteristics and the effects of government consumption shocks on the current account and real exchange rate

• Journal of International Economics---2015---Soyoung Kim

This paper examines the effects of government consumption shocks on the current account and the real exchange rate, as well as the influence of various country characteristics on these effects. A dataset of 18

models are estimated for the groups of countries classified by country characteristics. The primary empirical findings are as follows. First, positive government consumption shocks lead, if anything, to real exchange rate depreciation, but the direction of the current account response varies across samples. In particular, positive government consumption shocks lead to real exchange rate depreciation under a floating exchange rate regime. Second, international capital mobility has a significant impact on the effects of government consumption shocks. The depreciation of the real exchange rate and the improvement of current account are larger in countries with low international capital mobility than those with high capital mobility. Third, albeit less robust, the depreciation of the real exchange rate and the improvement of the current account are larger in countries under more flexible exchange rate regimes than those under less flexible exchange rate regimes. In addition, the current account improves more in countries with high trade openness than those with low trade openness. Standard theories do not fully explain these empirical patterns. Thus, these findings suggest a need for further theoretical development.

### On the benefits of a monetary union: Does it pay to be bigger?

• Journal of International Economics---2015---Chiara Forlati

This paper revisits the question of the appropriate domain of a currency area using a New-Keynesian open economy model in which the world is split into two areas, each framed as a continuum of small open regions. We show that the adoption of a common currency like the euro can be beneficial for the members of the monetary union, since the spill-over effects generated by the inflationary policies of the small open economies are likely to outweigh the costs of not tailoring monetary policy to country-specific shocks. We also show that while the enlargement of the monetary union to another group of small open economies can bring about welfare gains for all countries involved, monetary integration of two large economies, such as the euro area and the

U.S., will not. These findings can help to rationalize **Product standards and margins of trade:** the process of the creation and enlargement of multi- Firm-level evidence country currency areas like the eurozone.

#### Tariff binding and overhang: Theory and evidence

• Journal of International Economics---2015---Mostafa Beshkar, Eric Bond, Youngwoo Rho

Most market access commitments under the WTO are in the form of bindings on applied tariff rates. We observe two important regularities in the data. First, applied tariffs are often lower than the bound tariffs, providing governments with substantial policy flexibility. Second, the extent of flexibility varies substantially across sectors and countries. In a sharp contrast to the prediction of standard trade agreement models, we observe a strong negative correlation between tariff commitments and measures of import market power. We model the trade-off between discipline and flexibility in the design of trade agreements, and argue that recognizing this trade-off is the key to explain the observed patterns in the tariff binding commitments and applied tariffs under the WTO.

#### Is there a case for non-discrimination in the international protection of intellectual property?

• Journal of International Economics---2015---Difei Geng, Kamal Saggi

We evaluate the case for non-discrimination in international patent protection. When trade is not subject to any frictions/barriers, requiring national treatment (NT) does not affect the rate of innovation (and welfare) since unfavorable discrimination suffered abroad by innovators in the absence of NT is fully offset by favorable discrimination enjoyed by them at home. When trade barriers exist, however, such international offsetting in patent protection is incomplete and innovation incentives are actually lower under NT. By lumping domestic and foreign patent protection together, NT blunts the overall effectiveness of patent protection in incentivizing innovation in the presence of trade barriers.

• Journal of International Economics---2015---Lionel Fontagné, Gianluca Orefice, Roberta Piermartini, Nadia Rocha

This paper considers the heterogenous trade effects of restrictive Sanitary and Phyto-Sanitary (SPS) measures on exporters of different sizes, and the channels via which aggregate exports fall: firm participation, export values and pricing strategies. We do so by matching a detailed panel of French firm exports to a new database of SPS regulatory measures that have been raised as of concern in the dedicated committees of the WTO. By using specific trade concerns to capture the restrictiveness of product standards, we focus only on standards that are perceived as trade barriers. We analyze their effects on three trade-related outcomes: (i) the probability to export and to exit the export market (the firm-product extensive margin), (ii) the value exported (the firm-product intensive margin), and (iii) export prices. We find that SPS concerns discourage the presence of exporters in SPS-imposing foreign markets. We also find a negative effect of SPS imposition on the intensive margins of trade. These negative effects SPS are attenuated in larger firms.

### Public debt and growth: Heterogeneity and non-linearity

• Journal of International Economics---2015---Markus Eberhardt, Andrea Presbitero

We study the long-run relationship between public debt and growth in a large panel of countries. Our analysis builds on theoretical arguments and data considerations in modelling the debt-growth relationship as heterogeneous across countries. We investigate the debt-growth nexus adopting linear and non-linear specifications, employing novel methods and diagnostics from the time-series literature adapted for use in the panel. We find some support for a negative relationship between public debt and long-run growth across countries, but no evidence for a similar, let alone common, debt threshold within countries.

### Fiscal federalism and monetary unions: A quantitative assessment

Journal of International Economics---2015--Michael Evers

In this paper, I provide a quantitative analysis of three different forms of fiscal federalism in monetary unions: fully decentralized regional fiscal authorities as the benchmark, fiscal equalization with nominal tax revenue sharing, and a common central fiscal authority. I assess the capability of the different arrangements to stabilize regional consumption, output, and employment over the business cycle. I also study the implications for interregional income, consumption risk sharing and welfare. From this analysis, the following results emerge. First, a central fiscal authority stabilizes consumption fluctuations and increases the scope of interregional income and consumption risk sharing. Second, fiscal equalization destabilizes consumption fluctuations and also reduces the scope of interregional income and consumption risk smoothing. Third, a central fiscal authority leads to welfare gains, whereas fiscal equalization leads to welfare losses.

#### Structural gravity and fixed effects

• Journal of International Economics---2015---Thibault Fally

The gravity equation for trade flows is one of the most successful empirical models in economics and has long played a central role in the trade literature (Anderson, 2011). Different approaches to estimate the gravity equation, i.e. reduced-form or more structural, have been proposed. This paper examines the role of adding-up constraints as the key difference between structural gravity with "multilateral resistance" indexes and reduced-form gravity with simple fixed effects by exporter and importer. In particular, estimating gravity equations using the Poisson pseudomaximum-likelihood estimator (Poisson PML) with fixed effects automatically satisfies these constraints and is consistent with the introduction of "multilateral resistance" indexes as in Anderson and van Wincoop (2003).

### Structural gravity with dummies only: Constrained ANOVA-type estimation of gravity models

 Journal of International Economics---2015---Peter Egger, Sergey Nigai

The measurement of trade costs and their effects on outcome is at the heart of a large quantitative literature in international economics. The majority of the recent significant contributions on the matter assumes that trade is log-linear in exporter-specific factors, importerspecific factors, and log trade costs that are additively composed of a parameterized part and a residual part. We demonstrate that, under standard assumptions in the literature, the magnitude of unobservable, residual trade costs is large, and that their ignorance leads to a bias of the importance of observable trade-cost measures as well as of country-specific variables that are either solved implicitly through structural estimation or estimated explicitly as fixed effects. The reason is that, due to general-equilibrium linkages, some country-specific variables are endogenous to residual trade costs, regardless of whether they are captured by iteratively-solved structural terms or by country(-time) fixed effects. As a result, quantifications of effects of trade costs and comparative static results are also biased. Apart from diagnosing this problem, the paper provides remedies for it by proposing theory-consistent approaches including a two-step procedure that permits identifying partial effects of observable gravity variables on total trade costs and trade flows which do not suffer from the unobserved-trade-cost bias.

#### **Export prices of U.S. firms**

• Journal of International Economics---2015---James Harrigan, Xiangjun Ma, Victor Shlychkov

Using confidential firm-level data from the United States in 2002, we show that exporting firms charge prices for narrowly defined goods that differ substantially with the characteristics of firms and export markets. We control for selection into export markets using a three-stage estimator. We have three main results. First, we find that highly productive and skill-intensive

firms charge higher prices, while capital-intensive firms charge lower prices. Second, U.S. firms charge substantially higher prices to markets other than Canada and Mexico. Third, the correlation between distance and product-level export prices is largely due to a composition effect.

#### Offshoring domestic jobs

 Journal of International Economics---2015---Hartmut Egger, Udo Kreickemeier, Jens Wrona

We develop a two-country general equilibrium model, in which heterogeneous firms offshore routine tasks to a low-wage host country. In the presence of fixed costs for offshoring the most productive firms self-select into offshoring, which leads to a reallocation of domestic labor towards less productive uses if offshoring costs are high. As a consequence domestic welfare may fall. The reallocation effect is reversed and domestic welfare rises if offshoring costs are low. The aggregate income distribution, comprising wages and entrepreneurial incomes, becomes more unequal with offshoring.

### Trade dynamics with sector-specific human capital

 Journal of International Economics---2015---Adam Guren, David Hemous, Morten Olsen

This paper develops a dynamic Heckscher Ohlin Samuelson model with sector-specific human capital and overlapping generations to characterize the dynamics and welfare implications of gradual labor market adjustment to trade. Our model is tractable enough to yield sharp analytic results, that complement and clarify an emerging empirical literature on labor market adjustment to trade. Existing generations that have accumulated specific human capital in one sector can switch sectors when the economy is hit by a trade shock. Nonetheless, the shock induces few workers to switch, generating a protracted adjustment that operates largely through the entry of new generations. This results in wages being tied to the sector of employment in the short-run but to the skill type in the long-run. Relative to a world with general human

capital, welfare is improved for the skill group whose type-intensive sector shrinks. We extend the model to include physical capital and show that the transition is longer when capital is mobile. We also introduce nonpecuniary sector preferences and show that larger gross flows are associated with a longer transition.

#### How do exchange rate movements affect Chinese exports? — A firm-level investigation

• Journal of International Economics---2015---Hongbin Li, Hong Ma, Yuan Xu

This paper provides first-hand firm-level evidence on Chinese exporters' reaction to RMB exchange rate movements. We find that the RMB price response to exchange rate changes is very small, indicating relatively high exchange rate pass-through into foreign currency denominated prices, while the volume response is moderate and significant. Furthermore, exporters with higher productivity price more to market, though the pass-through is still very high. Other sources of heterogeneity, such as import intensity, distribution costs, income level of the destination countries, and foreign ownership also matter. Moreover, RMB appreciation reduces the probability of entry as well as the probability of continuing in the export market.

# The effects of surprise and anticipated technology changes on international relative prices and trade

• Journal of International Economics---2015---Deokwoo Nam, Jian Wang

This paper argues that it is important to distinguish surprise and anticipated components of total factor productivity (TFP) when we study the international transmission of TFP shocks. We document that surprise and anticipated shocks to US TFP induce distinct dynamics for international relative prices (the real exchange rate and the terms of trade) and international trade (real exports, real imports, and the trade balance). Our empirical findings can reconcile some conflicting empirical results in the literature and hence lead to a better understanding of the international

transmission of TFP shocks. In addition, we evaluate a standard international macroeconomic model and discuss the mechanisms that may help to replicate our empirical findings.

#### Liquidity premia and interest rate parity

 Journal of International Economics---2015---Ludger Linnemann, Andreas Schabert

Due to the US dollar's dominant role for international trade and finance, risk-free assets denominated in US currency not only offer a pecuniary return, but also provide transaction services, both nationally and internationally. Accordingly, the responses of bilateral US dollar exchange rates to interest rate shocks should differ substantially with respect to the (US or foreign) origin of the shock. We demonstrate this empirically and apply a model of liquidity premia on US treasuries originating from monetary policy implementation. The liquidity premium leads to a modification of uncovered interest rate parity (UIP), which enables the model to explain an appreciation of the dollar subsequent to an increase in US interest rates if foreign interest rates follow the US monetary policy rate.

## Do concerns about labor market competition shape attitudes toward immigration? New evidence

• Journal of International Economics---2015---Jens Hainmueller, Michael J. Hiscox, Yotam Margalit

Are concerns about labor market competition a powerful source of anti-immigrant sentiment? Several prominent studies have examined survey data on voters and concluded that fears about the negative effects of immigration on wages and employment play a major role generating anti-immigrant attitudes. We examine new data from a targeted survey of U.S. employees in 12 different industries. In contrast with previous studies, the findings indicate that fears about labor market competition do not appear to have substantial effects on attitudes toward immigration, and preferences with regard to immigration policy, among this large and diverse set of voters.

#### Betting the house

 Journal of International Economics---2015---Oscar Jorda, Moritz Schularick, Alan Taylor

Is there a link between loose monetary conditions, credit growth, house price booms, and financial instability? This paper analyzes the role of interest rates and credit in driving house price booms and busts with data spanning 140 years of modern economic history in the advanced economies. We exploit the implications of the macroeconomic policy trilemma to identify exogenous variation in monetary conditions: countries with fixed exchange regimes often see fluctuations in short-term interest rates unrelated to home economic conditions. We use novel instrumental variable local projection methods to demonstrate that loose monetary conditions lead to booms in real estate lending and house prices' bubbles; these, in turn, materially heighten the risk of financial crises. Both effects have become stronger in the postwar era.

#### The output effect of fiscal consolidation plans

 Journal of International Economics---2015---Alberto Alesina, Carlo Favero, Francesco Giavazzi

We show that the correct experiment to evaluate the effects of a fiscal adjustment is the simulation of a multi-year fiscal plan rather than of individual fiscal shocks. Simulation of fiscal plans adopted by 16 OECD countries over a 30-year period supports the hypothesis that the effects of consolidations depend on their design. Fiscal adjustments based upon spending cuts are much less costly, in terms of output losses, than tax-based ones and have especially low output costs when they consist of permanent rather than stop-and-go changes in taxes and spending. The difference between tax-based and spending-based adjustments appears not to be explained by accompanying policies, including monetary policy. It is mainly due to the different responses of business confidence and private investment.

#### **Dealing with debt**

• Journal of International Economics---2015---Carmen Reinhart, Vincent Reinhart, Kenneth RoThis paper explores the menu of options for renormalizing public debt levels relative to nominal activity in the long run, should governments eventually decide to do so. Although debt ratios may need to rise further in some cases, a vision of longer-term options is key to weighing alternative medium-term stabilization strategies. Orthodox ones, the standard fare of officialdom, include enhancing growth, running primary budget surpluses, and privatizing government assets. Heterodox polices include restructuring debt contracts, generating unexpected inflation, taxing wealth, and repressing private finance. Advanced countries have relied far more on heterodox approaches than many observers choose to remember.

### Fiscal consolidation with tax evasion and corruption

 Journal of International Economics---2015---Evi Pappa,Rana Sajedi,Eugenia Vella

Cross-country evidence highlights the importance of tax evasion and corruption in determining the size of fiscal multipliers. We introduce these two features in a New Keynesian model and revisit the effects of fiscal consolidations. VAR evidence for Italy suggests that spending cuts reduce tax evasion, while tax hikes increase it. In the model, spending cuts induce a reallocation of production towards the formal sector, thus reducing tax evasion. Tax hikes increase the incentives to produce in the less productive shadow sector, implying higher output and unemployment losses. Corruption further amplifies these losses by requiring larger hikes in taxes to reduce debt. We use the model to assess the recent fiscal consolidation plans in Greece, Italy, Portugal and Spain. Our results corroborate the evidence of increasing levels of tax evasion during these consolidations and point to significant output and welfare losses, which could be reduced substantially by combating tax evasion and corruption.

### Capital-flow management measures: What are they good for?

 Journal of International Economics---2015---Kristin Forbes, Marcel Fratzscher, Roland Straub

Are capital controls and macroprudential measures related to international exposures successful in achieving their objectives? Assessing their effectiveness is complicated by selection bias; countries which change their capital-flow management measures (CFMs) often share specific characteristics and are responding to changes in variables that the CFMs are intended to influence. This paper addresses these challenges by using a propensity-score matching methodology. We also create a new database with detailed information on weekly changes in controls on capital inflows, capital outflows, and macroprudential measures related to international transactions from 2009 to 2011 for 60 countries. Results show that these macroprudential measures can significantly reduce some measures of financial fragility. Most CFMs do not significantly affect other key targets, however, such as exchange rates, capital flows, interest-rate differentials, inflation, equity indices, and different volatilities. One exception is that removing controls on capital outflows may reduce real exchange rate appreciation. Therefore, certain CFMs can be effective in accomplishing specific goals —but most popular measures are not "good for" accomplishing their stated aims.

### International currency exposures, valuation effects and the global financial crisis

• Journal of International Economics---2015---Agustín Bénétrix, Philip Lane, Jay Shambaugh

We examine the evolution of international currency exposures, with a particular focus on the 2002–12 period. During the run up to the global financial crisis, there was a widespread shift towards positive net foreign currency positions, such that relatively few countries exhibited the archetypal emerging-market "short foreign currency" position on the eve of the global financial crisis. During the crisis, the upheaval in currency

markets generated substantial currency-generated valuation effects — much of which were not reversed. There is some evidence that the distribution of valuation effects was stabilizing in the sense of showing a negative covariation pattern with pre-crisis net foreign asset positions.

#### Administrative barriers to trade

• Journal of International Economics---2015---Cecília Hornok, Miklós Koren

We build a model of administrative barriers to trade to understand how they affect trade volumes, shipping decisions and welfare. Because administrative costs are incurred with every shipment, exporters have to decide how to break up total trade into individual shipments. Consumers value frequent shipments, because they enable them to consume close to their preferred dates. Hence per-shipment costs create a welfare loss.

### Incentive pay and bank risk-taking: Evidence from Austrian, German, and Swiss banks

 Journal of International Economics---2015---Matthias Efing, Harald Hau, Patrick Kampkötter, Johannes Steinbrecher

We use payroll data in the Austrian, German, and Swiss banking sector to identify incentive pay in the critical banking segments of treasury/capital market management and investment banking for 67 banks. We document an economically significant correlation of incentive pay with both the level and volatility of bank trading income—particularly for the pre-crisis period 2003–2007, in which incentive pay was strongest. This result is robust if we instrument the bonus share in the capital market divisions with the strength of incentive pay in unrelated bank divisions like retail banking. Moreover, pre-crisis incentive pay appears too strong for an optimal trade-off between trading income and risk, which maximizes the net present value of trading income. Further analyses indicate that the bonus moderation during the crisis has removed excessive pre-crisis incentive pay.

#### markets generated substantial currency-generated val- Third-country effects on the exchange rate

• Journal of International Economics---2015---Kimberly Berg, Nelson Mark

Predictive regressions for bilateral exchange rates are typically run on variables from the associated bilateral pairs of countries. These regressions characteristically have low explanatory power, which leaves room for an omitted variables interpretation. We test whether these omitted variables are from third-countries. When third-country macro factors are added to bilateral exchange rate regressions, they enter significantly and increase the adjusted R2. A three-country exchange rate model illustrates potential channels for third-country spillovers to affect the bilateral rate.

#### **Banking across borders**

• Journal of International Economics---2015---Friederike Niepmann

The international linkages between banks play a crucial role in today's global economy. Existing models explain these links largely on the basis of portfolio theory, in which banks diversify lending. These models have found limited empirical support and do not speak to several relevant dimensions of the data. They do not explain heterogeneity in the degree to which banks operate through foreign affiliates, fund their activities abroad or matter for local lending in foreign countries. This paper proposes a complementary theory of banking across borders that is based on elements of international trade theory. In the model, banking across borders arises because countries differ in their relative factor endowments and in the efficiency of their banking sectors. Based on these differences, the pattern of foreign bank asset and liability holdings emerges endogenously. This parsimonious model provides a rationale for the observed heterogeneity in foreign bank activities and is consistent with key patterns in the data.

### The trade comovement puzzle and the margins of used for the policy evaluation of NAFTA. We find that the most important products in our analysis are not

 Journal of International Economics---2015---Wei Liao, Ana Maria Santacreu

Countries that trade more with each other tend to have more strongly correlated business cycles. Yet, traditional international business cycle models predict a much weaker link between trade and business cycle comovement. We propose that fluctuations in the number of varieties embedded in trade flows may drive the observed comovement by increasing the correlation among trading partners' aggregate productivity. Our hypothesis is that business cycles should be more strongly correlated between countries that trade a wider variety of goods. We find empirical support for this hypothesis. After decomposing trade into its extensive and intensive margins, we find that the extensive margin explains most of the trade-productivity and trade-output comovement. This result is striking because the extensive margin accounts for only a fourth of the variability in total trade. We then develop a two-country model with heterogeneous firms, endogenous entry, and fixed export costs, in which the aggregate productivity correlation increases with trade in varieties. A numerical exercise shows that our proposed mechanism increases business cycle synchronization compared with the levels predicted by traditional models.

### Using the new products margin to predict the industry-level impact of trade reform

 Journal of International Economics---2015---Timothy Kehoe, Jack Rossbach, Kim Ruhl

This paper develops a methodology for predicting the impact of trade liberalization on exports by industry (3-digit ISIC) based on the pre-liberalization distribution of exports by product (5-digit SITC). We evaluate the ability of our methodology to account for the industry-level variation in export growth by using our model to "predict" the growth in industry trade from the North American Free Trade Agreement (NAFTA). We show that our method performs significantly better than the applied general equilibrium models originally

used for the policy evaluation of NAFTA. We find that the most important products in our analysis are not the ones with zero pre-liberalization trade, but those with positive, yet small amounts of pre-liberalization trade.

#### Export dynamics and sales at home

 Journal of International Economics---2015---Nicolas Berman, Antoine Berthou, Jérôme Héricourt

How do firms' sales interact across markets? Are foreign and domestic sales complements or substitutes? Using a French firm-level database combining balancesheet and product-destination-specific export information over the period 1995–2001, we study how demand conditions in foreign markets affect domestic sales through variations in exports. We identify a number of exogenous shocks affecting the firms' demand on foreign markets, including product-destination specific imports or tariff changes, and large foreign shocks such as financial crises or civil wars. Our results show that exogenous variations in firm-level exports positively impact domestic sales, even after controlling for domestic demand conditions. A 10% exogenous increase in foreign sales generates a 1 to 3% increase in domestic sales in the short-run. This result is robust to various estimation techniques, instruments, controls, and sub-samples. It is also supported by the natural experiment of the Asian crisis in the late 1990's.

### Migration of skilled workers and innovation: A European Perspective

 Journal of International Economics---2015---Valentina Bosetti, Cristina Cattaneo, Elena Verdolini

This paper analyzes the effect of skilled migration on two measures of innovation, patenting and bibliometric data, in a panel of 20 European countries between 1995 and 2008. The empirical findings show that a larger pool of migrants in the skilled professions is associated with higher levels of knowledge creation. Skilled migrants contribute both to the creation of "private"

cations through the Patent Cooperation Treaty, and to more "public" basic research, measured by the number of citations to published articles. This finding is robust, in that it uses both an occupation-based and an education-based index of skilled migration, as well as an instrumental variable estimation accounting for the endogeneity of the skilled migrants indicator and to a number of robustness checks. Our results suggest that policy efforts aiming at attracting skilled migrants to Europe and employing them in skilled professions, such as those put forward in the Europe 2020 Strategy, will indeed foster EU competitiveness in innovation.

### Financial development, sectoral reallocation, and volatility: International evidence

• Journal of International Economics---2015---Simone Manganelli, Alexander Popov

This paper studies how financial development affects the volatility of GDP growth through the channel of sectoral reallocation. For 28 OECD countries over the period 1970–2007, we construct a benchmark industrial portfolio that minimizes the economy's long-term volatility for a given level of long-term labor productivity growth. We find that financial development substantially increases the speed with which the observed industrial composition of output converges toward the benchmark. To overcome endogeneity concerns, we exploit sectoral sensitivities to financial deepening and exogenous liberalization events.

### Institutions, Corporate Governance and Capital **Flows**

• Journal of International Economics---2015---Rahul Mukherjee

Countries with weaker domestic investor protection hold less diversified international portfolios. An equilibrium business cycle model of North-South capital flow with corporate governance frictions between outside investors and corporate insiders explains this phenomenon through two channels. First, weak governance leads to concentrated ownership in the South because

knowledge, measured by the number of patent appli- international diversification by insiders is penalized by lower stock market valuation. This reduces the float portfolio, or the supply of South assets. Second, weak governance tilts the demand of South outside investors towards domestic assets to hedge labor income risk. This is due to a higher share of labor in income, which increases labor income risk. In addition, the dynamics of investment under insider control leads relative dividend and labor income to be more negatively correlated in the South, making domestic assets a better hedge against local labor income risk. I find that the insider ownership and hedging channels are responsible for at least 29% and 11%, respectively, of the cross-country variation in international diversification. Thus, weak institutions lower international diversification primarily through concentrated ownership of firms, with outsider hedging also playing a quantitatively significant role.

#### Inflation, R&D and growth in an open economy

• Journal of International Economics---2015---Angus Chu, Guido Cozzi, Ching-chong Lai, Chih-Hsing Liao

This study explores the long-run effects of inflation in a two-country Schumpeterian growth model with cash-in-advance constraints on consumption and R&D investment. We find that increasing domestic inflation reduces domestic R&D investment and the growth rate of domestic technology. Given that economic growth in a country depends on both domestic and foreign technologies, increasing foreign inflation also affects the domestic economy. When each government conducts its monetary policy unilaterally to maximize the welfare of domestic households, the Nash-equilibrium inflation rates are generally higher than the optimal inflation rates chosen by cooperative governments who maximize the welfare of both domestic and foreign households. Under the CIA constraint on R&D (consumption), a larger market power of firms amplifies (mitigates) this inflationary bias. We use cross-country panel data to estimate the effects of inflation on R&D and also calibrate the two-country model to data in the Euro Area and the US to quantify the welfare effects of decreasing the inflation rates from the Nash equilibrium

to the optimal level.

### Optimal monetary policy in a currency union with interest rate spreads

 Journal of International Economics---2015---Saroj Bhattarai, Jae Won Lee, Woong Yong Park

We introduce "financial imperfections" – asymmetric net wealth positions, incomplete risk-sharing, and interest rate spreads across member countries - in a prototypical two-country currency union model and study implications for monetary policy transmission mechanism and optimal policy. In addition to, and independent from, the standard transmission mechanism associated with nominal rigidities, financial imperfections introduce a wealth redistribution role for monetary policy. Moreover, the two mechanisms reinforce each other and amplify the effects of monetary policy. On the normative side, financial imperfections, via interactions with nominal rigidities, generate two novel policy trade-offs. First, the central bank needs to pay attention to distributional efficiency in addition to macroeconomic (and price level) stability, which implies that a strict inflation targeting policy of setting union-wide inflation to zero is never optimal. Second, the interactions lead to a trade-off in stabilizing relative consumption versus the relative price gap (the deviation of relative prices from their efficient level) across countries, which implies that the central bank allows for less flexibility in relative prices. Finally, we consider how the central bank should respond to a financial shock that causes an increase in the interest rate spread. Under optimal policy, the central bank strongly decreases the deposit rate, which reduces aggregate and distributional inefficiencies by mitigating the drop in output and inflation and the rise in relative consumption and prices. Such a policy response can be well approximated by a spread-adjusted Taylor rule as it helps the real interest rate track the efficient rate of interest.

#### Trade barriers and the relative price of tradables

• Journal of International Economics---2015---Michael Sposi In this paper I quantitatively address the role of trade barriers in explaining why prices of services relative to tradables are positively correlated with levels of development across countries. I argue that trade barriers play a crucial role in shaping the cross-country pattern of specialization across many tradable goods. I construct a multi-country, general equilibrium model of trade and derive tractable predictions that show how specialization affects relative prices. I calibrate the model to match the patterns of prices, levels of development, and bilateral trade across 103 countries. Through counterfactuals I find that removing trade barriers eliminates more than half of the gap in the relative price of services between rich and poor countries with only a minimal systematic effect on the absolute price of tradables.

### Dispersion and distortions in the trans-Atlantic slave trade

 Journal of International Economics---2015---John Dalton, Tin Cheuk Leung

Market distortions can lead to resource misallocation, which can further lead to inefficiency. Throughout the history of the trans-Atlantic slave trade, qualitative evidence of various sources of distortion abounds. No study, however, has quantified the inefficiency in the slave trade due to these distortions. We use a structural approach to identify the dispersion of distortions in the slave trade from wedges in first order conditions. We then calculate the TFP gains had the dispersion of distortions disappeared. Two main results emerge. First, dispersion of distortions had the smallest damage to TFP in Great Britain, followed by Portugal, and then France. Second, dispersion of distortions in the product market had a bigger impact on TFP than that of the capital and labor markets.

### Saving good jobs from global competition by rewarding quality and efforts

 Journal of International Economics---2015---Yongjin Wang, Laixun Zhao

This paper links firms' endogenous quality choices to

worker effort and efficiency wages. In the model, firms differ in their ability to monitor workers who have an incentive to shirk. As high quality output requires high worker effort, it is firms with better monitoring ability that upgrade their quality. Indeed, these firms upgrade their quality to such a degree that they also end up paying higher wages to induce even more worker effort. Trade liberalization can induce greater or smaller wage inequality but always enlarges the welfare inequality as higher wages go hand in hand with even greater effort.

### Estimating import supply and demand elasticities: Analysis and implications

• Journal of International Economics---2015---Anson Soderbery

Feenstra (1994) developed, and Broda and Weinstein (2006) refined, a structural estimator of import demand and supply elasticities. Working through the first principles of the methodology from Leamer (1981), this paper analyzes and improves the technique to provide a unified estimator of import supply and demand elasticities. The proposed LIML routine corrects small sample biases and constrained search inefficiencies. Previously used estimates are shown to overestimate the median elasticity of substitution by over 35%. Applied to US import data from 1993 to 2007, the biases of the standard estimates translate into an understatement of consumer gains from product variety by a factor of 6. To conclude, I investigate the implications of violations to the underlying assumptions of the model.

### Firm heterogeneity and costly trade: A new estimation strategy and policy experiments

• Journal of International Economics---2015---Ivan Cherkashin,Svetlana Demidova,Hiau Looi Kee,Kala Krishna

We build a tractable partial equilibrium model in the spirit of Melitz (2003) to help understand the role of trade preferences given to developing countries, as well as the efficacy of various subsidy policies. The model allows for firm level heterogeneity in both demand and

productivity and lets the mass of firms that enter be endogenous.

### Diversification, cost structure, and the risk premium of multinational corporations

 Journal of International Economics---2015---Jose Fillat, Stefania Garetto, Lindsay Oldenski

We investigate theoretically and empirically the relationship between the geographic structure of a multinational corporation and its risk premium. Our structural model suggests two channels. On the one hand, multinational activity offers diversification benefits: risk premia should be higher for firms operating in countries where shocks co-vary more with the domestic ones. Second, hysteresis and operating leverage induced by fixed and sunk costs of production imply that risk premia should be higher for firms operating in countries where it is costlier to enter and produce. Our empirical analysis confirms these predictions and delivers a decomposition of firm-level risk premia into individual countries' contributions.

### High-end variety exporters defying gravity: Micro facts and aggregate implications

 Journal of International Economics---2015---Julien Martin, Florian Mayneris

We develop a new methodology to identify high-end variety exporters in French firm-level data. We find that they do not export to more countries, but they export to more distant destinations than low-end ones. We also show that in contrast to low-end exporters, distance has almost no effect on high-end variety export(er)s. Because of this lower sensitivity to distance at the micro-level, specializing in the production of high-end varieties has implications for the geography of aggregate exports. Specializing in high-end varieties allows for a greater geographic diversification of aggregate exports – in particular when demand arises from both neighboring and distant countries. It also makes a country better able to benefit from growth in remote destinations.

### Market potential and the rise of US productivity leadership

• Journal of International Economics---2015---Dan Liu, Christopher M. Meissner

Today's globalization, driven by lower barriers to trade, has increased market potential for many nations and led to gains in GDP per capita. We test whether this was true in the first wave of globalization by constructing market potential measures for a sample of 27 countries in 1900 and 1910 based on a general equilibrium model of production and trade. Cross-sectional estimates suggest that market potential was an economically significant determinant of GDP per capita at this time. To assess welfare effects, we then study the general equilibrium impact of raising market potential by eliminating international borders in a quantitative counterfactual calculation for 1900. There are significant gains in real income per capita for all nations. We use US per capita output as a benchmark, since it attained leadership in this variable from the late 19th century and the literature frequently attributes this to its relatively large domestic market – a market unconstrained by trade costs associated with international borders. Because market potential was already near that of the US, the largest European countries do not entirely close their per capita income gaps with the US after removing all border barriers to trade within Europe or even globally. On the other hand, many small European countries could have done so.

#### Pooling risk among countries

• Journal of International Economics---2015---Michael Callen, Jean Imbs, Paolo Mauro

Suppose that international sharing risk—worldwide or with large numbers of countries—were costly. How much risk-sharing could be gained in small sets (or "pools") of countries? To answer this question, we compute the means and variances of poolwide gross domestic product growth, for all possible pools of any size drawn from a sample of 74 countries, and compare them with the means and variances of consumption

growth in each country individually. From the difference, we infer potential diversification and welfare gains. As much as two-thirds of the first best, full worldwide welfare gains can be obtained in groupings of as few as seven countries. The largest potential gains arise from pools consisting of countries in different regions and including countries with weak institutions. We argue that international risk-sharing fails to emerge because the largest potential gains are among countries that do not trust each other's willingness and ability to abide by international contractual obligations.

### Cross-country heterogeneity in intertemporal substitution

Journal of International Economics---2015 --Tomas Havranek,Roman Horvath,Zuzana
 Irsova,Marek Rusnák

We collect 2735 estimates of the elasticity of intertemporal substitution in consumption from 169 published studies that cover 104 countries during different time periods. The estimates vary substantially from country to country, even after controlling for 30 aspects of study design. Our results suggest that income and asset market participation are the most effective factors in explaining the heterogeneity: households in rich countries and countries with high stock market participation substitute a larger fraction of consumption intertemporally in response to changes in expected asset returns. Micro-level studies that focus on subsamples of rich households or asset holders also find systematically larger values of the elasticity.

#### **Customs**

Journal of International Economics---2015---Christian Volpe Martineus, Jeronimo Carballo, Alejandro Graziano

All international trade transactions are processed by custom agencies and such processing takes time. Despite the fact that time is a key trade barrier, the time it takes for shipments to clear customs and how customs' processing times affect firms' exports remain largely unknown. In this paper, we precisely estimate

In so doing, we use a unique dataset that consists of the universe of Uruguay's export transactions over the period 2002–2011 and includes precise information on the actual time it took for each of these transactions to go through customs. We account for potential endogeneity of these processing times by exploiting the conditional random allocation of shipments to different verification channels associated with the use of riskbased control procedures. Results suggest that delays have a significant negative impact on firms' exports along several dimensions. Effects are more pronounced on sales to newer buyers.

International trade and R&D spillovers

• Journal of International Economics---2015---Andrea Fracasso, Giuseppe Vittucci Marzetti

Departing from the usual tenets of proportionality between cross-border trade flows and knowledge spillovers, we investigate whether relatively intense trade relationships are associated with particularly large international R&D spillovers. A nonlinear specification nesting the hypothesis of global and trade-unrelated R&D spillovers is estimated on a sample of 24 advanced countries over 1971–2004. We find evidence that trade patterns positively affect the international transmission of knowledge, in particular when we consider bilateral trade flows that, thanks to the estimation of an auxiliary gravity model, are normalized for the size and the distance of the trading partners. Finally, we discuss the patterns of the bilateral relationships characterized by both relatively intense trade and large R&D spillovers.

#### Intellectual property rights, diasporas, and domestic innovation

• Journal of International Economics---2015---Alireza Naghavi, Chiara Strozzi

This paper studies the interaction between international migration and intellectual property rights (IPR) in determining innovation performance of developing countries. Although emigration may directly cause brain drain, it generates a flow of knowledge acquired

the effects of custom-related delays on firms' exports. by emigrants abroad back to their home countries, which could be exploited under sound IPR institutions. IPRs can thus stimulate domestic innovation by creating the right environment to absorb potential gains from international migration. Using a panel dataset of emerging and developing countries, we show that emigration has a favorable effect on strengthening the link between IPR protection and innovation by making a new source of knowledge available to domestic innovators. We test our results through instrumental variable methods using information on geography, cultural distance and institutions.

### The impact of worker bargaining power on the organization of global firms

• Journal of International Economics---2015---Juan Carluccio, Maria Bas

Do variations in labor market institutions affect the cross-border organization of the firm? Using firm-level data on multinationals located in France, we show that firms are more likely to outsource the production of intermediate inputs to external suppliers when importing from countries with high worker bargaining power. This effect is stronger for firms operating in capital-intensive and differentiated industries. We propose a theoretical mechanism that rationalizes these findings. The fragmentation of the value chain weakens the workers' bargaining position, by limiting the amount of revenues that are subject to union extraction. The outsourcing strategy reduces the share of surplus that is appropriated by the union, which enhances the firm's incentives to invest. Since investment creates relatively more value in capital-intensive industries, increases in worker bargaining power are more likely to be conducive to outsourcing in those industries. Overall, our findings suggest that global firms choose their organizational structure strategically when sourcing intermediate inputs from markets where worker bargaining power is high.

## Once an enemy, forever an enemy? The long-run impact of the Japanese invasion of China from 1937 to 1945 on trade and investment

Journal of International Economics---2015---Yi
 Che, Julan Du, Yi Lu, Zhigang Tao

In this study, we exploit one of the most important conflicts of the 20th century between what are currently the world's second and third largest economies, that is, the Japanese invasion of China from 1937 to 1945, to investigate the long-term impact of conflicts between countries on cross-border trade and investment. We find that Japanese multinationals are less likely to invest in Chinese regions that suffered greater civilian casualties during the Japanese invasion, and these regions also trade less with Japan. Our study shows that historical animosity still influences international trade and investment, despite the trend toward an increasingly globalized world.

# Can international macroeconomic models explain low-frequency movements of real exchange rates?

• Journal of International Economics---2015---Pau Rabanal, Juan F Rubio-Ramirez

Real exchange rates exhibit important low-frequency fluctuations. This makes the analysis of real exchange rates at all frequencies a more sound exercise than the typical business cycle one, which compares actual and simulated data after the Hodrick-Prescott filter is applied to both. A simple two-country, two-good, international real business cycle model can explain the volatility of the real exchange rate when all frequencies are studied. The puzzle is that the model generates too much persistence of the real exchange rate instead of too little, as the business cycle analysis asserts. We show that the introduction of input adjustment costs in production, cointegrated productivity shocks across countries, and lower home bias allows us to reconcile theory and this feature of the data.

### International equity and bond positions in a DSGE model with variety risk in consumption

• Journal of International Economics---2015---Masshige Hamano

This paper analyzes equity and bond positions in a two-country Dynamic Stochastic General Equilibrium model where the number of varieties, i.e., the extensive margins of products available to consumers, is endogenously determined. Fluctuations in the welfare-based real exchange rate, including those in the number of varieties, matter to international consumption risk sharing. We investigate the implication of such "variety risk" for the optimal portfolio choice and show that the variety risk generates home-biased equity positions, strengthening those obtained with the standard model in the literature. We also find preliminary empirical support for the mechanism.

### The domestic and international effects of interstate U.S. banking

 Journal of International Economics---2015---Matteo Cacciatore, Fabio Ghironi, Viktors Stebunovs

This paper studies the domestic and international effects of national bank market integration in a twocountry, dynamic, stochastic, general equilibrium model with endogenous producer entry. Integration of banking across localities reduces the degree of local monopoly power of financial intermediaries. The economy that implements this form of deregulation experiences increased producer entry, real exchange rate appreciation, and a current account deficit. The foreign economy experiences a long-run increase in GDP and consumption. Less monopoly power in financial intermediation results in less volatile business creation, reduced markup countercyclicality, and weaker substitution effects in labor supply in response to productivity shocks. Bank market integration thus contributes to moderation of firm-level and aggregate output volatility. In turn, trade and financial ties allow also the foreign economy to enjoy lower GDP volatility in most scenarios we consider. These results are consistent with

features of U.S. and international fluctuations after the United States began its transition to interstate banking in the late 1970s.

### Capital controls and recovery from the financial crisis of the 1930s

• Journal of International Economics---2015---Kris James Mitchener, Kirsten Wandschneider

We examine the first widespread use of capital controls in response to a global or regional financial crisis. In particular, we analyze whether capital controls mitigated capital flight in the 1930s and assess their causal effects on macroeconomic recovery from the Great Depression. We find evidence that they stemmed gold outflows in the year following their imposition; however, time-shifted, difference-in-differences (DD) estimates of industrial production, prices, and exports suggest that capital controls did not accelerate macroeconomic recovery relative to countries that went off gold and floated. Countries imposing capital controls also appear to perform similar to the gold bloc countries once the latter group of countries finally abandoned gold. Time series analysis suggests that countries imposing capital controls refrained from fully utilizing their newly acquired monetary policy autonomy.

#### Financial crises and exchange rate policy

 Journal of International Economics---2015---Luca Fornaro

This paper studies exchange rate policy in a small open economy model featuring an occasionally binding collateral constraint and Fisherian deflation. The goal is to evaluate the performance of alternative exchange rate policies in sudden stop-prone economies. The key element of the analysis is a pecuniary externality arising from frictions in the international credit markets, which creates a trade-off between price and financial stability. The main result is that depreciating the exchange rate during a financial crisis has a positive impact on welfare, because the stimulus provided by a depreciation sustains asset prices, value of collateral, and access to the international credit markets.

### Multi-product firms at home and away: Costversus quality-based competence

 Journal of International Economics---2015---Carsten Eckel, Leonardo Iacovone, Beata Javorcik, J. Peter Neary

We develop a new model of multi-product firms which invest to improve the perceived quality of both their individual products and their brand. Because of flexible manufacturing, products closer to firms' core competence have lower costs, so firms produce more of them, and also have higher incentives to invest in their quality. These two effects have opposite implications for the profile of prices. Mexican data provide robust confirmation of the model's key prediction: firms in differentiated-good sectors exhibit quality-based competence (prices fall with distance from core competence), but export sales of firms in non-differentiated-good sectors exhibit the opposite pattern.

#### Product switching in a model of learning

• Journal of International Economics---2015---Olga Timoshenko

New exporters add and drop products with much greater frequency than old exporters. This paper explains this behavior with a model of demand learning in which an exporter's profitability on the demand side is determined by a time-invariant firm-destination appeal index, and transient firm-destination-year preference shocks. New exporters must learn about their appeal indices in the presence of these shocks, and respond to fluctuations in demand by adding and dropping products more frequently than older exporters because they have less information about their attractiveness to consumers. Calibrated to match cross-sectional and dynamic moments of the distribution of sales and scope, the model quantitatively accounts for two thirds of the extent of product switching. The model further predicts that in response to a decline in trade costs, existing exporters add new products and new exporters enter a destination. Counterfactual implies that the contribution of product adding to export growth resulting from a fall in trade costs is substantially larger than the contribution of exporter entry.

### Input-trade liberalization, export prices and quality upgrading

 Journal of International Economics---2015---Maria Bas, Vanessa Strauss-Kahn

This paper explores the impact of input trade liberalization on imported input and exported product prices. Using Chinese transaction data for 2000–2006, we capture causal effects between exogenous input tariff reductions and within firm changes in HS6-traded product prices. For identification, we make use of a natural control group of firms that are exempted from paying tariffs. Both imported input and export prices rise. The effect on export prices is specific to firms sourcing inputs from developed economies and exporting output to high-income countries. Results are consistent with a scenario within which firms exploit the input tariff cuts to access high-quality inputs in order to quality-upgrade their exports.

#### Heterogeneous Firms, Quality, and Trade

• Journal of International Economics---2015---Alexis Antoniades

We present a simple and tractable trade model of heterogeneous firms, endogenous quality choice, and endogenous markups. A key feature of the model is that competition not only lowers the cost cut-off between the firms that produce and those that exit, but it also raises the scope for quality differentiation. With both these channels present, the most productive firms respond to competition by raising quality, prices, and markups, while the least productive either exit or respond in the exact opposite manner.

### Improving "national brands": Reputation for quality and export promotion strategies

• Journal of International Economics---2015---Julia Cagé, Dorothée Rouzet

This paper studies the effect of firm and country reputation on exports when buyers cannot observe quality prior to purchase. Firm-level demand is determined by expected quality, which is driven by the dynamics of consumer learning through experience and the country of origin's reputation for quality. We show that asymmetric information can result in multiple steady-state equilibria with endogenous reputation. We identify two types of steady states: a high-quality equilibrium (HQE) and a low-quality equilibrium (LQE). In a LQE, only the lowest-quality and the highest-quality firms are active; a range of relatively high-quality firms are permanently kept out of the market by the informational friction. Countries with bad quality reputation can therefore be locked into exporting low-quality, lowcost goods. Our model delivers novel insights about the dynamic impact of trade policies. First, an export subsidy increases the steady-state average quality of exports and welfare in a LQE, but decreases both quality and welfare in a HQE. Second, there is a tax/subsidy scheme based on the duration of export experience that replicates the perfect information outcome. Third, a minimum quality standard can help an economy initially in a LQE moving to a HQE.

#### Dynamic aid allocation

• Journal of International Economics---2015---Patrick Carter, Fabien Postel-Vinay, Jonathan Temple

This paper introduces a framework for studying the optimal dynamic allocation of foreign aid among multiple recipients. We pose the problem as one of weighted global welfare maximization. A donor in the North chooses an optimal path for international transfers, anticipating that consumption and investment decisions will be made by optimizing households in the South, and accounting for limits in the extent to which recipients can effectively absorb aid. We present quantitative results on optimal aid policy by applying our approach to a neoclassical growth model, where the scope for aid-funded growth is determined by the recipients' distance from steady-state.

#### Trade costs, conflicts, and defense spending

• Journal of International Economics---2015---Michael Seitz, Alexander Tarasov, Roman Zakharenko

This paper develops a quantitative model of trade, military conflicts, and defense spending. Lowering trade costs between two countries reduces probability of an armed conflict between them, causing both to cut defense spending. This in turn causes a domino effect on defense spending by other countries. As a result, both countries and the rest of the world are better off. We estimate the model using data on trade, conflicts, and military spending. We find that, after reduction of costs of trade between a pair of hostile countries, the welfare effect of worldwide defense spending cuts is comparable in magnitude to the direct welfare gains from trade.

### Logistic infrastructure and the international location of fragmented production

• Journal of International Economics---2015---Juan Blyde, Danielken Molina

Casual evidence suggests that multinational companies increasingly look for places with adequate transport and logistic infrastructure to locate affiliates that participate in cross-border production sharing. Yet, there are no systematic empirical analyses examining how logistic infrastructure interacts with the location decisions made by multinationals. Most studies on the determinants of FDI address the issue of transportationlogistics by examining the impact of distance on the relevant outcome, but distance does not capture by itself the quality of the logistic systems in place. We overcome this shortcoming in the literature by embedding indicators of infrastructure into an empirical framework that examines whether countries with adequate logistic systems attract more vertical FDI and particularly in industries that are more dependent on logistic services. We find that logistic infrastructure positively impacts vertical FDI in addition to the impact typically found on distance. A change from the first quartile to the third quartile of the distribution of logistic infrastructure is associated with an average increase in the number of vertically-integrated subsidiaries equivalent to 29%.

#### Exporters, importers and credit constraints

• Journal of International Economics---2015---Mirabelle Muûls

This paper analyzes the interaction between credit constraints and trading behavior, decomposing trade in extensive and intensive margins. I construct a unique dataset containing firm-level trade transaction data, balance sheets and credit scores from an independent credit insurance company for Belgian manufacturing firms between 1999 and 2007. Firms are more likely to be exporting or importing if they enjoy lower credit constraints. Also, firms that have better credit rating export and import more. Importing and exporting behaviors differ in how both the level and growth of the various margins of trade are related to credit constraints in one important dimension. In the case of exports, it is the intensive and extensive margins of exports in terms of both product and destinations that are significantly associated with credit constraints whereas for imports it is the extensive margin in terms of products only.

### **Supplier responses to Walmart's invasion in Mexico**

Journal of International Economics---2015- -Leonardo Iacovone, Beata Javorcik, Wolfgang Keller, James Tybout

This paper examines the effect of Walmart's entry into Mexico on Mexican manufacturers of consumer goods. Guided by firm interviews that suggested substantial heterogeneity across firms in how they responded to Walmart's entry, we develop a dynamic industry model in which firms decide whether to sell their products through Walmex (short for Walmart de Mexico), or use traditional retailers. Walmex provides access to a larger market, but it puts continuous pressure on its suppliers to improve their product's appeal, and it forces them to accept relatively low prices relative to

product appeal. Simulations of the model show that the arrival of Walmex separates potential suppliers into two groups. Those with relatively high-appeal products choose Walmex as their retailer, whereas those with lower appeal products do not. For the industry as a whole, the model predicts that the associated market share reallocations, adjustments in innovative effort, and exit patterns increase productivity and the rate of innovation. These predictions accord well with the results from our firm interviews. The model's predictions are also supported by establishment-level panel data that characterize Mexican producers' domestic sales, investments, and productivity gains in states with differing levels of Walmex presence during the years 1994 to 2002.

### When trade stops: Lessons from the Gaza blockade 2007–2010

 Journal of International Economics---2015---Haggay Etkes, Assaf Zimring

This paper uses detailed household expenditure and firm production data to study the welfare consequences of the blockade imposed on the Gaza Strip between mid-2007 and mid-2010. Using the West Bank as a counterfactual economy, we find that welfare declined by 14%–27%. Moreover, households with larger preblockade expenditure levels experienced larger welfare losses. We show that this large decline in welfare may be due to a combination of resource reallocation and reduced productivity. Workers were reallocated from manufacturing to services, and from industries that use imported inputs intensively, or export. In addition, labor productivity fell by 20% on average.

### A mapping of labor mobility costs in the developing world

• Journal of International Economics---2015---Erhan Artuc, Daniel Lederman, Guido Porto

Estimates of labor mobility costs are needed to assess the responses of employment and wages to trade shocks when factor adjustment is costly. Available methods to estimate those costs rely on panel data, which are seldom available in developing countries. We propose a method to estimate mobility costs using readily obtainable data worldwide. Our estimator matches the changes in observed sectoral employment allocations with the predicted allocations from a model of costly labor adjustment. We estimate a world map of labor mobility costs and we use those estimates to explore the response of labor markets to trade policy.

#### Factor proportions and the growth of world trade

• Journal of International Economics---2015---Robert Zymek

Most of the expansion of global trade since 1980 has been of the North-South kind — between capitalabundant developed and labour-abundant developing countries. Based on this observation, I argue that the recent growth of world trade is best understood from a factor-proportions perspective. Using data on trade barriers and estimates of capital-labour ratios for a group of 45 economies between 1980 and 2008, I find that a calibrated factor-proportions model can generate significant trade growth during this period, amounting to 90% of the observed rise in North-South trade. The opening up of China alone accounts for three quarters of the predicted increase. In line with the model, I present evidence that China's liberalisation has raised the exports and imports of capital-abundant countries relative to more labour-abundant economies. Overall, my findings suggest that factor-proportions theory may be useful for interpreting several quantitative and qualitative aspects of growing world trade in a period during which the group of large, open economies has become significantly less homogenous.

#### Eurosclerosis and international business cycles

 Journal of International Economics---2015---David Cook, Juanyi Xu

This paper incorporates search frictions with endogenous job creation and destruction into a two country dynamic stochastic general equilibrium model to explain two macroeconomic facts. First, since the 1980s, European unemployment rates have risen substantially

above USA levels. Second, the European business cycle has lagged the USA business cycle during the period of the Great Moderation. In the model, more generous unemployment benefits and greater employment protection (manifested as firing costs) can endogenously generate higher unemployment. These same policies will also create labor market frictions which slow the response of the economy to business cycle conditions.

Sovereign default risk and commitment for fiscal adjustment

 Journal of International Economics---2015---Carlos Eduardo Gonçalves, Bernardo Guimaraes

This paper studies fiscal policy in a model of sovereign debt and default. A time inconsistency problem arises: since the price of past debt cannot be affected by current fiscal policy and governments cannot credibly commit to a certain path of tax rates, debtor countries choose suboptimally low fiscal adjustments. An international organization, capable of designing a contract that coaxes debtors into a tougher fiscal stance via the provision of cheap senior lending in times of crisis, can work as a commitment device and improve social welfare.

#### An OLG model of global imbalances

• Journal of International Economics---2015---Sara Eugeni

In this paper, we investigate the relationship between East Asian countries' high propensity to save and global imbalances in a two-country OLG model with production. The saving behavior of emerging economies and capital outflows to the United States can be attributed to their poor pay-as-you-go systems. The model predicts that emerging countries run a trade surplus only as long as the long-run growth rate of the economy is higher than the real interest rate (capital overaccumulation case). The low real interest rate in the US is therefore evidence in favor of the hypothesis that there is a "global saving glut" in the world economy. The model can explain why the US current account deteriorated gradually and only in the late 1990s, although the

net foreign asset position had already turned negative in the early 1980s. Finally, the analysis also implies that an improvement of the pay-as-you-go system in China would have the effect of reducing the imbalances. In accordance with the theory, we find that the higher is the percentage of the working population covered by the pay-as-you-go system the lower are savings and the current account balance in a cross-section of countries.

#### Trade and insecure resources

 Journal of International Economics---2015---Michelle Garfinkel, Stergios Skaperdas, Constantinos Syropoulos

We construct a model of conflict and trade to study the consequences of interstate disputes over contested resources (land, oil, water or other resources) for arming, welfare and trade flows. Different trade regimes imply different costs of such disputes in terms of arming. Depending on world prices, free trade can intensify arming to such an extent that the additional security costs it brings swamp the traditional gains from trade and thus render autarky more desirable for one or all rival states. Free trade, though, is always an equilibrium, and sometimes is a dominant one with features of a prisoner's dilemma outcome. Furthermore, contestation of resources can reverse a country's apparent comparative advantage relative to its comparative advantage in the absence of conflict. And, where such conflict is present, comparisons of autarkic prices to world prices could be inaccurate predictors of trade patterns.

### Can the terms of trade externality outweigh free-riding? The role of vertical linkages

• Journal of International Economics---2015---Christian Bogmans

This paper analyzes the impact of vertical linkages on the international effects of environmental policy. With vertical linkages, stricter environmental policy at home indirectly reduces pollution in the rest of the world. This spillback effect can reinforce the free-rider problem that arises under strategic interaction. When

pollution is transboundary a race to the bottom ensues, products until 2005 and experienced a subsequent indespite the fact that vertical linkages make it easier for national regulators to export the costs of environmental policy via the terms of trade. We also find that while trade liberalization can be good for the environment, vertical linkages tend to increase global pollution.

#### Evaluating international financial integration in a center-periphery economy

• Journal of International Economics---2015---Changhua Yu

Does opening up capital markets facilitate risk diversification across borders? Are all countries gradually better off in the process of international financial integration? This paper explores welfare implications for various countries in a center-periphery framework with endogenous portfolio choice. Financial integration is divided into four stages: financial autarky, twocountry integration, center-periphery integration and global integration. Two effects from financial integration emerge: diversification effects and financial terms of trade effects. Results show that financial integration between the center and a new periphery in center-periphery integration generates welfare losses for the peripheral country already integrated and welfare gains for the central country. Allowing for financial integration between peripheries in global integration leads the welfare in the center to deteriorate. From two-country integration directly to global integration, the large country gains, while the small one loses.

#### **Spatial exporters**

• Journal of International Economics---2015---Fabrice Defever, Benedikt Heid, Mario Larch

In this paper, we provide causal evidence that firms serve new markets which are geographically close to their prior export destinations with a higher probability than standard gravity models predict. We quantify the impact of this spatial pattern using a data set of Chinese firms which had never exported to the EU, the United States, and Canada before 2005. These countries imposed import quotas on textile and apparel within a given industry and the role that globalization

crease in imports of previously constrained Chinese firms. Controlling for firm-destination specific effects and accounting for potential true state dependence we show that the probability to export to a country increases by about two percentage points for each prior export destination which shares a common border with this country. We find little evidence for other forms of proximity to previous export destinations like common colonizer, language or income group.

### Estimating direct and indirect effects of foreign direct investment on firm productivity in the presence of interactions between firms

• Journal of International Economics---2015---Sourafel Girma, Yundan Gong, Holger Görg, Sandra Lancheros

We implement a method to estimate the direct effects of foreign-ownership on foreign firms' productivity and the indirect effects (or spillovers) from the presence of foreign-owned firms on other foreign and domestic firms' productivity in a unifying framework, taking interactions between firms into account. To do so, we relax a fundamental assumption made in empirical studies examining a direct causal effect of foreign ownership on firm productivity, namely that of no interactions between firms. Based on our approach, we are able to combine direct and indirect effects of foreign ownership and calculate the total effect of foreign firms on local productivity. Our results show that all these effects vary with the level of foreign presence within a cluster, an important finding for the academic literature and policy debate on the benefits of attracting foreign owned firms.

#### Globalization and imperfect labor market sorting

• Journal of International Economics---2014---Carl Davidson, Fredrik Heyman, Steven Matusz, Fredrik Sjöholm, Susan Chun Zhu

This paper focuses on the ability of the labor market to efficiently match heterogeneous workers to jobs plays in that process. Using matched worker–firm data from Sweden, we find strong evidence that openness improves the matching between workers and firms in industries with greater comparative advantage. This suggests that there may be significant gains from globalization that have not been identified in the past — globalization may improve the efficiency of the matching process in the labor market. These results remain unchanged after adding controls for technical change at the industry level or measures of domestic anti-competitive regulations and product market competition. Our results are also robust to alternative measures of the degree of matching, openness, and the trade status of an industry.

### Allocative efficiency, mark-ups, and the welfare gains from trade

• Journal of International Economics---2014---Thomas J. Holmes, Wen-Tai Hsu, Sanghoon Lee

This paper develops an index of allocative efficiency that depends upon the distribution of mark-ups across goods and is separable from an index of standard Ricardian gains from trade. It determines how changes in trade frictions affect allocative efficiency in an oligopoly model of international trade, decomposing the effect into the cost-change channel and the price-change channel. Formulas are derived shedding light on the signs and magnitudes of the two channels. In symmetric country models, trade tends to increase allocative efficiency through the cost-change channel, yielding a welfare benefit beyond productive efficiency gains. In contrast, the price-change channel has ambiguous effects on allocative efficiency.

### Establishment heterogeneity, exporter dynamics, and the effects of trade liberalization

• Journal of International Economics---2014---George Alessandria, Horag Choi

We study the effects of tariffs and iceberg trade costs in a two-sector dynamic variation of the Melitz (2003) model extended to include a sunk cost of exporting, establishment-level uncertainty in productivity, capital accumulation, and material usage. We calibrate the model to match both cross-sectional and dynamic aspects of US producers related to export participation and the establishment lifecycle. We find a tariff equivalent of fixed export costs of 30 percentage points. We also find that a sizeable share of export profits is a return to the organizational capital from investing in export capacity rather than creating an establishment. We use the model to estimate the effect of reducing tariffs on welfare, trade, and export participation. We find that eliminating an 8 percent tariff increases the ratio of trade to GDP from 3.9% to 7.4%and raises welfare by 1.02%. Along the transition, consumption overshoots its steady state, even as trade and the capital stock grow gradually, so that the change in steady state consumption understates the welfare gain. Models without a dynamic export decision generate more gradual aggregate transition dynamics and smaller gains from trade. Capital accumulation and material usage are important sources of the welfare gains to trade.

### Entry, trade costs, and international business cycles

• Journal of International Economics---2014---Roberto Fattal Jaef, Jose Lopez

Are firm entry and fixed exporting costs relevant for understanding the international transmission of business cycles? We revisit this question using a model that includes entry, selection to exporting activity, physical capital accumulation and endogenous labor supply. We determine that once the stochastic process for exogenous productivity is calibrated to consider the endogenous dynamics in TFP created by the number of firms and the time series volatility of entry is calibrated to the data, our model yields minimal departures from the Backus et al. (1992) benchmark. The richer model shares all of the successes of the previous model in terms of the volatilities of aggregate quantities, as well as its failures, in terms of replicating patterns of international co-movement and the volatility of international relative prices.

### Comovement in GDP trends and cycles among trading partners

• Journal of International Economics---2014---Bruce Blonigen, Jeremy Piger, Nicholas Sly

It has long been recognized that business cycle comovement is greater between countries that trade more intensively with one another. However, nations face shocks to both the cyclical and trend components of their GDP series. Contrary to the result for cyclical fluctuations, we find comovement of shocks to the trend component of real GDP is weaker among countries that trade more intensively with one another. We simulate changes in ten-year output growth correlations corresponding to the estimated effects of trade and show that the impact of trade on trend comovement is quantitatively more important than its effect on cyclical comovement.

### Intermediate inputs, external rebalancing and relative price adjustment

• Journal of International Economics---2014---Rudolfs Bems

The traditional multi-sector macro model without production inputs is a value-added trade model. This paper shows that calibrating such a misspecified value-added trade model to available gross-flow trade data – a common practice in the literature – can lead to mismeasured (i) preference weights and (ii) price elasticities. Further, the calibrated model can give substantially different predictions regarding the relative price response to external rebalancing, when compared to a preferred alternative model with inputs that is consistent with gross-flow trade data. We find that mismeasured preference weights and price elasticities both contribute sizably to deviations in model predictions and estimate correctly-measured parameters for the value-added trade model.

#### The global agglomeration of multinational firms

• Journal of International Economics---2014---Laura Alfaro, Maggie Chen The explosion of multinational activities in recent decades is rapidly transforming the global landscape of industrial production. But are the emerging clusters of multinational production the rule or the exception? What drives the offshore agglomeration of multinational firms in comparison to the agglomeration of domestic firms? Using a unique worldwide plant-level dataset that reports detailed location, ownership, and operation information for plants in over 100 countries, we construct a spatially continuous index of agglomeration and analyze the different patterns underlying the global economic geography of multinational and non-multinational firms. We present new stylized facts that suggest that the offshore clusters of multinationals are not a simple reflection of domestic industrial clusters. Agglomeration economies including technology diffusion and capital-good market externality play a more important role in the offshore agglomeration of multinationals than the agglomeration of domestic firms. These findings remain robust when we explore the process of agglomeration.

## Corruption and firm behavior: Evidence from African ports

• Journal of International Economics---2014---Sandra Sequeira, Simeon Djankov

This paper investigates how corruption affects firm behavior. Using an original and unusually rich dataset on bribe payments at ports matched to firm-level data, we observe how firms adapt to different types of corruption by adjusting their transport strategies. Our results suggest that firms respond to the price effects of corruption, organizing production in a way that increases or decreases demand for the public service.

### Corporate hierarchies and international trade: Theory and evidence

 Journal of International Economics---2014---Dalia Marin, Thierry Verdier

Corporate organization varies within countries and between countries. We develop a theory which explains the variation in levels of decentralization across firms We introduce firms with internal hierarchies in a Melitz and Ottaviano (2008) model of international trade. We show that international trade increases the conflict of interest between CEO/owners and middle managers within firms and these eventually lead to decentralized corporate hierarchies. We test the theory with original data on the internal organizations of 2200 Austrian and German firms and find that the empirical evidence is consistent with the model's predictions.

### Do falling iceberg costs explain recent U.S. export growth?

• Journal of International Economics---2014---George Alessandria, Horag Choi

We study empirically and theoretically the growth of U.S. manufacturing exports from 1987 to 2007. We use plant-level data on exporters' export intensity to identify the changes in iceberg costs over this period. Given this change in iceberg costs, we find that a GE model with heterogeneous establishments and dynamic exporting decision from a sunk cost of starting to export is consistent with both aggregate U.S. export growth and the changes in the number and size of U.S. exporters. The model also captures the gradual response of U.S. exports to the cut in iceberg costs. A model with a static exporting decision generates substantially less trade growth and misses out on the timing of export growth. We also study the interplay between changes in the structure of manufacturing and trade. We find that the growth in trade contributed little to the contraction in U.S. manufacturing while changes in the structure of manufacturing from changes in sectoral productivity, capital intensity, idiosyncratic shocks, and corporate taxation reduced U.S. export growth by as much as 10%.

### Optimal borrowing constraints and growth in a small open economy

• Journal of International Economics---2014---Amanda Michaud, Jacek Rothert

and links it to the trade environment that firms face. Chinese high growth has been accompanied by government restrictions on international borrowing (capital controls). In this paper, we ask: are such restrictions a useful policy tool to facilitate growth? We provide a theory of borrowing constraints on households as a tool to correct a learning-by-doing externality. Borrowing constraints operate as a policy tool through two channels: (i) increasing labor supply and (ii) reallocating labor towards traded goods. We find that welfare gains are closest to that of the First-Best Planner allocation when the externality is not too large. We compute the sequence of optimal constraints along the growth path and show how the use of this policy tool contributes to repressed wages, current account balance, and slow real exchange rate appreciation.

#### Cherries for sale: The incidence and timing of cross-border M&A

• Journal of International Economics---2014---Bruce Blonigen, Lionel Fontagné, Nicholas Sly, Farid Toubal

This paper develops a model of cross-border M&A activity that features firm-level productivity shocks and endogenous export activity. We show that foreign firms will be relatively more attracted to targets in the domestic country that had high productivity levels that induced them to invest in large export networks several years prior to acquisition, but subsequently experienced a negative productivity shock (i.e., cherries for sale). From the theory we derive a dynamic panel binary choice empirical model to predict cross-border M&A activity, and find strong evidence for our hypotheses connecting the evolution of firm-level productivity to the ultimate targets of cross-border acquisitions using French firm-level data.

### Does trade globalization induce or inhibit corporate transparency? Unbundling the growth potential and product market competition channels

• Journal of International Economics---2014---Hui Tong, Shang-Jin Wei

Trade globalization may affect corporate transparency via multiple channels, with potentially opposite signs. We aim to empirically disentangle these channels by tracking evolution of corporate transparency for 4061 listed firms in tradable sectors in 49 countries during 1992–2005. By using detailed tariff schedules, we measure changes in growth opportunities and product market competition enabled by foreign and domestic trade liberalizations, respectively. On the one hand, higher growth opportunities engendered by foreign trade reforms are disproportionately associated with better corporate transparency in industries that depend more heavily on external financing. On the other hand, greater product market competition engendered by domestic tariff reductions has no significant impact on corporate transparency.

### Exports versus multinational production under nominal uncertainty

• Journal of International Economics---2014---Logan Lewis

This paper examines how nominal uncertainty affects the choice that firms face to serve a foreign market through exports or to produce abroad as a multinational. I develop a two-country, stochastic general equilibrium model in which firms make production and pricing decisions in advance, and I consider its implications for the relative attractiveness of exporting and multinational production. I find that when multinational sales are priced in the local currency while exports are priced in the producer currency, destination volatility benefits exporters: during a foreign nominal contraction, the foreign exchange rate appreciates, causing exports to be relatively cheaper. Exporters gain non-linearly through demand, making profit convex in prices. As foreign volatility rises, the model implies that the home country should serve the foreign country relatively more through exports. I take this implication to bilateral U.S. data, using inflation volatility as a proxy for nominal volatility. Using sectoral data on sales by majority-owned foreign affiliates matched with U.S. exports, I find that higher inflation volatility is associated with a significantly lower ratio of multinational sales to total foreign sales.

### The stock of external sovereign debt: Can we take the data at 'face value'?

• Journal of International Economics---2014---Daniel Dias, Christine Richmond, Mark Wright

The stock of sovereign debt is typically measured at face value. Defined as the undiscounted sum of future principal repayments, face values are misleading when debts are issued with different contractual forms or maturities. In this paper, we construct alternative measures of the stock of external sovereign debt for 100 developing countries from 1979 through 2006 that correct for differences in contractual form and maturity. We show that our alternative measures: (1) paint a very different quantitative, and in some cases also qualitative, picture of the stock of developing country external sovereign debt; (2) often invert rankings of indebtedness across countries, which historically defined eligibility for debt forgiveness; (3) indicate that the empirical performance of the benchmark quantitative model of sovereign debt deteriorates by roughly 50% once model-consistent measures of debt are used; (4) show how the spread of aggregation clauses in debt contracts that award creditors voting power in proportion to the contractual face value may introduce inefficiencies into the process of restructuring sovereign debts; and (5) illustrate how countries have manipulated their debt issuance to meet fiscal targets written in terms of face values.

#### **External liabilities and crises**

 Journal of International Economics---2014---Luis Catão, Gian Maria Milesi-Ferretti

We examine the determinants of external crises, focusing on the role of foreign liabilities and their composition. Using a variety of statistical tools and comprehensive data spanning 1970–2011, we find that the ratio of net foreign liabilities to GDP is a significant crisis predictor. This is primarily due to the net position in debt instruments—the effect of net equity liabilities is weaker and net FDI liabilities seem, if anything, an

external debt into its gross asset and liability counterparts does not add significant explanatory power to crisis prediction; ii) the current account is a powerful predictor; iii) foreign exchange reserves reduce the likelihood of crisis more than other foreign asset holdings; and iv) a parsimonious probit containing those and a handful of other variables has good predictive performance in- and out-of-sample. The latter result stems largely from our focus on external crises sensu stricto.

#### **Emerging market fluctuations: What makes the** difference?

• Journal of International Economics---2014---Constantino Hevia

Aggregate fluctuations in emerging countries are different from those in developed countries. Using data from Mexico and Canada, this paper decomposes these differences in terms of reduced form shocks that affect aggregate efficiency and distort the decisions of households about how much to invest, consume, and work in a standard model of a small open economy. The decomposition exercise suggests that most of these differences are explained by fluctuations in aggregate efficiency, distortions in labor choices over the business cycle, and distortions in intertemporal consumption choices. Successful models for emerging markets fluctuations should include primitive shocks and frictions that generate these features. Models with financial frictions in the form of working capital constraints, possibly augmented with endogenous collateral constraints, are consistent with these findings.

#### **Exporting under trade policy uncertainty: Theory** and evidence

• Journal of International Economics---2014---Kyle Handley

I provide novel evidence for the impact of trade policy uncertainty on exporters. In a dynamic, heterogeneous firms model, trade policy uncertainty will delay the entry of exporters into new markets and make them

offset factor. We also find that: i) breaking down net less responsive to applied tariff reductions. Policy instruments that reduce or eliminate uncertainty, such as binding trade policy commitments at the WTO, increase entry. The predictions are tested on disaggregated, product-level Australian imports with modelconsistent measures of uncertainty. The estimates show that growth of exporter-product varieties would have been 7% lower between 1993 and 2001 without the binding commitments implemented after the WTO was formed in 1996. If Australia reduced all its tariffs and bindings to zero, more than half of predicted product growth is accounted by removing uncertainty. These results illuminate and quantify an important new channel for trade creation.

#### Learning to export from neighbors

• Journal of International Economics---2014---Ana P. Fernandes, Heiwai Tang

This paper studies how learning from neighboring firms affects new exporters' performance. We develop a statistical decision model in which a firm updates its prior belief about demand in a foreign market based on several factors, including the number of neighbors currently selling there, the level and heterogeneity of their export sales, and the firm's own prior knowledge about the market. A positive signal about demand inferred from neighbors' export performance raises the firm's probability of entry and initial sales in the market but, conditional on survival, lowers its post-entry growth. These learning effects are stronger when there are more neighbors to learn from or when the firm is less familiar with the market. We find supporting evidence for the main predictions of the model from transaction-level data for all Chinese exporters over the 2000-2006 period. Our findings are robust to controlling for firms' supply shocks, countries' demand shocks, and city-country fixed effects.

### Managers' mobility, trade performance, and wages

• Journal of International Economics---2014---Giordano Mion,Luca David Opromolla

Knowledge is key to the competitiveness and success of an organization and in particular of a firm. Firms and their managers acquire knowledge via a variety of different channels which are often difficult to track down and quantify. By matching employer-employee data with trade data at the firm level we show that the export experience acquired by managers in previous firms leads their current firm toward higher export performance, and commands a sizeable wage premium for the manager. Moreover, export knowledge is decisive when it is market-specific: managers with experience related to markets served by their current firm receive an even higher wage premium; firms are more likely to enter markets where their managers have experience; exporters are more likely to stay in those markets, and their sales are on average higher. Our findings are robust to controlling for unobserved heterogeneity and, more broadly, endogeneity and indicate that managers' export experience is a first-order feature in the data with an impact on a firm's export performance that is, for example, at least as strong as that of firm productivity.

### Policymakers' horizon and trade reforms: The protectionist effect of elections

 Journal of International Economics---2014---Paola Conconi, Giovanni Facchini, Maurizio Zanardi

This paper shows that electoral incentives deter politicians from supporting trade liberalization. We focus on all major trade liberalization bills introduced since the early 1970s in the U.S. Congress, in which House and Senate members serve respectively two- and six-year terms and one third of senators face elections every two years. We show that senators are more likely to support trade liberalization than House representatives. However, this result does not hold for the last generation of senators, who face elections at the same time as House members, suggesting that inter-cameral differences are driven by term length. Considering senators alone, we find that the last generation is less likely to support trade liberalization than the previous two. This result is pervasive and holds both when comparing the behavior of different senators voting on the same bill and that of individual senators voting on different bills. The protectionist effect of election proximity disappears for senators who are retiring or hold safe seats.

### Coordinating climate and trade policies: Pareto efficiency and the role of border tax adjustments

 Journal of International Economics---2014---Michael Keen, Christos Kotsogiannis

This paper explores the role of trade instruments in globally efficient climate policies, focusing on whether or not some form of border tax adjustment (BTA) is warranted when carbon prices differ internationally. The analysis shows that, while there is no case for BTA when all instruments can be freely deployed, Paretoefficiency does require a form of BTA when carbon taxes in some countries are constrained: its purpose then is to partly counteract the impact on emissions of inappropriate carbon pricing there, or, equivalently, to undo the trade distortions such pricing creates. The required form of BTA is generally complex, but a special case is identified in which it optimally has the simple structure envisaged in practical policy discussions. It is also shown that the efficiency case for BTA depends critically on whether climate policies are pursued by carbon taxation or by cap-and-trade.

### Trade patterns and export pricing under non-CES preferences

 Journal of International Economics---2014---Sergey Kichko, Sergey Kokovin, Evgeny Zhelobodko

We develop a two-factor, two-sector trade model of monopolistic competition with variable elasticity of substitution. Firms' profits and sizes may increase or decrease with market integration depending on the degree of asymmetry between countries. The country in which capital is relatively abundant is a net exporter of the manufactured good, although both firm sizes and profits are lower in this country than in the country where capital is relatively scarce. The pricing policy adopted by firms depends neither on capital

endowment nor country asymmetry. It is determined by the nature of preferences: when demand elasticity erate while the effect on firm size is ambiguous. If increases (decreases) with consumption, firms practice dumping (reverse-dumping).

to each industry is either too excessive or too moderate while the effect on firm size is ambiguous. If countries are sufficiently symmetric, trade will increase the wage—rental ratio in both countries. Furthermore,

### Interdependent product cycles for globally sourced intermediates

Journal of International Economics---2014-- Johannes Van Biesebroeck, Lijun Zhang

We analyze a firm that produces a final good from multiple intermediates, each of which can be sourced domestically or from a low-wage country. Offshoring an intermediate is only profitable when it has matured sufficiently and the savings in production cost outweigh the underinvestment due to incomplete contracts abroad. We derive how equilibrium sourcing decisions of different intermediates depend on one another. In particular, we demonstrate that the maturity threshold to offshore additional parts is higher when some other parts are already sourced from the low-wage country. This prediction is robust to an alternative way of modeling the bargaining process, but it only holds if foreign suppliers are held sufficiently close to their reservation wage. If suppliers are able to capture most of the rents, the prediction reverses. Using information on U.S. imports of automotive parts, we illustrate that for most countries the price at which they first export a part tends to be higher for parts that are only exported later, consistent with offshoring becoming gradually more difficult.

## Trade and imperfect competition in general equilibrium

 Journal of International Economics---2014---Onur Koska, Frank Stähler

This paper employs a multi-industry general equilibrium model of oligopolistic competition, free market entry and trade in which capital is used to establish firms and labor is used for production. We show that both absolute and relative endowments matter for the pattern of trade. We demonstrate that market entry

to each industry is either too excessive or too moderate while the effect on firm size is ambiguous. If countries are sufficiently symmetric, trade will increase the wage—rental ratio in both countries. Furthermore, trade will increase per-capita consumption in capital-intensive industries and reduce it in labor-intensive industries. Nevertheless, trade will be mutually welfare-improving under relatively mild conditions.

### Price dynamics in the Belarusian black market for foreign exchange

• Journal of International Economics---2014---Hannes Huett, Matthias Krapf, Selver Uysal

Using unique data from an internet-based foreign-exchange trading platform, we show that the black market efficiently incorporated public information on the state of the Belarusian economy during the Balance of Payments crisis of 2011. Between May and October 2011, the government repeatedly devalued the Belarusian ruble and eventually abandoned its fixed exchange rate regime. Measures derived from black market transaction data have significant predictive power for these devaluations. The significance of these black market measures survives even when we include standard macroeconomic indicators in our forecasting model. In line with standard economic theory, activity in the black market has dried up subsequently.

#### Monopolistic competition: CES redux?

 Journal of International Economics---2014---Paolo Bertoletti, Paolo Epifani

We study the competitive and reallocation effects of trade opening in monopolistic competition. To this purpose, we generalize the Melitz (2003) setup with heterogeneous firms and fixed and variable trade costs beyond the CES to the case of additively separable utility functions. We find that extensive margin (Melitz-type selection) effects are robust to relaxing the CES assumption. Intensive margin effects (market share reallocations across inframarginal firms) and competitive (markup) effects are instead fragile. An important implication is that measured productivity gains from

preferences. We discuss our results in the light of alternative setups featuring non-additive preferences, strategic interaction and consumers' preference for an ideal variety.

### Wage Effects of Trade Reform with Endogenous **Worker Mobility**

• Journal of International Economics---2014---Pravin Krishna, Jennifer Poole, Mine Senses

In this paper, we use a linked employer–employee database from Brazil to evaluate the wage effects of trade reform. With an aggregate (firm-level) analysis of this question, we find that a decline in trade protection is associated with an increase in average wages in exporting firms relative to domestic firms, consistent with earlier studies. However, using disaggregated, employer-employee level data, and allowing for the endogenous assignment of workers to firms due to match-specific productivity, we find that the premium paid to workers at exporting firms is economically and statistically insignificant, as is the differential impact of trade openness on the wages of workers at exporting firms relative to otherwise identical workers at domestic firms. We also find that workforce composition improves systematically in exporting firms, in terms of the combination of worker ability and the quality of worker-firm matches, post-liberalization. These results stand in stark contrast to the findings reported in many earlier studies and underscore the importance of endogenous matching and, more generally, non-random labor market allocation mechanisms, in determining the effects of trade policy changes on wages.

#### Immigration and structural change: Evidence from post-war Germany

• Journal of International Economics---2014---Sebastian Braun, Michael Kvasnicka

Does immigration accelerate sectoral change from lowto high-productivity sectors? This paper analyzes the effect of one of the largest population movements in history, the influx of millions of German expellees

trade opening are no longer ensured with non-CES to West Germany after World War II, on Germany's speed of transition away from low-productivity agriculture. A simple two-sector specific factor model, in which moving costs prevent the marginal product of labor to be equalized across sectors, predicts that expellee inflows boost output per worker by expanding the high-productivity non-agricultural sector but decrease output per worker within sectors. Using German district-level data from before and after the war, we find empirical support for these predictions.

#### Heterogeneous firm-level responses to trade liberalization: A test using stock price reactions

• Journal of International Economics---2014---Holger Breinlich

This paper presents novel empirical evidence on key predictions of heterogeneous firm models by examining stock market reactions to the Canada-United States Free Trade Agreement of 1989 (CUSFTA). I derive testable predictions for a class of models based on Melitz (2003). Using the uncertainty surrounding CUSFTA's ratification, I show that the pattern of abnormal returns of Canadian manufacturing firms was strongly consistent with predictions related to export (U.S.) tariff reductions, but less so with predictions related to import (Canadian) tariff reductions. Lower Canadian tariffs did have an effect through the implied reduction in intermediate input tariffs, however.

#### An information-based theory of international currency

• Journal of International Economics---2014---Cathy Zhang

This paper develops an information-based theory of international currency based on search frictions, private trading histories, and imperfect recognizability of assets. Using an open-economy search model with multiple competing currencies, the value of each currency is determined without requiring agents to use a particular currency to purchase a country's goods. Strategic complementarities in portfolio choices and information acquisition decisions generate multiple equilibria

with different types of payment arrangements. While some inflation can benefit the country issuing an international currency, the threat of losing international status puts an inflation discipline on the issuing country. When monetary authorities interact in a simple policy game, the temptation to inflate can lead optimal policy to deviate from the Friedman rule. The calibrated model can produce a welfare cost of losing international status for the issuing country larger than previous findings, though estimates depend critically on inflation rates and information costs.

### Optimal fiscal policy in a small open economy with limited commitment

 Journal of International Economics---2014---Sofia Bauducco, Francesco Caprioli

We introduce limited commitment into a standard optimal fiscal policy model in small open economies. We consider the problem of a benevolent government that signs a risk-sharing contract with the rest of the world, and that has to choose optimally distortionary taxes on labor income, domestic debt and international transfers. Both the home country and the rest of the world may have limited commitment, which means that they can leave the contract if they find it convenient. The contract is designed so that, at any point in time, neither party has incentives to exit. We define a small open emerging economy as an economy where the limited commitment problem is active in equilibrium. Conversely, a small open developed economy is an economy in which the commitment problem is not active. Our model is able to rationalize some stylized facts about fiscal policy in emerging economies: i) the volatility of tax revenues over GDP is higher in emerging economies than in developed ones; ii) fiscal policy is procyclical in emerging economies; iii) emerging economies may "graduate" from procyclical fiscal policy and adopt countercyclical policies in the long run.

### Deforestation, foreign demand and export dynamics in Indonesia

• Journal of International Economics---2014---Joel Rodrigue,Omolola Soumonni

This paper presents a dynamic, heterogeneous firm model of investment in environmental abatement and exporting. The model highlights the interaction between firms' environmental investment and export decisions on the evolution of productivity and export demand in timber manufacturing industries. The model is structurally estimated using Indonesian timber manufacturing data that captures firm-level variation in environmental investment and export behavior. The results suggest that environmental abatement has little impact on productivity dynamics, but does encourage growth in export demand. Counterfactual experiments quantify the impact of policy change on trade and abatement decisions.

### Economic integration agreements and the margins of international trade

 Journal of International Economics---2014---Scott Baier, Jeffrey Bergstrand, Michael Feng

One of the main policy sources of trade-cost changes is the formation of an economic integration agreement (EIA), which potentially affects an importing country's welfare. This paper: (i) provides the first evidence using gravity equations of both intensive and extensive (goods) margins being affected by EIAs employing a panel data set with a large number of country pairs, product categories, and EIAs from 1962 to 2000; (ii) provides the first evidence of the differential (partial) effects of various "types" of EIAs on these intensive and extensive margins of trade; and (iii) finds a novel differential "timing" of the two margins' (partial) effects with intensive-margin effects occurring sooner than extensive-margin effects, consistent with recent theoretical predictions. The results are robust to correcting for potential sample-selection, firm-heterogeneity, and reverse causality biases.

### Native language, spoken language, translation and trade

 Journal of International Economics---2014---Jacques Melitz, Farid Toubal

We construct new series for common native language

and common spoken language for 195 countries, which we use together with series for common official language and linguistic proximity in order to draw inferences about (1) the aggregate impact of all linguistic factors on bilateral trade, (2) the separate role of ease of communication as distinct from ethnicity and trust, and (3) the contribution of translation and interpreters to ease of communication. The results show that the impact of linguistic factors, all together, is at least twice as great as the usual dummy variable for common language, resting on official language, would say. In addition, ease of communication plays a distinct role, apart from ethnicity and trust, and so far as ease of communication enters, translation and interpreters are significant. Finally, emigrants have much to do with the role of ethnicity and trust in linguistic influence.

#### Debt deleveraging and the exchange rate

• Journal of International Economics---2014---Pierpaolo Benigno, Federica Romei

Deleveraging from high debt can provoke deep recession with significant international side effects. Swings in the nominal exchange rate and large variations in consumption, output, and terms of trade can happen during the adjustment. All these movements are inefficient and interesting trade-offs emerge from the perspective of global welfare. The optimal adjustment to global imbalances should not necessarily require large movements in the nominal exchange rate. A global liquidity trap can be desirable when countries are more open to trade.

#### International trade and macroeconomic dynamics with labor market frictions

• Journal of International Economics---2014---Matteo Cacciatore

This paper studies how labor market frictions affect the consequences of trade integration in a two-country dynamic stochastic general equilibrium model with heterogeneous firms and endogenous producer entry. Two main results emerge. First, trade integration is beneficial for welfare by inducing higher productivity, ation (quality). Data patterns observed in Belgian

but unemployment can temporarily rise during the transitional adjustment. Labor market rigidities reduce gains from trade, even though they can mitigate shortrun employment losses. Second, consistent with the data, the model predicts that stronger trade linkages lead to increased business cycle synchronization. The strength of this effect, however, depends on the labor market characteristics of the integrating partners.

#### International capital flows under dispersed private information

• Journal of International Economics---2014---Cédric Tille, Eric van Wincoop

It is well established that private information is critical to our understanding of asset prices. In this paper we argue that it also affects international capital flows and use a simple two-country DSGE model to illustrate its impact. We show that private information (i) increases the volatility of both net and gross capital flows, (ii) leads to a high correlation between capital inflows and outflows, (iii) leads to a disconnect of capital flows from observed macro fundamentals and (iv) implies that capital flows contain information about the future macro fundamentals. We also show that dispersed information affects capital flows both through asset prices and directly, so that the impact on flows is not just the mirror image of the impact on prices.

#### Verti-zontal differentiation in export markets

• Journal of International Economics---2014---Francesco Di Comite, Jacques Thisse, Hylke Vandenbussche

Many trade models of monopolistic competition identify cost efficiency as the main determinant of firm performance in export markets. To date, the analysis of demand factors has received much less attention. We propose a new model where consumer preferences are asymmetric across varieties and heterogeneous across countries. The model generates new predictions and allows for an identification of horizontal differentiation (taste) clearly distinguished from vertical differentifirm-product level exports by destination are congru- Trade policy: Home market effect versus ent with the predictions and seem to warrant a richer terms-of-trade externality modelling of consumer demand.

#### Estimating the extensive margin of trade

• Journal of International Economics---2014---João Santos Silva, Silvana Tenreyro, Kehai Wei

Understanding and quantifying the determinants of the number of sectors or firms exporting in a given country is of relevance for the assessment of trade policies. Estimation of models for the number of exporting sectors, however, poses a challenge because the dependent variable has both a lower and an upper bound, implying that the partial effects of the explanatory variables on the conditional mean of the dependent variable cannot be constant. We argue that ignoring these bounds can lead to erroneous conclusions and propose a flexible specification that accounts for the doubly-bounded nature of the dependent variable. We empirically investigate the problem and the proposed solution, finding significant differences between estimates obtained with the proposed estimator and those obtained with standard approaches.

#### The asymmetric effects of tariffs on intra-firm trade and offshoring decisions

• Journal of International Economics---2014---Federico Diez

This paper studies the effects of tariffs on intra-firm trade. Building on the Antràs and Helpman (2004) North-South theoretical framework, I show that higher Northern tariffs reduce the incentives for outsourcing and offshoring, while higher Southern tariffs have the opposite effects. I also show that increased offshoring and outsourcing imply a decrease in the ratio of Northern intra-firm imports to total imports, an empirically testable prediction. Using a highly disaggregated dataset of U.S. (the North) imports and relevant U.S. and foreign tariffs, I find robust evidence to support the model's predictions.

• Journal of International Economics---2014---Alessia Campolmi, Harald Fadinger, Chiara Forlati

We study trade policy in a two-sector Krugman (1980) trade model, allowing for wage, import and export subsidies/taxes. We study non-cooperative trade policies, first for each individual instrument and then for the situation where all instruments can be set simultaneously, and contrast those with the efficient allocation. We show that in this general context there are four motives for non-cooperative trade policies: the correction of monopolistic distortions; the terms-of-trade manipulation; the delocation motive for protection (home market effect); the fiscal-burden-shifting motive. The Nash equilibrium when all instruments are available is characterized by first-best-level wage subsidies, and inefficient import subsidies and export taxes, which aim at relocating firms to the other economy and improving terms of trade. Thus, the dominating incentives for non-cooperative trade policies are the fiscal-burdenshifting motives and terms-of-trade effects.

### A quantitative approach to multinational production

• Journal of International Economics---2014---Natalia Ramondo

I examine new data on the number and revenues of foreign affiliates of multinational firms across a large number of country pairs. The data shed light on the behavior of the intensive and extensive margins of multinational production (MP). To capture the patterns observed in the data, I build and calibrate a multi-country general-equilibrium model of MP that combines a Lucas (1978) span-of-control with an Eaton and Kortum (2002) type model, and includes both fixed and variable costs of opening affiliates abroad. I use the calibrated model to calculate the gains that a country would experience from liberalizing access to foreign firms. Those calculations suggest that the welfare losses of closing up to foreign firms would be around 4\%, while the gains of liberalizing access to

foreign firms would be large, particularly if the variable 
Openness and optimal monetary policy - rather than the fixed - component of MP costs were lowered.

### Global sourcing of complex production processes

• Journal of International Economics---2014---Christian Schwarz. Jens Suedekum

We develop a theory of a firm in an incomplete contracts environment which decides on the complexity, the organization, and the global scale of its production process. Specifically, the firm decides i) how many intermediate inputs are simultaneously combined to a final product, ii) if the supplier of each input is an external contractor or an integrated affiliate, and iii) if that input is offshored to a foreign country. Our model leads to a rich set of predictions on the internal structure of multinational firms. In particular, it provides an explanation why many firms choose hybrid sourcing and have both outsourced and integrated suppliers.

#### Low-wage country competition and the quality content of high-wage country exports

• Journal of International Economics---2014---Julien Martin, Isabelle Mejean

We study how competition from low-wage countries in international markets affects the quality content of high-wage country exports. We focus on aggregate quality changes driven by a reallocation of sales from low- to high-quality exporters, within industries. Two alternative indicators are used on firm-level data to measure quality changes. Both lead to similar conclusions. Namely, we show that the mean quality of French exports increased by 10–15% between 1995 and 2005. Quality improvement is significantly more pronounced in markets in which competition from lowwage countries has increased the most. This holds true for various specifications including two different identification strategies. The results are consistent with competition from low-wage countries leading developed countries to specialize within industries in the production of higher quality goods.

• Journal of International Economics---2014---Giovanni Lombardo, Federico Ravenna

We show that the composition of international trade has important implications for the optimal volatility of the exchange rate, above and beyond the size of trade flows. Using an analytically tractable small open economy model, we characterize the impact of the trade composition on the policy trade-off and on the role played by the exchange rate in correcting for price misalignments. Contrary to models where openness can be summarized by the degree of home bias, we find that openness can be a poor proxy of the welfare impact of alternative monetary policies. Using input-output data for 25 countries we document substantial differences in the import and non-tradable content of final demand components, and in the role played by imported inputs in domestic production. The estimates are used in a richer small-open-economy DSGE model to quantify the loss from an exchange rate peg relative to the Ramsey policy conditional on the composition of imports. We find that the main determinant of the losses is the share of non-traded goods in final demand.

#### Autocracy, democracy and trade policy

• Journal of International Economics---2014---Sebastian Galiani, Gustavo Torrens

This paper develops a politico-economic model for use in studying the role of intra-elite conflict in the simultaneous determination of a country's political regime, trade policy and income-tax-based redistribution scheme. Three socioeconomic groups are involved: two elite groups and workers, whose preferences regarding trade policy and income taxation are derived from a simple open-economy model. The critical point is that income taxation induces a rich-poor/elite-workers political cleavage, while trade policy opens the door to intra-elite conflict. In this model, when there is no intra-elite conflict, changes in trade policy are associated with political transitions. Coups (democratizations) open up the economy if and only if both

elite groups are pro-free-trade (protectionist). However, in the presence of intra-elite conflict, autocracies respond to popular revolts by changing trade policy and reallocating political power within the elite (to the elite group with the same trade policy preference as the workers) rather than offering to democratize the country. The change in trade policy is credible because the elite group with the same trade policy preference as the workers controls the autocracy. Moreover, in the presence of intra-elite conflict, coups tend to result in the maintenance of the existing trade policy unless popular demands are extremely radical and/or the elite group with the same trade policy preference as the workers is exceptionally weak.

#### Trade intensity and purchasing power parity

Journal of International Economics---2014-- Dooyeon Cho, Antonio Doblas-Madrid

In this paper, we seek to contribute to the PPP literature by presenting evidence of a link between trade intensity and exchange rate dynamics. We first establish a negative effect of trade intensity on exchange rate volatility using panel regressions, with distance as an instrument to correct for endogeneity. We also estimate a nonlinear model of mean reversion to compute half-lives of deviations of bilateral exchange rates from the levels dictated by relative PPP, and find these half-lives to be significantly shorter for high trade intensity currency pairs. This result does not appear to be driven by Central Bank intervention. Finally, we show that conditioning on PPP may help improve the performance of popular currency trading strategies, such as the carry trade, especially for low trade intensity currency pairs.

#### Liquidity-constrained migrants

 Journal of International Economics---2014---Slobodan Djajić, Alexandra Vinogradova

Liquidity constraints represent a major obstacle for potential migrants trying to meet the high cost of undocumented international migration. Some cover it by borrowing from a smuggling organization with

a commitment to repay the loan by working in the destination country as bonded laborers. This paper compares alternative ways of financing migration and shows that debt bondage is optimal only if the international wage differential is sufficiently large in relation to migration costs. Tougher border controls as well as internal enforcement measures can be expected to reduce the incidence of debt-bonded relative to self-financed migration, although they may not necessarily lower the overall inflow of illegal aliens.

## Product-based cultural change: Is the village global?

 Journal of International Economics---2014---Nicolas Maystre, Jacques Olivier, Mathias Thoenig, Thierry Verdier

We provide a model of product-based cultural change where trade integration leads to cultural convergence. A standard trade model of Dixit-Stiglitz monopolistic competition is coupled with a micro-founded model of cultural dynamics. We show that access to varieties that are attached to a global cultural type changes the incentives of parents to socialize their children and transmit their type. The resulting increase in agents of the global cultural type leads to a magnification of the initial shock. A striking feature of the model is that even temporary shocks to openness may have permanent effects through the changing distribution of preferences in the economy.

### Openness and income: The roles of trade and migration

Journal of International Economics---2014-- Francesc Ortega, Giovanni Peri

This paper explores the relationship between openness to trade, immigration, and income per person across countries. To address endogeneity concerns we extend the instrumental-variables strategy introduced by Frankel and Romer (1999). We build predictors of openness to immigration and to trade for each country by using information on bilateral geographical and cultural distance (while controlling for country size).

nels, we also control for climate, disease environment, natural resources, and colonial origins. Most importantly, we also account for the roles of institutions and early development. Our instrumental-variables estimates provide evidence of a robust, positive effect of openness to immigration on long-run income per capita. In contrast, we are unable to establish an effect of trade openness on income. We also show that the effect of migration operates through an increase in total factor productivity, which appears to reflect increased diversity in productive skills and, to some extent, a higher rate of innovation.

#### Pro-poor trade policy in Sub-Saharan Africa

• Journal of International Economics---2014---Alessandro Nicita, Marcelo Olarreaga, Guido Porto

This paper examines the presence of a pro-poor bias in the existing structure of protection of six Sub-Saharan African (SSA) countries, Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Gambia, and Madagascar. We build on a simple agricultural household production model and we propose an extension to include adjustments in labor income. Our approach, which can be implemented without repeated cross-sections of household level data, suits well the data constraints in SSA. It also allows us to capture the heterogeneity in trade protection at the tariff line level. The pro-poor bias indicators suggest that SSA's trade policies tend to be biased in favor of poor households, as these policies redistribute income from rich to poor households. This is because protection increases the agricultural prices of goods that are sold by African households and this effect dominates both the impacts of higher consumption prices and the strong Stolper-Samuelson effects that benefit skilled over unskilled workers.

#### **Surges**

• Journal of International Economics---2014---Atish Ghosh, Mahvash Qureshi, Jun Il Kim, Juan Zalduendo

This paper examines when and why capital sometimes

Since geography may affect income through other chan-surges to emerging market economies (EMEs). Using data on net capital flows for 56 EMEs over 1980 2011, we find that global factors, including US interest rates and investor risk aversion act as "gatekeepers" that determine when surges of capital to EMEs will occur. Whether a particular EME receives a surge, and the magnitude of that surge, however, depends largely on domestic factors such as its external financing need, capital account openness, and exchange rate regime. Differentiating between surges driven by exceptional behavior of asset flows (repatriation of foreign assets by domestic residents) from those driven by exceptional behavior of liability flows (nonresident investments into the country), shows the latter to be relatively more sensitive to global factors and contagion.

### Collective action clauses: How do they affect sovereign bond yields?

• Journal of International Economics---2014---Alfredo Bardozzetti, Davide Dottori

We study the effects of the adoption of collective action clauses (CACs) on government bond yields by exploiting secondary market data on sovereign bonds quoted in international markets from March 2007 to April 2011. CACs are assessed security by security. Using a panel data approach, we find a U-shaped effect of CACs on yields according to the credit rating of the issuer. While the impact is negligible for the highest ratings, a significant yield discount emerges for mid-range ratings, which is smaller for bad ratings and possibly insignificant for the worst ratings. This relationship appears fairly robust across a number of checks. This evidence may reflect the fact that CACs are valuable because they help with orderly restructuring unless the perceived probability of default is too small. Nevertheless, at low ratings, this effect can be weakened by an increasing risk of moral hazard.

#### A model of demand, productivity and foreign location decision among Taiwanese firms

• Journal of International Economics---2014---Bee Yan Aw, Yi Lee

We develop a theoretical framework to examine the relative importance of firm demand and productivity in firm decisions to export and where to locate foreign direct investments. The model shows that the equilibrium firm decision depends on product technology, consumer preference for product quality, fixed investment costs of establishing a foreign subsidiary, transportation costs and relative wages. Our empirical results confirm the predictions of the theoretical model. Firm-level demand and productivity components are important in explaining the decision to participate in foreign markets with their relative importance depending on the firm's organizational form (exports versus FDI) and the destination of the investments. In general, FDI firms are more productive than exporting firms regardless of FDI destinations. FDI firms also have a higher demand component than exporters and this demand component is stronger than productivity. Finally, among FDI firms, while those with a high demand index and productivity have a significantly higher propensity to invest in high-income countries, firm productivity is the sole determinant of firms undertaking FDI in low-income countries.

### Unobservable skill dispersion and comparative advantage

 Journal of International Economics---2014---Matilde Bombardini, Giovanni Gallipoli, Germán Pupato

This paper investigates a theoretical mechanism linking comparative advantage to the distribution of skills in the working population. We develop a tractable multi-country, multi-industry model of trade with unobservable skills in the labour market and show that comparative advantage derives from (i) cross-industry differences in the substitutability of workers' skills and (ii) cross-country differences in the dispersion of skills. We establish the conditions under which higher skill dispersion leads to specialization in industries characterized by higher skill substitutability across tasks. The main results are robust when the model is extended to allow for partial observability of skills. Finally, we use distributions of literacy scores from the International

Adult Literacy Survey to approximate cross-country productivity differences due to skill dispersion and we carry out a quantitative assessment of the impact of skill dispersion on the pattern of trade.

# The impacts of trade liberalization on informal labor markets: A theoretical and empirical evaluation of the Brazilian case

• Journal of International Economics---2014---Lourenco Paz

Following trade liberalization, several developing countries experienced a sharp increase in the share of informal manufacturing employment. In this paper, I examine the impacts of trade liberalization on the labor markets of a small open economy, in an environment in which tariffs affect firms' payroll tax compliance decisions. I demonstrate that a reduction in domestic import tariffs reduces the average formal wage and show that the direction of the effect on the share of informal employment depends on the initial labor market conditions. A cut in trading partner import tariffs decreases the share of domestic informal employment and increases the average formal wage. I confirm the model's principal findings empirically, using data from the 1989-2001 Brazilian trade liberalization episode. I find the results robust to endogeneity and self-selection concerns, which are addressed, respectively, using instrumental variable and switching regression approaches.

# Factor Intensity, product switching, and productivity: Evidence from Chinese exporters

• Journal of International Economics---2014---Yue Ma, Heiwai Tang, Yifan Zhang

This paper analyzes how a firm's specialization in its core products after exporting affects its factor intensity and productivity. Using Chinese manufacturing firm data for the 1998–2007 period, we find that firms become less capital-intensive but more productive after exporting, compared to non-exporters that share similar ex ante characteristics. To rationalize these findings that contrast with existing studies, we develop

(2010, 2011) to consider firms producing multiple products with varying capital intensity. The model predicts that when a firm in a labor-abundant country starts exporting, it specializes in its core competencies by allocating more resources to produce more labor-intensive products. Firm ex ante productivity is associated with a smaller decline in capital intensity after exporting. A sharper post-export decline in capital intensity is associated with a larger increase in measured total factor productivity. We find firm-level evidence supporting these predictions. Using transaction-level data for the 2000–2006 period, we show that Chinese new exporters add products that are less capital-intensive than their existing products and drop those that are more capital-intensive in subsequent years.

#### International trade, risk taking and welfare

• Journal of International Economics---2014---Gonzague Vannoorenberghe

This paper shows that the gains from opening up to international trade are smaller when firms do not fully internalize downward risk. I develop a general equilibrium model with two key assumptions. First, when faced with adverse productivity shocks, employers can lay off workers without fully paying the social costs of their layoff decisions, a common feature of many institutions. Second, when opening to international trade, the elasticity of demand perceived by an industry increases. In this setup, I show that international trade induces firms to take more risk and (i) raises the equilibrium unemployment rate, (ii) increases the volatility of sectoral sales and (iii) increases welfare proportionately less than in the absence of the externality. Inducing firms to internalize the costs of layoff (Blanchard and Tirole, 2003) therefore appears even more important in a globalized world.

### Comparative advantage, service trade, and global imbalances

• Journal of International Economics---2014---Alessandro Barattieri

a variant of the model by Bernard, Redding, and Schott The large current account deficit of the U.S. is the result of a large deficit in the goods balance and a modest surplus in the service balance. The opposite is true for Japan, Germany, and China. Moreover, I document the emergence from the mid-nineties of a strong negative relation between specialization in the export of services and the current account balances of a large sample of OECD and developing countries. Starting from these new stylized facts, I propose in this paper a service hypothesis for global imbalances, a new explanation based on the interplay between the U.S. comparative advantage in services and the asymmetric trade liberalization process in goods trade versus service trade that took place starting in the mid-nineties. First, I use a structural gravity model to show that service trade liberalization lagged behind goods trade liberalization, and I quantify the extent of this asymmetry. Second, I show that a simple two-period model can rationalize the emergence of current account deficits in the presence of such asymmetric liberalization. The key inter-temporal mechanism is the asymmetric timing of trade policies, which affects saving decisions. Finally, I explore the quantitative relevance of this explanation for global imbalances. I introduce trade costs in an otherwise standard 2-sector 2-country international real business cycle model. When fed with the asymmetric trade liberalization path found in the data, the model generates a trade deficit of about 5% of GDP. I conclude that the service hypothesis for global imbalances is quantitatively relevant.

#### International capital flows, returns and world financial integration

• Journal of International Economics---2014---Martin Evans, Viktoria Hnatkovska

International capital flows have increased dramatically since the 1980s, with much of the increase being due to trade in equity and bond markets. Such developments are often attributed to the increased integration of world financial markets. We present a model that allows us to examine how greater integration in world financial markets affects the behavior of international capital flows and financial returns. Our model predicts

that international capital flows are large (in absolute value) and very volatile during the early stages of financial integration when international asset trading is concentrated in bonds. As integration progresses and households gain access to world equity markets, the size and volatility of international bond flows decline. This is the natural outcome of greater risk sharing facilitated by increased integration. This pattern is consistent with declining volatility observed during 1975-2007 period in the G-7 countries. We also find that the equilibrium flows in bonds and stocks predicted by the model are larger than their empirical counterparts, and are largely driven by variations in equity risk premia. The model also predicts that volatility of equity and bond returns decline with integration, again consistent with the data for G-7 economies.

#### The elasticity of trade: Estimates and evidence

 Journal of International Economics---2014---Ina Simonovska, Michael Waugh

Quantitative results from a large class of structural gravity models of international trade depend critically on the elasticity of trade with respect to trade frictions. We develop a new simulated method of moments estimator to estimate this elasticity from disaggregate price and trade-flow data and we use it within Eaton and Kortum's (2002) Ricardian model. We apply our estimator to disaggregate price and trade-flow data for 123 countries in the year 2004. Our method yields a trade elasticity of roughly four, nearly fifty percent lower than Eaton and Kortum's (2002) approach. This difference doubles the welfare gains from international trade.

# Trade-in-goods and trade-in-tasks: An integrating framework

 Journal of International Economics---2014---Richard Baldwin, Frederic Robert-Nicoud

We introduce a simple but flexible analytical framework in which both trade in goods and trade in tasks arise. We use this framework to provide versions of the gains-from-trade and the famous four HO

theorems (Heckscher-Ohlin, factor-price-equalisation, Stolper-Samuelson, and Rybczynski) that apply to this environment. We extend our framework to accommodate monopolistic competition and two-way offshoring and to integrate theoretical results of the early offshoring literature.

# Preferences, rent destruction and multilateral liberalization: The building block effect of CUSFTA

• Journal of International Economics---2014---Tobias Ketterer, Daniel Bernhofen, Chris Milner

If a free trade agreement (FTA) is characterized by the exchange of market access with a large and competitive trading partner, the agreement can cause a leakage of protectionist benefits to domestic industry from lobbying against external tariff cuts. This rent destruction effect of an FTA can free policy makers to be more aggressive in multilateral tariff cuts. We argue that the Canadian–US free trade agreement (CUS-FTA) provides an ideal policy experiment to link this mechanism to the data. Exploring the determinants of Canada's tariff cuts at the 8-digit HS product level, we find that CUSFTA acted as an additional driver of Canadian multilateral tariff reductions during the Uruguay Round.

# Globalization and financial development: A model of the Dot-Com and the Housing Bubbles

 Journal of International Economics---2014---Sergi Basco

In the last decade the United States experienced the burst of the Dot-Com and the Housing Bubbles. I develop a model to study the relationship between globalization and the emergence of rational bubbles. I also analyze how the effect of globalization on house prices depends on the type of bubble. I show that bubbles cannot arise in a financially developed country in autarky. In contrast, as globalization progresses, bubbles are more likely to appear in the financially developed country. I also show that house prices increase with globalization only when the bubble is attached

to houses. This prediction is consistent with empirical Resource-based FDI and expropriation in evidence for U.S. metropolitan areas.

#### Investor base and corporate borrowing: **Evidence from international bonds**

• Journal of International Economics---2014---Massimo Massa, Alminas Zaldokas

We examine international bond issues by US firms to study the benefits of investor taste for cross-border security issuances. We proxy for firms' international investor taste with the fraction of prior international bond holding in firms' domestic and international bonds and find that international investor demand increases with such taste. Moreover, the offering yield spreads on international bonds are lower than domestic offering yield spreads for these internationally recognized firms and they have higher probability of issuing internationally. Such international recognition may occur, for instance, if the diversification benefits of adding the security to investor's portfolio outweigh the negative effects of higher renegotiation costs for international compared to domestic investors.

### Neighbors and the evolution of the comparative advantage of nations: Evidence of international knowledge diffusion?

• Journal of International Economics---2014---Dany Bahar, Ricardo Hausmann, Cesar Hidalgo

The literature on knowledge diffusion shows that knowledge decays strongly with distance. In this paper we document that the probability that a product is added to a country's export basket is, on average, 65% larger if a neighboring country is a successful exporter of that same product. For existing products, growth of exports in a country is 1.5% higher per annum if it has a neighbor with comparative advantage in these products. While these results could be driven by a common third factor that escapes our controls, they align with our expectations of the localized character of knowledge diffusion.

# developing economies

• Journal of International Economics---2014---Christopher Hajzler

Globally, foreign direct investment (FDI) assets are expropriated more in resource extraction industries compared to other sectors. Despite the higher apparent risk of expropriation in resources, countries more likely to expropriate also have a larger share of FDI in the resource sector. An incomplete markets model of FDI is developed to account for this puzzle. The type of government regime is stochastic, with low penalty regimes facing a relatively low, exogenous cost of expropriating FDI, and country risk is measured by the variation in these costs across different regimes. The key innovation of the model is that the government, before the regime type is known, is able to charge different prices to domestic and foreign investors for mineral rights. Granting cheap access increases FDI and reduces the country's share of resource rents, increasing the temptation to expropriate in a relatively low penalty regime. In very high-risk countries, subsidizing resource FDI increases the total value of output by raising investment, and the net gains from expropriating in a low penalty regime outweigh the rents foregone under a high penalty one. However, a stochastic resource output price results in relatively low-risk countries restricting FDI inflows to the resource sector instead — "windfall profits" in this sector raise incentives to expropriate when prices are high, yet minimization of the ex ante risk of expropriation is preferred owing to the relatively high penalty for expropriating. These results imply a higher average share of resource-based FDI in countries most likely to expropriate, while resources account for a high share of expropriated assets compared to the sector's global share of FDI. We show that the model is able to reconcile observed patterns of foreign investment and expropriation for a sample of 38 developing and emerging economies.

#### New imported inputs, new domestic products

• Journal of International Economics---2014---Italo Colantone, Rosario Crino

We study the relationship between new imported inputs and the introduction of new domestic products. To this purpose, we assemble a novel data set covering 25 European countries over 1995–2007 and containing information on domestic production and bilateral trade for the universe of goods. We develop a procedure to identify new imported inputs and new domestic products, while dealing with the complications raised by the yearly changes in the commodity classifications. We augment these data with information on prices and novel estimates of quality. We organize the empirical analysis around a version of the endogenous growth model with expanding variety, in which inputs are allowed to be heterogeneous in terms of quality. In line with this framework, we find three main results. First, new imported inputs have a strong positive effect on product creation in Europe. Second, they work through a combination of mechanisms, allowing countries to benefit from both wider and better sets of intermediate products. Finally, new imported inputs give a substantial boost to output growth in manufacturing.

#### Fixed costs per shipment

• Journal of International Economics---2014---Andreas Kropf, Philip Sauré

Exporting firms do not only decide how much of their products they ship abroad but also at which frequency. Doing so, they face a trade-off between saving on fixed costs per shipments (by shipping large amounts infrequently) and saving on storage costs (by delivering just in time with small and frequent shipments). The firm's optimal choice defines a mapping from size and frequency of shipments to fixed costs per shipment. We use a unique dataset of Swiss cross-border trade on the transaction level to infer the size and shape of the underlying fixed costs. The inferred fixed costs are specific to each firm-country-product combination. Our results suggest that the fixed costs per shipment of the average Swiss exporter are large, ranging between

0.82% of the export value in our most conservative specification and 5.4%. We document that the imputed fixed costs per shipment correlate negatively with language commonalities, trade agreements and geographic proximity.

# Quantifying the evolution of world trade, 1870–1949

 Journal of International Economics---2014---Mariko Klasing, Petros Milionis

The typical narrative regarding the evolution of world trade prior to World War II refers to a secular rise starting around 1870 and a subsequent collapse beginning in 1914. This narrative, however, is based on measures of trade openness that do not fully take into account purchasing power differences across countries. Due to lack of alternative data, the measures employed in the existing literature are typically based on non-PPP-adjusted trade data denominated by PPPadjusted GDP data. The present paper seeks to resolve this inconsistency by constructing new trade share estimates for 62 countries, representing 90% of world GDP, for the period from 1870 to 1949. Our estimates combine historical import and export figures with non-PPP-adjusted GDP values that we estimate via the short-cut method. Our estimates confirm qualitatively the narrative of a dramatic rise and fall of world trade over this period. Yet, they indicate that this rise and fall was quantitatively much more pronounced. We find that trade shares were on average 38% higher than previously documented and the world's level of trade openness in 1913 was comparable to that in 1974.

# Welfare implications of trade liberalization and fiscal reform: A quantitative experiment

• Journal of International Economics---2014---Sunghyun Kim, Ayhan Kose

This paper studies the welfare implications of revenueneutral trade liberalization and fiscal reform programs for developing economies using a multi-sector dynamic general equilibrium model of a small open economy. We analyze how different combinations of tariffs – on imported consumption goods, intermediate inputs, and capital goods – and taxes – on consumption, labor income and capital income – affect the transitional and long-run welfare. We report three main findings. First, trade liberalization programs financed by consumption and labor income taxes tend to result in substantial welfare gains, but financing the lost tariff revenue through capital income taxes can have an adverse impact on welfare. Second, a significant fraction of welfare changes is due to transitional effects stemming from the allocation of resources in response to changes in tariffs and taxes. Third, trade liberalization and fiscal reform programs often translate into much larger welfare gains in countries that are more open to international financial markets.

# Trade policy-making in a model of legislative bargaining

• Journal of International Economics---2013---Levent Celik, Bilgehan Karabay, John McLaren

In democracies, trade policy is the result of interactions among many agents with different agendas. In accordance with this observation, we construct a dynamic model of legislative trade policy-making in the realm of distributive politics. An economy consists of different sectors, each of which is concentrated in one or more electoral districts. Each district is represented by a legislator in the Congress. Legislative process is modeled as a multilateral sequential bargaining game à la Baron and Ferejohn (1989). Some surprising results emerge: bargaining can be welfare-worsening for all participants; legislators may vote for bills that make their constituents worse off; identical industries will receive very different levels of tariff. The results pose a challenge to empirical work, since equilibrium trade policy is a function not only of economic fundamentals but also of political variables at the time of congressional negotiations — some of them random realizations of mixed bargaining strategies.

# A race to the bottom? Employment protection and foreign direct investment

• Journal of International Economics---2013---William Olney

A common critique of globalization is that it leads to a race to the bottom. Specifically, it is assumed that multinationals invest in countries with lower regulatory standards and that countries competitively undercut each other's standards in order to attract foreign capital. This paper tests this hypothesis and finds robust empirical support for both predictions. First, a reduction in employment protection rules leads to an increase in foreign direct investment (FDI). Furthermore, changes in employment protection legislation have a larger impact on the relatively mobile types of FDI. Second, there is evidence that countries are competitively undercutting each other's labor market standards.

# The effect of WTO on the extensive and the intensive margins of trade

• Journal of International Economics---2013---Pushan Dutt, Ilian Mihov, Timothy Van Zandt

We use 6-digit bilateral trade data to document the effect of WTO/GATT membership on the extensive and intensive product margins of trade. We construct gravity equations for the two product margins motivated by Chaney (2008). The empirical results show that standard gravity variables provide good explanatory power for bilateral trade on both margins. Importantly, we show that the impact of the WTO is concentrated almost exclusively on the extensive product margin of trade, i.e. trade in goods that were not previously traded. In our preferred specification, WTO membership increases the extensive margin of exports by 25%. At the same time, WTO membership has a negative impact on the intensive margin. Based on novel comparative statics results about how fixed and variable trade costs impact the product margins of trade, our results suggest that WTO membership works by reducing primarily the fixed rather than the variable costs of trade.

### Import competition, multi-product firms, and basic innovation

• Journal of International Economics---2013---Runjuan Liu, Carlos Rosell

How does firm strategy to produce basic innovation respond to international trade? Given the importance of basic innovation for economic growth and welfare, better understanding of this question is essential. In this vein we combine patent, firm, product, and trade data to show that when confronted with higher import penetration, the nature of firm innovation becomes less basic. We propose that underlying this result is the interplay between multi-product firms that narrow their product scope when exposed to greater import competition and the difficulty inventors face when capturing all benefits derived from their basic innovations.

# International capital flows and development: Financial openness matters

 Journal of International Economics---2013---Dennis Reinhardt, Luca Ricci, Thierry Tressel

Does capital flow from rich to poor countries? We revisit the Lucas paradox to account for the role of capital account openness. We find that, when accounting for such openness, the prediction of the neoclassical theory is empirically confirmed: among financially open economies, less developed countries tend to experience net capital inflows and more developed countries tend to experience net capital outflows. The results hold also when taking into account private flows, institutions, and numerous controls. We also show that reserve intervention has an effect on the current account only in financially open economies.

### When do cooperation and commitment matter in a monetary union?

• Journal of International Economics---2013---Hubert Kempf, Leopold von Thadden

This paper offers a framework to study strategic interactions between private players, national fiscal authorities and a common central bank in monetary unions. We establish general conditions, in terms of restrictions on spillover effects of actions by private and public players, under which games that differ in the degree of cooperation and commitment can admit the same equilibrium outcome. We use these conditions to characterize benchmark results on the irrelevance of cooperation and commitment established in recent literature. Moreover, we show for a general setting, in which the benchmark results do not apply, that gains from fiscal cooperation depend on the number of countries and increase as this number gets larger.

# Firms' entry, monetary policy and the international business cycle

 Journal of International Economics---2013---Lilia Cavallari

This paper proposes a two-country monetary model with firm entry as a means for alleviating the comovement puzzles in international business cycle models. It shows that business formation can generate fluctuations in output, employment, investment and trade flows close to those in the data while at the same time providing positive international comovements. Simulations show that the presence of imported investment goods is essential for replicating these facts.

#### A theory of the competitive saving motive

• Journal of International Economics---2013---Qingyuan Du,Shang-Jin Wei

Motivated by recent empirical work, this paper formalizes a theory of competitive savings — an arms race in household savings for mating competition that is made more fierce by an increase in the male-to-female ratio in the pre-marital cohort. Relative to the empirical work, the theory can clarify a number of important questions: What determines the strength of the savings response by males (or households with a son)? Can women (or households with a daughter) dis-save? What are the conditions under which aggregate savings would go up in response to a higher sex ratio? This theory can potentially help to understand the savings patterns in China, India, Vietnam, Singapore, Hong

dramatic increase in the pre-marital sex ratio.

#### How do exporters respond to antidumping investigations?

• Journal of International Economics---2013---Yi Lu, Zhigang Tao, Yan Zhang

Using monthly transaction data covering all Chinese exporters over the 2000–2006 period, we investigate how Chinese exporters respond to U.S. antidumping investigations. We find that antidumping investigations cause a substantial decrease in the total export volume at the HS-6 digit product level, and that this trade-dampening effect is due to a significant decrease in the number of exporters, yet a modest decrease in the export volume per surviving exporter. We also find that the bulk of the decrease in the number of exporters is exerted by less productive exporters, by direct exporters as opposed to trade intermediaries, and by single-product direct exporters as opposed to their multi-product counterparts. Combined with the existing studies on the effects that antidumping investigations have on protected firms, our study helps piece together a complete picture of the effects of antidumping investigations.

#### **Exporting Christianity: Governance and doctrine** in the globalization of US denominations

• Journal of International Economics---2013---Gordon Hanson, Chong Xiang

In this paper we build a model of market competition among religious denominations, using a framework that involves incomplete contracts and the production of club goods. We treat denominations akin to multinational enterprises, which decide which countries to enter based on local market conditions and their own "productivity." The model guides us in estimating how a denomination's religious doctrine and governance structure affect its ability to attract adherents. Using data on the foreign operations of US Protestant denominations in 2005 from the World Christian Database, we find that (1) denominations with stricter

Kong, and other economies that have experienced a religious doctrine attract more adherents in countries in which the risk of natural disaster or disease outbreak is greater and in which government provision of health services is weaker, and (2) denominations with a decentralized governance structure attract more adherents in countries in which the pastor cost of connecting with congregants is lower. These findings illuminate factors shaping the composition of religion within countries, helping account for the rise of new Protestant groups. They also provide empirical evidence for the recent theoretical developments in organization and trade.

#### Firm-level comparative advantage

• Journal of International Economics---2013---Matthieu Crozet, Federico Trionfetti

We study the consequences of heterogeneity in factor intensity on firm performance. We present a standard Heckscher-Ohlin model augmented with factor intensity differences across firms within a country-industry pair. We show that for any two firms, each of whose capital intensity is, for instance, one percent above (below) its respective country-industry average, the relative marginal cost of the firm in the capital-intensive industry of the capital-abundant country is lower (higher) than that of the other firm. Our empirical analysis, conducted using data for a large panel of European firms, supports this prediction. These results provide a novel approach to the verification of the Heckscher-Ohlin theory and new evidence on its validity.

#### **Export diversification: How much does the** choice of the trading partner matter?

• Journal of International Economics---2013---Julie Regolo

This paper studies how a country's export diversification varies across destination markets. It develops an extension of the Romalis (2004) model which yields two testable predictions. According to the first, exports between similarly endowed countries ( "South-South" and "North-North") are more diversified than exports between differently endowed countries ( "South–North" and "North–South" ). The second implication is that, for given countries' production patterns, low bilateral trade costs lead to greater export diversification. These predictions find empirical support in a panel of 102 trade partners and 4998 HS-6 industries over the period 1995–2007. Results show that similarities between trading partners in physical capital, land and human capital endowments per worker are associated with more diversified bilateral exports. Exports are also more diversified when bilateral trade costs are relatively low.

#### Effects of transitory shocks to aggregate output on consumption in poor countries

• Journal of International Economics---2013---Markus Brückner, Mark Gradstein

This paper provides instrumental variables estimates of the response of aggregate private consumption to transitory output shocks in poor countries. To identify exogenous, unanticipated, idiosyncratic and transitory variations in national output we use year-to-year variations in rainfall as an instrumental variable in a panel of 39 sub-Saharan African countries during the period 1980–2009. Our estimates yield a marginal propensity to consume out of transitory output of around 0.2. To explain this result we show, using instrumental variables techniques, that there is a significant negative effect of transitory output shocks on net current transfers and a significant positive and quantitatively large effect on the trade balance. An important implication is that frictions to private financial flows do not necessarily imply large effects of transitory shocks to aggregate output on private consumption in poor countries.

### Global financial conditions, country spreads and macroeconomic fluctuations in emerging countries

 Journal of International Economics---2013---Ozge Akinci

This paper uses a panel structural vector autoregressive (VAR) model to investigate the extent to which Survey evidence shows that the relationship between

global financial conditions, i.e., a global risk-free interest rate and global financial risk, and country spreads contribute to macroeconomic fluctuations in emerging countries. The main findings are: (1) global financial risk shocks explain about 20% of movements both in the country spread and in the aggregate activity in emerging economies. (2) The contribution of global risk-free interest rate shocks to macroeconomic fluctuations in emerging economies is negligible. Its role, which was emphasized in the literature, is taken up by global financial risk shocks. (3) Country spread shocks explain about 15 percent of the business cycles in emerging economies. (4) Interdependence between economic activity and the country spread is a key mechanism through which global financial shocks are transmitted to emerging economies.

#### News and sovereign default risk in small open economies

• Journal of International Economics---2013---C. Bora Durdu, Ricardo Nunes, Horacio Sapriza

This paper builds a unified model of sovereign debt, default risk, and news shocks. News shocks improve the quantitative performance of the sovereign default model in a number of empirically-relevant dimensions. First, with news shocks, not all defaults occur during downturns. Second, the news shocks help account for key differences between developing and more developed economies: as the precision of news improves, the model predicts lower variability of consumption, less countercyclical trade balance and interest rate spreads, as well as a higher level of debt in line with more developed economies. Third, the model captures the hump-shaped relationship between default rates and the precision of news obtained from the data. Finally, the news shocks have a nonmonotonic effect on welfare.

#### On the unstable relationship between exchange rates and macroeconomic fundamentals

• Journal of International Economics---2013---Philippe Bacchetta, Eric van Wincoop

the exchange rate and macro fundamentals is perceived to be highly unstable. We argue that this unstable relationship naturally develops when structural parameters in the economy are unknown. We show that the reduced form relationship between exchange rates and fundamentals is then driven not by the structural parameters themselves, but rather by expectations of these parameters. These expectations can vary significantly over time as a result of perfectly rational "scapegoat" effects. These effects can be expected to hold more broadly in macro and finance beyond the application to exchange rates in this paper.

#### Robustness and exchange rate volatility

• Journal of International Economics---2013---Edouard Djeutem, Kenneth Kasa

This paper studies exchange rate volatility within the context of the monetary model of exchange rates. We assume that agents regard this model as merely a benchmark, or reference model, and attempt to construct forecasts that are robust to model misspecification. We show that revisions of robust forecasts are more volatile than revisions of nonrobust forecasts, and that empirically plausible concerns for model misspecification can explain observed exchange rate volatility. We also briefly discuss the implications of robust forecasts for a number of other exchange rate puzzles.

#### A quantile-based test of protection for sale model

• Journal of International Economics---2013---Susumu Imai, Hajime Katayama, Kala Krishna

This paper proposes a new test of the Protection for Sale (PFS) model by Grossman and Helpman (1994). Unlike existing methods in the literature, our approach does not require any data on political organization. We use quantile and IV quantile regressions in our tests, using the data from Gawande and Bandyopadhyay (2000). Surprisingly, the results do not provide any evidence favoring the PFS model. We also explain why previous work may have found support for it.

# Product and process productivity: Implications for quality choice and conditional exporter premia

 Journal of International Economics---2013----Juan Hallak, Jagadeesh Sivadasan

We develop a model of international trade with two dimensions of firm heterogeneity. The first dimension is "process productivity", which is how we denote the standard concept of productivity as modeled in the literature. The second one is "product productivity", defined as firms' ability to develop high-quality products spending small fixed outlays. The distinction between these two sources of productivity, together with the assumption that iceberg trade costs decrease with quality, delivers various conditional exporter premia as theoretical predictions. Conditional on size, exporters sell higher quality products, charge higher prices, pay higher input prices and higher wages, and use capital more intensively. Some of these predictions had already been documented in the empirical literature but lacked a theoretical framework for properly interpreting them. We conduct systematic tests of these predictions using manufacturing establishment data for India, the U.S., Chile, and Colombia, and find strong support for the model.

# World trade patterns and prices: The role of productivity and quality heterogeneity

 Journal of International Economics---2013---Cristiana Benedetti Fasil, Teodora Borota Milicevic

This paper analyzes the role of product quality and labor efficiency in shaping the trade patterns and trade intensities within and across two groups of countries, the developed and richer North and the developing South. Recent empirical literature identifies two groups of evidence — the product lines evidence on different export strategies and sources of competitiveness across product groups and countries, and the aggregate trade flows evidence on a positive relation between the income per capita and both export and import prices

(also conditional on the exporter). We attempt to provide a theoretical background for these findings and focus on the North-South productivity differences in a four country North-South trade model with two dimensions of firm heterogeneity. Differences in the firms' product quality and cost efficiency impose different competitiveness sources when entering more difficult markets and result in the observed export and import prices and consumption bundles across the rich and poor countries.

#### Why trucks jump: Offshoring and product characteristics

• Journal of International Economics---2013---Phillip McCalman, Alan Spearot

In this paper, we study the role of vertical product differentiation in the decision to allocate production between domestic and foreign plants. To do so, we examine the first wave of light-truck offshoring to Mexico that occurred due to substantially lower post-NAFTA trade barriers and a coincident increase in US demand for light trucks. In contrast to the typical assumption, but similar to many other industries, the need for additional capacity was accommodated by investment in both the US and Mexico for the same models of light trucks. Using a new dataset that details the extent of offshoring and domestic production within models, we document sharp differences in how capacity was utilized. Specifically, within models, we find that automakers offshored varieties which tend to be older in design vintage, lower scale, and less complex to produce. In contrast, we find that varieties "inshored" to newer capacity in the US exhibit the opposite characteristics. This highlights the important role of vertical differentiation and the associated variation in production complexity for the sorting of production across borders. A product with a large degree of vertical differentiation may provide scope for a firm to maximize profits by "inshoring" the more complex varieties while offshoring the less complex versions.

• Journal of International Economics---2013---Tim Schmidt-Eisenlohr

Shipping goods internationally is risky and takes time. To allocate risk and to finance the time gap between production and sale, a range of payment contracts is utilized. I study the optimal choice between these payment contracts and their implications for trade. The equilibrium contract is determined by financial market characteristics and contracting environments in both the source and the destination country. Trade increases in enforcement probabilities and decreases in financing costs proportional to the time needed for trade. Empirical results from gravity regressions are in line with the model, highly significant and economically relevant. They suggest that importer finance is as important for trade as exporter finance.

#### Simple fiscal policy rules for small open economies

• Journal of International Economics---2013---Michael Kumhof, Douglas Laxton

This paper analyzes the scope for rules-based countercyclical fiscal policy in small open economies where a subset of households is liquidity-constrained. Relative to balanced budget rules, structural surplus rules significantly improve welfare. But they minimize fiscal instrument volatility rather than business cycle volatility. More aggressively countercyclical tax revenue gap rules (strong automatic stabilizers) increase welfare gains by around 50%, with only modest increases in fiscal instrument volatility. If liquidity-constrained households' labor income is independent of raw materials prices, the government should save excess raw materials revenue on their behalf. The best fiscal instruments are transfers, consumption and labor taxes.

### Causes of nonlinearities in low-order models of the real exchange rate

• Journal of International Economics---2013---Yamin Ahmad, Ming Chien Lo, Olena Mykhaylova

This paper investigates the extent to which modern DSGE models, which feature local currency pricing, home bias, nontraded goods, and incomplete markets, can generate nonlinear real exchange rate dynamics that are consistent with those found in the time series literature using data from the current floating period. Our key findings are as follows. First, if the true model can be appropriately characterized as a set of linear equations, then linearity tests that utilize univariate autoregressions of the real exchange rate suffer from an omitted variables problem, which leads them to overestimate the true incidence of nonlinearity. Consequently, studies that fail to control for this problem may spuriously find evidence of nonlinearities in the data, despite the fact that the data generating process may be linear. Second, we propose a strategy that can largely eliminate this distortion. Finally, we find that DSGE models solved using higher order approximations are capable of generating true structural nonlinearities in real exchange rates both asymptotically and in short samples.

# Multiproduct firms and scope adjustment in globalization

• Journal of International Economics---2013---Larry Qiu, Wen Zhou

A model of heterogeneous firms with variety-specific fixed costs is developed and analyzed to study how multiproduct firms respond to globalization. In contrast with most existing models, the analysis demonstrates that more-productive firms may expand their product scope, which in turn may push up their average costs. A necessary and sufficient condition for scope expansion is that the fixed cost of introducing more varieties increases rapidly with the product scope. With increasing globalization, the percentage of scope-expanding firms diminishes and eventually becomes zero.

# Emigration and wages: The EU enlargement experiment

• Journal of International Economics---2013---Benjamin Elsner

The enlargement of the European Union provides a unique opportunity to study the impact of the lifting of migration restrictions on the migrant sending countries. With EU enlargement in 2004, 1.2million workers from Eastern Europe emigrated to the UK and Ireland. I use this emigration wave to show that emigration significantly changed the wage distribution in the sending country, in particular between young and old workers. Using a novel dataset from Lithuania, the UK and Ireland for the calibration of a structural model of labor demand, I find that over the period of five years emigration increased the wages of young workers by 6%, while it had no effect on the wages of old workers. Contrary to the immigration literature, there is no significant effect of emigration on the wage distribution between high-skilled and low-skilled workers.

### Paying a visit: The Dalai Lama effect on international trade

Journal of International Economics---2013-- Andreas Fuchs, Nils-Hendrik Klann

Is political compliance a precondition for healthy trade relations with China? The Chinese government frequently threatens that meetings between its trading partners' officials and the Dalai Lama will be met with animosity and ultimately harm trade ties. We run a gravity model of exports to China from 159 partner countries between 1991 and 2008 to test the extent to which bilateral tensions affect trade with autocratic China. In particular, we empirically investigate whether countries that receive the Dalai Lama despite China's opposition experience a significant reduction in their exports to China. In order to account for the potential endogeneity of meetings with the Dalai Lama, the number of Tibet Support Groups and the travel pattern of the Tibetan leader are used as instruments. Our empirical results support the idea that countries officially receiving the Dalai Lama at the highest political level are punished through a reduction of their exports to China. However, this 'Dalai Lama Effect' is only observed for the Hu Jintao era and not for earlier periods. Furthermore, we find that this

effect is mainly driven by reduced exports of machinery and transport equipment and that it disappears in the second year after a meeting took place.

# Estimating productivity with multi-product firms, pricing heterogeneity and the role of international trade

 Journal of International Economics---2013---Valerie Smeets, Frédéric Warzynski

In this paper, we analyze the relationship between exports, imports and firm productivity taking into account pricing heterogeneity and multi-product firms. We use a rich firm-product level dataset providing both revenue and quantities of all products produced, exported and imported for a large panel of Danish manufacturing firms over the period 1999–2006. With this detailed information, we compute a firm level price index to deflate our measure of output and compare our productivity measures when we deflate output with an industry-level deflator. We find that firms only importing have a large productivity premium, but not firms only involved in exporting, while firms involved in both importing and exporting are the most productive. The international trade premia are found to be significantly larger when output is deflated with our firm-specific price index rather than the traditional sector-level PPI, suggesting that pricing heterogeneity plays an important role in productivity measurement. We also find evidence of a self-selection into exporting but not into importing. Finally, we detect the presence of learning by exporting only when we control for pricing heterogeneity; when looking at learning by importing, we find a positive effect in the long run, but the effect is lower when we deflate revenue with a firm-specific price index. These results suggest that pricing heterogeneity can significantly affect the way we measure productivity and our assessment about the link between productivity and trade.

# Spiders and snakes: Offshoring and agglomeration in the global economy

• Journal of International Economics---2013---Richard Baldwin, Anthony Venables

Global production sharing is determined by international cost differences and frictions related to the costs of unbundling stages spatially. The interaction between these forces depends on engineering details of the production process with two extremes being 'snakes' and 'spiders'. Snakes are processes whose sequencing is dictated by engineering; spiders involve the assembly of parts in no particular order. This paper studies spatial unbundling as frictions fall, showing that outcomes are very different for snakes and spiders, even if they share some features. Both snakes and spiders have in common a property that lower frictions produce discontinuous location changes and 'overshooting'. Parts may move against their comparative costs because of proximity benefits, and further reductions in frictions lead these parts to be 'reshored'. Predictions for trade volumes and the number of fragmented stages are quite different in the two cases. For spiders, a part crosses borders at most twice; the value of trade increases monotonically as frictions fall, except when the assembler relocates and the direction of parts trade is reversed. For snakes the volume of trade and number of endogenously determined stages is bounded only by the fragmentation of the underlying engineering process, and lower frictions monotonically increase trade volumes.

#### Putting per-capita income back into trade theory

• Journal of International Economics---2013---James Markusen

A major role for per-capita income in international trade, as opposed to simply country size, was persuasively advanced by many early economists including Linder (1961), Kuznets (1966), and Chenery and Syrquin (1975). Yet this crucial element of their story was abandon by most later trade economists in favor of the analytically-tractable but counter-empirical assumption that all countries share identical and homothetic preferences. This paper presents a set of assumptions which produces multiple results when they hold jointly. Most of these results are novel, but several that are implicit or explicit in earlier literature are also noted for completeness. Adding non-homothetic prefer-

ences to traditional models helps explain such diverse phenomena as a growing skill premium, the mystery of the missing trade, home bias in consumption, the behavior of trade to GDP ratios, and the role of intracountry income distribution, from the demand side of general equilibrium. With imperfect competition, we can explain higher markups and higher price levels in higher per-capita income countries, and the puzzle that gravity equations show a positive dependence of trade on per-capita-incomes, aggregate income held constant. The model also predicts horizontal multinational activity is negatively related to per-capita income differences between countries.

# The simple analytics of the Melitz model in a small economy

• Journal of International Economics---2013---Svetlana Demidova, Andres Rodriguez-Clare

In this paper we present a version of the Melitz (2003) model for the case of a small economy and summarize its key relationships with the aid of a simple figure. We then use this figure to provide an intuitive analysis of the implications of asymmetric changes in trade barriers and show that a decline in import costs always benefits the liberalizing country. This stands in contrast to variants of the Melitz model with a freely traded (outside) sector, such as Demidova (2008) and Melitz and Ottaviano (2008), where the country that reduces importing trade costs experiences a decline in welfare.

# Windfalls, structural transformation and specialization

• Journal of International Economics---2013---Karlygash Kuralbayeva,Radoslaw Stefanski

Macro cross-country data and micro US county data indicate that resource-rich regions have small but relatively productive manufacturing sectors and large but relatively unproductive non-manufacturing sectors. We suggest a process of specialization to explain these facts. Windfall revenue induces labor to move from the (traded) manufacturing to the (non-traded) nonmanufacturing sector. A self-selection of workers takes place. Only those most skilled in manufacturing sector work remain in manufacturing. Workers that move to non-manufacturing however, will be less skilled at nonmanufacturing sector work than those who were already employed there. Resource-induced structural transformation thus results in higher productivity in manufacturing and lower productivity in non-manufacturing. We construct and calibrate a two-sector, open economy model of self-selection and show that exogenous crosscountry variation in natural resource endowments is large enough to explain the direction and magnitude of sectoral employment and productivity differences between resource-rich and resource-poor regions. The model implies that low aggregate productivity found in some resource-rich countries is not caused by a resource-induced decline of a relatively productive manufacturing sector. Rather, the higher manufacturing productivity in those countries is a consequence of manufacturing's smaller size.

### Dissecting the dynamics of the US trade balance in an estimated equilibrium model

• Journal of International Economics---2013---Punnoose Jacob, Gert Peersman

In an estimated two-country DSGE model, we find that shocks to the marginal efficiency of investment account for more than half of the forecast variance of cyclical fluctuations in the US trade balance. Both domestic and foreign marginal efficiency shocks generate a strong effect on the variability of the imbalance, through shifts in international relative absorption. On the other hand, shocks to uncovered interest parity and foreign export prices, which transmit mainly via the terms of trade and exchange rate, have a strong influence at short forecast-horizons, before the investment disturbances begin their dominance.

### The impact of uncertainty shocks in emerging economies

• Journal of International Economics---2013---Yan Carrière-Swallow,Luis Cespedes A recent strand of research proposes that sudden jumps in uncertainty generate rapid drops and recoveries in real macroeconomic variables that drive the business cycle. Using an empirical model, we find substantial heterogeneity in reactions to these shocks across countries. In comparison to the U.S. and other developed countries, emerging economies suffer much more severe falls in investment and private consumption following an exogenous uncertainty shock, take significantly longer to recover, and do not experience a subsequent overshoot in activity. We provide evidence that the dynamics of investment and consumption are correlated with the depth of financial markets. We control for the potential role of a credit channel, and estimate that it can account for up to one-half of the increased fall in investment generated by uncertainty shocks among emerging economies with less-developed financial markets. In this context, monetary and fiscal policy actions that alleviate the impact of credit constraints facing firms may reduce the impact of uncertainty shocks in these economies.

# Sorting into outsourcing: Are profits taxed at a gorilla's arm's length?

• Journal of International Economics---2013---Christian Bauer, Dominika Langenmayr

This article analyzes profit taxation according to the arm's length principle in a model where heterogeneous firms sort into foreign outsourcing. We show that multinational firms are able to shift profits abroad even if they fully comply with the tax code. This is because, in equilibrium, intra-firm transactions occur in firms that are better than the market at input production. Moreover, market input prices include a mark-up that arises from the bargaining between the firm and the independent supplier. Transfer prices set at market values following the arm's length principle thus systematically exceed multinationals' marginal costs, leading to a reduction of tax payments for each unit sold. The optimal organization of firms hence provides a new rationale for the empirically observed lower tax burden of multinational corporations.

### Technology adoption, government policy and tariffication

 Journal of International Economics---2013---Josh Ederington, Phillip McCalman

We integrate trade policy into an open-economy model of technology adoption to investigate the impact of alternate trade barriers on the equilibrium diffusion of a cost-saving technology. It is shown that even when ad-valorem tariffs have a neutral impact on technology adoption, non-tariff barriers such as quotas can be used to affect the speed of technology diffusion in both the home and foreign countries. In addition, we demonstrate how, in an open-economy setting, tariffication (i.e., the conversion of quotas to ad-valorem tariffs) can lead to faster technology adoption world-wide.

# Do the biggest aisles serve a brighter future? Global retail chains and their implications for Romania

• Journal of International Economics---2013---Beata Javorcik, Yue Li

During the past two decades many countries have opened their retail sector to foreign direct investment (FDI), yet little is known about the implications of such liberalization for their economies. Using a unique dataset combining outlet-specific information on global retail chains with a panel of Romanian manufacturing firms, this study sheds some light on this question. The results suggest that the expansion of global retail chains leads to a significant increase in the total factor productivity (TFP) in the supplying manufacturing industries: a 10% increase in the number of foreign chains' outlets is associated with a 2.4% to 2.6% boost to the TFP in the supplying industries. The decomposition of the aggregate productivity in the supplying industries suggests that the boost to performance is driven by both within-firm improvements and between-firm reallocation. Both changes are found to be associated with the expansion of foreign chains. These conclusions are robust to a variety of specifications and supported by evidence from a firm-level survey. They suggest that the opening of the retail sector to FDI may stimulate

productivity growth and improve allocation efficiency in manufacturing industries and thus provide another piece of evidence in favor of services liberalization.

#### Rain, agriculture, and tariffs

• Journal of International Economics---2013---Paulo Bastos,Odd Rune Straume,Jaime A. Urrego

We examine whether and how rainfall shocks affect tariff setting in the agricultural sector. In a model of strategic trade policy, we show that the impact of a negative rainfall shock on optimal import tariffs is generally ambiguous, depending on the weight placed by the domestic policy maker on tariff revenue, profits and the consumer surplus. The more weight placed on domestic profits, the more likely it is that the policy maker will respond to a rainfall shortage by reducing import tariffs. These findings are robust to alternative assumptions about market structure and the timing of the game. Using detailed panel data on applied tariffs and rainfall for 70 nations, we find robust evidence that rainfall shortages generally induce policy makers to set lower tariffs on agricultural imports.

# Are RTA agreements with environmental provisions reducing emissions?

 Journal of International Economics---2013---Leila Baghdadi,Inmaculada Martínez-Zarzoso,Habib Zitouna

This paper investigates whether RTAs with environmental provisions affect relative and absolute pollution levels. In order to do so, the determinants of carbon dioxide emissions convergence are estimated for a cross-section of 182 countries over the period 1980 to 2008. A propensity score matching approach is combined with difference-in-differences techniques to effectively isolate the effect of the Regional Trade Agreement (RTA) variable. The usual controls for scale, composition and technique effects are added to the estimated model and the endogeneity of income and trade variables is modeled using instruments. The main results indicate that the CO2 emissions of the pairs of countries that belong to an RTA with environmental provisions tend

to converge and are lower in absolute terms, whereas this is not the case for RTAs without environmental provisions. As regards specific agreements, we find that emissions converge more rapidly for NAFTA than for EU-27 and Euro-Med countries. We find consistent evidence that only RTAs with environmental harmonization policies affect relative and absolute pollution levels.

### Does input trade liberalization boost downstream firms' exports? Theory and firm-level evidence

 Journal of International Economics---2013---Emmanuelle Chevassus-Lozza, Carl Gaigne, Léo Le Mener

We analyze the impact of input tariffs on the export status and export performance of heterogeneous processing firms. Using a theoretical model with downstream firms exhibiting different levels of productivity, we show that lower input tariffs may increase the export sales of high-productivity firms at the expense of low-productivity firms and may decrease the probability of firms entering foreign markets. We compare the predictions of the theoretical model with firm-level data from the French agrifood sector by developing a two-stage estimation procedure that uses an equation for selection into export markets in the first stage and an export's equation in the second stage. The liberalization of agricultural trade appears to favor the reallocation of market share from low- to highproductivity agrifood firms. In addition, our results suggest that, whether lower input tariffs increase total export sales (and jobs), a large fraction of the least productive exporting firms may lose from an additional decrease in agricultural input tariffs.

# Exaggerated death of distance: Revisiting distance effects on regional price dispersions

 Journal of International Economics---2013---Kazuko Kano, Takashi Kano, Kazutaka Takechi

This paper empirically establishes the significant roles of transport costs in price dispersions across regions. We identify and estimate the iceberg-type distanceelastic transport costs as a parameter of a structural model of cross-regional price differentials featuring product delivery decisions. Utilizing a data set of wholesale prices and product delivery patterns of agricultural products in Japan, our structural estimation approach finds large distance elasticities of the transport costs. The result confirms that geographical barriers are an economically significant contributor to the failures of the law of one price.

# Trade structure and belief-driven fluctuations in a global economy

• Journal of International Economics---2013---Yunfang Hu, Kazuo Mino

This paper constructs a dynamic two-country model with country-specific production externalities and inspects the presence of equilibrium indeterminacy under alternative trade structures. It is shown that the presence of belief-driven economic fluctuations caused by equilibrium indeterminacy is closely related to the specified trade structure. If investment goods are not internationally traded and international lending and borrowing are allowed, then indeterminacy arises in a wider set of parameter space than in the corresponding closed economy. By contrast, either if both consumption and investment goods are traded in the absence of international lending and borrowing or if only investment goods are traded with financial transactions, then the indeterminacy conditions are the same as those for the closed economy counterpart.

# The contribution of economic fundamentals to movements in exchange rates

• Journal of International Economics---2013---Nathan Balke, Jun Ma, Mark Wohar

Starting from the asset pricing approach of Engel and West, we examine the degree to which fundamentals can explain exchange rate fluctuations. We show that it is not possible to obtain sharp inferences about the relative contribution of fundamentals using only data on

observed monetary fundamentals—money minus output differentials across countries—and exchange rates. We use additional data on interest rate and price differentials along with the implications of the monetary model of exchange rates to decompose exchange rate fluctuations. In general, we find that money demand shifts, along with observed monetary fundamentals, are an important contributor to exchange rate fluctuations.

#### International Bond Risk Premia

 Journal of International Economics---2013---Magnus Dahlquist, Henrik Hasseltoft

We find evidence for time-varying risk premia across international bond markets. Local and global factors jointly predict returns. The global factor is closely linked to US bond risk premia and international business cycles. Movements in the global factor seem to drive risk premia and expected short-term interest rates in opposite directions. We consider an affine term-structure model in which risk premia are driven by one local and one global factor. Shocks to these factors account for only a small fraction of yield variance and the cross-section of yields conveys little information about the factors. Finally, correlations between international bond risk premia have increased over time, suggesting an increase in integration between markets.

# Common and idiosyncratic disturbances in developed small open economies

 Journal of International Economics---2013---Pablo Guerron

Using an estimated dynamic stochastic general equilibrium model, I show that shocks to a common international stochastic trend explain on average about 10% of the variability of output in several small developed economies. These shocks explain roughly twice as much of the volatility of consumption growth as the volatility of output growth. When the model is expanded to include a common stationary productivity shock, the model attributes around 23% of the variability of output to those international common innovations.

Country-specific disturbances account for the bulk of the volatility in the data. Substantial heterogeneity in the estimated parameters and stochastic processes translates into a rich array of impulse responses across countries.

### Import protection, business cycles, and exchange rates: Evidence from the Great Recession

• Journal of International Economics---2013---Chad Bown, Meredith Crowley

This paper estimates the impact of macroeconomic fluctuations on import protection policies over 1988:Q1–2010:Q4 for five industrialized economies the United States, European Union, Australia, Canada and South Korea. We find evidence of a strong countercyclical trade policy response in the pre-Great Recession period of 1988:Q1-2008:Q3 during which increases in domestic unemployment rates, real appreciations in bilateral exchange rates, and declines in the GDP growth rates of bilateral trading partners led to substantial increases in new temporary trade barriers. We then apply this pre-Great Recession empirical model to realized macroeconomic data from 2008:Q4 to 2010:Q4 and find that it predicts a surge of new import protection during the Great Recession — e.g., for the US and EU, the model predicts that new trade barriers would cover an additional 15 percentage points of nonoil imports, well above the baseline level of 2–3% of import coverage immediately preceding the crisis. Finally, we examine why the realized trade policy response differed from model predictions. While exchange rate movements played an important role in limiting new import protection during the Great Recession, we provide evidence of one particularly important change in trade policy responsiveness; i.e., in this period, governments refrained from imposing new temporary trade barriers against foreign trading partners experiencing their own weak or negative economic growth.

#### Occasional and perennial exporters

Bernardo S. Blum, Sebastian Claro, Ignatius overhead export costs.

#### Horstmann

We document several new features of firms' export entry and exit behaviors: i) one-third of exporting firms enter into and exit from exporting multiple times; ii) most continuing exporters enter and exit specific export destinations multiple times; iii) firms re-entering exporting often sell the same product(s) to the same importer(s). We provide a model in which this behavior is an optimal response for firms facing increasing costs and stochastic demand. The model has a number of predictions that do not come out of models of trade in which firms have constant marginal cost. Our data strongly support these predictions.

#### A theory of entry into and exit from export markets

• Journal of International Economics---2013---Giammario Impullitti, Alfonso A. Irarrazabal, Luca David Opromolla

This paper introduces idiosyncratic firm efficiency shocks into a continuous-time general equilibrium model of trade with heterogeneous firms. The presence of sunk export entry costs and efficiency uncertainty gives rise to hysteresis in export market participation. A firm will enter into the export market once it achieves a given size, reflecting its efficiency, but may keep exporting even after its efficiency has fallen below its initial entry level. Some exporters will not be selling as much in the domestic market as other firms that never entered the foreign market. The model captures the qualitative features of firm birth, growth, export market entry and exit, and death found in the empirical literature. We calibrate the model to match relevant statistics of firms' turnover and export dynamics in the United States, and show that the mode of globalization (a reduction in sunk costs as opposed to overhead costs), matters for a firm's selection and persistence in export status. Trade liberalization via a reduction in sunk export entry costs reduces a firm's export status persistence, while the opposite happens • Journal of International Economics---2013--- when liberalization takes place through a reduction in

### and skills

• Journal of International Economics---2013---Sascha Becker, Karolina Ekholm, Marc-Andreas Muendler

We analyze the relationship between offshoring and the onshore workforce composition in German multinational enterprises (MNEs), using plant data that allow us to discern tasks, occupations, and workforce skills. Offshoring is associated with a statistically significant shift towards more non-routine and more interactive tasks, and with a shift towards highly educated workers. The shift towards highly educated workers is in excess of what is implied by changes in either the task or the occupational composition. Offshoring to low-income countries—with the exception of Central and Eastern European countries—is associated with stronger onshore responses. We find offshoring to predict between 10 and 15% of observed changes in wage-bill shares of highly educated workers and measures of non-routine and interactive tasks.

#### What determines BITs?

• Journal of International Economics---2013---Jeffrey Bergstrand, Peter Egger

Similar to bilateral or regional preferential trade agreements (PTAs), bilateral investment treaties (BITs) have proliferated over the past 50 years. The purpose of this study is to provide the first systematic empirical analysis of the economic determinants of BITs and of the likelihood of BITs between pairs of countries using a qualitative choice model, in a manner consistent with explaining PTAs. We develop the econometric specification for explaining the two based upon a general equilibrium model of world trade and foreign direct investment with three factors, two products, and trade and investment costs among multiple countries in the presence of national and multinational firms. The empirical model for BITs and PTAs is bivariate in nature and supports a set of hypotheses drawn from the general equilibrium model. Using the preferred empirical model for a sample of 12,880 country-pairs in the year

Offshoring and the onshore composition of tasks 2000, we predict correctly 88% of all pairs with a BIT and a PTA, 81% with a BIT but no PTA, and 84% with a PTA but no BIT.

#### Foreign entry and spillovers with technological incompatibilities in the supply chain

• Journal of International Economics---2013---Juan Carluccio, Thibault Fally

Does foreign entry improve host country productivity and welfare? Previous studies have looked at the role of backward linkages with domestic suppliers and their effects on domestic competitors. In this paper, we study how these externalities are affected by technological incompatibilities between foreign and domestic technologies. When foreign technologies require specialized inputs, some local suppliers self-select into production for multinational firms. A decrease in the cost of inputs compatible with the foreign technology has heterogeneous effects. It benefits foreign firms and the most productive downstream domestic firms that adopt the foreign technology, and negatively affects firms using the domestic technology. Technological incompatibilities reduce the welfare gains from openness to FDI, but this negative effect can be overcome by domestic technology adoption. The model's predictions are consistent with the stylized facts drawn from the empirical literature on FDI spillovers.

### The customs union issue: Why do we observe so few of them?

• Journal of International Economics---2013---Giovanni Facchini, Peri Silva, Gerald Willmann

The number of preferential trade agreements has greatly increased over the past two decades, yet most existing arrangements take the form of free trade areas, and less than 10% can be considered to be fully fledged customs unions. This paper develops a political economy model of trade policy under imperfect competition to provide a positive explanation for the prevalence of free trade areas. In a three-country setting, a representative from each prospective member is elected to determine the tariffs to be applied on imported goods. Under a customs union, the necessity to coordinate tariffs leads voters to strategically delegate power to more protectionist representatives. We show that strategic delegation may imply that free trade areas increase the prospective member countries' welfare compared to customs unions. Moreover, the model also indicates conditions under which free trade areas are more likely to be politically viable than customs unions.

# Shaky roads and trembling exports: Assessing the trade effects of domestic infrastructure using a natural experiment

• Journal of International Economics---2013---Christian Volpe Martineus, Juan Blyde

Our knowledge of the trade effects of domestic infrastructure is very limited. The reason is twofold. First, data needed to examine these effects are not readily available. Second, identifying such effects requires properly addressing potential endogeneity problems affecting the relationship between internal infrastructure and trade. In this paper, we overcome these limitations by combining firm-level export data with detailed geo-referenced information on Chile and by exploiting the earthquake that took place in this country in 2010 as an exogenous source of variation in available infrastructure and thereby in transport costs. We find that diminished transportation infrastructure had a significant negative impact on firms' exports.

# Brain drain or brain gain? Technology diffusion and learning on-the-job

• Journal of International Economics---2013---Thomas Sampson

This paper studies technology transfer when technology is embodied in human capital and learning requires onthe-job communication between managers and workers. Patterns of technology diffusion depend on where high knowledge managers work and how much time they allocate to training workers. Managers appropriate the surplus training creates and in the open economy managers face a cross-country trade-off between labor costs and the value of knowledge transfer. Complementarity between country level efficiency and managerial knowledge makes learning more valuable in the North meaning that high knowledge managers choose to work in the North and globalization precipitates a brain drain of high knowledge Southern agents to the North. The brain drain reduces learning opportunities in the South and exacerbates cross-country technology differences.

# Market size, division of labor, and firm productivity

Journal of International Economics---2013-- Thomas Chaney, Ralph Ossa

We generalize Krugman's (1979) 'new trade' model by allowing for an explicit production chain in which a range of tasks is performed sequentially by a number of specialized teams. We demonstrate that an increase in market size induces a deeper division of labor among these teams which leads to an increase in firm productivity. The paper can be thought of as a formalization of Smith's (1776) famous theorem that the division of labor is limited by the extent of the market. It also sheds light on how market size differences can limit the scope for international technology transfers.

# Input tariffs, speed of contract enforcement, and the productivity of firms in India

• Journal of International Economics---2013---Reshad Ahsan

This paper extends the literature on trade liberalization and firm productivity (TFP) by examining the complementarities between the speed of contract enforcement and the productivity gains from input tariff liberalization. It does so by using firm-level panel data from India along with an objective measure of judicial efficiency at the state level. The results suggest that for a 10 percentage point decline in input tariffs, firms in the state at the 75th percentile of judicial efficiency gain an additional 3.6 percentage points in productivity when compared to firms in the state with the median level of judicial efficiency. The results also indicate

that the complementarities are strongest for firms in industries that are contract intensive and imported-capital intensive. These results are robust to using a matching estimator to address the self-selection of firms into states with high judicial efficiency and an IV approach to instrument input tariffs. In addition, the results are also robust to the addition of state—year interaction fixed effects to control for time-varying, unobservable state characteristics. Thus, the results indicate that rapid contract enforcement is necessary to maximize the productivity benefits from input tariff liberalization.

# Institution-driven comparative advantage and organizational choice

• Journal of International Economics---2013---Shon Ferguson, Sara Formai

The theory of the firm suggests that firms can respond to poor contract enforcement by vertically integrating their production process. The purpose of this paper is to examine whether firms' integration opportunities affect the way contract enforcement institutions determine international trade patterns. We find that the benefits of judicial quality for the exports of contractintense goods are more muted in industries that have a greater propensity towards vertical integration arrangements with input suppliers. We show that our results are not driven by primitive industry characteristics. Our results confirm the role of judicial quality as a source of comparative advantage and suggest that this depends not only on the technological characteristics of the goods produced but also on the way firms are able to organize the production process.

# Exporters and the rise in wage inequality: Evidence from German linked employer–employee data

• Journal of International Economics---2013---Daniel Baumgarten

Using a linked employer—employee data set of the German manufacturing sector, this paper analyses the role of exporting establishments in explaining rising wage

dispersion both within and between skill groups in the time period 1996 to 2007. A decomposition analysis shows that the strong increase in the exporter wage gap, conditional on workers' skill levels, contributed to the growth in wage inequality, whereas the increase in the exporters' share in total employment worked towards a reduction in wage dispersion. The resulting net contribution is positive (inequality-increasing) but moderate. These findings are consistent with recent heterogeneous-firm trade models that feature an exporter wage premium as well as variability of the premium with respect to increasing trade liberalisation.

#### Sources of disagreement in inflation forecasts: An international empirical investigation

 Journal of International Economics---2013---Pierre Siklos

Central to the conduct of monetary policy are inflation forecasts. Inflation forecasts are not unique. Central banks and professional organizations generate inflation forecasts while households are surveyed about their inflation outlook. This paper estimates inflation forecast disagreement for nine economies over the 1999–2009 period, five of which target inflation. I find that central bank transparency tends to increase forecast disagreement. To the extent this reflects the attention paid to inflation performance the implication is that transparency is beneficial. Moreover, this finding does not appear to be a feature that applies only to central banks that must adhere to an inflation target.

# International trade without CES: Estimating translog gravity

• Journal of International Economics---2013---Dennis Novy

This paper derives a micro-founded gravity equation based on a translog demand system that allows for flexible substitution patterns across goods. In contrast to the standard CES-based gravity equation, translog gravity generates an endogenous trade cost elasticity. Trade is more sensitive to trade costs if the exporting country only provides a small share of the destination country's imports. As a result, trade costs have a heterogeneous impact across country pairs, with some trade flows predicted to be zero. I test the translog gravity equation and find empirical evidence that is in many ways consistent with its predictions.

#### Firm entry, trade, and welfare in Zipf's world

• Journal of International Economics---2013---Julian di Giovanni, Andrei Levchenko

Firm size follows Zipf's Law, a very fat-tailed distribution that implies a few large firms account for a disproportionate share of overall economic activity. This distribution of firm size is crucial for evaluating the welfare impact of economic policies such as barriers to entry or trade liberalization. Using a multicountry model of production and trade calibrated to the observed distribution of firm size, we show that the welfare impact of high entry costs is small. In the sample of the 50 largest economies in the world, a reduction in entry costs all the way to the U.S. level leads to an average increase in welfare of only 3.25%. In addition, when the firm size distribution follows Zipf's Law, the welfare impact of the extensive margin of trade – newly imported goods at or near the exporting cutoff – is negligible. The extensive margin of imports accounts for only about 5.2% of the total gains from a 10% reduction in trade barriers in our model. This is because under Zipf's Law, the large, infra-marginal firms have a far greater welfare impact than the much smaller firms that comprise the extensive margin in these policy experiments. The distribution of firm size matters for these results: in a counterfactual model economy that does not exhibit Zipf's Law the gains from a reduction in fixed entry barriers are an order of magnitude larger, while the gains from a reduction in variable trade costs are an order of magnitude smaller.

# Productivity and the decision to import and export: Theory and evidence

• Journal of International Economics---2013---Hiroyuki Kasahara,Beverly Lapham

This paper develops an open economy model with heterogeneous final goods producers who simultaneously choose whether to export their output and whether to use imported intermediates. Using the theoretical model, we develop and estimate a structural empirical model that incorporates heterogeneity in productivity, transport costs, and other costs using Chilean plant-level data for a set of manufacturing industries. The estimated model is consistent with many key features of the data regarding productivity, exporting, and importing. We perform a variety of counterfactual experiments to assess quantitatively the positive and normative effects of barriers to trade in import and export markets. These experiments suggest that there are substantial gains in aggregate productivity and welfare due to trade. Furthermore, because of import and export complementarities, policies which inhibit the importation of foreign intermediates can have a large adverse effect on the exportation of final goods.

### Default risk and risk averse international investors

• Journal of International Economics---2013---Sandra Lizarazo

This paper develops an endogenous default risk model for small open economies that interact with risk averse international investors whose preferences exhibit decreasing absolute risk aversion (DARA). By incorporating risk averse investors who trade with an emerging economy, the present model explains a larger proportion and volatility of the spread between sovereign bonds and riskless assets than the standard model with risk neutral investors. The paper shows that if investors have DARA preferences, then the emerging economy's default risk, capital flows, and bond prices are a function not only of the fundamentals of the economy but also of the level of financial wealth and risk aversion of international investors. In particular, as investors become wealthier or less risk averse, the emerging economy becomes less credit constrained. As a result, the emerging economy's default risk is lower, and its bond prices and capital inflows are higher. Additionally, with risk averse investors, the risk premium

in the asset prices of the sovereign countries can be decomposed into two components: a base premium that compensates the investors for the probability of default and an "excess" premium that compensates them for taking the risk of default.

# A reappraisal of the allocation puzzle through the portfolio approach

• Journal of International Economics---2013---Kenza Benhima

Paradoxically, high-growth, high-investment developing countries tend to experience capital outflows. This paper shows that this allocation puzzle can be explained simply by introducing uninsurable idiosyncratic investment risk in the neoclassical growth model with international trade in bonds, and by taking into account not only TFP catch-up, but also the capital wedge, that is, the distortions on the return to capital. The model fits the two following facts, documented on a sample of 67 countries between 1980 and 2003: (i) TFP growth is positively correlated with capital outflows in a sample including creditor countries; (ii) the long-run level of capital per efficient unit of labor is positively correlated with capital outflows. Consistently, we show that the capital flows predicted by the model are positively correlated with the actual ones in this sample once the capital wedge is accounted for. The fact that Asia dominates global imbalances can be explained by its relatively low capital wedge.

### Growth and structural reforms: A new assessment

• Journal of International Economics---2013---Lone Christiansen, Martin Schindler, Thierry Tressel

This paper presents a simultaneous assessment of the relationship between economic performance and three groups of economic reforms: domestic finance, trade, and the capital account. Domestic financial reforms and trade reforms are robustly associated with economic growth, but only in middle-income countries. In contrast, there is no evidence of a systematic positive relationship between capital account liberalization and

economic growth. Moreover, the effect of domestic financial reforms on economic growth in middle-income countries is accounted for by improvements in measured aggregate TFP growth, not by higher aggregate investment. Additional analysis suggests that sufficiently developed property rights are a precondition for reaping the benefits of financial and trade reforms. Our results are robust to endogeneity bias and a number of alternative specifications.

### The direct and relative effects of preferential market access

 Journal of International Economics---2013---Marco Fugazza, Alessandro Nicita

The proliferation of preferential trade agreements has resulted in a complex system of preferences in which market access conditions are often discriminatory. In this paper we investigate how market access conditions have evolved between 2000 and 2009, and how this has affected international trade. Our results show that the proliferation of preferential access has increased bilateral trade not only due to lower tariffs but also because preferential access often resulted in higher preferential margins vis-à-vis foreign competitors. The results also indicate that the evolution of the system of preferences has been disadvantageous for countries that did not actively engage in forming new trade agreements.

### Are all trade protection policies created equal? Empirical evidence for nonequivalent market power effects of tariffs and quotas

 Journal of International Economics---2013---Bruce Blonigen, Benjamin Liebman, Justin Pierce, Wesley Wilson

Over the past 50 years, the steel industry has been protected by a wide variety of trade policies, both tariffand quota-based. We exploit this extensive heterogeneity in trade protection to examine the well-established theoretical literature predicting nonequivalent effects of tariffs and quotas on domestic firms' market power. Using plant-level Census Bureau data for steel plants ket power effects for binding quota-based protection, but not tariff-based protection, particularly with respect to integrated and minimill steel producers. Our results are robust to calculation with two standard measures of market power and controlling for potential endogeneity of trade policies.

#### Trade as an engine of creative destruction: Mexican experience with Chinese competition

• Journal of International Economics---2013---Leonardo Iacovone, Ferdinand Rauch, L. Winters

This paper exploits the surge in Chinese exports from 1994 to 2004 to evaluate the effects of a competition shock from a low wage competitor for producers in an important middle-income country, Mexico. We find that this shock causes selection and reallocation at both firm and product levels and that its impact is highly heterogeneous at the intensive and extensive margins. Sales of smaller plants and more marginal products are compressed and are more likely to cease, whereas those of larger plants and core products seem relatively impervious to the shock. This implies a reallocation in terms of market shares within firms and between firms. We also show that the impact of expanded access to cheaper Chinese intermediate inputs has a similar effect, with larger plants benefiting more from the availability of cheaper imported inputs.

#### Heterogeneous trade costs and wage inequality: A model of two globalizations

• Journal of International Economics---2013---Sergi Basco, Martí Mestieri

We develop a model for analyzing the distributional effects of two globalizations and their interdependence. We distinguish between two trade cost reductions, (i) trade liberalizations in the 1980s, which increased trade in low-skill-intensive goods (denoted L-globalization) and (ii) reductions in communication costs due to the IT revolution, which raised trade in middle-skill-intensive goods during the 1990s (denoted C-globalization). We consider a North-south trade

from 1967 to 2002, we find evidence for significant mar- economy in which the North is skill abundant. A freely traded final good is produced using high-skill services and a bundle of inputs. Inputs differ on the intensity of middle- and low-skill workers required to be produced, and are subject to heterogeneous trade costs. In the North, we find that wage inequality increases in the L-globalization. During the C-globalization, wage polarization emerges. The relative wage of high- to middle-skill workers increases, while the relative wage of middle- to low-skill workers is hump-shaped. We find a complementarity between the two globalizations. Wage polarization is delayed by the extent of trade in the L-globalization. In the South, we find that wage inequality increases in both globalizations. Finally, we show how asymmetric participation in the C-globalization of two southern countries generates a discontinuous pattern of specialization. The southern country participating in the C-globalization specializes in the least and most skill-intensive traded inputs.

### Trade, wages and skill accumulation in the emerging giants

• Journal of International Economics---2013---Richard G. Harris, Peter E. Robertson

Concerns over rising inequality have threatened to slow the process of trade liberalization in emerging economies, such as China and India. But even if trade liberalization raises inequality, these effects may be short lived and associated with important dynamic effects such as capital and skill accumulation. Using a simple dynamic open economy model we show that trade liberalization can induce substantial human capital accumulation, and that the transition path for the skill premium can be non-monotonic. We then consider a higher dimensional version of the model which is calibrated to data for China and India. In both cases trade liberalization generates a jump in the skill premium on impact, and a fall in the long run. It also generates strong wage growth for both skilled and unskilled labor and substantial accumulation of skilled labor.

# **Exporting and firm performance: Market entry, investment and expansion**

• Journal of International Economics---2013---Richard Fabling, Lynda Sanderson

This paper examines input and productivity dynamics of manufacturing firms in the period leading to and following export market entry. We examine 3 possible explanations for the observed productivity gap between exporting and non-exporting firms: self-selection of high-performing firms into exporting; post-entry learning effects; and joint export-investment decisions. We consider both initial entry into exporting and subsequent expansion into new destination markets, showing that capital deepening and employment growth are associated with both types of entry. However, the timing of investment differs between the 2 entry events. The observed dynamics are consistent with a model of investment under uncertainty, in which first-time exporters delay investment to gain more information about the success of their export ventures, while experienced exporters pre-commit to capital deepening in advance of additional market expansion.

# The arm's length principle and distortions to multinational firm organization

• Journal of International Economics---2013---Christian Keuschnigg, Michael Devereux

To prevent profit shifting by manipulation of transfer prices, tax authorities typically apply the arm's length principle in corporate taxation and use comparable market prices to 'correctly' assess the value of intracompany trade and royalty income of multinationals. We develop a model of firms subject to financing frictions and offshoring of intermediate inputs. We find that arm's length prices systematically differ from prices set by independent agents. Application of the principle distorts multinational activity by reducing debt capacity and investment of foreign affiliates. Although it raises tax revenue and welfare in the headquarter country, welfare losses may be larger in the subsidiary location, leading to a loss in world welfare.

# International capital flows and credit market imperfections: A tale of two frictions

Journal of International Economics---2013-- Alberto Martin, Filippo Taddei

The financial crisis of 2007–08 has underscored the importance of adverse selection in financial markets. This friction has been mostly neglected by macroeconomic models of financial imperfections, which have focused almost exclusively on the effects of limited pledgeability. In this paper, we fill this gap by developing a standard growth model with adverse selection. Our main results are that, by fostering unproductive investment, adverse selection: (i) leads to an increase in the economy's equilibrium interest rate, and; (ii) it generates a negative wedge between the marginal return to investment and the equilibrium interest rate. Under international financial integration, we show how this translates into excessive capital inflows and endogenous cycles. We also extend our model to the more general case in which adverse selection and limited pledgeability coexist. We conclude that both frictions complement one another and show that limited pledgeability exacerbates the effects of adverse selection.

#### Financial crises and macro-prudential policies

 Journal of International Economics---2013---Gianluca Benigno, Huigang Chen, Christopher Otrok, Alessandro Rebucci, Eric Young

In this paper we study a two-sector production small open economy subject to a collateral constraint in which a financial crisis can arise endogenously and alternate with normal time periods. In this class of models, the scope for policy intervention arises because individual agents do not internalize the effects of their action on a key market price that enters the collateral constraint (i.e. there is a pecuniary externality). Our main result is that the interaction between agents' behavior in crisis and normal times is crucial for the normative implications of this class of models. In contrast to the related literature, we find that in our model economy the social planner borrows more than private agents in normal times (i.e., the economy displays

"underborrowing" rather than "overborrowing" in normal times) and yet has a lower probability to enter a financial crisis. While our findings call for both ex-ante and ex-post policy interventions relative to the crisis event, our analysis shows that welfare gains of ex-post policies are much larger than those of ex-ante policies. As a result, adopting only ex ante interventions such as macro-prudential policies or capital controls may be costly in welfare terms. For example, a small macro-prudential tax on debt that lowers the probability of a crisis to zero is welfare-reducing in our model because it also lowers average consumption.

#### International risk cycles

 Journal of International Economics---2013---Francois Gourio, Michael Siemer, Adrien Verdelhan

Recent work in international finance suggests that exchange rate puzzles can be accounted for if (1) aggregate uncertainty is time-varying, and (2) countries have heterogeneous exposures to a world aggregate shock. We embed these features in a standard two-country real business cycle framework, and calibrate the model to equity risk premia in low and high interest rates countries. Unlike traditional real business cycle models, our model generates volatile exchange rates, a large currency forward premium, "excess comovement" of asset prices relative to quantities, and an imperfect correlation between relative consumption growth and exchange rates. Our model implies, however, that high interest rate countries have smoother quantities, equity returns and interest rates than low interest rate countries, contrary to the data.

# Does Short-Term Debt Increase Vulnerability to Crisis? Evidence from the East Asian Financial Crisis

• Journal of International Economics---2013---Efraim Benmelech, Eyal Dvir

Does short-term debt increase vulnerability to financial crisis, or does short-term debt reflect – rather than cause – the incipient crisis? We study the role that short-term debt played in the collapse of the East Asian

financial sector in 1997–1998. We alleviate concerns about the endogeneity of short-term debt by using long-term debt obligations that matured during the crisis. We find that debt obligations issued at least three years before the crisis had a negative, albeit sometimes insignificant, effect on the probability of failure. Our results are consistent with the view that short-term debt reflects, rather than causes, distress in financial institutions.

#### Global banks and crisis transmission

 Journal of International Economics---2013 --Sebnem Kalemli-Ozcan, Elias Papaioannou, Fabrizio Perri

We study the effect of financial integration (through banks) on the transmission of international business cycles. In a sample of 18/20 developed countries between 1978 and 2009 we find that, in periods without financial crises, increases in bilateral banking linkages are associated with more divergent output cycles. This relation is significantly weaker during financial turmoil periods, suggesting that financial crises induce co-movement among more financially integrated countries. We also show that countries with stronger, direct and indirect, financial ties to the U.S. experienced more synchronized cycles with the U.S. during the recent 2007–2009 crisis. We then interpret these findings using a simple general equilibrium model of international business cycles with banks and shocks to banking activity. The model suggests that the relation between integration and synchronization depends on the type of shocks hitting the world economy, and that shocks to global banks played an important role in triggering and spreading the 2007–2009 crisis.

#### Sudden spikes in global risk

• Journal of International Economics---2013---Philippe Bacchetta, Eric van Wincoop

Recent episodes (October 2008, May 2010, August 2011) have witnessed huge spikes in equity price risk (implied volatility). Apart from their large size, several features characterize these risk panics. They are global

There is substantial variation though in the extent to which individual countries are impacted, while the impact bears little relation to financial linkages with the epicenter of the crisis. In addition there is usually not a large shock to fundamentals that sets off these panics. We provide an explanation for these risk panic features in the context of a two-country model that allows for self-fulfilling shifts in risk.

#### Financial integration and growth — Why is **Emerging Europe different?**

• Journal of International Economics---2013---Christian Friedrich, Isabel Schnabel, Jeromin Zettelmeyer

Using industry-level data, this paper tries to explain why financial integration raised growth differentials between externally dependent and less dependent industries in European transition countries, but not in other developing or advanced countries in the years preceding the current crisis. We argue that political integration with countries that have stronger political and economic institutions leads to growth-enhancing foreign investments because investors expect an improvement of institutions in the future. The empirical evidence supports the importance of political integration: within the group of developing countries, the effect of financial integration is larger in countries that are more strongly politically integrated. Such an effect is not found for advanced countries. Our results suggest that political integration can considerably increase the benefits of financial integration in developing countries, even when institutions are still weak.

#### Varieties and the transfer problem

• Journal of International Economics---2013---Giancarlo Corsetti, Philippe Martin, Paolo Pesenti

We revisit the classic transfer problem, accounting for two channels of adjustment: increased trade in existing goods and services (the intensive margin) and net creation and destruction of product varieties (the extensive margin). Over the medium term, the latter

phenomena, shared among a broad set of countries. reduces the scope for real exchange rate and terms of trade variability in response to cross-border flows. We embed our transfer analysis in popular models of current account adjustment, where initial imbalances are driven by domestic demand for — or foreign supply of — net saving, possibly associated with over-optimistic expectations. Simulation exercises based on 2006 data suggest that a transfer of the size of the pre-crisis U.S. current account deficit may require only moderate trend depreciation in real terms, and that the aggregate welfare impact of the transfer is disconnected from the size of the relative price correction.

#### Optimal tariffs, retaliation, and the welfare loss from tariff wars in the Melitz model

• Journal of International Economics---2013---Gabriel Felbermayr, Benjamin Jung, Mario Larch

This paper characterizes analytically the optimal tariff of a large one-sector economy with monopolistic competition and firm heterogeneity in general equilibrium, thereby extending the small-country results of Demidova and Rodríguez-Clare (JIE, 2009) and the homogeneous firms framework of Gros (JIE, 1987). The optimal tariff internalizes a mark-up distortion, an entry distortion, and a terms-of-trade externality. It is larger when the dispersion of firm-level productivities is higher, and the country's relative size or relative average productivity is bigger. Furthermore, in the two-country Nash equilibrium, tariffs turn out to be strategic substitutes. Small or poor economies set lower Nash tariffs than large or rich ones. Lower transportation costs or smaller fixed market entry costs induce higher equilibrium tariffs and larger welfare losses relative to the case of zero tariffs. Similarly, cross-country productivity or size convergence, and higher firm-level productivity dispersion increase the global welfare loss due to non-cooperative tariff policies. These results suggest that post WWII trends have increased the relative merits of the WTO.

### Variable demand elasticities and tariff liberalization

• Journal of International Economics---2013---Alan Spearot

This paper examines tariff liberalization within an environment of heterogeneous demand elasticities. Varieties produced at a lower cost (a) are imported at lower absolute demand elasticities and (b) earn higher revenues. By virtue of larger demand elasticities, low revenue varieties benefit the most from tariff liberalization. Further, if varieties are substitutable, low revenue varieties benefit at the expense of high revenue varieties. These predictions are confirmed using a case study of US Uruguay Round ad-valorem tariff cuts, where within exporter-industry groups, low revenue varieties experienced large gains, and high revenue varieties experienced negligible gains. Further, I find evidence suggesting that these effects were also relevant for other trade shocks, such as exchange rates and specific tariffs.

### Would global patent protection be too weak without international coordination?

• Journal of International Economics---2013---Edwin Lai, Isabel K.M. Yan

In the standard model with free trade and socialwelfare-maximizing governments à la Grossman and Lai (2004), cross-border positive policy externalities result in countries choosing a combination of patent strengths that is weaker than optimal from a global perspective. This paper introduces three new features to the analysis: trade and FDI barriers, firm heterogeneity and political economy considerations in setting patent policies. Based on calibration, we find that there would be global under-protection of patent rights when there is no international policy coordination. The empirical fact that firm revenues follow a fat-tailed distribution implies that the barriers to exploit inventions internationally are quite low, despite the fact that only a small fraction of firms sell overseas and an even smaller fraction of firms carry out FDI as a result of trade barriers. Furthermore, requiring all countries to

harmonize their patent standards with the equilibrium standard of the most innovative country (the US) does not lead to global over-protection of patent rights.

#### Coordination failures in immigration policy

• Journal of International Economics---2013---Paolo Giordani, Michele Ruta

We propose a theoretical framework for analyzing the problems associated to unilateral immigration policy in receiving countries and for evaluating the grounds for reform of international institutions governing immigration. We build a model with multiple destination countries and show that immigration policy in one country is influenced by measures adopted abroad as migrants choose where to locate (in part) in response to differences in immigration policy. This interdependence gives rise to a leakage effect of immigration policy, an international externality well documented in the empirical literature. In this environment, immigration policy becomes strategic and unilateral behavior may lead to coordination failures, where receiving countries are stuck in welfare inferior equilibria. We then use an equilibrium refinement to show that the selected equilibrium differs from the Pareto-dominant one and argue that multilateral institutions that help receiving countries make immigration policy commitments would address this inefficiency.

# Does strengthening Collective Action Clauses (CACs) help?

• Journal of International Economics---2013---Sayantan Ghosal, Kannika Thampanishvong

Does improving creditor coordination by strengthening CACs lead to efficiency gains in the functioning of sovereign bond markets? We address this question in a model featuring both debtor moral hazard and creditor coordination under incomplete information. Conditional on default, we characterize the interim efficient CAC threshold and show that strengthening CACs away from unanimity results in interim welfare gains. However, once the impact of strengthening CACs on debtor's incentives is taken into account, we

demonstrate the robust possibility of a conflict between ex ante and interim efficiency. We calibrate our model to quantify such a welfare trade-off and discuss the policy implications of our results.

### Investment composition and international business cycles

• Journal of International Economics---2013---P. Marcelo Oviedo, Rajesh Singh

This paper studies a two country model with traded and nontraded sectors, in which sector-specific capital goods, as in practice, are produced by combining inputs from all sectors. The model also includes nontraded distribution services employed in retailing traded goods to consumers. The results show that the model with capital goods comprising multisectoral inputs outperforms the standard model in which sectoral output also serves as its capital. In particular, it substantially improves (a) the movements of trade balance and relative prices; (b) within country comovements of sectoral and aggregate quantities; (c) cross-country comovements of output vis-à-vis consumption. The results change only marginally when distribution services are removed from the model.

#### Ricardian selection

• Journal of International Economics---2013---Andrea Finicelli, Patrizio Pagano, Massimo Sbracia

We analyze the foundations of the relationship between trade and average productivity in the Ricardian model. Under broad assumptions about the autarky distributions of industry productivities, trade openness raises average productivity. This is due to the selection effect of international competition – driven by comparative advantage - which makes "some" high- and "many" low-productivity industries exit the market. We derive a model-based measure of this effect that requires only production and trade data. For a sample of 41 countries, we find that Ricardian selection raised average productivity in the manufacturing sector by 11% above the autarky level in 2005 (6% in 1985), with a neat positive time trend and large cross-country differences. residents. Are the decisions of domestic investors to

### **Gravity Redux: Estimation of gravity-equation** coefficients, elasticities of substitution, and general equilibrium comparative statics under asymmetric bilateral trade costs

• Journal of International Economics---2013---Jeffrey Bergstrand, Peter Egger, Mario Larch

A large class of models with CES utility and iceberg trade costs are now known to generate isomorphic "gravity equations." Economic interpretations of these gravity equations vary in terms of two basic elements: the exporter's "mass" variable and the elasticity of trade with respect to true ad valorem "trade costs." In this paper, we offer three potential contributions. First, we formulate and estimate a structural gravity equation based on the standard Krugman model of monopolistic competition and increasing returns. In the context of this model, a key parameter, the elasticity of substitution in consumption ( $\sigma$ ), can be estimated precisely – even without observable true ad valorem trade-cost measures – using exporter's population and observable variables that influence trade costs. Second, in the empirical context of the well-known McCallum Canadian-U.S. "border puzzle," our approach – allowing estimation of  $\sigma$  – yields considerably different general equilibrium comparative static trade-flow and economic welfare effects than those in an Armington endowment economy and assumed values of  $\sigma$ . Moreover, our predicted trade flows and GDPs are highly correlated with their respective observed values in the case of bilaterally symmetric or asymmetric Canadian–U.S. border effects. Third, a Monte Carlo analysis confirms unbiased and precise estimates of all coefficients, the elasticity of substitution, and comparative statics using our approach.

#### Sudden stops: Are global and local investors alike?

• Journal of International Economics---2013---Cesar Calderon, Megumi Kubota

Our main goal is to characterize the determinants of sudden stops caused by domestic vis-à-vis foreign

invest abroad or of foreign investors to cut off funds from the domestic economy governed by the same set of determinants? Given the distribution of different types of sudden stop episodes over time and its different macroeconomic consequences, we argue that their determinants may not be alike. One of the novel aspects of this paper is to characterize sudden stops in capital flows (frequency, consequences and determinants) using quarterly data on gross flows for a wide array of countries from 1975 to 2010. We find that foreign investors are less likely to stop bringing capital when the domestic economy is growing and its performance is leveraged by positive external shocks. Domestic agents, on the other hand, are more willing to invest abroad if there are high external savings (current account surpluses), especially in natural-resource abundant countries. Rising financial openness makes the domestic country more vulnerable to sudden stops caused by either local or global investors. Finally, rising risk aversion in world capital markets tend to reduce the likelihood of outflow-driven stops—which may signal a larger propensity towards capital repatriation by domestic investors.

### Welfare analysis of currency regimes with defaultable debts

Journal of International Economics---2013-- Aloisio Araujo, Marcia Leon, Rafael Santos

We modify the Cole and Kehoe model by including domestic debt. According to the original model, a speculative attack on a high debt level issued abroad triggers external debt default. Here, it is possible to inflate away the domestic debt to avoid the external debt default. We consider two possibilities for domestic debt denomination: (i) local currency and (ii) common currency. In the second case, inflation depends on a monetary union decision. Our numerical results show that to have a debt share denominated in a common currency is optimal when the refinancing risks are highly correlated across union members. Otherwise, the best is to keep the domestic debt denominated in local currency. Finally, the extreme case of having all debt issued abroad and denominated in a foreign

currency is suitable when, under alternative regimes, suboptimal inflation motivated by political factors is likely. Although the paper was originally developed for emerging market economies, it sheds some light on the recent Eurozone crisis.

### Foreign labor costs and domestic employment: What are the spillovers?

• Journal of International Economics---2013---Mai Dao

This paper studies the international spillover effects of country-specific labor cost changes in the presence of labor market frictions. A two-country model with search frictions predicts that a cut in foreign labor costs leads to an increase in domestic employment, driven by a positive terms of trade effect on job creation. I find empirical evidence in support of this positive spillover effect, the terms of trade channel, and the dependence on the degree of labor market rigidity. This is done by a panel regression that estimates the effect of exogenous variation in foreign unit labor costs, instrumented by changes in foreign statutory social security contribution rates, on domestic employment and output.

### Offshoring, unemployment, and wages: The role of labor market institutions

 Journal of International Economics---2013---Priya Ranjan

It is shown that when wages are determined through collective bargaining, there is a non-monotonic relationship between the cost of offshoring and unemployment. Starting from a high cost of offshoring, a decrease in the cost of offshoring reduces unemployment first and then increases it. The non-monotonicity of unemployment in the cost of offshoring does not obtain if wages are determined by individual Nash bargaining instead of collective bargaining. The non-monotonic relationship between the cost of offshoring and unemployment is verified through a calibration exercise performed using parameters for Sweden. The calibration exercise predicts that a decrease in the cost of offshoring, starting from the present level, would reduce unemployment

in Sweden. In a two country framework of offshoring (source country and host country) it is shown how changes in the labor market institutions in one country affect labor market outcomes in both countries.

### Trade and the allocation of talent with capital market imperfections

• Journal of International Economics---2013---Roberto Bonfatti, Maitreesh Ghatak

Trade liberalization in the 1980s and 1990s has been associated with a sharp increase in the skill premium in both developed and developing countries. This is in apparent conflict with neoclassical theory, according to which trade should decrease the relative return on the relatively scarce factor, and thus decrease the skill premium in skill-scarce developing countries. We develop a simple model of trade with talent heterogeneity and capital market imperfections, and show that trade can increase the skill premium in a skill-scarce South that opens up to a skill-abundant North, both in the short run as well as in the long run. We show that trade has two effects: it reduces the skilled wage, and therefore drives non talented agents out of the skilled labor force. It also reduces the cost of subsistence, thereby allowing the talented offspring of unskilled workers to go to school. This compositional effect has a positive effect on the observed skill premium, potentially strong enough to outweigh the decrease in the skilled wage. In our framework, trade liberalization may trigger an increase in the skill-premium in both the North and the South.

# Import competition from and offshoring to China: A curse or blessing for firms?

 Journal of International Economics---2013---Giordano Mion, Linke Zhu

We use Belgian manufacturing firm-level data over the period 1996–2007 to analyze the impact of imports from different origins on firm employment growth, exit, and skill upgrading. For this purpose, we use both industry-level and firm-level imports by country of origin and further distinguish between firm-level offshoring of final

versus intermediate goods. Results indicate that China is different from both other low-wage and OECD countries. Industry-level import competition from China reduces firm employment growth and induce skill upgrading in low-tech manufacturing industries. On the other hand, import competition has no effect on firm survival, while offshoring of finished goods to China actually increases firms' probability of survival. In terms of skill upgrading, the effect of Chinese imports is large. Import competition from China accounts for 27% (48%) of the total observed increase – within and between firms – in the share of non-production (highly educated) workers in low-tech Belgian manufacturing over our period of analysis. Offshoring to China further accounts for a small but significant increase in the share of non-production workers.

#### Is the GATT/WTO's Article XXIV bad?

 Journal of International Economics---2013---Monika Mrázová, David Vines, Benjamin Zissimos

The GATT/WTO Article XXIV prevents a customs union (CU) from raising its common external tariff. In this paper, we compare CU formation with and without this Article XXIV constraint. We show, in a multicountry oligopoly model, that for a given CU structure, Article XXIV improves world welfare by lowering trade barriers. However, we also show that Article XXIV has a composition effect on CU formation: it affects the endogenous choice of CUs. By encouraging more symmetric CUs, Article XXIV causes more trade to be subject to trade barriers. As a result, Article XXIV may be 'bad' for world welfare.

# International R&D subsidy competition, industrial agglomeration and growth

• Journal of International Economics---2013---Hiroki Kondo

I construct a model with endogenous growth and new economic geography. Using this framework, I consider the outcomes of R&D subsidy competition among countries under different trade costs. When trade costs are higher, less industrialized countries are more eager to attract industries with vertical linkages. To prevent the industries from relocating, more industrialized countries choose much higher R&D subsidies. As a result, the industries never relocate and the growth rate is very high. When trade costs decrease, countries are less willing to host industries with vertical linkages. R&D subsidy competition becomes less intense, and the growth rate decreases.

#### Lumpy countries, urbanization, and trade

Journal of International Economics---2013-- Steven Brakman, Charles Marrewijk

Lumpiness of production factors within a country might overturn the Heckscher-Ohlin (HO) model's predictions for the factor content of trade. Trade patterns, as predicted by this model, can both be magnified or reversed by uneven concentration of production factors within a country. Cities are the most characteristic manifestation of lumpiness of production factors and as a consequence different patterns of urbanization between countries might cause trade patterns to differ from the HO model's predictions on the basis of the overall availability of production factors. Using data on cities we provide evidence that the so-called lens condition is violated, suggesting that from an urban perspective lumpiness matters.

# Expansion of trade at the extensive margin: A general gains-from-trade result and illustrative examples

• Journal of International Economics---2013---James Markusen

The basic gains-from-trade theorem makes a stark comparison between completely free trade and complete autarky. This paper is motivated by recent evidence that trade has greatly expanded on the extensive margin (aka fragmentation, vertical specialization, offshoring) by adding newly traded goods and services and that much of this new trade is in intermediates. I provide an extension of existing gains-from-trade results by allowing trade in an added set of final and/or intermediate goods. As seems generally understood, a sufficient

condition for all countries to gain from liberalization is that the relative world prices of initially-traded goods don't change, but I don't think that this has been generalized to expanding the set of tradeables. Further, trade costs break the strict link between domestic and world prices in my approach and this results in interesting subtleties as initially-traded goods change their trade status following fragmentation. I illustrate these results by applying them to two recent and quite specific formulations of expansion at the extensive margin: Grossman and Rossi-Hansberg (2008) and Markusen and Venables (2007).

### ABS inflows to the United States and the global financial crisis

• Journal of International Economics---2012---Carol Bertaut,Laurie Pounder DeMarco,Steven Kamin,Ralph Tryon

Relative to the "global savings glut" (GSG) hypothesis, we present a more complete picture of how capital flows contributed to the financial crisis, drawing attention to the sizable inflows from European investors into U.S. private-label asset-backed securities (ABS), including mortgage-backed securities and other structured investment products. The GSG hypothesis argues that the surge in capital inflows from emerging market economies to the United States led to significant declines in long-term interest rates in the United States and other industrial economies. In turn, these lower interest rates, when combined with both innovations and deficiencies of the U.S. credit market, are believed to have contributed to the U.S. housing bubble and to the buildup in financial vulnerabilities that led to the financial crisis. Because the GSG countries for the most part restricted their U.S. purchases to Treasuries and Agency debt, their provision of savings to ultimately risky subprime mortgage borrowers was necessarily indirect, pushing down yields on safe assets and increasing the appetite for alternative investments on the part of other investors. Foreign acquisitions of private-label ABS, primarily by Europeans, provided credit more directly and, by adding to domestic demand for these securities, contributed to the decline in

nation of empirical estimation and model simulation, we verify that both GSG inflows into Treasuries and Agencies, as well as European acquisitions of ABS, played a role in contributing to downward pressures on U.S. interest rates.

#### Capital flow waves: Surges, stops, flight, and retrenchment

• Journal of International Economics---2012---Kristin Forbes, Francis Warnock

This paper analyzes waves in international capital flows. We develop a new methodology for identifying episodes of extreme capital flow movements using data that differentiates activity by foreigners and domestics. We identify episodes of "surges" and "stops" (sharp increases and decreases, respectively, of gross inflows) and "flight" and "retrenchment" (sharp increases and decreases, respectively, of gross outflows). Our approach yields fundamentally different results than the previous literature that used measures of net flows. Global factors, especially global risk, are significantly associated with extreme capital flow episodes. Contagion, whether through trade, banking, or geography, is also associated with stop and retrenchment episodes. Domestic macroeconomic characteristics are generally less important, and we find little association between capital controls and the probability of having surges or stops driven by foreign capital flows. The results provide insights for different theoretical approaches explaining crises and capital flow volatility.

#### External adjustment and the global crisis

• Journal of International Economics---2012---Philip Lane, Gian Maria Milesi-Ferretti

The period preceding the global financial crisis was characterized by a substantial widening of current account imbalances across the world. Since the onset of the crisis, these imbalances have contracted to a significant extent. In this paper, we analyze the ongoing process of external adjustment in advanced economies and emerging markets. We find that countries whose

their spreads over Treasury yields. Through a combi-pre-crisis current account balances were in excess of what could be explained by standard economic fundamentals have experienced the largest contractions in their external balance. We subsequently examine the contributions of real exchange rates, domestic demand and domestic output to the adjustment process (allowing for differences across exchange rate regimes) and find that external adjustment in deficit countries was achieved primarily through demand compression, rather than expenditure switching. Finally, we show that changes in other investment flows were the main channel of financial account adjustment, with official external assistance and ECB liquidity cushioning the exit of private capital flows for some countries.

#### The financial crisis and the geography of wealth transfers

• Journal of International Economics---2012---Pierre-Olivier Gourinchas, Helene Rey, Kai Truempler

This paper studies the geography of wealth transfers between 2007Q4 and 2008Q4, at the height of the global financial crisis. We construct valuation changes on bilateral external positions in equity, direct investment and portfolio debt to measure who benefited and who lost on their external exposure. We find a very diverse set of fortunes governed by the structure of countries' external portfolios. In particular, we are able to relate the gains and losses on debt portfolios to the country's exposure to ABS, ABCP conduits and the extent of dollar shortage.

#### Leverage across firms, banks, and countries

• Journal of International Economics---2012---Sebnem Kalemli-Ozcan, Bent Sorensen, Sevcan Yesiltas

We present new stylized facts on bank and firm leverage during the period 2000-2009 using internationally comparable micro level data from many countries. We document the following patterns: a) there was an increase in leverage for investment banks prior to the sub-prime crisis; b) there was no visible increase in leverage for

c) off-balance-sheet items constitute a big fraction of assets, especially for large commercial banks in the US, whereas investment banks do not report these items; d) the leverage ratio is procyclical for investment banks and for large commercial banks in the US; e) banks in emerging markets with tighter bank regulation and stronger investor protection experienced significantly less deleveraging during the crisis. The results suggest that excessive risk taking before the crisis was not easily detectable because the risk involved the quality rather than the quantity of assets.

#### Liquidity management of U.S. global banks: Internal capital markets in the great recession

• Journal of International Economics---2012---Nicola Cetorelli, Linda Goldberg

The recent crisis highlighted the importance of globally active banks in linking markets. One channel for this linkage is through how these banks manage liquidity across their entire banking organization. We document that funds regularly flow between parent banks and their affiliates in diverse foreign markets. We show that parent banks, when hit by a funding shock, reallocate liquidity in the organization according to a locational pecking order. Affiliate locations that are important for the parent bank revenue streams are relatively protected from liquidity reallocations in the organization, while traditional funding locations are more extensively used to buffer shocks to the parent bank balance sheets.

#### Bank relationships, business cycles, and financial crises

• Journal of International Economics---2012---Galina Hale

The importance of information asymmetries in the capital markets is commonly accepted as one of the main reasons for home bias in investment. The effects of such asymmetries may potentially be reduced through relationships between banks established through bankto-bank lending. To analyze the dynamics of formation

the typical commercial bank and non-financial firm; of such relationships during 1980–2009, I construct a global banking network of 7938 banking institutions from 141 countries. I find that recessions and banking crises tend to have negative effects on the formation of new connections and that these effects are not the same for all countries or all banks. I also find that the global financial crisis of 2008–09 had a large negative impact on the formation of new relationships in the global banking network, especially by large banks, which were previously immune to effects of banking crises and recessions.

#### Dollar illiquidity and central bank swap arrangements during the global financial crisis

• Journal of International Economics---2012---Andrew Rose, Mark Spiegel

While the global financial crisis was centered in the United States, it led to a surprising appreciation in the dollar, suggesting global dollar illiquidity. In response, the Federal Reserve partnered with other central banks to inject dollars into the international financial system. Empirical studies of the success of these efforts have yielded mixed results, in part because their timing is likely to be endogenous. In this paper, we examine the cross-sectional impact of these interventions. Theory consistent with dollar appreciation in the crisis suggests that their impact should be greater for countries that have greater exposure to the United States through trade and financial channels, less transparent holdings of dollar assets, and greater illiquidity difficulties. We examine these predictions for observed cross-sectional changes in CDS spreads, using a new proxy for innovations in perceived changes in sovereign risk based upon Google-search data. We find robust evidence that auctions of dollar assets by foreign central banks disproportionately benefited countries that were more exposed to the United States through either trade linkages or asset exposure. We obtain weaker results for differences in asset transparency or illiquidity. However, several of the important announcements concerning the international swap programs disproportionately benefited countries exhibiting greater asset opaqueness.

## Capital flows, push versus pull factors and the global financial crisis

 Journal of International Economics---2012---Marcel Fratzscher

The causes of the 2008 collapse and subsequent surge in global capital flows remain an open and highly controversial issue. Employing a factor model coupled with a dataset of high-frequency portfolio capital flows to 50 economies, the paper finds that common shocks - key crisis events as well as changes to global liquidity and risk – have exerted a large effect on capital flows both in the crisis and in the recovery. However, these effects have been highly heterogeneous across countries, with a large part of this heterogeneity being explained by differences in the quality of domestic institutions, country risk and the strength of domestic macroeconomic fundamentals. Comparing and quantifying these effects show that common factors ("push" factors) were overall the main drivers of capital flows during the crisis, while country-specific determinants ("pull" factors) have been dominant in accounting for the dynamics of global capital flows in 2009 and 2010, in particular for emerging markets.

## On the international transmission of shocks: Micro-evidence from mutual fund portfolios

• Journal of International Economics---2012---Claudio Raddatz, Sergio Schmukler

Using micro-level data on mutual funds from different financial centers investing in equity and bonds, this paper analyzes how investors and managers behave and transmit shocks across countries. The paper shows that the volatility of mutual fund investments is quantitatively driven by both the underlying investors and fund managers through (i) injections into/redemptions out of each fund and (ii) managerial changes in country weights and cash. Both investors and managers respond to country returns and crises and adjust their investments substantially, e.g., generating large real-locations during the global financial crisis. Their behavior tends to be pro-cyclical, reducing their exposure to countries during bad times and increasing it

when conditions improve. Managers actively change country weights over time, although there is significant short-run pass-through from returns to country weights. Capital flows from mutual funds do not seem to have a stabilizing role and expose countries in their portfolios to foreign shocks.

#### From the financial crisis to the real economy: Using firm-level data to identify transmission channels

• Journal of International Economics---2012---Stijn Claessens, Hui Tong, Shang-Jin Wei

Using accounting data for 7722 non-financial firms in 42 countries, we examine how the 2007–2009 crisis affected firm performance and how various linkages propagated shocks across borders. We isolate and compare effects from changes in business cycle, international trade, and external financing conditions, on firms' profits, sales and investment using both sectoral benchmarks and firm-specific sensitivities estimated prior to the crisis. We find that the crisis had a bigger negative impact on firms with greater sensitivity to business cycle and trade developments, particularly in countries more open to trade. Interestingly, financial openness made limited difference.

## International reserves and the global financial crisis

• Journal of International Economics---2012---Kathryn Dominguez, Yuko Hashimoto, Takatoshi Ito

This study examines whether pre-crisis international reserve accumulations, as well as exchange rate and reserve policy decisions made during the global financial crisis, can help to explain cross-country differences in post-crisis economic performance. Our approach focuses not only on the total stock of official reserves held by countries, but also on the decisions by governments to purchase or sell reserve assets during the crisis period. We introduce new data made available through the IMF Special Data Dissemination Standard (SDDS)

terest income and valuation changes in the stock of official reserves from the actively managed component of reserves. We use this novel data to gage how (and whether) reserve accumulation policies influenced the economic and financial performance of countries during and after the global crisis. Our findings support the view that higher reserve accumulations prior to the crisis are associated with higher post-crisis GDP growth.

#### Tools for managing financial-stability risks from capital inflows

• Journal of International Economics---2012---Jonathan Ostry, Atish Ghosh, Marcos Chamon, Mahvash Qureshi

We examine whether macroprudential policies and capital controls can enhance financial stability in the face of the risks typically associated with large capital inflows. We construct new indices of foreign currency (FX)-related prudential measures, domestic prudential measures, and financial-sector specific capital controls for 51 emerging market economies over the period 1995–2008. Our results indicate that both capital controls and FX-related prudential measures are associated with a lower proportion of FX lending in total domestic bank credit, and with a lower proportion of portfolio debt in total external liabilities. Other prudential policies appear to help restrain the intensity of aggregate credit booms. Experience from the global financial crisis suggests that prudential and capital control policies in place during the boom enhanced economic resilience during the bust.

#### Financial crises and the multilateral response: What the historical record shows

• Journal of International Economics---2012---Bergljot Barkbu, Barry Eichengreen, Ashoka Mody

We provide a synoptic description of financial crises and the multilateral response over the course of the last four decades. We present both indicators of economic performance around crisis dates and a comprehensive

Reserve Template, which allow us to distinguish in- description of multilateral rescue efforts. While emergency lending has grown, reliance on debt restructuring, broadly speaking, has declined. This leads us to ask what can be done to rebalance the management of debt problems toward a better mix of emergency lending and private sector burden sharing. In particular, we explore the idea of sovereign cocos, contingent debt securities that automatically reduce payment obligations in the event of debt-sustainability problems.

#### Are Free Trade Agreements contagious?

• Journal of International Economics---2012---Richard Baldwin, Dany Jaimovich

This paper tests the hypothesis that the domino-like spread of regionalism is partly driven by 'defensive' FTAs, i.e. FTAs signed to reduce discrimination created by third-nation FTAs. A theory-based measure is used to test contagion against alternative determinants of regionalism. The main finding is that contagion is present in our data and robust to various econometric specifications, samples, and inclusions of various economic and political controls including the Baier-Bergstrand controls. Some support is found for political theories that stress 'political distance' but none for those that stress 'slow multilateralism'.

#### Sequential exporting

• Journal of International Economics---2012---Facundo Albornoz, Hector Calvo Pardo, Gregory Corcos, Emanuel Ornelas

Many new exporters give up exporting very shortly, despite substantial entry costs; others shoot up foreign sales and expand to new destinations. We develop a model based on experimentation to rationalize these and other dynamic patterns of exporting firms. We posit that individual export profitability, while initially uncertain, is positively correlated over time and across destinations. This leads to "sequential exporting," where the possibility of profitable expansion at the intensive and extensive margins makes initial entry costs worthwhile despite high failure rates. Firm-level evidence from Argentina's customs, which would be

difficult to reconcile with existing models, strongly supports this mechanism.

### The economics of trade agreements in the linear Cournot delocation model

• Journal of International Economics---2012---Kyle Bagwell,Robert Staiger

Existing theories of trade agreements suggest that GATT/WTO efforts to reign in export subsidies represent an inefficient victory for exporting governments that comes at the expense of importing governments. Building on the Cournot delocation model first introduced by Venables (1985), we derive new results from this model and use these results to develop a more benign interpretation of efforts to restrain export subsidies in trade agreements. And we suggest that the gradual tightening of restraints on export subsidies that has occurred in the GATT/WTO may be interpreted as deriving naturally from the gradual reduction in import barriers that member countries have negotiated. Together with existing theories, the Cournot delocation model may help to provide a more nuanced and complete understanding of the treatment of export subsidies in trade agreements.

## Trade disputes, quality choice, and economic integration

Journal of International Economics---2012-- Richard Chisik

Recent work demonstrates the importance of developing high quality output in order to compete in export markets and other recent studies verify the prevalence of fixed and ongoing trade costs while participating in those markets. I consider the joint choice of quality and export promotion costs when trade relationships are subject to temporary disputes. When transparency is low and macroeconomic instability is high, disputes arrive more frequently and, therefore, firms may inefficiently choose lower levels of quality and export promotion. These, in turn, build shallower trading relationships with less trade volumes and higher tariffs, and generate greater trade reductions during the

more common trade disputes. Several institutional features of the WTO dispute settlement mechanism that are generally lacking in preferential trade agreements such as improved transparency, dispute investigation, and the provision to recommend asymmetric continuation payoffs can ameliorate these inefficient quality choice outcomes. Hence, lower quality output and lower quality trading relationships may be more endemic to countries that depend on preferential trading areas as opposed to the WTO.

#### Border prices and retail prices

 Journal of International Economics---2012---David Berger, Jon Faust, John Rogers, Kai Steverson

We analyze retail prices and at-the-dock (import) prices of specific items in the Bureau of Labor Statistics' (BLS) CPI and IPP databases, using both databases simultaneously to identify items that are identical in description at the dock and when sold at retail. This identification allows us to measure the distribution wedge associated with bringing traded goods from the point of entry into the United States to their retail outlet. We find that overall U.S. distribution wedges are 50-70%, around 10 to 20 percentage points higher than that reported in the literature. We discuss the implications of this for measuring the size of the "pure" tradeables sector, exchange rate pass-through, and real exchange rate determination. We find that distribution wedges are very stable over time but there is considerable variation across items. There is some variation across the country of origin for the imported item, for our major trading partners, but not as much as the cross-item variation. We also investigate the determinants of distribution wedges, finding that wedges do not vary systematically with exchange rates, but are related to other features of the micro data.

## The carry trade and fundamentals: Nothing to fear but FEER itself

 Journal of International Economics---2012---Oscar Jorda, Alan Taylor

Risky arbitraging based on interest rate differentials

between two countries is typically referred to as a carry trade. Up until the recent global financial crisis, these trades generated years of persistent positive returns, which were hard to reconcile with standard pricing kernels. In 2008 these trades blew up, which seemed to weaken the case for a puzzle relating to predictable currency returns. But the rise and fall of this puzzle in the academic literature has only been concerned with naïve carry trades based on yield signals alone. We show, however, that some simple and more realistic fundamentals-augmented trading strategies would have generated strong and sustained positive profits that endured through the turmoil.

#### Exports, borders, distance, and plant size

• Journal of International Economics---2012---Thomas J. Holmes, John Stevens

The fact that large manufacturing plants export relatively more than small plants has been at the foundation of much work in the international trade literature. We examine this fact using Census microdata on plant shipments from the Commodity Flow Survey. We show that the fact is not entirely an international trade phenomenon; part of it can be accounted for by the effect of distance, distinct from any border effect. Export destinations tend to be farther than domestic destinations, and large plants tend to ship farther distances even to domestic locations compared with small plants. We develop an extension of the Melitz (2003) model and use it to set up an analysis with model interpretations of ratios between large plant and small plant shipments that can be calculated with the data. We obtain a decomposition of the overall ratio into a term that varies with distance, holding fixed the border, and a term that varies with the border, holding fixed the distance. The distance term accounts for more than half of the overall difference.

## Robustness, information–processing constraints, and the current account in small open economies

• Journal of International Economics---2012---Yulei Luo,Jun Nie,Eric Young

In this paper we examine the effects of two types of "induced uncertainty", model uncertainty due to robustness (RB) and state uncertainty due to finite information–processing capacity (called rational inattention or RI), on consumption and the current account. We show that the combination of RB and RI improves the model's predictions for (i) the contemporaneous correlation between the current account and income and (ii) the volatility and persistence of the current account in small open emerging and developed economies. In addition, we show that the two informational frictions improve the model's ability to match the impulse response of consumption to income and the relative volatility of consumption to income growth.

#### Decentralized borrowing and centralized default

• Journal of International Economics---2012---Yun Jung Kim,Jing Zhang

In the past, foreign borrowing by developing countries was comprised almost entirely of government borrowing. However, private firms and individuals in developing countries now borrow substantially from foreign lenders. It is often asserted that this surge in private sector borrowing generates excessive borrowing and frequent sovereign defaults in developing countries. This paper analyzes the impact of decentralized borrowing using a quantitative model in which private agents decide how much to borrow and the government decides whether to default. Relative to a model in which the government determines both the level of borrowing and whether to default, decentralized borrowing drives up aggregate credit costs and sovereign default risk, and reduces aggregate welfare. Interestingly, decentralized borrowing may lead to either too much or too little debt in equilibrium depending on the severity of default penalties.

## Currency composition of international bonds: The EMU effect

 Journal of International Economics---2012---Galina Hale, Mark Spiegel

We analyze the impact that the launch of the EMU

had on the currency denomination of private international bond issues in 1990–2006 using micro-level data. Our stylized model predicts that the introduction of the euro would lead to an increase in the share of euro-denominated debt and a decline in the share of dollar-denominated debt issued by firms located in countries outside both the United States and the euro area. Moreover, our model predicts that the euro effect would be particularly pronounced for nonfinancial firms. Our empirical results are consistent with these predictions. In addition, we find that among nonfinancial firms, the impact on new issuers is larger than on seasoned issuers. Extending the model to allow for differences in issuance volumes across future monetary union countries prior to integration, we also predict larger increases in euro-denominated issuance among firms from smaller monetary union countries. We confirm this prediction for international bond issues by euro-area firms.

## Financial integration, specialization, and systemic risk

 Journal of International Economics---2012---Falko Fecht, Hans Peter Grüner, Philipp Hartmann

This paper studies the implications of cross-border financial integration for financial stability when banks' loan portfolios adjust endogenously. Banks can be subject to sectoral and aggregate domestic shocks. After integration they can share these risks in a complete interbank market. When banks have a comparative advantage in providing credit to certain industries, financial integration may induce banks to specialize in lending. An enhanced concentration in lending does not necessarily increase risk, because a well-functioning interbank market allows to achieve the necessary diversification. This greater need for risk sharing, though, increases the risk of cross-border contagion and the likelihood of widespread banking crises. However, even though integration increases the risk of contagion it improves welfare if it permits banks to realize specialization benefits.

## ClubMed? Cyclical fluctuations in the Mediterranean basin

 Journal of International Economics---2012---Fabio Canova, Matteo Ciccarelli

We investigate macroeconomic fluctuations in the Mediterranean, their similarities and convergence. A model with four indicators, roughly covering the West, the East and the Middle East and the North Africa portions of the Mediterranean, characterizes well the historical experience since the early 1980. Idiosyncratic causes still dominate domestic cyclical fluctuations in many countries. Convergence and divergence which coexist are local and transitory. The cyclical outlook for the next few years is rosier for the East than for the West.

## Corporate taxation and the choice of patent location within multinational firms

• Journal of International Economics---2012---Tom Karkinsky, Nadine Riedel

Corporate patents are important assets in the modern economy, where knowledge is highly valued. In many multinational enterprises (MNEs), they constitute a major portion of the business's value. The intra-firm transfer pricing process for patent-related royalty payments is moreover often highly intransparent and patents thus represent a major source of profit shifting opportunities between multinational entities. For both reasons, MNEs have an incentive to locate their patents at low-tax affiliates to minimize the corporate tax burden. The purpose of our paper is to empirically test for this relationship by exploiting a unique dataset that links information on patent applications to micro panel data for European MNEs. Our results suggest that the corporate tax rate (differential to other group members) exerts a negative effect on the number of patent applications filed by a multinational affiliate. The effect is quantitatively large and robust to controlling for firm size and unobserved heterogeneity between the entities. The findings moreover prevail if we account for royalty withholding taxes and binding 'Controlled Foreign Company' rules.

## Who bears the burden of international taxation? Evidence from cross-border M&As

 Journal of International Economics---2012---Harry Huizinga, Johannes Voget, Wolf Wagner

Cross-border M&As can trigger additional taxation of the target's income in the form of non-resident dividend withholding taxes and acquirer-country corporate income taxation. This paper finds that this additional international taxation is fully capitalized into lower takeover premiums. In contrast, acquirer excess stock market returns around the bid announcement date do not appear to reflect additional taxation of the target's income. These findings suggest that international taxation is considered to be burdensome and that the incidence of this taxation is primarily on target-firm shareholders.

## Sovereign debt and corporate borrowing costs in emerging markets

 Journal of International Economics---2012---Senay Agca,Oya Celasun

We document that the corporate sector faces higher borrowing costs when the external debt of the public sector is higher. By contrast, no significant relationship is found between domestic public debt and corporate borrowing costs. An increase in sovereign debt by one standard deviation from its sample mean is associated with 9% higher loan yield spreads. The correlation is considerably higher in countries with weak creditor rights and past sovereign default episodes. Overall, these findings suggest substantial adverse linkages between public external debt and private financing costs.

#### The dynamic effects of a currency union on trade

• Journal of International Economics---2012---Paul Bergin, Ching-Yi Lin

The response of trade to a monetary union is a dynamic process. An empirical study of the European monetary union finds that the extensive margin of trade in new goods responded several years ahead of EMU implementation and ahead of overall trade volume. A

dynamic rational expectations trade model shows that early entry of new firms in anticipation is explainable as a rational forward-looking response to news. The model helps identify which types of trading frictions are reduced by a currency union, and shows how new entry can be affected by uncertainty about EMU.

#### **Gravity in International Finance**

 Journal of International Economics---2012---Yohei Okawa, Eric van Wincoop

The past decade has witnessed an explosion of papers estimating gravity equations for cross-border financial holdings without much of a theoretical foundation. In this paper we develop a theory for bilateral asset holdings that takes a gravity form. We discuss how to estimate international financial frictions and conduct comparative statics analysis within the context of the theory. We also find though that reasonable extensions of the model no longer generate a gravity form. While this does not significantly complicate estimation and comparative statics analysis, it raises questions about the empirical validity of gravity specifications for cross-border financial holdings that need to be addressed in future work.

## Can leading indicators assess country vulnerability? Evidence from the 2008–09 global financial crisis

Journal of International Economics---2012-- Jeffrey Frankel, George Saravelos

We investigate whether leading indicators can help explain the cross-country incidence of the 2008–09 financial crisis. Rather than looking for indicators with specific relevance to the recent crisis, the selection of variables is driven by an extensive review of more than eighty papers from the previous literature on early warning indicators. Our motivation is to address suspicions that indicators found to be useful predictors in one round of crises are typically not useful to predict the next round. The review suggests that central bank reserves and past movements in the real exchange rate were the two leading indicators that had proven

the most useful in explaining crisis incidence across different countries and episodes in the past. For the 2008–09 crisis, we use six different variables to measure crisis incidence: drops in GDP and industrial production, currency depreciation, stock market performance, reserve losses, and participation in an IMF program. We find that the level of reserves in 2007 appears as a consistent and statistically significant leading indicator of who got hit by the 2008-09 crisis, in line with the conclusions of the pre-2008 literature. In addition to reserves, recent real appreciation is a statistically significant predictor of devaluation and of a measure of exchange market pressure during the current crisis. We define the period of the global financial shock as running from late 2008 to early 2009, which probably explains why we find stronger results than earlier papers such as Obstfeld et al. (2009, 2010) and Rose and Spiegel (2009a,b, 2010, 2011) which use annual data.

#### Temporary trade and heterogeneous firms

 Journal of International Economics---2012---Gábor Békés, Balazs Murakozy

Using Hungarian firm-transaction level export data, we show that about one third of firm-destination and about one half of firm-product-destination export spells are short-lived, or temporary, each year. This is in odds with theories where comparative advantage is stable and market entry costs are sunk. We show how endogenous choice between variable and sunk cost trade technologies can explain the empirical importance and some characteristics of temporary trade. We build a model in which the likelihood of temporary trade depends on productivity and capital cost of the firm as well as well-known gravity variables of destinations. These predictions are borne out by the data; the likelihood of permanent trade, defined by a simple filter, rises with firm productivity, financial stability, proximity and GDP of destination countries.

#### Do trade policy differences induce sorting? Theory and evidence from Bangladeshi apparel exporters

 Journal of International Economics---2012---Svetlana Demidova, Hiau Looi Kee, Kala Krishna

This paper provides a new heterogeneous firm model for trade where firms differ in their productivity and experience different market demand shocks. The model incorporates the variations in trade policy, trade preferences, and the rules of origin needed to obtain them that are faced by Bangladeshi garment exporters to the US and EU. We estimate firm's productivity using an extension of the Olley Pakes procedure that accounts for the biases arising from both demand shocks and productivity being unobserved. Predictions of the model are then tested non-parametrically and are shown to be supported empirically.

## Equilibrium parallel import policies and international market structure

 Journal of International Economics---2012---Santanu Roy, Kamal Saggi

In a North–South vertically differentiated duopoly we analyze (i) the effects of parallel import (PI) policies on price competition and (ii) the interdependence of national PI policies. Prices can be higher in the North if both countries permit PIs relative to when only the South does. If governments maximize national welfare and demand asymmetry across countries is sufficiently large, the North forbids PIs to ensure its firm sells in the South and international price discrimination — the South's most preferred market outcome — obtains. When demand structures are relatively similar across countries, the North permits PIs and uniform pricing — its most preferred outcome — results.

## Trade Liberalization and the Wage Skill Premium: Evidence from Indonesia

 Journal of International Economics---2012---Mary Amiti,Lisa Cameron In this paper, we analyze the effect of reducing import tariffs on intermediate inputs and final goods on the wage skill premium within firms in Indonesia – a country with a high share of unskilled workers. We present a new finding that reducing input tariffs reduces the wage skill premium within firms that import their intermediate inputs. However, we do not find significant effects from reducing tariffs on final goods on the wage skill premium within firms.

## Globalization and wage inequality: Evidence from urban China

• Journal of International Economics---2012---Jun Han,Runjuan Liu,Junsen Zhang

This paper examines the impact of globalization on wage inequality using Chinese Urban Household Survey data from 1988 to 2008. Exploring two trade liberalization shocks, Deng Xiaoping's Southern Tour in 1992 and China's accession to the World Trade Organization (WTO) in 2001, we analyze whether regions more exposed to globalization experienced larger changes in wage inequality than less-exposed regions. Contrary to the predictions of the Heckscher–Ohlin model, we find that the WTO accession was significantly associated with rising wage inequality. We further show that both trade liberalizations contributed to within-region inequality by raising the returns to education (the returns to high school after 1992 and the returns to college after 2001).

#### Immigration and international prices

 Journal of International Economics---2012---Marios Zachariadis

This paper considers the relation between immigration and prices in a number of countries across the world over the period from 1990 to 2006. Immigration is shown to have a negative impact on international relative prices. A 10% increase in the share of immigrant workers in total employment decreases the prices of final products by as much as 3%. Our results suggest that the tendency of this factor of production to relocate to relatively expensive high-wage countries exerts

downward pressure on prices of tradeables and nontradeables there relative to other locations. The effect of immigration on prices is more evident for goods consumed by immigrants as compared to goods produced by immigrants.

## **Export Versus FDI and the Communication of Complex Information**

 Journal of International Economics---2012---Lindsay Oldenski

Traditional proximity-concentration models of the decision to serve foreign markets through exports or FDI sales tend to overemphasize physical transport costs and market size while underemphasizing the cost of transmitting information. I augment those models with the importance of interacting with customers and communicating complex information within firms and use these characteristics to predict the location of production. Goods and services requiring direct communication with consumers are more likely to be produced in the destination market. Activities requiring complex within firm communication are more likely to occur at the multinational's headquarters for export, especially when the destination market has weak institutions. These predictions are tested using firm-level data from the Bureau of Economic Analysis US Direct Investment Abroad Benchmark Survey of Multinationals combined with task-level data from the Department of Labor's Occupational Information Network. The approach developed in this paper performs well for both manufacturing and service industries and is robust to a variety of specifications.

## Learning and knowledge diffusion in a global economy

• Journal of International Economics---2012---Kunal Dasgupta

I develop a dynamic general equilibrium model to understand how multinationals affect host countries through knowledge diffusion. Workers in the model learn from their managers and knowledge diffusion takes place through worker mobility. Unlike in a model without learning, I present a novel mechanism through which an integrated equilibrium represents a Pareto improvement for the host country. I go on to explore other dynamic consequences of integration. The entry of multinationals makes the lifetime earning profiles of host country workers steeper. At the same time, if agents learn fast enough, integration creates unequal opportunities, thereby widening inequality. The exworkers of foreign multinationals also found new firms which are, on average, larger than the largest firms under autarky.

## Labor market institutions, firm-specific skills, and trade patterns

• Journal of International Economics---2012---Heiwai Tang

This paper studies how a country's labor market institutions, by affecting workers' skill acquisition, can shape its export patterns. I develop an open-economy model in which workers undertake non-contractible activities to acquire firm-specific skills on the job. In the model, labor market protection raises workers' incentives to acquire firm-specific skills relative to general skills, turning labor laws into a source of comparative advantage. In particular, the model shows that countries with more protective labor laws export relatively more in firm-specific skill-intensive sectors at both the intensive and extensive margins. To test the theoretical predictions, I construct sector proxies for the firm-specific and industry-specific skill intensity by estimating returns to firm tenure and industry tenure for different U.S. manufacturing sectors during the 1974–1993 period. By estimating sector-level gravity equations for 84 countries using the Helpman–Melitz–Rubinstein (2008) framework, I find evidence supporting the predicted effects of labor market institutions at both margins of exports.

#### Networks, firms, and trade

 Journal of International Economics---2012---Paulo Bastos, Joana Silva

Fixed costs associated with learning about demand

and setting up distribution networks are expected to be lower when there are more potential contacts in the destination market, suggesting a greater probability of market entry and larger export revenues. We match historically-determined emigration stocks with detailed firm-level data from Portugal to examine the effect of migrant networks on these export outcomes. We find that larger stocks of emigrants in a given destination increase export participation and intensity. In addition, we show that the former of these effects tends to be more pronounced among firms that are more likely to have close ties with the emigrants. These results are consistent with a multiple-destination version of the Melitz (2003) model featuring market-specific entry costs and idiosyncratic firm-destination demand shocks.

### Innovation and imitation in a model of North–South trade

• Journal of International Economics---2012---Teodora Borota Milicevic

This paper analyzes the growth and welfare effects of trade openness within a North-South framework that predicts the observed intra-industry trade and the North-South specialization over different quality vintages within product lines. The model is used to re-examine the relationship between the innovation in the North and the imitation lag of the South and to address the implications of the (weak) international Intellectual Property Rights (IPR) protection. When the imitation technology is modeled as a function of increasing complexity of targeted products, opening to trade increases the growth rate and welfare of both regions, but results in a larger North-South quality gap. While a full catch-up is possible with no protection of ideas flow, but also with no trade, the quality gap is always positive under full economic integration including trade in goods. Stronger IPR protection increases the gap and has a negative effect on the world growth rate and welfare.

## Rainfall, financial development, and remittances: Evidence from Sub-Saharan Africa

 Journal of International Economics---2012---Rabah Arezki, Markus Brückner

We use annual variations in rainfall to examine the effects that exogenous, transitory income shocks have on remittances in a panel of 41 Sub-Saharan African countries during the period 1970–2007. Our main finding is that on average rainfall shocks have an insignificant contemporaneous effect on remittances. However, the marginal effect is significantly decreasing in the share of domestic credit to GDP. So much so, that at high levels of credit to GDP rainfall shocks have a significant negative effect on remittances, while at low levels of credit to GDP the effect of rainfall on remittances is significantly positive.

## International productivity and factor price comparisons

• Journal of International Economics---2012---Kathryn G. Marshall

Using OECD input-output tables for a diverse group of 33 countries in the year 2000 and estimates of each country's factor stocks, I compute factor payments for aggregate labor and capital with value-added data adjusted for self-employment by sector. Using a detailed technology matrix for the U.S., I compute factorspecific productivity measures in each country relative to the U.S., and show that these measures are strongly correlated with the pattern of wages and rental rates. I find that many low income countries with low labor productivity have relatively high capital productivity. I also find a distinctive pattern between factor productivity and factor payments depending on whether a country has a high or low wage-rental ratio compared to the U.S. I show these findings are consistent with the existence of sector-based differences in production technology and complementarities between factors.

#### Trade, competition, and efficiency

• Journal of International Economics---2012---Kristian Behrens, Yasusada Murata

We present a general equilibrium model of monopolistic competition featuring pro-competitive effects and a competitive limit, and investigate the impact of trade on welfare and efficiency. Contrary to the constant elasticity case, in which all gains from trade are due to product diversity, our model allows for a welfare decomposition between gains from product diversity and gains from pro-competitive effects. We show that the market outcome is not efficient because too many firms operate at an inefficiently small scale by charging too high markups. We further illustrate that trade raises efficiency by narrowing the gap between the equilibrium utility and the optimal utility. As the population gets arbitrarily large in the integrated economy, the equilibrium utility converges to the optimal utility because of the competitive limit. We finally extend the variable elasticity model to a multi-sector setting, and show that intersectoral distortions are eliminated in the limit. The multi-sector model allows us to illustrate some new aspects arising from intersectoral and intrasectoral allocations, namely that trade leads to structural convergence, rather than sectoral specialization, and that trade induces domestic exit in the nontraded sector.

## Competition and political organization: Together or alone in lobbying for trade policy?

• Journal of International Economics---2012---Matilde Bombardini,Francesco Trebbi

This paper employs a novel data set on lobbying expenditures to measure the degree of within-sector political organization and to explore the determinants of the mode of lobbying and political organization across U.S. industries. The data show that sectors characterized by a higher degree of competition tend to lobby more together (through a sector-wide trade association), while sectors with higher concentration and more differentiated products lobby more individually. The paper proposes a theoretical model to interpret the empirical evidence. In an oligopolistic market, firms can benefit from an increase in their product-specific protection measure, if they can raise prices and profits. They find it less profitable to do so in a competitive market where

attempts to raise prices are more likely to reduce profits. In competitive markets firms are therefore more likely to lobby together, thereby simultaneously raising tariffs on all products in the sector.

US versus the rest of the world (RoW) scenario, we perform experiments that are largely consistent with countries' liberalization experiences. A reduction in the RoW's controls on capital outflows and/or a tight-

## Heterogeneous firms, exporter networks and the effect of distance on international trade

• Journal of International Economics---2012---Sebastian Krautheim

Distance effects in gravity equations are high and are not decreasing over time. Given that technical change in transport technology is biased in favor of long distances, this constitutes a challenge for existing theoretical models. In line with recent empirical evidence, this paper introduces a spillover effect from the number of exporters to the fixed costs of exporting into a trade model with heterogeneous firms. Since less firms export to remote markets, the equilibrium fixed costs are increasing in distance. This creates an additional effect of distance on aggregate trade flows: while the intensive margin of trade is unaffected, the extensive margin is magnified. This magnification leads to higher predicted distance effects. In addition, it offers a new perspective on non-decreasing distance effects: a relatively moderate strengthening of the spillover over time is sufficient to generate a constant distance elasticity.

## Capital liberalization and the US external imbalance

 Journal of International Economics---2012---Elvira Prades.Katrin Rabitsch

Differences in financial systems are often named as a prime candidate for the current state of global imbalances. This paper focuses on cross-country heterogeneity in access to international financial markets that derives from the presence of capital controls and argues that the process of capital liberalization over the past decades can explain a substantial fraction of US net external liabilities. We present a simple two-country model with an internationally traded bond, in which capital controls are reflected in the presence of borrowing and lending constraints on that bond. In a

US versus the rest of the world (RoW) scenario, we perform experiments that are largely consistent with countries' liberalization experiences. A reduction in the RoW's controls on capital outflows and/or a tightening in the RoW's borrowing constraint enable the US economy to better insure against consumption risk relative to the rest of the world, and therefore decrease its motives for precautionary asset holdings relative to the rest of the world. As a result of these asymmetric shifts in countries' barriers to capital mobility, the US runs a long run external deficit.

## Getting beyond carry trade: What makes a safe haven currency?

 Journal of International Economics---2012---Maurizio M. Habib, Livio Stracca

The main objective of this paper is to investigate the fundamentals of safe haven currencies, which are those currencies that provide an hedge for a reference portfolio of risky assets, conditional on shocks to global risk aversion. We analyse a large panel of 52 currencies in advanced and emerging countries over almost 25 years of data. We find that only a few factors are robustly associated to a safe haven status, most notably the net foreign asset position, an indicator of external vulnerability, and whether currencies have been a good hedge in the past. In addition, the currencies of large, less financially open economies are a good hedge against global risk aversion shocks. By contrast, the level of the interest rate spread vs. the US is significant only during the latest crisis. Finally, we find some evidence of non-linearity as the importance of the fundamentals is stronger during crisis times.

## The use of foreign currency derivatives, corporate governance, and firm value around the world

 Journal of International Economics---2012---George Allayannis, Ugur Lel, Darius P. Miller

This paper examines the impact of currency derivatives on firm value using a broad sample of firms from thirtynine countries with significant exchange-rate exposure. Derivatives can be used for managers' self-interest, for hedging or for speculative purposes. We hypothesize that investors can appeal to a firm's internal (firm-level) and external (country-level) corporate governance to draw inferences on a firm's motive behind the use of derivatives, since well-governed firms are more likely to use derivatives to hedge rather than to speculate or pursue managers' self-interest. Consistent with this explanation, we find strong evidence that the use of currency derivatives for firms that have strong internal firm-level or external country-level governance is associated with a significant value premium.

## A Ricardian model of trade and growth with endogenous trade status

• Journal of International Economics---2012---Takumi Naito

We formulate a two-country, continuum-good Ricardian model of trade and endogenous growth with endogenous trade status. After establishing the existence, uniqueness, and global stability of a balanced growth path, we show that, compared with the old balanced growth path, a permanent fall in the trade cost in any one country: (i) raises the growth rates of capital in all countries for all periods; (ii) increases both the range of the imported varieties and that of the exported varieties in all countries for all periods; and (iii) raises welfare in all countries. Our theoretical predictions are qualitatively consistent with the empirical evidence.

### Learning to export: Export growth and the destination decision of firms

• Journal of International Economics---2012---Katherine Schmeiser

I find evidence that the geographic expansion of firm exports occurs slowly over time and that a large share of export growth is due to incumbent exporters entering new destinations. New exporters enter large countries and destinations with characteristics similar to their domestic market. Less similar, distant or less developed countries are entered by firms already exporting to other destinations. I formulate a dynamic general

equilibrium model to test if these patterns are due to firms learning how to export (as other recent empirical findings have suggested) or other factors considered in the literature. In this model, heterogeneous firms experience learning in the form of market entry costs that depend on export history. Using Russian firm level data, I find that learning plays a significant role in explaining the observed entry patterns, which standard trade models cannot account for.

## International differences in production techniques: Implications for the factor content of trade

• Journal of International Economics---2012---Shuichiro Nishioka

This paper examines how production techniques differ across countries, factors, and industries and considers its implications for previous empirical evidence on the Vanek prediction. I find that production techniques differ substantially across countries and factors, but differ much less across industries within a country. Davis and Weinstein (2001) argue that modeling cross-industry differences (multiple-cone specialization) improves the fit of the Vanek prediction; however, their test statistics are unchanged when one restricts techniques to be identical across industries within a country. Thus, the bulk of world factor content of trade does not arise from specialization.

## A proportionality assumption and measurement biases in the factor content of trade

 Journal of International Economics---2012---Laura Puzzello

This paper revisits Trefler and Zhu's (2005, 2010) (TZ) empirical examination of the factor content of trade in the presence of international differences in production techniques and trade in inputs. In this framework, knowing the bilateral details of each country's input—output structure is key to the correct calculation of the factor content of trade. Because input—output tables typically lack this detail, TZ impute the relevant input—output coefficients by making a propor-

Gaulier, Daria Taglioni, Vincent Vicard

tionality assumption. This paper uses survey-based input-output coefficients from the Asian Input-output (AIO) tables that do provide bilateral details. Exploiting methodological differences in the compilation of the AIO tables and the data underlying TZ studies, this paper empirically assesses how well the TZ approach fits sourcing patterns of inputs and finds that it understates countries' use and relative use of foreign inputs, especially in those sectors where they are most used. As a result countries' use of domestic factors is overstated. Biases generated on exported and imported factor services cancel each other out. The net effect on the measured factor trade is small.

## Off the cliff and back? Credit conditions and international trade during the global financial crisis

 Journal of International Economics---2012---Davin Chor, Kalina Manova

We study the collapse of international trade flows during the global financial crisis using detailed data on monthly US imports. We show that credit conditions were an important channel through which the crisis affected trade volumes, by exploiting the variation in the cost of capital across countries and over time, as well as the variation in financial vulnerability across sectors. Countries with higher interbank rates and thus tighter credit markets exported less to the US during the peak of the crisis. This effect was especially pronounced in sectors that require extensive external financing, have limited access to trade credit, or have few collateralizable assets. Exports of financially vulnerable industries were thus more sensitive to the cost of external capital than exports of less vulnerable industries, and this sensitivity rose during the financial crisis. The quantitative implications of our estimates for trade volumes highlight the large real effects of financial crises and the potential gains from policy intervention.

## Firms and the global crisis: French exports in the turmoil

• Journal of International Economics---2012---Jean-Charles Bricongne, Lionel Fontagné, Guillaume Global trade contracted quickly and severely during the global crisis. This paper uses a unique dataset of French firms to match export data to firm-level credit constraints and shows that most of the 2008-2009 trade collapse was due to the unprecedented demand shock and to product characteristics. While all firms have been affected by the crisis, the effect on large firms has been mainly at the intensive margin and has resulted in a smaller portfolio of products being offered to export destinations. The effect on smaller exporters has been to reduce the range of destinations served or to stop exporting altogether. Credit constraints have been an added aggravation for firms active in high financial dependence sectors. However, the share of credit constrained firms is small and their number has not increased hugely during the crisis, with the result that the overall impact of credit constraints on trade has been limited.

### Cross-border banking, credit access, and the financial crisis

 Journal of International Economics---2012---Alexander Popov, Gregory Udell

We study the sensitivity of credit supply to bank financial conditions in 16 emerging European countries before and during the financial crisis. We use survey data on 10,701 applicant and non-applicant firms that enable us to disentangle effects driven by positive and negative shocks to the banking system from demand shocks that may vary across lenders. We find strong evidence that firms' access to credit was affected by changes in the financial conditions of their banks. During the crisis firms were more credit constrained if they were dealing with banks that experienced a decline in equity and Tier 1 capital, as well as losses on financial assets. We also find that access to credit reflects the balance sheet conditions of foreign parent banks. The effect of positive and negative shocks to a bank is greater for riskier firms and firms with fewer tangible

## Market response to policy initiatives during the global financial crisis

 Journal of International Economics---2012---Yacine Ait-Sahalia, Jochen Andritzky, Andreas Jobst, Sylwia Nowak, Natalia Tamirisa

This paper examines the impact of macroeconomic and financial sector policy announcements in the United States, the United Kingdom, the euro area, and Japan on interbank credit and liquidity risk premia during the recent crisis. Overall, policy interventions were associated with a reduction in interbank risk premia, most significantly for recapitalization programs. By contrast, decisions to bail out individual banks in an ad hoc manner or let them fail were accompanied by a significant rise in interbank risk premia. Most policy announcements had international spillovers. These results are broadly robust to using alternative measures of financial distress and varying the size of the event window.

#### How do business and financial cycles interact?

• Journal of International Economics---2012---Stijn Claessens, Ayhan Kose, Marco Terrones

This paper analyzes the interactions between business and financial cycles using an extensive database covering 44 countries for the period 1960:1–2010:4. Our analysis shows that there are strong linkages between the different phases of business and financial cycles. In particular, recessions associated with financial disruptions, notably house and equity price busts, tend to be longer and deeper than other recessions. Conversely, while recoveries following asset price busts tend to be weaker, recoveries associated with rapid growth in credit and house prices are often stronger. These findings emphasize the importance of financial market developments for the real economy.

#### Fairness, trade, and inequality

• Journal of International Economics---2012---Hartmut Egger,Udo Kreickemeier

We develop a model of international trade between two symmetric countries that features inter-group inequality between managers and workers, and also intra-group inequality within each of those two groups. Individuals are heterogeneous with respect to their managerial ability, and firms run by more able managers have a higher productivity level and make higher profits. There is rent sharing at the firm level due to fair wage preferences of workers, and hence firms with higher profits pay higher wages in equilibrium in order to elicit their workers' full effort. We show that in this framework international trade leads to a self-selection of the best firms into export status, with exporting firms having to pay a wage premium. Aggregate welfare increases, but there is also larger inequality along multiple dimensions: Involuntary unemployment and income inequality between managers and workers increase, and so does inequality within these two subgroups of individuals, as measured by the respective Gini coefficients.

#### Trade liberalization and organizational change

 Journal of International Economics---2012---Paola Conconi, Patrick Legros, Andrew Newman

We embed a simple incomplete-contracts model of organization design in a standard two-country perfectlycompetitive trade model to examine how the liberalization of product and factor markets affects the ownership structure of firms. In our model, managers decide whether or not to integrate their firms, trading off the pecuniary benefits of coordinating production decisions with the private benefits of operating in their preferred ways. The price of output is a crucial determinant of this choice, since it affects the size of the pecuniary benefits. Organizational choices also depend on the terms of trade in supplier markets, which affect the division of surplus between managers. We show that, even when firms do not relocate across countries, the price changes triggered by the liberalization of product markets can lead to changes in ownership structures within countries. The removal of barriers to factor mobility can also induce widespread restructuring, which can lead to increases in product prices (or declines in quality), hurting consumers worldwide.

#### Globalization and the empowerment of talent

 Journal of International Economics---2012---Dalia Marin, Thierry Verdier

Many experts have identified globalization as the new way in which firms organize their activities and the emergence of talent as the new stakeholder in the firm. This paper examines the role of trade integration in the changing nature of the corporation. International trade leads to a 'war for talent' which makes it more likely that an organizational equilibrium emerges in the integrated world economy in which control is delegated to lower levels of the firm's hierarchy empowering human capital. Furthermore, trade integration is shown to lead to waves of decentralization and to convergence in corporate cultures across countries.

## Accounting for intermediates: Production sharing and trade in value added

• Journal of International Economics---2012---Robert Johnson, Guillermo Noguera

We combine input-output and bilateral trade data to compute the value added content of bilateral trade. The ratio of value added to gross exports (VAX ratio) is a measure of the intensity of production sharing. Across countries, export composition drives VAX ratios, with exporters of Manufactures having lower ratios. Across sectors, the VAX ratio for Manufactures is low relative to Services, primarily because Services are used as an intermediate to produce manufacturing exports. Across bilateral partners, VAX ratios vary widely and contain information on both bilateral and triangular production chains. We document specifically that bilateral production linkages, not variation in the composition of exports, drive variation in bilateral VAX ratios. Finally, bilateral imbalances measured in value added differ from gross trade imbalances. Most prominently, the U.S.-China imbalance in 2004 is 30-40% smaller when measured in value added.

## The role of expenditure switching in the global imbalance adjustment

 Journal of International Economics---2012---Wei Dong

In theory, nominal exchange rate movements can lead "expenditure switching" when they generate changes in the relative prices of goods across countries. This paper explores whether the expenditureswitching role of exchange rates has changed in the current episode of significant global imbalances. We develop a multi-sector two-country model for the United States and the G6 countries, with the rest of the world captured by exogenous price and demand shocks, and estimate the model over two sub-samples, which cover the periods before and after the early 1990s. Our results indicate that both U.S. imports and exports have become much less responsive to exchange rate movements in recent years, mainly due to changes in firms' pricing behavior and global trade pattern. These findings suggest that the exchange rate would have to move by a much larger amount now than in the 1970s and 1980s to reduce the U.S. trade deficit by a given amount.

#### **Duration of sovereign debt renegotiation**

• Journal of International Economics---2012---Yan Bai,Jing Zhang

In the period since 1990, sovereign debt renegotiations take an average of five years for bank loans but only one year for bonds. We provide an explanation for this finding by highlighting one key difference between bank loans and bonds: bank loans are rarely traded, while bonds are heavily traded on the secondary market. In our theory, the secondary market plays a crucial information revelation role in shortening renegotiations. Consider a dynamic bargaining game with incomplete information between a government and creditors. The creditors' reservation value is private information, and the government knows only its distribution. Delays in reaching agreements arise in equilibrium because the government uses costly delays to screen the creditors' reservation value. When the creditors trade on the

secondary market, the market price conveys informa- Per capita income, market access costs, and tion about their reservation value, which lessens the information friction and reduces the renegotiation duration. We find that the secondary market tends to increase the renegotiation payoff of the government but decrease that of the creditors while increasing the total payoff. We then embed these renegotiation outcomes in a simple sovereign debt model to analyze the ex ante welfare implications. The secondary market has the potential to increase the government ex ante welfare when the information friction is severe.

#### The effect of the Uruguay round on the intensive and extensive margins of trade

• Journal of International Economics---2012---Ines Buono, Guy Lalanne

Do tariffs inhibit trade flows by limiting the entry of exporters ('firm extensive margin') or by restricting the average volume exported by each firm ( 'firm intensive margin')? Using a gravity equation approach, we analyze how the decrease in tariffs promoted during the 90s by the Uruguay Round multilateral trade agreement affected the trade margins of French firms for 57 sectors and 147 countries from 1993 to 2002. Our main contribution is to estimate the elasticity of trade on both margins, controlling for the unobserved heterogeneity of trade flows thanks to a three-dimensional panel and to time-varying tariffs as a measure of variable trade costs. Our results show that the number of firms exporting in a given sector to a given destination is related to the level of tariffs. But they also show that the decrease in tariffs induced by the implementation of the Uruguay Round did not lead more firms to export and that it only induced incumbent exporters to increase their shipments. We control for two problems that may affect our basic specification: tariff changes may be endogenous and zero flows are not included. Our results are confirmed — even when the extensive margin is significant, its magnitude is very small.

### trade volumes

• Journal of International Economics---2012---Alexander Tarasov

There is strong empirical evidence that countries with lower per capita income tend to have smaller trade volumes even after controlling for aggregate income. Furthermore, poorer countries do not just trade less, but have a lower number of trading partners. In this paper, I construct and estimate a general equilibrium model of trade that captures both these features of the trade data. The key element of the model is an association between trade costs (both variable and fixed) and countries' development levels, which can account for the effect of per capita income on trade volumes and explain many zeros in bilateral trade flows. I find that market access costs play an important role in fitting the model to the data. In a counterfactual analysis, I find that removing the asymmetries in trade costs raises welfare in all countries with an average percentage change equal to 29% and larger gains for smaller and poorer countries. Real income inequality falls by 43%.

#### Fighting multiple tax havens

• Journal of International Economics---2012---May Elsayyad, Kai Konrad

This paper develops a competition theory framework that evaluates an important aspect of the OECD's Harmful Tax Practices Initiative against tax havens. We show that the sequential nature of the process is harmful and more costly than a "big bang" multilateral agreement. The sequentiality may even prevent the process from being completed successfully. Closing down a subset of tax havens reduces competition among the havens that remain active. This makes their "tax haven business" more profitable and shifts a larger share of rents to these remaining tax havens, making them more reluctant to give up their "tax haven business". Moreover, the outcome of this process, reducing the number of tax havens, but not eliminating them altogether, may reduce welfare in the OECD.

## Risk and the technology content of FDI: A dynamic model

• Journal of International Economics---2012---Pao-Li Chang, Chia-Hui Lu

This paper incorporates risk into the FDI decisions of firms. The risk of FDI failure increases with the gap between the South's technology frontier and the technology complexity of a firm's product. This leads to a double-crossing sorting pattern of FDI—firms of intermediate technology levels are more likely than others to undertake FDI. It is with the attempt to relax the upper bound of the technology content of FDI, we argue, that many FDI policies are created. The theory's predictions are consistent with the empirical patterns of FDI in China by US and Taiwanese manufacturing firms.

## Commodity windfalls, polarization, and net foreign assets: Panel data evidence on the voracity effect

• Journal of International Economics---2012---Rabah Arezki, Markus Brückner

This paper examines the effects that windfalls from international commodity price booms have on net foreign assets in a panel of 145 countries during the period 1970–2007. The main finding is that windfalls from international commodity price booms lead to a significant increase in net foreign assets, but only in countries that are ethnically homogeneous. In highly ethnically polarized countries, net foreign assets significantly decreased. To explain this asymmetry, the paper shows that in ethnically polarized countries commodity windfalls lead to large increases in government consumption expenditures and political corruption. The paper's findings are consistent with theoretical models of the current account that have a built-in voracity effect.

#### Virtual borders

• Journal of International Economics---2012---Jean Boivin, Robert Clark, Nicolas Vincent

Numerous studies have documented substantial deviations from the law of one price for consumer goods. However, in most cases small transaction costs can explain these violations. In our study, we purposely focus on a market where such frictions are minimal, namely online bookselling in the US and Canada. We exploit the high frequency nature of the data to disentangle nominal rigidities from market segmentation and show that while firms seem to respond to domestic competitive pressure, there is no evidence that they react to fluctuations in the relative price of foreign competition following exchange rate movements. In addition, we cannot identify any significant impact on sales volume stemming from variations in international relative prices. Hence, our results suggest that even in an environment with minimal frictions, international market segmentation is extensive and responsible for violations of the law of one price.

## Demand uncertainty: Exporting delays and exporting failures

• Journal of International Economics---2012---Daniel Nguyen

This paper presents a model of trade that explains why firms wait to export and why many exporters fail. Firms face uncertain demands that are only realized after the firm enters the destination. The model retools the timing of the resolution of uncertainty found in models with heterogeneity of firm productivity. This retooling addresses several shortcomings. First, the imperfect correlation of demands reconciles the sales variation observed in and across destinations. Second, since demands for the firm's output are correlated across destinations, a firm can use previously realized demands to forecast unknown demands in untested destinations. The option to forecast demands causes firms to delay exporting in order to gather more information about foreign demand. Third, since uncertainty is resolved after entry, many firms enter a destination and then exit after learning that they cannot profit. This prediction reconciles the high rate of exit seen in the first years of exporting. Finally, when faced with multiple destinations to which they can export, many firms will choose to sequentially export in order shock, and credit constraints are key to understanding to slowly learn more about its chances for success in untested markets.

A many-cone world?

• Journal of International Economics---2012---Kozo Kiyota

The breakdown of global factor price equalization, or a single-cone world, is a central concern in various fields of economics. This paper examines the empirical validities of the following two claims: 1) the multiple-cone Heckscher-Ohlin (HO) model fits better than does the single-cone HO model; and 2) increases in the number of cones improve the fit of the model. One of the contributions of this paper is that it focuses simultaneously on factor endowments, production patterns, and wage disparities across economies. My empirical results support the first claim but not the second claim. The results suggest that although the multiple-cone model performs better than does the single-cone model, the increases in the number of cones do not necessarily result in better performance of the HO model.

#### Banking globalization and international business cycles: Cross-border chained credit contracts and financial accelerators

• Journal of International Economics---2012---Kozo Ueda

This paper constructs a two-country DSGE model to study the nature of the recent financial crisis and its effects that spread immediately throughout the world owing to the globalization of banking. In the model, financial intermediaries (FIs) enter into chained credit contracts at home and abroad, engaging in crossborder lending to entrepreneurs by undertaking crossborder borrowing from investors. The FIs as well as the entrepreneurs in two countries are credit constrained. so all of their net worths matter. Our model reveals that under FIs' globalization, adverse shocks that hit one country affect the other, yielding business cycle synchronization on both the real and financial sides. It also suggests that the FIs' globalization, net worth the recent financial crisis.

#### Financial integration and international risk sharing

• Journal of International Economics---2012---Yan Bai, Jing Zhang

Conventional wisdom suggests that financial liberalization can help countries insure against idiosyncratic risk. There is little evidence, however, that countries have increased risk sharing despite widespread financial liberalization. We show that the key to understanding this puzzling observation is that conventional wisdom assumes frictionless international financial markets, while actual markets are far from frictionless: financial contracts are incomplete and contract enforceability is limited. When countries remove official capital controls, default risk is still present as an implicit barrier to capital flows. If default risk were eliminated, capital flows would be six times greater, and international risk sharing would increase substantially.

#### Consumption and real exchange rates in professional forecasts

• Journal of International Economics---2012---Michael Devereux, Gregor Smith, James Yetman

Standard models of international risk sharing with complete asset markets predict a positive association between relative consumption growth and real exchangerate depreciations across countries. The striking lack of evidence for this link — the consumption/realexchange-rate anomaly or Backus-Smith puzzle has prompted research on risk-sharing indicators with incomplete asset markets. That research generally implies that the association holds in forecasts, rather than realizations. Using professional forecasts for 28 countries for 1990–2010 we find no such association, whether for floating nominal exchange rate regimes, fixed exchange rates, or common currencies, thus deepening the puzzle.

#### Trade and prices with heterogeneous firms

• Journal of International Economics---2012---Robert Johnson

This paper estimates a heterogeneous firms trade model using sector level data on export participation, trade flows, and unit value prices in a multi-country setting. Examining within-exporter variation in prices across destinations, prices are increasing in the difficulty of entering the destination market in the majority of sectors. This pattern is consistent with models in which product quality is positively correlated with firm size. However, prices decrease in export thresholds in some large sectors, including autos, apparel, and electronics. I discuss the causes and consequences of this cross-sector heterogeneity. From an accounting perspective, selection into exporting explains a small fraction of overall price variation, but accounts for nearly half of variation in bilateral trade.

#### Firm-level volatility and exports

• Journal of International Economics---2012---Gonzague Vannoorenberghe

This paper shows that the share of exports in the total sales of a firm has a positive and substantial impact on the volatility of its sales. Decomposing the volatility of sales of exporters between their domestic and export markets, I show using an identification strategy based on a firm-specific geographical instrument that firms with a larger export share have more volatile domestic sales and less volatile exports. These empirical patterns can be explained using a model in which firms face market-specific shocks and short-run convex costs of production. In such a framework, firms react to a shock in one market by adjusting their sales in the other market. I point to strong evidence that output variations on the domestic and export market are negatively correlated at the firm level. This result casts doubts on the standard hypothesis that firms face constant marginal costs and maximize profits on their different markets independently of each other. Furthermore, it points to the caveat that sales volatility on a particular market only gives limited information about the size of shocks on that market.

## How wages and employment adjust to trade liberalization: Quasi-experimental evidence from Austria

 Journal of International Economics---2012---Marius Brülhart, Celine Carrere, Federico Trionfetti

We study the response of regional employment and nominal wages to trade liberalization, exploiting the natural experiment provided by the opening of Central and Eastern European markets after the fall of the Iron Curtain in 1990. Using data for Austrian municipalities, we examine differential pre- and post-1990 wage and employment growth rates between regions bordering the formerly communist economies and interior regions. If the 'border regions' are defined narrowly, within a band of less than 50km, we can identify statistically significant liberalization effects on both employment and wages. While wages responded earlier than employment, the employment effect over the entire adjustment period is estimated to be around three times as large as the wage effect. The implied slope of the regional labor supply curve can be replicated in an economic geography model that features obstacles to labor migration due to immobile housing and to heterogeneous locational preferences.

## Local costs of distribution, international trade costs and micro evidence on the law of one price

 Journal of International Economics---2012---Rahul Giri

This paper connects trade flows to deviations from the law of one price (LOOP) in a structural model of trade and retailing. It accounts for the observed cross-country dispersion in prices of goods, based on retail price survey data, by focusing on two sources of goods market segmentation — (i) international trade costs, and (ii) non-traded input costs of distribution. I find that a multi-sector Ricardian trade model, ala Eaton-Kortum, augmented with a distribution sector, can account for the average price dispersion for a basket of goods fully and generates 70% of the variation in price dispersion across goods within the basket. While tradability of goods is important in explaining the average price dispersion for the basket of goods, distribution costs are important in explaining why, within the basket, some goods show more price dispersion than others.

#### Manufacturing restructuring and the role of real exchange rate shocks

• Journal of International Economics---2012--Karolina Ekholm, Andreas Moxnes, Karen Helene Ulltveit-Moe

Using a new and extensive micro data set we investigate the impact of a change in international competitive pressure on industrial performance and restructuring. Unlike previous studies we are able to account for the heterogeneity across firms in their exposure to foreign competition. We focus on a situation akin to a natural experiment, and examine the impact of a sharp real appreciation of the Norwegian Krone in the early 2000s on Norwegian manufacturing firms which differ substantially in their trade orientation. A change in the real exchange rate (RER) affects a firm through three different channels: (i) firm's export sales, (ii) firm's purchases of imported inputs, and (iii) import competition faced in the domestic market. Unlike previous studies, we are able to examine all three channels. Both net exporters and import-competing firms were exposed to increased competition due to the real appreciation. Both groups reacted by shedding labor, but only the first group experienced increasing labor productivity. Partly, the productivity improvements came from measured TFP gains, while capital deepening does not appear to have been affected by the shock.

#### International trade with endogenous mode of competition in general equilibrium

ter Neary, Joe Tharakan

This paper endogenizes the extent of intra-sectoral competition in a multi-sectoral general-equilibrium model of oligopoly and trade. Firms choose capacity followed by prices. If the benefits of capacity investment in a given sector are below a threshold level, the sector exhibits Bertrand behavior, otherwise it exhibits Cournot behavior. By endogenizing the threshold parameter in general equilibrium, we show how exogenous shocks such as globalization and technological change alter the mix of sectors between "more" and "less" competitive, or Bertrand and Cournot, and affect the relative wages of skilled and unskilled workers, even in a "North-North" model with identical countries.

#### The rise of vertical specialization trade

• Journal of International Economics---2012---Benjamin Bridgman

Manufacturing and vertical specialization (VS) trade, trade in goods that incorporate imported inputs, have grown rapidly since the 1960s. I argue that declining trade costs are an important explanation for these facts. I present a three stage vertical specialization trade model, with raw materials, manufactured parts and final goods sectors. In the simulated model, falling trade costs explain much of the observed growth in overall and VS trade. Manufacturing trade grows twice as fast as overall trade. Raw materials trade was more important in the 1960s when trade costs were high, since their production is more strongly linked to endowments than manufacturing. Therefore, materials will be traded even when trade costs are high. Trade costs have fallen more for manufactured goods over the last 40 years, leading to a rapid expansion of manufactured parts trade relative to materials.

#### **Evasion behaviors of exporters and importers:** Evidence from the U.S.-China trade data discrepancy

• Journal of International Economics---2012---Michael J. Ferrantino, Xuepeng Liu, Zhi Wang

• Journal of International Economics---2012---J. Pe- Since the late 1990s, reported U.S. imports from China and Hong Kong have regularly and increasingly exceeded reported exports of China and Hong Kong to the United States. This discrepancy, which is not caused by re-exporting through Hong Kong, varies by product categories, and in some cases takes the opposite sign. In this paper, we focus on China's direct exports to the United States. Using a model that allows for simultaneous misreporting to two authorities, we find strong statistical evidence of under-reporting exports at the Chinese border to avoid paying value-added tax (VAT). The value of VAT avoided is estimated at \$6.5 billion during 2002–2008, and the associated understatements account for approximately two-thirds of the discrepancy. We also provide evidence of tariff evasion at the U.S. border, in particular for relatedparty transactions, and indirect evidence of transfer pricing and evasion of Chinese capital controls. An estimated \$2 billion of U.S. tariff revenue is lost due to such evasion during 2002–2008, which reduces the apparent size of the statistical discrepancy.

#### Understanding interstate trade patterns

• Journal of International Economics---2012---Hakan Yilmazkuday

This paper models and estimates bilateral trade patterns of U.S. states in a CES framework and identifies the elasticity of substitution across goods, the elasticities of substitution across varieties of each good, and the good-specific elasticities of distance by using markup values obtained from the production side. Compared to the international trade literature, the elasticity of substitution estimates are lower across both goods and varieties, while the elasticity of distance estimates are higher. Although home-bias effects at the state level are significant, there is evidence for decreasing effects over time.

#### "Lending by example": Direct and indirect effects of foreign banks in emerging markets

• Journal of International Economics---2012---Mariassunta Giannetti, Steven Ongena

Using a novel dataset that allows us to trace the bank. This paper embeds the specific factors model in the relationships of a sample of mostly unlisted firms, we goods continuum approach of Dornbusch et al. (1977,

explore which borrowers are able to benefit from foreign bank presence in emerging markets. Our results suggest that the limits to financial integration are less tight than the static picture of firm-bank relationships implies. Even though foreign banks are more likely to engage large and foreign-owned firms, after an acquisition, a bank is 20% less likely to terminate a relationship with a firm if the acquirer is foreign rather than domestic. Most importantly, within a credit market, firms appear to have the same access to financial loans and ability to invest whether they borrow from a foreign bank or not, while foreign banks benefit all firms by indirectly enhancing credit access.

#### Volatility due to offshoring: Theory and evidence

• Journal of International Economics---2011---Paul Bergin, Robert Feenstra, Gordon Hanson

Existing models of offshoring are not equipped to explain how global production sharing affects the volatility of economic activity. This paper develops a trade model that can account for why offshoring industries in low wage countries such as Mexico experience fluctuations in employment that are twice as large as in high wage countries such as the United States. We argue that a key to explaining this outcome is that the extensive margin of offshoring responds endogenously to shocks in demand and transmits those shocks across borders in an amplified manner. Empirical evidence supports the claim that the extensive margin of offshoring is an active margin of adjustment, and quantitative simulation experiments show that the degree of movement of this margin in the data is sufficient to explain relative employment volatility in Mexico and the U.S.

#### The specific factors continuum model, with implications for globalization and income risk

• Journal of International Economics---2011---James Anderson

ization on income risk. Globalization amplifies sector specific income risk induced by idiosyncratic sectoral technology shocks, but tends to reduce income risk to both mobile and immobile factors induced by aggregate technology shocks that differ by country. Aggregate risk bears most heavily on the poorest specific factors.

#### Policy choice: Theory and evidence from commitment via international trade agreements

• Journal of International Economics---2011---Nuno Limão, Patricia Tovar

Why do governments employ inefficient policies when more efficient ones are available for the same purpose? We address this puzzle in the context of redistribution toward special interest groups (SIGs) by focusing on a set of important policies: tariffs and non-tariff barriers (NTBs). In our policy choice model a government can gain by committing to constrain tariffs through international agreements even if this leads to the use of less efficient NTBs; commitment has political value because it improves the bargaining position of a government that is weak relative to domestic SIGs. Using detailed data we find support for several of the model's predictions including: (i) tariff commitments in trade agreements increase the likelihood and restrictiveness of NTBs but not enough to offset the original tariff reductions; (ii) tariff commitments are more likely to be adopted and more stringent when the government is weaker relative to a SIG. Thus, the results can explain the use of inefficient policies for redistribution and suggest that the bargaining motive is an important source of the political value of commitment in international agreements.

#### Gravity, trade integration, and heterogeneity across industries

• Journal of International Economics---2011---Natalie Chen, Dennis Novy

We derive a micro-founded measure of bilateral trade integration that is consistent with a broad range of leading gravity models. This measure accounts for

1980) and applies it to analyze the effect of global- cross-industry heterogeneity by incorporating substitution elasticities estimated at the industry level. We then use it to provide a theory-based ranking of trade integration across manufacturing industries in European Union countries. In addition, we explore the determinants of trade integration, finding that substantial Technical Barriers to Trade in certain industries as well as high transportation costs associated with heavy-weight goods are the most notable trade barriers.

#### Plant-level responses to antidumping duties: Evidence from U.S. manufacturers

• Journal of International Economics---2011---Justin Pierce

This paper describes the effects of a temporary increase in tariffs on the performance and behavior of U.S. manufacturers. Using a dataset that includes the full population of U.S. manufacturing plants, I show that an apparent positive correlation between antidumping duties and traditional revenue productivity is likely misleading. For the subset of plants reporting quantity-based output data, increases in prices and markups artificially inflate the effect of antidumping duties on revenue productivity, while physical productivity actually falls. Moreover, antidumping duties allow low-productivity plants to continue producing protected products, slowing the reallocation of resources from less productive to more productive uses.

#### Estimating vertical spillovers from FDI: Why results vary and what the true effect is

• Journal of International Economics---2011---Tomas Havranek, Zuzana Irsova

In the last decade, more than 100 researchers have examined productivity spillovers from foreign affiliates to local firms in upstream or downstream sectors. Yet results vary broadly across methods and countries. To examine these vertical spillovers in a systematic way, we collected 3626 estimates of spillovers and reviewed the literature quantitatively. Our meta-analysis indicates that model misspecifications reduce the reported estimates and journals select relatively large estimates

for publication. No selection, however, was found for working papers. Taking these biases into consideration, the average spillover to suppliers is economically significant, whereas the spillover to buyers is statistically significant but small. Greater spillovers are received by countries that have underdeveloped financial systems and are open to international trade. Greater spillovers are generated by investors who come from distant countries and have only a slight technological edge over local firms.

## Valuation effects with transitory and trend productivity shocks

• Journal of International Economics---2011---Ha Nguyen

Changes in asset prices of a country's foreign assets and liabilities ("valuation effects") are commonly thought of as stabilizing: they counteract current account movements and mitigate the impact of the current account on the country's net foreign asset (NFA) position. This paper shows that whether valuation effects are stabilizing or not depends critically on the nature of the underlying productivity shocks. In response to transitory shocks, valuation effects are stabilizing; but in response to trend shocks, such effects amplify the impact of the current account on NFA position. These contrasting effects arise because optimally smoothing consumers respond differently to a transitory shock than to a trend shock to income. This theoretical result finds empirical support with G7 countries' data, and is illustrated by the pattern of external imbalances between the U.S. and other G7 countries since the 1990s.

## Habit formation and fiscal transmission in open economies

 Journal of International Economics---2011---Olivier Cardi, Gernot Müller

In this paper we analyze the ability of an open economy version of the neoclassical model to account for the time-series evidence on fiscal policy transmission. Revisiting the evidence, we find that i) government

spending raises output, while inducing a simultaneous decline of investment and the current account and ii) the responses of output and investment are more muted in more open economies while current account deficits tend to be larger. Turning to the model, we explore the role of habit formation for fiscal policy transmission. Specifically, we show that the model can account for the evidence if consumption behavior is characterized by habit formation and the terms of trade adjust endogenously.

#### The yield curve in a small open economy

 Journal of International Economics---2011---Mariano Kulish, Daniel Rees

Long-term nominal interest rates in a number of inflation-targeting small open economies have tended to be strongly correlated with those of the United States. This observation has recently led support to the view that, in these economies, the long-end of the yield curve has decoupled from its short-end and naturally to a concern that monetary policy may have lost some of its autonomy. We set up and estimate a two-country small open economy model in which the expectations hypothesis and uncovered interest rate parity hold to study the co-movement of long-term nominal interest rates of different currencies. We show that differences in the persistence of domestic and foreign disturbances, a hypothesis for which we find support in recent data, can explain the observed pattern of correlations. These correlations are not evidence of weaker monetary policy.

## Transportation, freight rates, and economic geography

• Journal of International Economics---2011---Kristian Behrens, Pierre Picard

We investigate the role of competitive transport markets in shaping the location of economic activity and the pattern of trade. In our model, carriers supply transport services for shipping manufactured goods, and freight rates are set to clear transport markets. Each carrier must commit to the maximum capacity for

a round-trip and thus faces a logistics problem as there are opportunity costs of returning empty. These costs increase the freight rates charged to firms located in regions that are net exporters of manufactured goods. Since demand for transport services depends on the spatial distribution of economic activity, the concentration of production in one region raises freight rates to serve foreign markets from there, thus working against specialization and the agglomeration of firms. Consequently, a more even spatial distribution of firms and production prevails at equilibrium when freight rates are endogenously determined than when they are assumed to be exogenous as in the literature.

#### The impact of trade liberalization on productivity: Evidence from India's formal and informal manufacturing sectors

• Journal of International Economics---2011---Shanthi Nataraj

Despite a large literature investigating the impacts of trade on firm productivity, there is almost no evidence on how small firms react to trade liberalization. Using a unique dataset of firm-level surveys that are representative of the entire Indian manufacturing industry, I show that India's unilateral reduction in final goods tariffs increased the average productivity of small, informal firms, which account for 80% of Indian manufacturing employment but have been excluded from previous studies. In contrast, the increase in productivity among larger, formal firms was driven primarily by the concurrent reduction in input tariffs. By examining the effect of the tariff liberalization on the distributions of productivity and firm size, I find evidence consistent with the exit of the smallest, least productive firms from the informal sector. In addition, I find that although the decline in final goods tariffs did not significantly impact average formal sector productivity, it did increase productivity among the top quantiles of the distribution.

## International real business cycles with endogenous markup variability

• Journal of International Economics---2011---Jonathan Davis, Kevin Huang

The aggregate impact of decisions made at the level of the individual firm has recently attracted a lot of attention in both the macro and trade literatures. We adapt the benchmark international real business cycle model to a game-theoretic environment to add a channel for the strategic interaction among domestic and foreign firms. We show how the sum of strategic pricing decisions made at the level of the individual firm can have significant effects on the volatility and cross country comovement of GDP and its components. Specifically we show that the addition of this one channel for strategic interaction leads to a significant increase in the crosscountry co-movement of production and investment, as well as a significant decrease in the volatility of investment and the trade balance over the benchmark IRBC model.

## Financial liberalization, structural change, and real exchange rate appreciations

 Journal of International Economics---2011---Felipe Meza, Carlos Urrutia

The last twenty years have witnessed periods of sustained appreciations of the real exchange rate in emerging economies. The case of Mexico between 1988 and 2002 is representative of several episodes in Latin America and Central and Eastern Europe in which countries opening to capital flows experienced large appreciations accompanied by a significant reallocation of workers towards the non-tradable sector. We account for these facts using a two sector dynamic general equilibrium model of a small open economy with frictions to labor reallocation and two driving forces: (i) A decline in the cost of borrowing in foreign markets, and (ii) differential productivity growth across sectors. These two mechanisms account together for 60% of the decline in the domestic relative price of tradables in Mexico and for a large fraction of the observed reallocation of labor across sectors. The decline in the interest rate faced

by Mexico in international markets is quantitatively intrafirm transactions, is able to generate all of these the most important channel. Our results are robust to the inclusion of terms of trade into the model.

#### Size, productivity, and international banking

• Journal of International Economics---2011---Claudia Buch, Catherine Koch, Michael Koetter

Heterogeneity in size and productivity is central to models that explain which manufacturing firms export. This study presents descriptive evidence on similar heterogeneity among international banks as financial services providers. A novel and detailed bank-level data set reveals the volume and mode of international activities for all German banks. Only a few, large banks have a commercial presence abroad, consistent with the size pecking order documented for manufacturing firms. However, the relationship between internationalization and productivity also yields two inconsistencies with recent trade models. First, virtually all banks hold at least some foreign assets, irrespective of size or productivity. Second, some fairly unproductive banks maintain commercial presences abroad.

#### A state-dependent model of intermediate goods pricing

• Journal of International Economics---2011---Brent Neiman

Recent analyses of transaction-level data sets have generated new stylized facts on price setting and greatly influenced the empirical open- and closed-economy macroeconomics literatures. This work has uncovered marked heterogeneity in price stickiness, demonstrated that even non-zero price changes do not fully apass throughâ exchange rate shocks, and offered evidence of synchronization in the timing of price changes. Further, intrafirm prices have been shown to differ from arm's length prices in each of these characteristics. This paper develops a state-dependent model of price setting by strategic intermediate goods producers that anticipate and respond to their competitors' actions. The model, which allows for both arm's length and

empirical pricing patterns.

#### Currency crises with the threat of an interest rate defence

• Journal of International Economics---2011---Tijmen Daniëls, Henk Jager, Franc Klaassen

While virtually all currency crisis models recognise that the decision to abandon a peg depends on how tenaciously policy makers defend it, this is seldom modelled explicitly. We add the threat of an interest rate defence to the global game model of Morris and Shin (American Economic Review 88, 1998). With an endogenous defence, actions of speculators may become strategic substitutes instead of the usual complements. Nevertheless, our generalised model remains tractable and has a unique threshold equilibrium. It provides additional insights. For instance, the threat of an interest rate defence makes speculation riskier and this may be sufficient to keep speculators out when fundamentals are still relatively strong.

#### Does corporate governance risk at home affect investment choices abroad?

• Journal of International Economics---2011---Woochan Kim, Taeyoon Sung, Shang-Jin Wei

Disparity between control and ownership rights gives rise to the risk of tunneling by the controlling shareholder, and is prevalent in many emerging market economies and present in some developed countries. At the same time, international investors come from different countries whose home markets are characterized by varying degrees of controlâownership disparity. This paper studies whether this difference in investors' home countries affects their portfolio choice in an emerging market. It combines two unique data sets on ownership and control in business groups, and investor-stock level foreign investment in Korea. A key finding is that investors from low-disparity countries disfavor high-disparity stocks in Korea, but investors from high-disparity countries are indifferent. Moreover, investors from low-disparity countries became averse

to disparity only after the Asian financial crisis. These results suggest that the nature of corporate governance in international investors' home countries affects their portfolio choice abroad, and therefore these investors should not be lumped together in the analyses of their portfolio choice.

#### Power laws in firm size and openness to trade: Measurement and implications

 Journal of International Economics---2011---Julian di Giovanni, Andrei Levchenko, Romain Ranciere

Existing estimates of power laws in firm size typically ignore the impact of international trade. Using a simple theoretical framework, we show that international trade systematically affects the distribution of firm size: the power law exponent among exporting firms should be strictly lower in absolute value than the power law exponent among non-exporting firms. We use a dataset of French firms to demonstrate that this prediction is strongly supported by the data, both for the economy as a whole and at the industry level. Furthermore, the differences between power law coefficients for exporters and non-exporters are larger in sectors that are more open to trade. While estimates of power law exponents have been used to pin down parameters in theoretical and quantitative models, our analysis implies that the existing estimates are systematically lower than the true values. We propose two simple ways of estimating power law parameters that take explicit account of exporting behavior.

#### The WTO trade effect

 Journal of International Economics---2011---Pao-Li Chang, Myoung-jae Lee

This paper re-examines the GATT/WTO membership effect on bilateral trade flows, using nonparametric methods including pair-matching, permutation tests, and a Rosenbaum (2002) sensitivity analysis. Together, these methods provide an estimation framework that is robust to misspecification bias, allows general forms of heterogeneous membership effects, and addresses

potential hidden selection bias. This is in contrast to most conventional parametric studies on this issue. Our results suggest large GATT/WTO tradepromoting effects that are robust to various restricted matching criteria, alternative GATT/WTO indicators, non-random incidence of positive trade flows, inclusion of multilateral resistance terms, and different matching methodologies.

## Escaping a protectionist rut: Policy mechanisms for trade reform in a democracy

 Journal of International Economics---2011---Emily Blanchard, Gerald Willmann

This paper analyzes the dynamics of trade policy reform under democracy. In an overlapping generations model, heterogeneous agents may acquire skills when young thereby determining the skill composition of their cohort. Current and anticipated trade policies influence education decisions and thus voters' trade policy preferences. We show that there may exist two political steady states: one protectionist and one liberal. Transition from the former to the latter can be achieved by government announcements, temporary educational subsidies, or tariff liberalization by trading partners, but generally not by transfer payments to adversely affected workers. We find additionally that reform is politically feasible only if the proposed liberalization is sufficiently large, suggesting that radical reform may be necessary for escaping a protectionist political rut.

## Who's afraid of a globalized world? Foreign Direct Investments, local knowledge and allocation of talents

 Journal of International Economics---2011---Giovanni Pica, José V. Rodríguez Mora

We study the distributional effects of globalization within a model of heterogeneous agents where both managerial talent and knowledge of the local economic environment are required in order to become a successful entrepreneur. Agents willing to set up a firm abroad incur a learning cost that depends on how different the

In this context, we show that globalization fosters FDI and raises wages, output and productivity. However, not everybody wins. The steady state relationship between globalization and income is U-shaped: high- and low-income agents are better off in a globalized world, while middle-income agents (domestic entrepreneurs) are worse off. Thus, consistently with recent empirical evidence, the model predicts globalization to increase inequality at the top of the income distribution while decreasing it at the bottom.

#### **Exporting out of poverty: Provincial poverty in** Vietnam and U.S. market access

• Journal of International Economics---2011---Brian McCaig

Can a developing country reduce poverty by gaining increased market access to a large, rich country? The 2001 U.S.âVietnam Bilateral Trade Agreement (BTA) provides an excellent opportunity to examine this question as, unlike other bilateral trade agreements, the U.S. tariff cuts were not influenced by Vietnamese industries. Using variation in the structure of the labor force across provinces prior to the trade agreement, I construct provincial measures of U.S. tariffs. To address concerns over confounding trends between changes in provincial poverty and changes in provincial tariffs I follow two approaches: controlling for trends based on observable initial conditions and differencing away time invariant trends using pre-BTA data. I find that provinces that were more exposed to the U.S. tariff cuts experienced faster decreases in poverty between 2002 and 2004. Additionally, I document that the movement of workers across provinces is limited in scale, particularly for those with low levels of education. Finally, I show that the most exposed provinces experienced faster wage growth for workers with low levels of education, but not for highly educated workers.

#### Do interest groups affect US immigration policy?

• Journal of International Economics---2011---Giovanni Facchini, Anna Maria Mayda, Prachi Mishra

foreign and domestic entrepreneurial environments are. While anecdotal evidence suggests that interest groups play a key role in shaping immigration policy, there is no systematic empirical analysis of this issue. In this paper, we construct an industry-level dataset for the United States, by combining information on the number of temporary work visas with data on lobbying activity associated with immigration. We find robust evidence that both pro- and anti-immigration interest groups play a statistically significant and economically relevant role in shaping migration policy across sectors. Barriers to migration are lower in sectors in which business interest groups incur larger lobbying expenditures and higher in sectors where labor unions are more important.

#### Revisiting the evidence on trade policy preferences

• Journal of International Economics---2011---Bruce Blonigen

Past literature has found evidence that labor market attributes affect individuals' trade policy preferences in a manner consistent with theories of international trade. This paper shows that, with the exception of education, the relationships between labor market attributes and trade policy preferences are not robust in US survey data. This suggests that either our proxies of labor market attributes are poor or our theories for what drives trade policy preferences need to be revisited.

#### Does services liberalization benefit manufacturing firms?: Evidence from the Czech Republic

• Journal of International Economics---2011---Jens Arnold, Beata Javorcik, Aaditya Mattoo

While there is considerable empirical evidence on the impact of liberalizing trade in goods, the effects of services liberalization have not been empirically established. This study examines the link between services sector reforms and the productivity of manufacturing industries relying on services inputs. Several aspects of services liberalization are considered, namely, the presence of foreign providers, privatization and the level

of competition. The results, based on firm-level data from the Czech Republic, show a positive relationship between services sector reform and the performance of domestic firms in downstream manufacturing sectors. Allowing foreign entry into services industries appears to be the key channel through which services liberalization contributes to improved performance of manufacturing sectors. This finding is supported by evidence that foreign acquisitions of Czech services providers result in profound changes in the labor productivity and sales of acquired firms. As most barriers to foreign investment today are not in goods but in services sectors, the findings of this study may strengthen the argument for reform in this area.

#### Information, incentives and multinational firms

• Journal of International Economics---2011---Chen Cheng

I present a model that explains a multinational firm's choice of organizational form. If a firm in the developed country outsources the production of its intermediate goods to a supplier in the developing country, it faces an adverse selection problem. If it chooses to produce the intermediate goods in its own subsidiary in the developing country, it faces an inefficient monitoring problem. My analysis of this tradeoff provides a new explanation for the observation that FDI is concentrated in capital intensive industries and yields two empirical hypotheses: more firms should adopt outsourcing instead of FDI after trade liberalization; the share of intra-firm trade in total trade should be increasing in the degree of productivity dispersion across intermediate goods suppliers in the developing country.

# Andrés Solimano,,International Migration in the Age of Crisis and Globalization: Historical and Recent Experiences (2010) Cambridge University Press

• Journal of International Economics---2011---Spilimbergo Antonio

2011

#### M. Ayhan Kose, Eswar S. Prasad,,Emerging Markets: Resilience and Growth amid Global Turmoil (2010) Brookings Institution Press

• Journal of International Economics---2011---C. Bora Durdu

2011

#### Foreign influence and welfare

 Journal of International Economics---2011---Pol Antras, Gerard Padró i Miquel

How do foreign interests influence policy? How are trade policies and the viability of trade agreements affected? What are the welfare implications of such foreign influence? In this paper we develop a model of foreign influence and apply it to the study of optimal tariffs. In a two-country voting model of electoral competition, we allow the incumbent party in each country to take costly actions that probabilistically affect the electoral outcome in the other country. We show that policies end up maximizing a weighted sum of domestic and foreign welfare. Using this formulation we show that foreign influence increases aggregate world welfare when there are no other means of alleviating the externalities that arise from cross-border effects of policies. In contrast, when countries can engage in international agreements, foreign influence can prove harmful as powerful countries may refuse to offer concessions. We also show that power imbalances are particularly detrimental to cooperation when they are positively correlated with economic size.

#### Innovation and trade with heterogeneous firms

 Journal of International Economics---2011---Ngo Long, Horst Raff, Frank Stähler

This paper examines how trade liberalization affects the innovation incentives of firms, and what this implies for industry productivity. For this purpose we develop a reciprocal dumping model of international trade with heterogeneous firms and endogenous R&D. Among the robust results that hold both in the short run when there is no entry, and in the long run under free entry

are that trade liberalization increases aggregate R&D when trade costs are low and decreases R&D when trade costs are high. Expected industry productivity rises as trade costs fall.

#### Closing large open economy models

• Journal of International Economics---2011--Martin Bodenstein

A large class of international business cycle models admits multiple locally isolated deterministic steady states, if the elasticity of substitution between traded goods is sufficiently low. I explore the conditions under which such multiplicity occurs and characterize the dynamic properties in the neighborhood of each steady state. Models with standard incomplete markets, portfolio costs, a debt-elastic interest rate, or an overlapping generations framework allow for multiple steady states, if the model features multiple steady states under financial autarchy. If the excess demand for the foreign traded good is increasing in the good's own price in a given steady state, the equilibrium dynamics around this steady state are unbounded. Otherwise, the dynamics are bounded and unique. By contrast, with Uzawa-type preferences, the steady state is always unique and the associated equilibrium dynamics are always bounded and unique. The same results obtain under complete markets.

## When is quality of financial system a source of comparative advantage?

• Journal of International Economics---2011---Jiandong Ju,Shang-Jin Wei

Dominant theories of trade tend to ignore the role of finance as a source of comparative advantage. On the other hand, the finance literature places financial institutions as a driver of economic growth. This paper unites these two competing schools of thought in a general equilibrium framework. For economies with high-quality institutions (defined by the competitiveness of the financial sector, the quality of corporate governance, and the level of property rights protection), finance is passive. On the other hand, for economies

with low-quality institutions, the quality of the financial system is an independent source of comparative advantage. Interestingly, the conventional measure of financial development (the size of the financial market relative to GDP) does not adequately capture the underlying quality of financial institutions. In addition, free trade may reduce the aggregate income in South. Financial capital tends to flow from South to North.

## International trade in services: A portrait of importers and exporters

• Journal of International Economics---2011---Holger Breinlich, Chiara Criscuolo

We provide a novel set of stylized facts on firms engaging in international trade in services, using unique data on firm-level exports and imports from the world's second largest services exporter, the United Kingdom (UK). We show that only a fraction of UK firms engage in international trade in services, that trade participation varies widely across industries and that service traders are different from non-traders in terms of size, productivity and other firm characteristics. We also provide detailed evidence on the trading patterns of service exporters and importers, such as the number of markets served, the value of exports and imports per market and the share of individual markets in overall sales. We interpret these facts in the light of existing theories of international trade in services and goods. Our results demonstrate that firm-level heterogeneity is a key feature of services trade. Also, we find many similarities between services and goods trade at the firm level and conclude that existing heterogeneous firm models for goods trade will be a good starting point for explaining trade in services as well.

#### Buyer-seller relationships in international trade: Evidence from U.S. States' exports and business-class travel

 Journal of International Economics---2011---Anca Cristea

International trade has become increasingly dependent on the transmission of complex information, often

realized via face-to-face communication. This paper provides novel evidence for the importance of in-person business meetings in international trade. Interactions among trade partners entail a fixed cost of trade, but at the same time they generate relationship capital, which adds bilateral specific value to the traded products. Differences in the face-to-face communication intensity of traded goods, bilateral travel costs and foreign market size determine the optimal amount of interaction between trade partners. Using U.S. state level data on international business-class air travel as a measure of in-person business meetings, I find robust evidence that the demand for business-class air travel is directly related to volume and composition of exports in differentiated products. I also find that trade flows in R&D intensive manufactures and goods facing contractual frictions are most dependent on face-to-face meetings. The econometric identification exploits the cross-state variation in bilateral exports and business-class air travelers by foreign country and time period, circumventing any spurious correlation induced by cross-country differences driving aggregate travel and trade patterns.

### Productivity differences in an interdependent world

• Journal of International Economics---2011---Harald Fadinger

This paper studies cross-country differences in productivity from an open economy perspective by using a Helpman-Krugman-Heckscher-Ohlin model that embraces the single-cone model and a one-sector economy with factor deepening as particular cases. To estimate the model, I combine tools from development accounting and the factor content of trade literature. When simultaneously fitting data on income, factor prices and the factor content of trade, I find that the one-sector model is by far better supported by the data than the single-cone model. Rich countries have far higher productivities of human capital than poor ones, while differences in physical capital productivity are not related to income per worker. Finally, I estimate an aggregate elasticity of substitution between human

and physical capital that is significantly below one.

## Rethinking the area approach: Immigrants and the labor market in California

• Journal of International Economics---2011---Giovanni Peri

A framework that uses a Constant Elasticity of Substitution (CES) production function with skill differentiation and integrated national labor markets has predictions for the employment effect of immigrants at the local level. The employment (rather than wage) response to immigration by skill in a state reveals the production substitutability-complementarity between native and immigrant labor. This, in turn, reveals the degree to which immigrants stimulate or depress the demand for native labor. To estimate this elasticity, I use a novel instrument based on demographic characteristics of total Central American migrants or of the Mexican Population to predict immigration by skill level within California. Looking at immigration to California between 1960 and 2005 these estimates support the assumption of a nationally integrated labor market by skill and they support the hypothesis that natives and immigrants in the same educationexperience group are not perfectly substitutable. This explains the counter-intuitive fact that there is a zero correlation between immigration and wage and employment outcomes of natives in the state.

### Intraindustry trade and the skill premium: Theory and evidence

• Journal of International Economics---2011---Elias Dinopoulos, Constantinos Syropoulos, Bin Xu, Yoto Yotov

We explore theoretically and empirically the relationship between intraindustry trade and the skill premium. Our model features a Chamberlinian-type mechanism of income distribution based on quasi-homothetic consumer preferences, non-homothetic production, and factor-biased scale economies at the firm level. The analysis focuses on a two-country, one-sector model of intraindustry trade with two factor inputs consisting of high-skilled and low-skilled labor. We find that a move from autarky to free trade (a) raises the output of the representative firm and its level of total factor productivity, and (b) reduces (raises) the relative wage of high-skilled workers under the hypothesis of output-skill substitutability (output-skill complementarity). Plant-level evidence from Mexico supports the empirical relevance of the proposed income-distribution mechanism.

#### Good jobs, bad jobs, and trade liberalization

• Journal of International Economics---2011---Donald Davis, James Harrigan

How do labor markets adjust to trade liberalization? Leading models of intraindustry trade (Krugman (1981), Melitz (2003)) assume homogeneous workers and full employment, and thus predict that all workers win from trade liberalization, a conclusion at odds with the public debate. Our paper develops a new model that merges Melitz (2003) with Shapiro and Stiglitz (1984), so also links product market churning to labor market churning. Workers care about their jobs because the model features aggregate unemployment and jobs that pay different wages to identical workers. Simulations show that, for reasonable parameter values, as many as one-fourth of existing "good jobs" (those with above average wage) may be destroyed in a liberalization. This is true even as the model shows minimal impact on aggregate unemployment and quite substantial aggregate gains from trade.

## Infant industry protection and industrial dynamics

• Journal of International Economics---2011---Josh Ederington, Phillip McCalman

A perennial case for industrial policy is based on the protection of young or emerging industries. Despite a natural association with concepts of life cycles, industrial policy has not been analyzed in the context of an industry life-cycle model. In particular, an important life-cycle characteristic, the potential for very large changes in the rate of net entry, is ignored. In

this paper, we demonstrate how the impact of industrial policy depends critically on the entry and exit dynamics within an industry. We construct a model of technology adoption in which the number of firms is endogenous, and derive a set of novel predictions about the effects of protection on firm technology decisions. Specifically, we show that permanent protection can induce earlier adoption, but also decreases the probability that a given firm adopts the new technology. Likewise, we demonstrate that reducing the duration of protection results in faster adoption than permanent protection, but also reduces a given firm's probability of adoption. Finally, we show that, for industries characterized by flexibility in firm numbers, protection does not change the rate of technology adoption but does increase the size and probability of a shakeout (large scale net exit).

## The current account and precautionary savings for exporters of exhaustible resources

• Journal of International Economics---2011---Rudolfs Bems, Irineu de Carvalho Filho

Exporters of exhaustible resources have historically exhibited higher income volatility than other economies, suggesting a heightened role for precautionary savings. This paper uses a parameterized small open-economy model to quantify the role of precautionary savings for exporters of exhaustible resources, when the only source of uncertainty is the price of the exhaustible resource. The parameterized model fares moderately well at capturing current account balances in both cross-section and time-series data. The results show that the precautionary motive can generate sizable external sector savings, the more so the greater the weight of exhaustible resource revenues in future income.

#### Sovereign defaults and liquidity crises

• Journal of International Economics---2011---Filippo Brutti

Sovereign debt crises in emerging markets are usually associated with liquidity and banking crises. The conventional view is that the domestic turmoil is the

consequence of foreign retaliation, although there is no clear empirical evidence on "classic" default penalties. This paper emphasizes, instead, a direct link between sovereign defaults and liquidity crises building on two natural assumptions: (i) government bonds represent a source of liquidity for the domestic private sector and (ii) the government cannot discriminate between domestic and foreign creditors in the event of default. In this context, external debt emerges even in the absence of classic penalties, and government default is countercyclical, triggers a liquidity crunch, and amplifies output volatility. In addition, a reform that involves a substitution of government bonds with privately-sourced liquidity instruments could backfire by restricting governments' access to foreign credit.

#### The role of intermediaries in facilitating trade

 Journal of International Economics---2011---JaeBin Ahn, Amit Khandelwal, Shang-Jin Wei

This paper documents that intermediaries play an important role in facilitating international trade. We modify a heterogeneous firm model to allow for an intermediary sector. The model predicts that firms will endogenously select their mode of export - either directly or indirectly through an intermediary - based on productivity. The model also predicts that intermediaries will be relatively more important in markets that are more difficult to penetrate. We provide empirical confirmation for these predictions using the firm-level census of China's trade, and generate new facts regarding the activity of intermediaries. We also provide evidence that firms begin to export directly after exporting through intermediaries.

## Read my lips: The role of information transmission in multilateral reform design

 Journal of International Economics---2011---Silvia Marchesi, Laura Sabani, Axel Dreher

Context-specific knowledge is crucial to crafting multilateral reform programs. Nonetheless local knowledge often consists of unverifiable information, thus the quality of countries' reports depends on the conflict of

interests faced by the recipient and the multilateral. We compare the performance of a "delegation-scheme" against a "centralization-scheme." We find that recipients' discretion in the choice of reforms (delegation) should only be increased when the countries' local knowledge is strictly more important than the multilateral's information. Conversely, a reduction in the conflict of interests may lead the multilateral in to allowing the recipient less freedom in designing reforms (centralization). Our empirical results support these theoretical predictions.

## Democracy, foreign direct investment and natural resources

 Journal of International Economics---2011---Elizabeth Asiedu, Donald Lien

Empirical studies that examine the impact of democracy on foreign direct investment (FDI) assume that the relationship between democracy and FDI is the same for resource exporting and non-resource exporting countries. This paper examines whether natural resources in host countries alter this relationship. We estimate a linear dynamic panel-data model using data from 112 developing countries over the period 1982-2007. We find that democracy promotes FDI if and only if the value of the share of minerals and oil in total exports is less than some critical value. We identify 90 countries where an expansion of democracy may enhance FDI and 22 countries where an increase in democratization may reduce FDI. We also find that the effect of democracy on FDI depends on the size and not the type of natural resources.

## Cluster-based industrialization in China: Financing and performance

• Journal of International Economics---2011---Cheryl Long, Xiaobo Zhang

China's rapid industrialization despite the lack of a well developed financial system seems to defy the conventional thinking on the role of finance in development. This paper tries to explain the puzzle from the clustering point of view. Based on firm-level data from two recent censuses, we find that within industrial clusters: finer division of labor lowers the capital barriers to entry; closer proximity makes the provision of trade credit among firms easier. With less reliance on external financing, more small firms emerge within clusters, leading to higher levels of export and total factor productivity thanks to the resultant more fierce competition.

## On tax competition, public goods provision and jurisdictions' size

Journal of International Economics---2011-- Patrice Pieretti, Skerdilajda Zanaj

In this paper, we analyze competition among jurisdictions to attract foreign capital through low taxes and public inputs that enhance firms' productivity. The competing jurisdictions are different in size and mobility of capital is costly. We find that for moderate mobility costs, small economies can attract foreign capital by supplying higher levels of public goods than larger jurisdictions, without practicing tax undercutting. The classical result that small jurisdictions are attractive because they engage in tax dumping is recovered only for high mobility costs of capital.

#### Carl Davidson and Steven J. Matusz, International Trade with Equilibrium Unemployment, Princeton University Press (2010)

• Journal of International Economics---2011---James Harrigan

2011

#### Carmen M. Reinhart and Kenneth S. Rogoff, This Time is Different: Eight Centuries of Financial Folly, Princeton University Press (2009)

• Journal of International Economics---2011---Ayhan Kose

2011

## Structural estimation and solution of international trade models with heterogeneous firms

• Journal of International Economics---2011---Edward Balistreri,Russell Hillberry,Thomas F. Rutherford

We present an empirical implementation of a generalequilibrium model of international trade with heterogeneous manufacturing firms. The theory underlying our model is consistent with Melitz (2003). A nonlinear structural estimation procedure identifies a set of core parameters and unobserved firm-level trade frictions that best fit the geographic pattern of trade. Our estimation model is consistent with the specified general equilibrium model, and we conduct general equilibrium counterfactual analyses to illustrate model responses. We first assess the economic effects of reductions in measured tariffs. Taking the simple-average welfare change across regions the Melitz structure indicates welfare gains from liberalization that are four times larger than in a standard trade policy simulation. Furthermore, when we compare the economic impact of tariff reductions with reductions in estimated fixed trade costs we find that policy measures affecting the fixed costs are of greater importance than tariff barriers.

## Credit constraints and firm export: Microeconomic evidence from Italy

• Journal of International Economics---2011---Raoul Minetti,Susan Chun Zhu

This paper estimates the impact of credit rationing on firms' export. We use detailed survey data from Italian manufacturing firms that provide a firm-specific measure of credit rationing based directly on firms' responses to the survey rather than indirectly on firms' financial statements. After controlling for productivity and other relevant firm attributes, and accounting for the endogeneity of credit rationing, we find that the probability of exporting is 39% lower for rationed firms and that rationing reduces foreign sales by more than 38%. While credit rationing also appears to depress domestic sales, its impact on foreign sales is

significantly stronger. The analysis also suggests that credit rationing is an obstacle to export especially for firms operating in high-tech industries and in industries that heavily rely on external finance.

#### Lobbying costs and trade policy

• Journal of International Economics---2011---Patricia Tovar

We study how endogenous lobbying costs influence trade policies. Although in practice lobbying expenditures far exceed campaign contributions, the literature on the political economy of trade policy has focused on the latter. In this paper we develop a model in which informational lobbying costs play a role in determining the structure of protection. In the model, special interest groups can choose to send a signal to the policymaker regarding some information they possess, and the policymaker observes the signal before setting the trade policies. We find that lobbying expenditures directly affect the equilibrium policies. In order to test the predictions of the model we collected data on lobbying expenditures from the Center for Responsible Politics as well as data on trade and industry characteristic variables for the United States from other sources. We perform a structural estimation of the equilibrium trade policies and find support for our model. The empirical evidence indicates that lobbying expenditures play an important role in explaining the variation of protection across sectors. Moreover, the model leads to considerably lower and more reasonable estimates of the weight that the government places on social welfare relative to political contributions.

## In search of WTO trade effects: Preferential trade agreements promote trade strongly, but unevenly

• Journal of International Economics---2011---Theo Eicher, Christian Henn

The literature measuring the effects of WTO membership on trade flows has produced remarkably diverse results. Rose (2004) reports a wide range of empirical specifications that produce no WTO effects. Tomz et al. (2007) use Rose's data but include de facto WTO

membership, to find positive WTO trade effects. Rose (2005) also produced positive WTO trade effects after accounting for the diverse trade effects produced by individual preferential trade agreements (PTAs). When Subramanian and Wei (2007) emphasize general equilibrium trade effects by controlling for multilateral resistance, they find strong WTO trade effects only for industrialized countries. Subramanian and Wei (2007), however, account neither for unobserved heterogeneity among trading partners, nor for differences in trade effects across PTAs (which could inflate WTO estimates). We unify the Rose, Tomz et al., and Subramanian and Wei specifications in one comprehensive approach that minimizes omitted variable bias to show that all specifications produce one consistent result: WTO effects on trade flows are not statistically significant, while PTAs produce strong but uneven trade effects. Extending the gravity model to address specific avenues in which WTO may have affected trade flows, we find that WTO membership boosts trade prior to PTA formation and increases trade among proximate developing countries (at the expense of distant trade). An augmented gravity model that accounts for WTO terms-of-trade theory shows that countries with greater incentives to bargain for tariff reductions before WTO accession experience positive and significant subsequent WTO trade effects.

#### To be or not to be in monetary union: A synthesis

Journal of International Economics---2011-- Laurent Clerc, Harris Dellas, Olivier Loisel

Monetary union can benefit countries suffering from policy credibility problems if it eliminates the inflation bias and also allows for more efficient management of certain shocks. But it also carries costs as some stabilization may be feasible even in the absence of credibility, and this may be more than what an individual country can hope for in a monetary union. In this paper, we combine the stabilization and credibility branches of the currency union literature and construct a simple welfare criterion that can be used to evaluate alternative monetary arrangements. We produce examples where monetary union may be welfare improving even for low-modest levels of inflation

synchronized across countries.

#### Oil shocks and external adjustment

• Journal of International Economics---2011---Martin Bodenstein, Christopher Erceg, Luca Guerrieri

We examine the effects of endogenously determined oil price fluctuations in a two-country DSGE model. Under incomplete financial markets, an oil market-specific shock that boosts the oil price results in a wealth transfer toward oil exporters, depresses the oil importer's consumption, and causes the oil importer's real exchange rate to depreciate. Although the oil importer experiences a deterioration in the oil component of its trade balance, an improvement in the nonoil balance substantially dampens the effects on the overall trade balance.

#### Trade booms, trade busts, and trade costs

• Journal of International Economics---2011---David Jacks, Christopher Meissner, Dennis Novy

What has driven trade booms and trade busts in the past and present? We employ a micro-founded measure of trade frictions consistent with leading trade theories to gauge the importance of bilateral trade costs in determining international trade flows. We construct a new balanced sample of bilateral trade flows for 130 country pairs across the Americas, Asia, Europe, and Oceania for the period from 1870 to 2000 and demonstrate an overriding role for declining trade costs in the pre-World War I trade boom. In contrast, for the post-World War II trade boom we identify changes in output as the dominant force. Finally, the entirety of the interwar trade bust is explained by increases in trade costs.

#### Skill bias, trade, and wage dispersion

• Journal of International Economics---2011---Ferdinando Monte

bias (2-3%) as long as business cycles are not too a- Wage ratios between different percentiles of the wage distribution have moved in parallel and then diverged in the U.S. in the last 50 years. In this paper, I study the theoretical response of wage ratios to skill-biased technical change and trade integration. I build a simple model of heterogeneous technology and heterogeneous workers that features complementarities between the quality of ideas and abilities. I show that changes to the skill bias of technology and to trade costs can both reproduce the observed pattern since (i) they have similar asymmetric effects on productive vs. unproductive firms, and (ii) positive assortative matching in the labor market transmits this asymmetry across high and low skill workers. Focusing on the different channels through which skill-biased technical change and trade integration operate suggests ways to disentangle the magnitude of each.

### The effect of investor origin on firm performance: Domestic and foreign direct investment in the **United States**

• Journal of International Economics---2011---Wenjie Chen

This paper evaluates the causal relationship between the source of origin of FDI and the performance of the target firm. The empirical analysis uses new data on a comprehensive sample of public U.S. firms that received FDI between 1979 and 2006. To account for the possibility that performance differences arise due to the selection of superior target firm rather than the change in ownership, I use propensity score matching to create similar comparison groups of target firms prior to acquisitions. The analysis reveals three major findings. First, acquiring firms from industrialized countries lead to labor productivity increases of 13% in the target firm three years after the acquisition compared to targets acquired by domestic firms. Firms that received developing country firm acquisitions, on the other hand, exhibit lower labor productivity gains four years after acquisition, compared to targets acquired by domestic firms. Second, targets receiving FDI by firms from industrial and developing countries also experience increases in profits, compared with firms

States. Third, compared with domestic acquisitions, foreign industrial firm acquisition FDI tends to increase their targets' employment and sales, whereas targets acquired by firms located in developing countries experience a decrease in both revenues and total number of employees. These findings suggest that target firms are subject to significantly different restructuring processes depending on the origin of the acquiring firm.

#### Capital, technology, and specialization in the neoclassical model

• Journal of International Economics---2011---Serge Shikher

The paper studies the effects of technology and capital stock on trade using simulation. For this purpose, the paper develops and evaluates a model that is distinguished by its use of the Eaton-Kortum framework to explain intra-industry trade instead of the usual Armington assumption. It is found that the magnitudes and in many cases signs of the effects of capital stock and technology on specialization are very countryspecific. This implies that the regression studies that estimate cross-country average effects have limited value. Looking at the volume of trade, the paper finds that capital endowments and industry-level comparative advantages have little effect on the volume of trade -the reduced inter-industry trade between more similar countries is compensated by increased intra-industry trade. Producer heterogeneity, on the other hand, has a significant effect on the volume of trade. The paper evaluates the accuracy of the model's forecasts by performing historical simulations for 1975-95, with the results showing that the model's predictions are accurate.

#### Sovereign borrowing by developing countries: What determines market access?

• Journal of International Economics---2011---R. Gaston Gelos, Ratna Sahay, Guido Sandleris

veloping countries to access international credit mar- ysis. First, whenever there is heterogeneity in markups,

receiving acquisition by domestic firms from the United kets? We examine this question using detailed data on sovereign bond issuances and public syndicated bank loans between 1980 and 2000. A key finding of this paper is that the probability of market access is not influenced by a country's frequency of defaults, and that a default, if resolved quickly, does not reduce significantly the probability of tapping the markets. We also find that trade openness, a standard measure of a country's links with the rest of the world, and traditional liquidity and macroeconomic indicators do not help much in explaining market access. However, a country's vulnerability to shocks and the perceived quality of economic policies and institutions appear to influence the government's ability to tap the markets. We also document that the average exclusion from international credit markets following a default declined from four years in the 1980s to two years in the 1990s.

### Michael W. Klein and Jay C. Shambaugh, **Exchange Rate Regimes in the Modern Era, The MIT Press (2010)**

• Journal of International Economics---2011---Joseph Gagnon

2011

#### Trade, markup heterogeneity and misallocations

• Journal of International Economics---2011---Paolo Epifani, Gino Gancia

Markups vary widely across industries and countries, their heterogeneity has increased overtime and asymmetric exposure to international trade seems partly responsible for this phenomenon. In this paper, we study how the entire distribution of markups affects resource misallocation and welfare in a general equilibrium framework encompassing a large class of models with imperfect competition. We then identify conditions under which trade opening, by changing the distribution of markups, may reduce welfare. Our approach is novel both in its generality and in the emphasis on the second moment of the markup distribution. Two What determines the ability of governments from de- broad policy recommendations stand out from the analbe it due to trade or other distortions, there is also an intersectoral misallocation, so that the equilibrium can be improved upon with an appropriate intervention. This suggests that trade liberalization and domestic industrial policy are complementary. Second, ensuring free entry is a crucial precondition to prevent adverse effects from asymmetric trade opening.

# Trade barriers and trade flows with product heterogeneity: An application to US motion picture exports

• Journal of International Economics---2011---Gordon Hanson, Chong Xiang

We extend Melitz (2003) to allow for both global and bilateral fixed export costs. If global (bilateral) export costs dominate, the average sales ratio (import sales per product variety/domestic sales per variety), decreases (increases) in variable (fixed) trade barriers, due to adjustment along the intensive (extensive) margin of trade. Using novel data on bilateral US movie exports we find that (i) variation in box-office revenues per movie is much larger than in the number of movies exported, and (ii) the average sales ratio decreases in geographic and linguistic distance. These findings suggest that global fixed export costs dominate.

### Does intellectual property rights reform spur industrial development?

• Journal of International Economics---2011---Lee Branstetter,Raymond Fisman,C. Fritz Foley,Kamal Saggi

An extensive theoretical literature generates ambiguous predictions concerning the effects of intellectual property rights (IPR) reform on industrial development. The impact depends on whether multinational enterprises (MNEs) expand production in reforming countries and the extent of decline in imitative activity. We examine the responses of U.S.-based MNEs and domestic industrial production to a set of intellectual property rights reforms in the 1980s and 1990s. Following reform, MNEs expand the scale of their activities. MNEs that make extensive use of intellectual property

disproportionately increase their use of inputs. There is an overall expansion of industrial activity after reform, and highly disaggregated trade data indicate higher exports of new goods. These results suggest that the expansion of multinational activity more than offsets any decline in imitative activity.

### International trade in durable goods: Understanding volatility, cyclicality, and elasticities

• Journal of International Economics---2011---Charles Engel, Jian Wang

Data for OECD countries document: 1. imports and exports are about three times as volatile as GDP; 2. imports and exports are pro-cyclical, and positively correlated with each other; 3. net exports are countercyclical. Standard models fail to replicate the behavior of imports and exports, though they can match net exports relatively well. Inspired by the fact that a large fraction of international trade is in durable goods, we propose a two-country two-sector model in which durable goods are traded across countries. Our model can match the business cycle statistics on the volatility and comovement of the imports and exports relatively well. The model is able to match many dimensions of the data, which suggests that trade in durable goods may be an important element in open-economy macro models.

# How do fiscal and technology shocks affect real exchange rates?: New evidence for the United States

 Journal of International Economics---2011---Zeno Enders, Gernot Müller, Almuth Scholl

Using vector autoregressions on U.S. time series relative to an aggregate of industrialized countries, this paper provides new evidence on the dynamic effects of government spending and technology shocks on the real exchange rate and the terms of trade. To achieve identification, we derive robust restrictions on the sign of several impulse responses from a two-country general equilibrium model. We find that both the real

exchange rate and the terms of trade--whose responses are left unrestricted--depreciate in response to expansionary government spending shocks and appreciate in response to positive technology shocks.

### Sovereign default, private sector creditors, and the IFIs

• Journal of International Economics---2011---Emine Boz

The data reveal that emerging market sovereign borrowing from International Financial Institutions (IFIs) is small, intermittent and countercyclical compared to that from private sector creditors. The IFI loan contracts offered to sovereigns differ from the private ones in that they are more enforceable and have conditionality arrangements attached to them. Taking these contractual differences as given, this paper builds a quantitative model of a sovereign borrower and argues that better enforceability of IFI loan contracts is the main institutional feature that explains the size and cyclicality while conditionality accounts for the intermittency of borrowing from the IFIs.

### Unemployment and relative labor market institutions between trading partners

• Journal of International Economics---2011---Herve Boulhol

This paper contributes to the literature that highlights the role of trading partners' institutions for a country's unemployment rate. The objective is to study whether the results established in the minimum wage-setting of Davis (1998) hold when unemployment is driven by search frictions. This paper finds that relative labor market institutions matter for equilibrium unemployment as they generate comparative advantages, but there are two main differences with Davis. With North-North trade, unemployment decreases in the low-regulation country. When South is brought into the picture, low-regulation North is not insulated, and unemployment increases in both developed countries as a result of specialization.

### Robert C. Feenstra and Shang-Jin Wei, Editors, China's Growing Role in World Trade, The University of Chicago Press (2010)

 Journal of International Economics---2011---David Hummels

2011

# Pierre L. Siklos, Martin T. Bohl and Mark E. Wohar, Challenges in central banking: the current institutional environment and forces affecting monetary policy, Cambridge University Press (2010)

• Journal of International Economics---2011---Kenneth Kuttner, Mark Wohar

2011

### The quality of a firm's exports: Where you export to matters

 Journal of International Economics---2010---Paulo Bastos, Joana Silva

What drives export quality? Using Portuguese firm-level data on exports by product and destination market, we find that f.o.b. unit values increase systematically with distance, and tend to be higher in shipments to richer nations. These relationships reflect not only the sorting of firms across markets, but also the within-firm variation of unit values across destinations. Within product categories, higher-productivity firms tend to ship greater quantities at higher prices to a given market, consistent with higher quality. In addition, firm productivity tends to magnify the positive effect of distance on within-product unit values, suggesting that high-productivity, high-quality firms are more able to serve difficult markets.

### The exchange rate, employment and hours: What firm-level data say

• Journal of International Economics---2010---Francesco Nucci, Alberto Pozzolo Using a representative panel of manufacturing firms, government can be solved by a rule of capping deficits. we estimate the response of job and hours worked to currency swings, showing that it depends primarily on firms' exposure to foreign sales and their reliance on imported inputs. We also show that, for a given international exposure, the response to exchange rate fluctuations is magnified when firms exhibit a lower monopoly power and when they face foreign pressure in the domestic market through import penetration. The degree of substitutability between imported and other inputs and the distribution of workers by type introduce additional degrees of specificity in the employment sensitivity to exchange rate swings. Moreover, we show that episodes of entry and exit in the export market are associated with a heterogeneous employment response depending on the degree of external orientation when the switch of export status occurs.

#### Future rent-seeking and current public savings

• Journal of International Economics---2010---Ricardo Caballero, Pierre Yared

The conventional wisdom is that politicians' rentseeking motives increase public debt and deficits. This is because myopic politicians face political risk and prefer to extract political rents as early as possible. In this paper we study the determination of government debt and deficits in a dynamic political economy model. We show that this conventional wisdom relies on economic volatility being low relative to political uncertainty. If economic volatility is high relative to political uncertainty, then a rent-seeking government actually over-saves and over-taxes along the equilibrium path relative to a benevolent government. This result emerges because of the option value of rentseeking: a rent-seeking government over-values future funds because of the possibility of using them for future rents instead of cutting taxes in the event of a future boom (when marginal utility of private consumption is low). This over-saving bias is temporary since, in the long run, the rent-seeking government over-borrows relative to the benevolent government as it eventually squanders the funds it has accumulated. We find that both the under-saving and over-saving bias of the

### Ricardian-Heckscher-Ohlin comparative advantage: Theory and evidence

• Journal of International Economics---2010---Peter Morrow

This paper derives and estimates a unified and tractable model of comparative advantage due to differences in both factor abundance and relative productivity differences across industries. It derives conditions under which ignoring one force for comparative advantage biases empirical tests of the other. I emphasize two empirical results: First, factor abundance- and relative productivity-based models each possesses explanatory power when nesting the other as an alternate hypothesis. Second, productivity differences across industries do not bias tests of the HO model in my sample. However, I find weak and mixed evidence that Heckscher-Ohlin forces can potentially bias tests of the Ricardian model.

### Unpacking sources of comparative advantage: A quantitative approach

• Journal of International Economics---2010---Davin Chor

This paper develops an approach for quantifying the importance of different sources of comparative advantage, by extending the Eaton and Kortum (2002) model to predict industry trade flows. In this framework, comparative advantage is determined by the interaction of country and industry characteristics, with countries specializing in industries whose production needs they can best meet with their factor endowments and institutional strengths. I estimate the model parameters using: (i) OLS; and (ii) a simulated method of moments procedure that accounts for the prevalence of zeros in the bilateral trade data. I apply the model to explore various quantitative questions, such as how much distance, Ricardian productivity, factor endowments, and institutions each matter for country welfare in the global trade equilibrium.

### Measuring the benefits of foreign product variety with an accurate variety set

 Journal of International Economics---2010---Bruce Blonigen, Anson Soderbery

Recent studies have used import data to assess the impact of foreign varieties on domestic prices and welfare. We employ a market-based data set on the U.S. automobile market that allows us to define goods varieties at a more precise level, as well as discern location of production and ownership of varieties. Our estimates of price and welfare changes from new varieties in the U.S. automobile sector are twice as large as standard estimates when using our detailed market-based data. We also show that new varieties introduced by foreignowned affiliates provided an additional 70% welfare gain during our sample.

#### Airplanes and comparative advantage

• Journal of International Economics---2010---James Harrigan

Airplanes are a fast but expensive means of shipping goods, a fact which has implications for comparative advantage. The paper develops a Ricardian model with a continuum of goods which vary by weight and hence transport cost. Comparative advantage depends on relative air and surface transport costs across countries and goods, as well as stochastic productivity. A key testable implication is that the U.S. should import heavier goods from nearby countries, and lighter goods from faraway counties. This implication is tested using detailed data on U.S. imports from 1990 to 2003. Looking across goods the U.S. imports, nearby exporters have lower market share in goods that the rest of the world ships by air. Looking across exporters for individual goods, distance from the US is associated with much higher import unit values. These effects are large, which establish that the model identifies an important influence on specialization and trade.

#### The structure of factor content predictions

• Journal of International Economics---2010---Daniel Trefler,Susan Chun Zhu

The last decade witnessed an explosion of research into the impact of international technology differences on the factor content of trade. Yet the literature has failed to confront two pivotal issues. First, with international technology differences and traded intermediate inputs, there is no existing definition of the factor content of trade that is compatible with Vanek's factor content prediction. We fill this gap. Second, as Helpman and Krugman (1985) showed, many models beyond Heckscher-Ohlin imply the Vanek prediction. Thus, absent a complete list of these models, we do not fully know what models are being tested when the Vanek prediction is tested. We completely characterize the class of models being tested by providing a familiar consumption similarity condition that is necessary and sufficient for a robust Vanek prediction. Finally, we reassess the performance of the prediction using the correct factor content definition and input-output tables for 41 countries. We find that the prediction performs well except for the presence of missing trade. Further, missing trade is not pervasive: it is associated entirely with 'home bias' in the consumption of agricultural goods, government services and construction.

### Who is afraid of political risk? Multinational firms and their choice of capital structure

 Journal of International Economics---2010----Iris Kesternich, Monika Schnitzer

This paper investigates how multinational firms choose the capital structure of their foreign affiliates in response to political risk. We focus on two choice variables, the leverage and the ownership structure of the foreign affiliate, and we distinguish different types of political risk, such as expropriation, unreliable intellectual property rights and confiscatory taxation. In our theoretical analysis we find that, as political risk increases, the ownership share tends to decrease, whereas leverage can both increase or decrease, depending on the type of political risk. Using the Microdatabase Direct Investment of the Deutsche Bundesbank, we find supportive evidence for these different effects.

### How important is liquidity risk for sovereign bond risk premia? Evidence from the London stock exchange

• Journal of International Economics---2010---Ron Alquist

Using a unique data set, this paper studies the relationship between market liquidity risk and sovereign bond risk premia. The London Stock Exchange during the late 19th century is an ideal laboratory in which to examine the effect of market liquidity on sovereign bond prices. This period was the last time when the debt of a heterogeneous set of countries was traded in a centralized location and for which sufficiently long time series of observable bond prices are available to conduct asset-pricing tests. Empirical analysis of these data establishes two results. First, illiquid sovereign bonds carry larger factor loadings on market liquidity than liquid bonds. The difference in average excess returns is not only due to the larger transaction costs associated with holding illiquid bonds but also to the greater sensitivity of the returns of illiquid bonds to fluctuations in market liquidity. Second, excess bond returns are linearly related to the returns of a liquiditymimicking portfolio in the cross-section, indicating that market liquidity is a priced common risk factor. At about 2.8% per year, the price for bearing liquidity risk is economically significant. Overall, this evidence underscores the importance of understanding the effect of market liquidity on bond prices, even in an economic environment that seems remote from today's.

#### The spatial selection of heterogeneous firms

• Journal of International Economics---2010---Toshihiro Okubo, Pierre Picard, Jacques Thisse

We show that heterogeneous firms choose different locations in response to market integration. Specifically, decreasing trade costs lead to the gradual agglomeration of efficient firms in the larger country where they have access to a bigger pool of consumers. In contrast, high-cost firms seek protection against competition from efficient firms by locating in the smaller country. However, when the spatial separation of markets ceases

to be a sufficient protection against foreign competition, high-cost firms choose to set up in the larger market. Hence, the relationship between economic integration and international productivity gap first increases and then decreases with market integration.

### Third-country effects on the formation of free trade agreements

• Journal of International Economics---2010---Maggie Chen,Sumit Joshi

The recent proliferation of free trade agreements (FTAs) has resulted in an increasingly complex network of preferential trading relationships. The economics literature has generally examined the formation of FTAs as a function of the participating countries' economic characteristics alone. In this paper, we show both theoretically and empirically that the decision to enter into an FTA is also crucially dependent on the participating countries' existing FTA relationships with third countries. Accounting for the interdependence of FTAs helps to explain a significant fraction of FTA formations that would not otherwise be predicted by countries' economic characteristics.

### Ronen Palan, Richard Murphy and Christian Chavagneux, Tax Havens: How Globalization Really Works, Cornell University Press (2010)

• Journal of International Economics---2010---Mark Spiegel

2010

### Production fragmentation and business-cycle comovement

• Journal of International Economics---2010---Eric Ng

International trade increasingly involves trade in goods being produced in fragmentation arrangements across countries, with each country specializing in different stages of a production sequence. This paper examines empirically whether pairs of countries with more bilateral production fragmentation arrangements tend

to have more correlated business cycles. Using crosscountry data from 30 countries, we find that bilateral production fragmentation has a positive effect while the standard bilateral trade intensity indicator has a negative impact on business-cycle comovement. We also find that the positive effect of trade in complements (captured by bilateral production fragmentation) dominates the negative effect of trade in substitutes (explained by bilateral trade intensity), resulting in an overall positive impact of trade. Hence, bilateral production fragmentation plays a key role underlying the positive response of business-cycle comovement to increases in trade.

#### Hedging price volatility using fast transport

• Journal of International Economics---2010---David Hummels, Georg Schaur

Purchasing goods from distant locations introduces a significant lag between when a product is shipped and when it arrives. These transit lags are trade barriers for firms facing volatile demand, who must place orders before knowing the resolution of demand uncertainty. I propose a framework within which to interpret and We provide a model in which airplanes bring producers and consumers together in time. Fast transport allows firms to respond quickly to favorable demand realizations and to limit the risk of unprofitably large quantities during low demand periods. The model predicts that the likelihood and extent to which firms employ air shipments is increasing in the volatility of demand they face, decreasing in the air premium they must pay, and increasing in the contemporaneous realization of demand. We confirm all three conjectures using detailed US import data. Fast transport thus provides firms with a real option to smooth demand volatility on international markets, and we provide simple calculations of that option value. This enables us to identify how the option value relates to goods characteristics, and to changes in air transport premia associated with technological and policy change including the introduction of jet engines, and liberalization of trade in air services.

#### Trade, offshoring, and the invisible handshake

• Journal of International Economics---2010---Bilgehan Karabay, John McLaren

We study the effect of globalization on the volatility of wages and worker welfare in a model in which risk is allocated through long-run employment relationships (the 'invisible handshake'). Globalization can take two forms: international integration of commodity markets (i.e., free trade) and international integration of factor markets (i.e., offshoring). In a two-country, two-good, two-factor model we show that free trade and offshoring have opposite effects on rich-country workers. Free trade hurts rich-country workers, while reducing the volatility of their wages; by contrast, offshoring benefits them, while raising the volatility of their wages. We thus formalize, but also sharply circumscribe, a common critique of globalization.

### Trade skirmishes safeguards: A theory of the WTO dispute settlement process

• Journal of International Economics---2010---Mostafa Beshkar

evaluate the major reforms introduced to the GATT system in its transition to the WTO. In particular, I examine the WTO Agreement on Safeguards that has amended the GATT escape clause (Article XIX), and the Dispute Settlement Body (DSB) that resembles a court of law under the WTO. Using this framework, I interpret the weakening of the reciprocity principle under the Agreement on Safeguards as an attempt to reduce efficiency-reducing trade skirmishes. The DSB is interpreted as an impartial arbitrator that announces its opinion about the state of the world when a dispute arises among member countries. I demonstrate that the reforms in the GATT escape clause should be bundled with the introduction of the DSB, in order to maintain the incentive compatibility of trade agreements. The model implies that trade agreements under the WTO lead to fewer trade skirmishes but this effect does not necessarily result in higher payoffs to the governments. The model also implies that the introduction of the

WTO court, which has no enforcement power, can improve the self-enforceability of trade agreements.

### Backward stealing and forward manipulation in the WTO

• Journal of International Economics---2010---Kyle Bagwell,Robert Staiger

Motivated by the structure of WTO negotiations, we analyze a bargaining environment in which negotiations proceed bilaterally and sequentially under the mostfavored-nation (MFN) principle. We identify backwardstealing and forward-manipulation problems that arise when governments bargain under the MFN principle in a sequential fashion. We show that these problems impede governments from achieving the multilateral efficiency frontier unless further rules of negotiation are imposed. We identify the WTO nullification-orimpairment and renegotiation provisions and its reciprocity norm as rules that are capable of providing solutions to these problems. In this way, we suggest that WTO rules can facilitate the negotiation of efficient multilateral trade agreements in a world in which the addition of new and economically significant countries to the world trading system is an ongoing process.

# Reevaluating the role of trade agreements: Does investment globalization make the WTO obsolete?

• Journal of International Economics---2010---Emily Blanchard

International ownership alters the role of multilateral trade institutions by redefining pecuniary externalities among countries. Regardless of the underlying cause - whether foreign direct investment, international portfolio diversification, cross-country mergers, or multinational firms -- international ownership can mitigate incentives that lead large countries to set inefficiently high tariffs. At the same time, however, foreign ownership introduces the potential for expropriation by investment-host countries, which can extract rent from foreign owners by manipulating local prices. The basic

principle of reciprocity continues to serve as an important guide to efficiency, though its application must account for the pattern of international ownership in addition to traditional measures of market access.

### FDI in post-production services and product market competition

 Journal of International Economics---2010----Jota Ishikawa, Hodaka Morita, Hiroshi Mukunoki

Post-production services, such as sales, distribution, and maintenance, comprise a crucial element of business activity. We explore an international duopoly model in which a foreign firm has the option of outsourcing post-production services to its domestic rival or providing those services by establishing its own facilities through FDI. We demonstrate that trade liberalization in goods may hurt domestic consumers and lower world welfare, and that the negative welfare impacts are turned into positive ones if service FDI is also liberalized. This finding yields important policy implications, given the reality that the progress of liberalization in service sectors is still limited.

# The determinants of international investment and attention allocation: Using internet search query data

 Journal of International Economics---2010---Jordi Mondria, Thomas Wu, Yi Zhang

This paper explores the joint determination of home bias and attention allocation. We overcome the typical challenge associated with evaluating attention allocation theories by using a new internet search query dataset to measure how much information investors decide to process. Employing an instrumental variables approach, we find empirical evidence of a two-way causality between home bias and attention. Our estimates suggest that if all countries were to receive the same level of attention as the U.S., then the average home bias by U.S. investors would fall from 85.2% to 57.3%.

### Pierre-Philippe Combes, Thierry Mayer and Jacques-Francois Thisse, Economic Geography: The Integration of Regions and Nations, Princeton University Press (2008)

• Journal of International Economics---2010---Donald Davis

2010

### Do tariffs matter for the extensive margin of international trade? An empirical analysis

 Journal of International Economics---2010---Peter Debaere, Shalah Mostashari

With disaggregate tariff data we study the impact of changing tariffs on the range of goods countries export to the United States. Our probits with country and good effects show tariffs tend to have a statistically significant but small impact: at best 5% of the increasing extensive margin for 1989-1999 and 12% for 1996-2006 is explained by tariff reductions. This suggests the extensive margin has not amplified the impact of tariffs on trade flows to such an extent that the relatively moderate tariff reductions since WW II can explain the strong growth of world trade.

#### Outsourcing and pass-through

• Journal of International Economics---2010---Rebecca Hellerstein, Sofia Villas-Boas

A large share of international trade occurs through intra-firm transactions. We show that this common cross-border organization of the firm has implications for the well-documented incomplete transmission of shocks across such borders. We present new evidence of an inverse relationship between a firm's outsourcing of inputs and its rate of exchange-rate pass-through. We then develop a structural econometric model with final assemblers and upstream parts suppliers to quantify how firms' organization of their activities across national borders affects their pass-through behavior.

### The monetary model strikes back: Evidence from the world

• Journal of International Economics---2010---Valerie Cerra.Sweta Saxena

We revisit the dramatic failure of monetary models in explaining exchange rate movements. Using the information content from 98 countries, we find strong evidence for cointegration between nominal exchange rates and monetary fundamentals. We also find fundamentals-based models very successful in beating a random walk in out-of-sample prediction.

### Exporting behavior of foreign affiliates: Theory and evidence

• Journal of International Economics---2010---Jiangyong Lu, Yi Lu, Zhigang Tao

Firms have increasingly conducted different stages of production in different countries. In particular, they may set up operations in low-cost countries (those operations are referred to as foreign affiliates in those countries) either as platforms for export or serving the growing markets there. What is the exporting behavior of foreign affiliates? In this paper, using data from China, we find that among foreign affiliates exporters are less productive than non-exporters. We then offer a theoretical explanation by incorporating into the standard firm heterogeneity model the possibility that firms could have different stages of production in different countries.

#### Trade policy in a "super size me" world

• Journal of International Economics---2010---Phillip McCalman

When a foreign monopolist sets a single market clearing price for its product, the sign of the optimal tariff is determined by the extent of pass through (also known as the terms of trade effect). However, when a foreign monopolist employs a second degree price discrimination mechanism in the domestic market the calculus of welfare maximization is very different. While there are still terms of trade effects from the imposition of

a tariff, the existence of such effects are neither necessary nor sufficient to determine the sign of the optimal tariff. Instead the distribution of valuations within the population is the key determinant of the nature of policy intervention. This result differs significantly from the uniform price case and is driven by the incentive compatibility constraint which places the distribution of types at the center of the analysis. If there is a relatively large fraction of high valuation types in the population, then domestic information rents may be increased by subsidizing imports thereby increasing the consumption of the low valuation types and moving the incentive constraint in favor of the high valuation types. However, if the share of high types in the population is relatively small then the increase in information rents will also be small but the fiscal implications of a subsidy will be large. Consequently, the optimal policy will be to impose a trade tax.

### Offshoring and unemployment: The role of search frictions labor mobility

• Journal of International Economics---2010---Devashish Mitra, Priya Ranjan

In a two-sector, general-equilibrium model with labormarket search frictions, we find that the wage increases and sectoral unemployment decreases upon offshoring in the presence of perfect intersectoral labor mobility. If, as a result, labor moves to the sector with the lower (or equal) vacancy costs, there is an unambiguous decrease in economywide unemployment. With imperfect intersectoral labor mobility, unemployment in the offshoring sector can rise, with an unambiguous unemployment reduction in the non-offshoring sector. Imperfect labor mobility can result in a mixed equilibrium in which only some firms offshore, with unemployment in the offshoring sector rising.

### Trade liberalisation and human capital adjustment

• Journal of International Economics---2010---Rodney Falvey, Sir David Greenaway, Joana Silva

This paper highlights the way in which workers of different ages and abilities are affected by anticipated and unanticipated trade liberalisations. A two-factor (skilled and unskilled labour), two-sector Heckscher-Ohlin trade model is supplemented with an education sector which uses skilled labour and time to convert unskilled workers into skilled workers. A skilled worker's income depends on her ability, but all unskilled workers have the same income. Trade liberalisation in a relatively skilled labour abundant country increases the relative skilled wage and induces skill upgrading by the existing workforce, with younger and more able unskilled workers most likely to upgrade. But not all upgraders are better off as a result of the liberalisation. The older and less able upgraders are likely to lose. For an anticipated liberalisation we show that the preferred upgrading strategies depend on a worker's ability and that much of the upgrading will take place before the liberalisation. Hence some workers who would have upgraded had they anticipated the liberalisation will not if it is unanticipated, and adjustment assistance that applies only to post-liberalisation upgraders will fail to compensate some losers and distort the upgrading decisions of others.

### The role of multinational production in a risky environment

 Journal of International Economics---2010---Natalia Ramondo, Veronica Rappoport

This paper explores the aggregate consequences of Foreign Direct Investment (FDI) on the opportunities for risk diversification available to consumers. The crucial difference between FDI and other international financial flows is that the former involves technology flows across countries. We present a model where firm-embedded productivity can be transferred costly across countries through the activity of multinational firms. We find that risk patterns affect multinationals' location decisions and, in turn, these decisions change the scope for international risk diversification even in a world with complete financial markets.

### Imperfect tax competition for profits, asymmetric equilibrium and beneficial tax havens

Journal of International Economics---2010---Niels
 Johannesen

We present a model of tax competition for real investment and profits and show that the presence of tax havens in some cases increases the tax revenue of countries. In the first part of the paper, we argue that tax competition for profits is likely to be imperfect in the sense that the jurisdiction with the lowest tax rate does not necessarily attract all shifted profits. Under this assumption, tax competition between a large number of identical countries may lead to either a symmetric equilibrium with no profit shifting or an asymmetric equilibrium where firms shift profits from high-tax to low-tax countries. In the second part of the paper, we introduce tax havens. Starting from a symmetric equilibrium, tax havens unambiguously reduce the tax revenue of countries due to a 'leakage effect' -- tax havens attract tax base from countries -- and a 'competition effect' -- the optimal response to the increased tax sensitivity of tax bases involves a reduction of tax rates. Starting from an asymmetric equilibrium, however, tax havens also raise the tax revenue of countries through a 'crowding effect' -- tax havens make it less attractive to compete for profits and thus induce low-tax countries to become high-tax countries. We demonstrate that the latter effect may dominate the former effects so that countries, on balance, benefit from the presence of tax havens.

### The erosion of colonial trade linkages after independence

• Journal of International Economics---2010---Keith Head, Thierry Mayer, John Ries

Most independent nations today were part of empires in 1945. Using bilateral trade data from 1948 to 2006, we examine the effect of independence on post-colonial trade. While there is little short-run effect on trade, after four decades trade with the metropole (colonizer) has contracted by about 65%. Hostile separations lead to large, immediate reductions in trade. We also find

that trade between former colonies of the same empire erodes as much as trade with the metropole, whereas trade with third countries decreases about 20%. The gradual trade deterioration following independence suggests the depreciation of some form of trading capital.

### Market imperfections, wealth inequality, and the distribution of trade gains

• Journal of International Economics---2010---Reto Foellmi, Manuel Oechslin

Globalization increasingly involves less-developed countries (LDCs), i.e., economies which usually suffer from severe imperfections in their financial systems. Taking these imperfections seriously, we analyze how credit frictions affect the distributive impact of trade liberalizations. We find that free trade significantly widens income differences among firm owners in LDCs: While wealthy entrepreneurs are better off, relatively poor business people lose. Intuitively, with integrated markets, profit margins shrink -- which makes access to credit particularly difficult for the least-affluent agents. Richer entrepreneurs, by contrast, win because they can take advantage of new export opportunities. Our findings resonate well with a number of empirical regularities, in particular with the observation that some liberalizing LDCs have observed a surge in top-income shares.

### Bilateralism, multilateralism, and the quest for global free trade

• Journal of International Economics---2010---Kamal Saggi, Halis Yildiz

We develop an equilibrium theory of trade agreements in which both the degree and the nature (bilateral or multilateral) of trade liberalization are endogenously determined. To determine whether and how bilateralism matters, we also analyze a scenario where countries pursue trade liberalization on only a multilateral basis. We find that when countries have asymmetric endowments or when governments value producer interests more than tariff revenue and consumer surplus, there exist circumstances where global free trade is a stable

equilibrium only if countries are free to pursue bilateral trade agreements. By contrast, under symmetry, both bilateralism and multilateralism yield global free trade.

### Do stronger patent rights raise high-tech exports to the developing world?

• Journal of International Economics---2010---Olena Ivus

Despite over 20Â years of debate, the TRIPs agreement remains very contentious. This paper evaluates the impact of strengthening patent rights (PRs) in developing countries on developed countries' exports over the 1962-2000 period. Colonial origin is used to isolate exogenous variation in PRs. The impact is then identified by examining the cross-industry difference in sensitivity to PRs. I find that the increase in PRs made in response to the TRIPs agreement added about \$35Â billion (2000 US dollars) to the value of developed countries' patent-sensitive exports into 18 developing countries. This amount is equivalent to an 8.6% increase in these developing countries' annual value of patent-sensitive imports. The increase in the value of exports was driven by a quantity, rather than a price, increase.

# Accounting for persistence and volatility of good-level real exchange rates: The role of sticky information

 Journal of International Economics---2010---Mario Crucini, Mototsugu Shintani, Takayuki Tsuruga

Volatile and persistent real exchange rates are observed not only in aggregate series but also in micro-price data at the retail level. Kehoe and Midrigan (2007) recently showed that, under a standard assumption on nominal price stickiness, empirical frequencies of micro price adjustment cannot replicate the time series properties of the Law of One Price (LOP) deviations. We extend their sticky price model by combining good-specific price adjustment with information stickiness in the sense of Mankiw and Reis (2002). Our framework allows for multiple cities within a country. Using a panel of U.S.-Canadian city pairs, we estimate a

dynamic price adjustment process for 165 individual goods. Under a reasonable assumption on the money growth process, we show that the model matches the persistence of the LOP deviation for the median good and accounts for the majority of its volatility when information updates occur every 12Â months.

# Can structural small open-economy models account for the influence of foreign disturbances?

• Journal of International Economics---2010---Alejandro Justiniano, Bruce Preston

This paper demonstrates that an estimated, structural, small open-economy model of the Canadian economy cannot account for the substantial influence of foreign-sourced disturbances identified in numerous reduced-form studies. The benchmark model assumes uncorrelated shocks across countries and implies that U.S. shocks account for less than 3% of the variability observed in several Canadian series, at all forecast horizons. Accordingly, model-implied cross-correlation functions between Canada and U.S. are essentially zero. Both findings are at odds with the data. A specification that assumes correlated cross-country shocks partially resolves this discrepancy, but still falls well short of matching reduced-form evidence. One central difficulty resides in the model's inability to account for comovement without generating counter factual implications for the real exchange rate, the terms of trade and Canadian inflation.

# What lies beneath the euro's effect on financial integration? Currency risk, legal harmonization, or trade?

• Journal of International Economics---2010---Sebnem Kalemli-Ozcan, Elias Papaioannou, Jose-Luis Peydro

Although recent research shows that the euro has spurred cross-border financial integration, the exact mechanisms remain unknown. We investigate the underlying channels of the euro's effect on financial integration using data on bilateral banking linkages among

twenty industrial countries in the past thirty years. is evidence of profit shifting which seems more pro-We also construct a dataset that records the timing of nounced than debt shifting in Europe: multinationals legislative-regulatory harmonization policies in financial services across the European Union. We find that the euro's impact on financial integration is primarily driven by eliminating the currency risk. Legislativeregulatory convergence has also contributed to the spur of cross-border financial transactions. Trade in goods, while highly correlated with bilateral financial activities, does not play a key role in explaining the euro's positive effect on financial integration.

#### The effects of offshoring on the elasticity of labor demand

• Journal of International Economics---2010---Mine Senses

In this paper, I use detailed plant-level data to analyze the relationship between offshoring and labor demand elasticities in the U.S. manufacturing sector during the 1972-2001 period. The results suggest that conditional demand elasticities for production workers are positively associated with increased exposure to offshoring both in the short-run and in the long-run. This relationship holds both for the unbalanced panel of plants and, for plants which continue their operations throughout the sample period. Controlling for skill biased technical change does not alter the magnitude or the significance of the estimated positive relationship between offshoring and labor demand elasticities.

#### Saving taxes through foreign plant ownership

• Journal of International Economics---2010---Peter Egger, Wolfgang Eggert, Hannes Winner

This paper analyzes to which extent foreign plant ownership involves lower tax payments than domestic plant ownership. We assess hypotheses about the tax savings of endogenous foreign subsidiary ownership relative to domestic firms in a data-set of 507,542 foreign- and domestically-owned manufacturing plants in Europe. We identify a significant profit tax saving of endogenous foreign ownership in high-tax host countries. There earn significantly higher profits than comparable domestic units in low-tax countries but significantly lower ones in high-tax countries. Consequently, profit tax payments of foreign-owned firms are lower than those of domestic firms in high-tax countries but higher in low-tax countries.

#### Twin dollarization and exchange rate policy

• Journal of International Economics---2010---Kang Shi, Juanyi Xu

This paper develops a small open economy general equilibrium model with nominal rigidities to study twin dollarization in East Asian economies, a phenomenon where firms borrow in US dollars and also set export prices in US dollars. In this model, we endogenize both the currency of liability denomination and the currency of export pricing. We show that a key factor that affects firms' dollarization decisions is exchange rate policy. Twin dollarization is an optimal strategy for all firms when exchange rate flexibility is limited, which implies that a fixed exchange rate regime may lead to an equilibrium with twin dollarization. Furthermore, we find that twin dollarization can reduce the welfare loss caused by the fixed exchange rate regime, as it helps to cushion the economy against domestic nominal risk.

### Business cycles and monetary regimes in emerging economies: A role for a monopolistic banking sector

• Journal of International Economics---2010---Federico Mandelman

This study shows that the presence of imperfect competition in the banking system propagates external shocks and amplifies the business cycle. Strategic limit pricing, aimed at protecting retail niches from potential competitors, generates countercyclical bank markups. Markup increments during recessions directly increase borrowing costs for firms and indirectly damage the financial position of firms' balance-sheets, increasing the

risk perception of lenders. I use Bayesian techniques and data from Argentina to show that the inclusion of monopolistic banking improves the fit of the New Keynesian small open economy model.

### Fluctuations in the foreign exchange market: How important are monetary policy shocks?

• Journal of International Economics---2010---Hafedh Bouakez, Michel Normandin

We study the effects of U.S. monetary policy shocks on the bilateral exchange rate between the U.S. and each of the G7 countries. We also estimate deviations from uncovered interest rate parity conditional on these shocks. The analysis is based on a structural vector autoregression in which monetary policy shocks are identified through the conditional heteroscedasticity of the structural disturbances. Unlike earlier work in this area, our empirical methodology avoids making arbitrary assumptions about the relevant policy indicator or transmission mechanism in order to achieve identification. At the same time, it allows us to assess the implications of imposing invalid identifying restrictions. Our results indicate that the nominal exchange rate exhibits delayed overshooting in response to a monetary expansion, depreciating for roughly ten months before starting to appreciate. The shock also leads to large and persistent departures from uncovered interest rate parity. Variance-decomposition results indicate that monetary policy shocks account for a non-trivial proportion of exchange rate fluctuations.

#### Market integration and strike activity

 Journal of International Economics---2010---Ana Mauleon, Vincent Vannetelbosch

We consider a two-country model of wage determination with private information in unionized, imperfectly competitive, industries. We investigate the effects of opening up markets to trade as well as of further market integration on the negotiated wage and the maximum delay in reaching an agreement. From an initial situation of two-way intra-industry trade, an increase in product market integration decreases the maximum

delay in reaching an agreement. However, opening up markets to trade has an ambiguous effect on both the wage outcome and the maximum real delay time.

#### International capital flows

• Journal of International Economics---2010---Cédric Tille, Eric van Wincoop

The surge in international asset trade since the early 1990s has lead to renewed interest in models with international portfolio choice. We develop the implications of portfolio choice for both gross and net international capital flows in the context of a simple two-country dynamic stochastic general equilibrium (DSGE) model. We focus on the time-variation in portfolio allocation following shocks, and resulting capital flows. Endogenous time-variation in expected returns and risk, which are the key determinants of portfolio choice, affect capital flows in often subtle ways. The model is consistent with a broad range of empirical evidence. An additional contribution of the paper is to overcome the technical difficulty of solving DSGE models with portfolio choice by developing a broadly applicable solution method.

#### Sovereign default and debt renegotiation

• Journal of International Economics---2010---Vivian Yue

This paper develops a small open economy model to study sovereign default and debt renegotiation for emerging economies. The model features both endogenous default and endogenous debt recovery rates. Sovereign bonds are priced to compensate creditors for the risk of default and the risk of debt restructuring. The model captures the interaction between sovereign default and ex post debt renegotiation. We find that both debt recovery rates and sovereign bond prices decrease with the level of debt. In a quantitative analysis, the model accounts for the debt reduction, volatile and countercyclical bond spreads, countercyclical trade balance, and other empirical regularities of the Argentine economy. The model also replicates the dynamics of bond spreads during the debt crisis in Argentina.

### Location decision of heterogeneous multinational firms

• Journal of International Economics---2010---Maggie Chen, Michael Moore

We examine how multinational firms with heterogeneous total factor productivity (TFP) self-select into different host countries. Both aggregate- and firm-level estimates suggest that more productive French firms are more likely than their less efficient competitors to invest in relatively tough host countries. Countries with a smaller market potential, higher fixed costs of investment or lower import tariffs tend to have higher cutoff productivities and attract a greater proportion of productive multinationals. This self-selection mechanism remains largely robust when we control for unobserved firm and country heterogeneity and address potential TFP endogeneity.

#### Foreign subsidization and excess capacity

• Journal of International Economics---2010---Bruce Blonigen, Wesley Wilson

The U.S. steel industry has long held that foreign subsidization and excess capacity has led to its longrun demise, yet no one has formally examined this hypothesis. In this paper, we incorporate foreign subsidization considerations into a model based on Staiger and Wolak's (1992) cyclical dumping framework and illustrate testable implications of both cyclical excess capacity and structural excess capacity stemming from foreign subsidization. We then use detailed productand foreign country-level data on steel exports to the U.S. market to estimate these excess capacity effects. While the full sample results provide evidence of both cyclical and structural excess capacity effects for exports to the U.S. market, these effects are confined to such a narrow range of country-product combinations that it is unlikely that such effects were a significant factor in the fortunes of U.S. steel firms over the past decades.

### Tariff wars in the Ricardian Model with a continuum of goods

• Journal of International Economics---2010---Marcus Opp

This paper describes strategic tariff choices within the Ricardian framework of Dornbusch, Fischer, and Samuelson (1977) using CES preferences. The optimum tariff schedule is uniform across goods and inversely related to the import demand elasticity of the other country. In the Nash equilibrium of tariffs, larger economies apply higher tariff rates. Productivity adjusted relative size ([approximate]Â GDP ratio) is a sufficient statistic for absolute productivity advantage and the size of the labor force. Both countries apply higher tariff rates if specialization gains from comparative advantage are high and transportation cost is low. A sufficiently large economy prefers the inefficient Nash equilibrium in tariffs over free trade due to its quasimonopolistic power on world markets. The required threshold size is increasing in comparative advantage and decreasing in transportation cost. I discuss the implications of the static Nash-equilibrium analysis for the sustainability and structure of trade agreements.

## Exposure to foreign media and changes in cultural traits: Evidence from naming patterns in France

• Journal of International Economics---2010---Anne-Célia Disdier, Keith Head, Thierry Mayer

Free trade in audio-visual services has faced opposition on the grounds that foreign media undermine domestic culture, and ultimately, global diversity. Using a long panel of French birth registries, we assess the media-culture link using name frequencies as a measure of tastes. Controlling for the number of people who currently have a name and unobserved name effects, our regressions show that media influences choices via selective imitation. Parents are much more likely to adopt media names that they associate with youth. Using estimated parameters, we simulate our model of name choice to reveal that, absent foreign media, fewer than 5% of French babies would have been named differently.

Our simulations also suggest a positive effect of foreign media on the welfare of parents.

### Competition for firms in an oligopolistic industry: The impact of economic integration

• Journal of International Economics---2010---Andreas Haufler, Ian Wooton

We set up a model of generalised oligopoly where two countries of different size compete for an exogenous, but variable, number of identical firms. The model combines a desire by national governments to attract internationally mobile firms with the existence of location rents that arise even in a symmetric equilibrium where firms are dispersed. As economic integration proceeds, equilibrium taxes initially decline, but then rise again as trade costs fall even further. A range of trade costs is identified where economic integration raises the welfare of the small country, but lowers welfare in the large country.

### Why do most countries set high tax rates on capital?

 Journal of International Economics---2010---Nicolas Marceau, Steeve Mongrain, John Wilson

We consider tax competition in a world with tax bases exhibiting different degrees of mobility, modeled as mobile and immobile capital. An agreement among countries not to give preferential treatment to mobile capital results in an equilibrium where mobile capital is nevertheless taxed relatively lightly. In particular, one or two of the smallest countries, measured by their stocks of immobile capital, choose relatively low tax rates, thereby attracting mobile capital away from the other countries, which are then left to set revenuemaximizing taxes on their immobile capital. This conclusion holds regardless of whether countries choose their tax policies sequentially or simultaneously. In contrast, unrestricted competition for mobile capital results in the preferential treatment of mobile capital by all countries, without cross-country differences in the taxation of mobile capital. Nevertheless our main result is that the non-preferential regime generates larger expected global tax revenue, despite the sizable revenue loss from the emergence of low-tax countries. By extending the analysis to include cross-country differences in productivities, we are able to resurrect a case for preferential regimes, but only if the productivity differences are sufficiently large.

### The quality of innovation and the extent of the market

• Journal of International Economics---2010---Daniel Spulber

I present a comprehensive model of international trade in technology that considers both the demand for inventions and the supply of inventions. On the demand side, domestic and foreign firms make strategic technology adoption decisions. On the supply side, inventors compete to sell licenses for their technology to domestic and foreign firms. Countries benefit from international trade in technology because they obtain the best invention from a larger pool of inventions. International trade in technology increases the extent of the market for inventions and thereby improves the quality of innovation. Technology trade lowers prices, increases outputs, and increases the volume of trade in differentiated products. When traded products are not close substitutes, international markets for technology generate gains from trade. The results of the analysis are robust to the possibility of technology transfer either through expropriation or imitation. Protection of intellectual property rights preserves incentives for entry of inventors and improves the quality of innovation.

#### Trade policy with endogenous entry revisited

 Journal of International Economics---2010---Kala Krishna, Ling Hui Tan

This paper revisits the effects of tariffs and quotas in a competitive setting where three results are thought to hold. These are: that quotas are equivalent to specific tariffs, the form of tariffs--specific or ad valorem--does not matter, and that the way in which a quota is allocated has no real effects as it only affects the allocation of rents, not their size. We show that all three of these

alence holds only if the initial level of entry is set at the long-run level under the quota.

#### Domestic productivity and variety gains from trade

 Journal of International Economics---2010---Adina Ardelean, Volodymyr Lugovskyy

We show theoretically and confirm empirically that domestic productivity has a significant impact on the demand for foreign varieties under the assumption that domestic and foreign varieties are imperfect substitutes. In particular, the demand for imported varieties is more elastic for countries with comparative advantage. For an average good facing a median trade barrier, doubling the importer-exporter relative export performance decreases the number of imported varieties by 17%. Our findings suggest that the variety gains estimates could be significantly biased if we ignore the substitutability between imported and domestic varieties.

### Market power in banking, countercyclical margins and the international transmission of business cycles

• Journal of International Economics---2010---Maria

By introducing an imperfectly competitive banking sector into a standard two-country, two-good RBC model with complete asset markets, we study the international transmission of aggregate TFP shocks in an environment with noncompetitive financial intermediation. In this model, price-cost margins in a global loan market are endogenous and countercyclical. As a result, a positive TFP shock in one country spills over to another through a reduction in the global cost of both credit and externally financed investment. The quantitative analysis shows that countercyclical margins on loans play a key role in bringing the predictions of the theory closer to the observed cross-country cyclical comovements of consumption, employment, investment and output. Recessions are deeper when the cost of credit rises during these economic downturns. Thus, a

results are false when entry/exit is endogenous. Equiv- financial accelerator arises in our framework, unveiling the increased importance of stabilization policies in economies where margins in credit markets are countercyclical.

### International competitiveness, job creation and job destruction--An establishment-level study of German job flows

• Journal of International Economics---2010---Christoph Moser, Dieter Urban, Beatrice Weder

This study investigates the impact of international competitiveness on net employment, job creation, job destruction, and gross job flows for a representative sample of German establishments from 1993 to 2005. We find a statistically significant but economically small effect of real exchange rate shocks on employment, comparable to the one found in studies for the United States. However, contrary to the United States, the employment adjustment (among surviving firms) operates mainly through the job creation rather than the job destruction rate. Job destruction occurs essentially through discrete events such as restructuring, outsourcing and bankruptcy. We suggest that these findings are consistent with a highly regulated labor market, in which smooth adjustment is costly and possibly delayed.

### Jakob De Haan, Sander Oosterloo and Dirk Schoenmaker, European Financial Markets and Institutions, Cambridge University Press (2009)

• Journal of International Economics---2010---Richard M. Levich

2010

#### JIE special issue on international macro-finance

• Journal of International Economics---2010---Michael Devereux, Charles Engel, Akito Matsumoto, Alessandro Rebucci, Alan Sutherland

#### Why do foreigners invest in the United States?

• Journal of International Economics---2010---Kristin Forbes

Why are foreigners willing to invest over \$2Â trillion per year in the United States? This paper tests various hypotheses and finds that standard portfolio allocation models and diversification motives are poor predictors of foreign holdings of U.S. liabilities. Instead, foreigners hold greater shares of their investment portfolios in the United States if they have less developed financial markets. The magnitude of this effect decreases with income per capita. Countries that trade more with the United States also have greater portfolio shares in U.S. equity and bond markets. These results support recent theoretical work on the role of financial development in sustaining global imbalances and have important implications for whether the United States can continue to attract sufficient financing from abroad without major changes in asset prices and returns, especially in bond markets.

### Decomposing the U.S. external returns differential

• Journal of International Economics---2010---Stephanie E. Curcuru, Tomas Dvorak, Francis Warnock

We decompose the returns differential between U.S. portfolio claims and liabilities into the composition, return, and timing effects. Our most striking and robust finding is that foreigners exhibit poor timing when reallocating between bonds and equities within their U.S. portfolios. The poor timing of foreign investors-caused primarily by deliberate trading, not a lack of portfolio rebalancing-contributes positively to the U.S. external returns differential. We find no evidence that the poor timing is driven by mechanical reserve accumulation by emerging market countries; rather, it is driven almost entirely by the poor timing of rich, developed (mainly European) countries. Finally, while poor foreign timing appears to be persistent across subsamples, other terms in our decomposition (the composition and return effects and U.S. timing abroad), as well as the overall differential, are sometimes negative, sometimes positive, and usually indistinguishable from zero.

### The long or short of it: Determinants of foreign currency exposure in external balance sheets

• Journal of International Economics---2010---Philip Lane, Jay Shambaugh

A major focus of the recent literature on the determination of optimal portfolios in open-economy macroeconomic models has been on the role of currency movements in determining portfolio returns that may hedge various macroeconomic shocks. However, there is little empirical evidence on the foreign currency exposures that are embedded in international balance sheets. Using a new database, we provide stylized facts concerning the cross-country and time-series variation in aggregate foreign currency exposure and its various subcomponents. In panel estimation, we find that richer, more open economies take longer foreign-currency positions. In addition, we find that an increase in the propensity for a currency to depreciate during bad times is associated with a longer position in foreign currencies, providing a hedge against domestic output fluctuations. We view these new stylized facts as informative in their own right and also potentially useful to the burgeoning theoretical literature on the macroeconomics of international portfolios.

#### Patterns of international capital raisings

 Journal of International Economics---2010---Juan Carlos Gozzi, Ross Levine, Sergio Schmukler

This paper documents several new patterns associated with firms issuing stocks and bonds in foreign markets that motivate the need for and help guide the direction of future research. Three major patterns stand out. (1) A large and growing fraction of capital raisings, especially debt issuances, occurs in international markets, but a very small number of firms accounts for the bulk of international capital raisings, highlighting the cross-firm heterogeneity in financial globalization. (2) Changes in firm performance following equity and debt issuances in international markets are qualitatively

similar to those following domestic issuances, suggest- Exchange rate forecasting, order flow and ing that capital raisings abroad are not intrinsically different from those in domestic markets. (3) Firms continue to issue securities both abroad and at home after accessing international markets, suggesting that international and domestic markets are complements, not substitutes. Existing theories do not fully account for these patterns.

### Order flows and the exchange rate disconnect puzzle

• Journal of International Economics---2010---Martin Evans

The aim of this paper is to establish the link between the high frequency dynamics of spot exchange rates and developments in the macroeconomy. To do so, I first present a theoretical model of exchange-rate determination that bridges the gap between existing microstructure and traditional models. The model examines how dispersed microeconomic information known to individual agents outside the foreign exchange market is aggregated and transmitted to dealers via transaction flows (i.e., order flow); and how the information is then embedded in the spot exchange rate. I then report empirical evidence that strongly supports the presence of the link between the macroeconomy, order flow, and high frequency exchange rate returns implied by the model. In fact, my empirical results indicate that between 20 and 30% of the variance in excess currency returns over one- and two-month horizons can be linked back to developments in the macroeconomy. This level of explanatory power is an order of magnitude higher than that found in traditional models -- even the newly developed monetary models incorporating central banks reaction functions. Moreover, it provides a straightforward solution to the exchange-rate disconnect puzzle. Namely, the high frequency behavior of spot exchange rates reflects the flow of new information reaching dealers concerning the slowly evolving state of the macroeconomy, rather than the effects of shocks that drive rapidly changing macroeconomic conditions.

### macroeconomic information

• Journal of International Economics---2010---Dagfinn Rime, Lucio Sarno, Elvira Sojli

This paper adds to the research efforts that aim to bridge the divide between macro and micro approaches to exchange rate economics by examining the linkages between exchange rate movements, order flow and expectations of macroeconomic variables. The basic hypothesis tested is that if order flow reflects heterogeneous expectations about macroeconomic fundamentals, and currency markets learn about the state of the economy gradually, then order flow can have both explanatory and forecasting power for exchange rates. Using one year of high frequency data collected via a live feed from Reuters for three major exchange rates, we find that: i) order flow is intimately related to a broad set of current and expected macroeconomic fundamentals; ii) more importantly, order flow is a powerful predictor of daily movements in exchange rates in an out-of-sample exercise, on the basis of economic value criteria such as Sharpe ratios and performance fees implied by utility calculations.

#### A new perspective on "the new rule" of the current account

• Journal of International Economics---2010---Cédric Tille, Eric van Wincoop

In an influential series of contributions, Kraay and Ventura (2000, 2003) offer a "new rule" for the current account: in response to a temporary income shock, the change in the current account is equal to the change in saving times the ratio of net foreign assets to wealth. We analyze the impact of a temporary income shock on the current account in the context of a two-country dynamic general equilibrium model of portfolio choice and show that the new rule does not hold. We also show that the cross-section evidence reported by Kraay and Ventura in favor of the new rule is a feature implied by the steady state of the model that is conceptually distinct from the new rule. We argue that the new rule could only hold in a model with one-way capital flows

is strongly counterfactual.

### International portfolios, capital accumulation and foreign assets dynamics

• Journal of International Economics---2010---Nicolas Coeurdacier, Robert Kollmann, Philippe Martin

Despite the liberalization of capital flows among OECD countries, equity home bias remains sizable. We depart from the two familiar explanations of equity home bias: transaction costs that impede international diversification, and terms of trade responses to supply shocks that provide risk sharing, so that there is little incentive to hold diversified portfolios. We show that the interaction of the following ingredients generates a realistic equity home bias: capital accumulation and international trade in stocks and bonds. In our model, domestic stocks are used to hedge fluctuations in local wage income. Terms of trade risk is hedged using bonds denominated in local goods and in foreign goods. In contrast to related models, the low level of international diversification does not depend on strongly countercyclical terms of trade. The model also reproduces the cyclical dynamics of foreign asset positions and of international capital flows.

### Home bias and high turnover: Dynamic portfolio choice with incomplete markets

• Journal of International Economics---2010---Viktoria Hnatkovska

Why do investors trade a lot in foreign assets and hold so little of them in their portfolios? This paper shows that both observations can arise naturally in the presence of nondiversifiable nontraded consumption risk when each country specializes in production, preferences exhibit consumption home bias, and asset markets are incomplete. Using a general equilibrium two-country, two-sector (tradable and nontradable) model of the world economy with production I show that low diversification occurs because variations in relative prices (i) increase the riskiness of foreign assets

(only inflows or outflows, but not both), a feature that and (ii) facilitate risk-sharing across countries. Large and volatile capital flows are necessary to take advantage of international risk premia differentials that occur in response to productivity changes in the nontradable sector. I characterize the optimal portfolio holdings, the evolution of the investment opportunity set, the risk premium, and the dynamics of capital flows using a new methodology for solving dynamic general equilibrium models with incomplete markets and portfolio choice.

#### Valuation effects and the dynamics of net external assets

• Journal of International Economics---2010---Michael Devereux, Alan Sutherland

'Valuation effects' can imply that the traditional current account is an inaccurate measure of the change in the net foreign asset (NFA) position. This paper uses new developments in the analysis of portfolio choice in general equilibrium to investigate valuation effects in a two-country model. Broadly speaking, the valuation effects in the model correspond to those observed in the data. But there is a key distinction between 'unanticipated' and 'anticipated' valuation effects. Unanticipated effects can be large, dominating the movement in NFA, but anticipated effects arise only at higher orders of approximation and are small for reasonable parameterizations.

#### An asset-pricing view of external adjustment

• Journal of International Economics---2010---Anna Pavlova, Roberto Rigobon

Recent literature has argued that conventional measures of external sustainability - the trade balance and current account - are misleading because they omit capital gains on net foreign asset positions. We adjust the definition of the current account to include the capital gains and discuss how this may affect our thinking about external adjustment and sustainability. We do so in the context of a two-country macro-finance model of Pavlova and Rigobon (2008a) that allows exploration of the interconnections between equilibrium portfolios

and external accounts' dynamics. We calibrate the model and find that it generates several testable implications, some of which have already been validated empirically. First, we establish dynamic properties of the capital-gains adjusted current account and show that they are fundamentally different from those of the conventional current account. Second, we find that capital gains have a stabilizing effect on the trade balance and the current account. Finally, we demonstrate that in response to a shock, the conventional and the capital-gains adjusted current accounts may move in opposite directions.