Conference on International Economics

On April 4 and 5, 2008, the Globalization and Monetary Policy Institute, in collaboration with the Department of Economics at the University of Texas at Austin, cosponsored the Murray S. Johnson Memorial Conference on international economics in Austin. The conference brought together scholars to discuss a variety of international topics. Nine papers were grouped under three sessions: exchange rates and capital flows, empirical international trade and international prices.

Exchange Rates and Capital Flows

The first session dealt with exchange rate movements and capital flows in emerging countries. The first paper was presented by Cristina Arellano from the University of Minnesota and the Federal Reserve Bank of Minneapolis. The paper, written jointly with Ananth Ramanarayanan from the Federal Reserve Bank of Dallas, studies the maturity composition of government debt in emerging countries. Arellano and Ramanarayanan note that governments in emerging countries issue debt in international markets with a volatile maturity structure: Debt issuances are mostly short-term when interest rate spreads are high and are mostly long-term when interest spreads are low.

Using a dynamic model of borrowing and defaults, the authors show that managing the maturity of debt can provide benefits to the government because of uncertainty over future interest rates. In their model, maturity composition of debt reflects the time-variation properties of long-term debt relative to the cost of short-term debt. On one

hand, long-term debt is beneficial because it can hedge against variation in short-term interest rates. On the other hand, short-term debt is beneficial because it can deliver immediate liquidity. They find that the volatility of the maturity composition of government debt is indeed an optimal response to interest rate fluctuations experienced by emerging countries.

Other dimensions that characterize the relationship between sovereign debt and economic activity have been difficult to explain simultaneously using contemporary economic models. For example, three often-cited facts are that (i) default episodes are often associated with recessions, (ii) interest rates on sovereign debt and domestic output are negatively correlated, and (iii) external debt as a share of output is usually high. Vivian Z. Yue from New York University presented the second paper. Coauthored with Enrique Mendoza from the University of Maryland and the National Bureau of Economic Research (NBER), the paper takes on the task of explaining these three facts through a model of sovereign default with endogenous output fluctuations.

Yue and Mendoza's model borrows from the business-cycle literature a transmission mechanism that links default risk with economic activity via the financing of working capital. Using numerical analysis, they show that the model can explain simultaneously these three facts of sovereign debt. The results hinge on three premises of the model: Imported inputs require working capital; domestic production is done with imported inputs; and

default on foreign obligations of firms and government occurs simultaneously.

The third paper was presented by George Alessandria from the Federal Reserve Bank of Philadelphia. The paper, cowritten with Joseph Kaboski from Ohio State University and Virgiliu Midrigan from New York University and NBER, looks at the implications of large swings in exchange rates on international trade. First, they highlight the importance of fixed transaction costs (such as document preparation, custom clearing, etc.) and delivery lags for international trade flows. Quantitatively, these fixed costs amount to 3 to 11 percent of shipments. Given that most goods transacted across borders are storable, these costs make it optimal for importers to engage infrequently in international transactions and to hold substantial inventories of imported goods.

Building on this idea, they construct a dynamic stochastic general equilibrium (DSGE) model of trade with fixed transaction costs and delivery lags to study international trade dynamics under large exchange rate variations. Following a currency devaluation, their model accounts well for the dynamics of import quantity and price observed in the data. That is, in response to unanticipated currency devaluations, importers reduce retail markups, reduce import quantities and reduce import variety.

Empirical International Trade

The second session discussed topics in empirical international trade. The first two papers of the session look at the determinants of firms' export behavior, while the final one studies the relationship between trade flows and income.

Current models of international trade often attach productivity or product quality as the single attribute to firms' heterogeneity. While these models capture the salient fact that exporters tend to be large firms, this prediction leaves much of the observed relationship between firm size and export status unexplained.

Conference Papers

Conference papers can be found on the Federal Reserve Bank of Dallas website at www.dallasfed.org/news/research/2008/08msj.cfm

1. Cristina Arellano and Ananth Ramanarayanan, "Default and the Maturity Structure in Sovereign Bonds"

2. Enrique Mendoza and Vivian Yue, "A Solution to the Default Risk–Business Cycle Disconnect"

3. George Alessandria, Joseph Kaboski and Virgiliu Midrigan, "Inventories, Lumpy Trade, and Large Devaluations"

4. Maurice Kugler and Eric Verhoogen, "Product Quality at the Plant Level: Plant Size, Exports, Output Prices, and Input Prices in Colombia"

5. Juan Carlos Hallak and Jagadeesh Sivadasan, "Productivity, Quality and Exporting Behavior Under Minimum Quality Requirements"

6. Ana Cecilia Fieler, "Non-Homotheticity and Bilateral Trade: Evidence and a Quantitative Explanation"

7. Emi Nakamura, "Accounting for Incomplete Pass-Through"

8. Mario Crucini and Hakan Yilmazkuday, "A Model of International Cities: Implications for Real Exchange Rates"

9. Anthony Landry, "International Pricing and the Law of One Price"

The fourth paper was presented by Eric Verhoogen from Columbia University. The paper, cowritten with Maurice Kugler from Wilfrid Laurier University and Harvard University, looks at the relationship between plant size and product quality and prices. Using Colombian manufacturing plant data, Verhoogen and Kugler find that (i) plant size and output prices are positively correlated within industries, (ii) plant size and input prices are positively correlated within industries, and (iii)

these correlations are more positive in industries with more scope for quality differentiation.

To account for these observed correlations, they augment the Melitz model of heterogeneous firms with quality differentiation in inputs and outputs. In their framework, input quality and plant size are complementary in determining output quality. They conclude that a model of quality differentiation of inputs and outputs is consistent with the above correlation while difficult to reconcile with models that impose symmetry of homogeneity on both sets of goods.

The fifth paper was presented by Juan Carlos Hallak from Universidad de San Andres and NBER. Coauthored with Jagadeesh Sivadasan from the University of Michigan, the paper develops an alternative model of international trade with two sources of firm heterogeneity: productivity and caliber. Caliber reflects a firm's ability to produce quality.

Compared with single-attribute models of firm heterogeneity emphasizing either productivity or product quality, Hallak and Sivadasan's model produces a more nuanced characterization of firms' export behavior. In particular, size is not the sole determinant of export status because exporters differ in quality as well as productivity. They also demonstrate that conditional on size, exporters sell products of higher quality at higher prices, use capital more intensively and pay higher wages.

Finally, Ana Cecilia Fieler from New York University presented the sixth paper, which studies the relationship between trade flows and income distribution. Standard empirical models of international trade predict that trade flows increase with both importer and exporter total income but ignore how total income is divided across populations. However, the data show that trade grows strongly with income per capita but is largely unresponsive to population growth.

Fieler develops a model of international trade that allows the elasticities of trade with respect to per capita income and population to diverge. In her model, goods are divided into two types: income elasticity of demand and heterogeneity in production technologies. In equilibrium, low-income countries consume relatively more goods of the low-income elasticity type, and they have a comparative advantage in producing goods with low levels of heterogeneity in production technologies. Using data on bilateral trade flows, Fieler shows that her model improves the predictions of standard empirical models regarding variations due to income per capita and population.

International Prices

The last session looked at the relation between exchange rate movements and domestic prices. This is of particular importance given the recent movements in currency markets.

Recent theoretical work suggests a number of potentially important factors for the incomplete pass-through of exchange movements to prices. These include markup adjustment, local costs and menu costs. Emi Nakamura from Columbia University and NBER presented the seventh paper. She uses data on prices and sales of coffee beans to uncover the role of these factors in accounting for incomplete exchange rate pass-through. Nakamura finds that local costs and markup adjustments explain the bulk of incomplete pass-through, while menu costs only explain a small fraction. Nevertheless, menu costs play an important role since they explain the delayed response of price to costs. Moreover, she finds that delayed pass-through in the coffee industry occurs almost entirely at the wholesale rather than the retail level.

The eighth paper was presented by Mario Crucini from Vanderbilt University, who cowrote it with Hakan Yilmazkuday, also from Vanderbilt. The paper notes that price deviations for similar goods across countries are too large to be accounted for by transportation costs, tariffs and other barriers to trade and too persistent to be accounted for by nominal rigidities.

Instead, a recent stream of empirical papers focuses on the notion that final goods are composites of traded and nontraded components. Building on this literature, Crucini and Yilmazkuday develop a model where trade occurs at the level of cities. Each city has two agents: a manufacturer that specializes in the production of a single homogenous good and a retailer that imports, bundles and distributes a variety of goods from other cities. In this environment, price dispersion arises because of trade costs via distances separating cities, consumer demand for a city-specific good and difference in productivity levels in the distribution sector.

Using micro price data, they explore the relative contribution of trade costs and distribution margins in accounting for price dispersion in the Organization for Economic Cooperation and Development (OECD). They find that trade costs are more important than distribution margins in accounting for price dispersion. However, the contributions of distribution margins and trade costs are roughly equal when less-developed economies are included. This arises because measured wage differentials are small relative to price dispersion within the OECD. In contrast, larger wage differentials between the OECD and the less-developed economies boost the contribution of distribution costs in accounting for price dispersion around the globe.

Finally, Anthony Landry from the Federal Reserve Bank of Dallas presented a paper on IKEA retail prices. While the empirical literature finds significant price deviations for similar goods across countries, the economic interpretations of those deviations are controversial. Most concerns are about the homogeneity of goods used to test deviations in the law of one price (LOP).

To avoid this concern, Landry looks at identical goods advertised in annual catalogs from the multinational IKEA. The large number of observations and the tractability of the database allow him to control for product heterogeneity, product turnover and price changes. Landry confirms significant price deviations for similar goods across countries. In addition, he finds that most of the price dispersion is attributable to long-run LOP deviation. This suggests that some goods are always cheaper or more expensive in one country relative to another. While this new database confirms previous findings, IKEA micro price data should shed new light on questions related to LOP deviations.

—Anthony Landry