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Editors' Summary

In macroeconomics, the joke goes, the important questions remain the same, but the answers keep changing. International economists may not be as fickle, but as national economies become more integrated, long-standing policy issues often take on new dimensions and occasionally lead to novel conclusions. The 2001 edition of the *Brookings Trade Forum* revisits six such issues using new theoretical frameworks as well as new, expanded data sets.

The first two papers examine topics in international macroeconomics and finance. The first of these addresses what factors determine central bank holdings of reserves**,** and why such holdings have increased even as countries have moved toward more flexible exchange regimes. The second explores whether there is still a role for countercyclical monetary policy—especially exchange rate depreciation—for emerging markets with high capital mobility.

The four remaining papers address topics in international trade. Does the existence of visible international conventions affect the probability that individual countries will adopt and implement labor standards? Why are some people more protectionist than others, and how well are these attitudes explained by the types of economic factors emphasized in standard trade models? How important are the remaining barriers to cross-border trade, and would removal of such barriers significantly improve welfare? Finally, what determines a firm's decision to invest abroad? In particular, how important are market access and wage differentials relative to other factors?

The Brookings Trade Forum held its fourth annual conference in Washington on May 10–11, 2001. This issue of the *Trade Forum* contains the six papers and discussion from that conference.

IN THE FIRST PAPER, Robert Flood and Nancy Marion examine why countries held so many international reserves during the 1990s. At the end of 1999,

global reserve holdings (excluding gold) were almost double what they had been at the end of 1960 and about 20 percent higher than they had been at the start of the 1990s. Reserve holdings have also trended upward when measured as a share of global income. A primary use of international reserves is for countries to stabilize the exchange value of their currencies. However, by standard measures, most countries pay less attention to currency stabilization now than in the recent past. They certainly pay far less attention to currencies' exchange values than they did in the Bretton Woods era. As pointed out by discussants and other participants, this topic has received surprisingly little recent attention in the economics literature.

Flood and Marion begin by carefully documenting what has happened to reserve holdings among a broad sample of countries in the post–World War II period. Their paper then turns to more formal statistical analyses in an attempt to explain the observed patterns. The authors first replicate and update early econometric estimates of countries' reserve-holding behavior based on a "buffer-stock" model. This early work developed the insight that countries should tend to hold more reserves when reserve levels are more volatile. However, early approaches for measuring this volatility are likely to be biased, as explained in some detail in the paper. Therefore, Flood and Marion extend the methods and data used in previous econometric work. By building on more recent models in which reserve movements respond to government policies and countries may be subject to speculative attacks on reserve stocks, they construct better measures of reserve volatility that can be used in the estimation. Finally, after estimating models constrained tightly by suggested economic theory, the authors report some exploratory work that considers the importance of other factors in explaining recent reserve holdings.

Overall, the results reported in the paper are mixed. The replication and data extension of previous work indicates that the buffer-stock model works about as well using the extended data set as it did for 1970s data. Reserve holdings increase with greater reserve volatility but do not respond significantly to their opportunity cost. Using their improved measure of volatility the authors show that their results are very robust. Their new volatility measure is always a highly statistically significant explanatory variable for reserve holdings.

However, neither volatility nor any other variable suggested directly by the buffer stock theory is able to explain much of the variation in reserve holdings. In a typical regression, country-fixed effects account for about 75 percent of the variation of reserve holdings as a share of GNP, while the explanatory

variables suggested by the theoretical model explain only about 10 percent of reserves/GNP variation.

When Flood and Marion depart from the tight constraints of the buffer-stock model, however, their results are more promising. In particular once indicators of openness are included, the regressors explain over 40 percent of reserve variation absent fixed country effects. These findings suggest that economies more open to trade and to financial flows may hold more reserves, on average, because they face higher costs of adjustment should they run out of reserves.

The paper generated a wide-ranging discussion of why holdings of foreign exchange reserves may have increased, and of the best ways to examine these developments. The authors of the paper stressed their view that the buffer-stock model provides a very useful approach to modeling reserve holdings and that there are many promising extensions for additional work based on this framework. However, others argued that a better understanding of trends in reserve holdings may require analysts to explore a broader range of models.

IN THE SECOND PAPER, Andrés Velasco challenges what he calls the emerging orthodoxy—that developing countries cannot maintain monetary independence once they have integrated with global capital markets. The well-known traditional view is frequently called the "impossible trinity." Countries cannot have capital mobility, an independent monetary policy, and fixed exchange rates all at once. Velasco argues that in the aftermath of the Mexican, Asian, Russian, and Turkish crises, this traditional view has been replaced by the "impossible duo." Velasco explains the "impossible duo" as follows: countries cannot enjoy both free capital movements and a countercyclical monetary policy, regardless of their exchange rate regime. According to this view, the culprit is "original sin": past misbehavior keeps a country from being able to borrow in its own currency, causing a pervasive dollarization of liabilities. In these circumstances a monetary expansion accompanied by a real depreciation can do more harm than good, causing debt-service costs to shoot up and bankrupting local banks and firms. The result is that emerging markets may as well forget about running independent monetary policies.

Velasco argues that this emerging orthodoxy is misleading and the impossibility of the duo is much less clear-cut than the post-Asia discussion suggests. The theoretical results in his paper suggest that flexible exchange rates and countercyclical monetary policy do have a role to play, even in economies

with dollar liabilities and external financing constraints. Indeed there are circumstances in which an active monetary policy and a weaker exchange rate may be just what is needed to avoid collapses in investment and growth.

To analyze these policy options, the paper develops a simple model of a small, open economy. In this model real exchange rates play a central role in the adjustment process, wages and prices are sticky, liabilities are "dollarized," and local capitalists' international borrowing capacity is limited by their net worth. Thus, the model incorporates the basic building blocks that would be necessary for unexpected real exchange rate movements to be financially dangerous. The model does yield circumstances in which self-fulfilling devaluations and financial crises are possible. But it also highlights a potentially constructive role for exchange rate flexibility and countercyclical monetary policy.

The basic message of the paper is that when we ask whether monetary policy can be effective, it is important to specify "effective at what?" On the one hand, there are certainly situations in which a policy-induced depreciation is likely to be very damaging. For instance, the paper finds this result for an economy in the midst of a speculative attack, caused by a bout of pessimism that could be self-fulfilling. On the other hand, there are many other situations when not allowing the exchange rate to depreciate may be just as damaging—for instance, if the economy has suffered an adverse export shock.

Finally, Velasco acknowledges that the requirements for countercyclical monetary policy to work are quite stringent. In particular central banks must be credible—a transitory nominal and real devaluation must be viewed as just that, and not as the start of an inflationary spiral. A few years ago that might have seemed like an impossible prerequisite, especially in Latin America. But in Velasco's view, the increasing prevalence of independent central banks, bent on inflation targeting, has made it more plausible.

Conference participants welcomed the model developed in the paper as a useful addition to existing literature. However, some commentators were unconvinced by the potency of monetary policy suggested in the paper. In this context they raised issues such as whether the paper's somewhat simplistic treatment of timing and neglect of the role of credibility lead to an unrealistically strong role for monetary policy.

THE THIRD PAPER, by Nancy Chau and Ravi Kanbur, examines a topic that has been quite controversial in the context of growing international economic integration—when do countries adopt labor standards such as the right to organ-

ize, and what role does the ILO play in this decision? The authors motivate their study by distinguishing between two very different views. One view is common in the empirical economic literature on labor standards and economic performance. Here, the adoption of international labor standards is measured by the ratification of ILO conventions and is treated as an exogenous variable that explains labor costs, growth, exports, or inward foreign direct investment. Thus the ratification of ILO conventions is assumed to be correlated with higher labor standards in the ratifying country. In contrast in popular discussions, the ILO is often characterized as having no "teeth" to enforce standards, and ratification is often characterized as having no substantial meaning. An objective of this paper is to assess which of these views is nearer to the truth.

The first section of the paper develops a framework in which a country's decision to ratify a labor standard is made simultaneously with its decision on degree of implementation, taking into account the costs and benefits. In the absence of an international standard, a country is assumed to have a "natural" standard that it would adopt. A system of international standards changes the cost-benefit calculation since there may be costs of not adopting the international standard and these costs may depend on whether the country does or does not ratify an ILO convention. The authors reason that if there were no difference at all in the costs of deviating from an international standard, between a country that ratifies and a country that does not, then ratification would have no systematic empirical determinants. Therefore, if they do find systematic determinants of ratification, their model implies that ratification of ILO standards is indeed costly and, moreover, that ratification is correlated with higher domestic labor standards.

The rest of their paper is devoted to an empirical investigation of the time patterns of ratification for four core ILO conventions—Right to Organize and Collective Bargaining, Abolition of Forced Labor, Discrimination, and Minimum Age—using data for ninety-four countries from 1950 to 1992. They estimate the probability of ratification for a country in any year, given that it has not so far ratified the convention. They find that basic economic variables—real income per capita, degree of openness to trade, education levels, degree of urbanization—do not explain the probability of ratification, even though they have been emphasized in previous literature. Neither do they find a role for their indicator of political rights, which has been suggested by some theorists.

The two key variables that they do find to matter are type of legal systems and peer effects. Legal systems are classified according to their origins as British common law, French civil law, German civil law, Scandinavian civil

law, and socialist law. Countries with Scandinavian civil law are found to have a higher probability of ratifying the conventions, while countries whose legal systems have origins in socialist law have a lower probability of ratification. The authors suggest that these results may reflect the quality of enforcement and efficiency that is characteristic of these different systems.

Peer effects seem to be important for two of the four conventions: Right to Organize and Abolition of Forced Labor. The greater the number of countries from a reference group who have already signed, the higher the probability of ratification. The paper considers three reference groups—export orientation (five categories), level of development (two categories), and geographical region (seven categories). Each specification yields statistically significant effects, even when a time variable is introduced to take into account the fact that ratifications have generally increased over time. Such peer effects suggest empirical support for the hypothesis of "strategic complementarity" in labor standards—the benefits to a country from adopting a standard increase with the number of countries who have already adopted that standard.

Thus the authors are able to find determinants which explain ratification for all four of the ILO conventions considered, although the determinants differ somewhat across conventions. Taking their theoretical framework to heart, therefore, the empirical analysis suggests that ratification of an ILO convention is neither random nor meaningless. Instead there are costs to ratification, and countries that ratify are likely to have higher domestic standards. The paper generated an active discussion of the timing and implications of ratifying ILO conventions.

KEVIN O'ROURKE AND RICHARD SINNOTT study the determinants of individuals' attitudes toward protectionism. Their paper asks the following questions: What makes some people more pro-free trade than others? How well do standard trade theory models help us to predict which groups are protectionist, and which are not? To what extent are an individual's attitudes rooted in cultural and ideological forces, rather than in rational calculations of material self-interest? And finally, can protectionism be characterized as an economic manifestation of nationalism?

The economic theory tested by the paper is the standard Heckscher-Ohlin model of international trade, which suggests that in rich, skill-abundant countries, the high-skilled should favor free trade, while the low-skilled should favor protection. The same theory also suggests that in poor countries with an abundance of unskilled labor, it is the low-skilled who should be free traders, and

the high-skilled who should be protectionist. A number of recent papers have found that the low-skilled are indeed more protectionist in the United States and Canada, which is suggestive evidence in favor of the Heckscher-Ohlin perspective. However, such findings do not exclude the possibility that low-skilled workers everywhere are protectionist, which would be inconsistent with that theory.

O'Rourke and Sinnott also take seriously the possibility that nationalism might be an important independent determinant of attitudes toward protectionism. The issue is important, since if support for economic protectionism is solely a function of the material interests of individuals, it can in principle be addressed by offering side payments that compensate for the losses that result from liberalization. If, on the other hand, protectionist policy preferences are rooted in nationalist attitudes, the strategy to alter them would have to be very different, and the strategist may have to be less sanguine about the prospects of success.

The empirical analysis uses data provided by the 1995 International Social Survey Program (ISSP) for twenty countries, all of which (except the Philippines) are either western, or east European "transition" economies. The data are random, nationally representative samples of the adult population in each country. Respondents were asked how much they agreed or disagreed with the statement that their country "should limit the import of foreign products in order to protect its national economy," which is used as a measure of protectionism. The data set also provides individual-level measures of a range of demographic, socioeconomic, and political variables, including the respondent's skill level. In addition the authors use principal components analysis to generate two different indicators of nationalist attitudes. One, which they label "patriotism," reflects a straightforward preference for and sense of the superiority of one's own country. The other, labeled "chauvinism," reflects a narrow or exclusive sense of nationality associated with support for one's country, "right or wrong."

Using these data, the paper estimates a series of ordered probit models of the determinants of protectionism. Its first finding is that protectionist attitudes increase with both patriotism and chauvinism. The relationship is especially strong for the latter. These results hold across countries, and the effects are quantitatively as well as statistically significant. In this regard, trade policy preferences appear to be heavily influenced by noneconomic factors.

Second, the authors find that skill level matters for policy in ways that are consistent with Heckscher-Ohlin theory. The least skilled individuals tend to

be more in favor of free trade in countries with relatively low per capita incomes but more protectionist in wealthier countries. Further, there seems to be a strong negative relationship between the impact of skills on protectionist attitudes, on the one hand, and income per capita on the other. That is, high skills are generally associated with a preference for free trade, and this effect is stronger in richer countries than in poorer countries. Indeed, in some of the poorest countries in the truncated sample, high skills are, albeit weakly, associated with a preference for protection.

Third, the authors find a pronounced gender gap regarding trade policy preferences, which is quantitatively important and apparently consistent across countries. Being a woman substantially increases the probability of the most protectionist response. They have no explanation for this phenomenon, but note that it is consistent with several other survey findings regarding the determinants of attitudes toward trade, European integration, and the market economy more generally.

Discussion of the paper centered around a variety of issues. In particular, some participants were concerned about whether survey data provide robust indicators. Others were not convinced that the approach followed allows the authors to distinguish between alternative trade models, and thus questioned the authors' conclusion that their results provide support for the Heckscher-Ohlin model.

IN THEIR PAPER, James Anderson and Eric van Wincoop examine the implications of border barriers. They conclude that such barriers inhibit large amounts of trade and, consequently, large real income gains could be realized from deep international economic integration. To demonstrate this result, they study the welfare implications of NAFTA as well as two additional policy exercises discussed below. The methodology for all three applications is based on previous work by these authors that extends the gravity model of bilateral trade flows.

The gravity model is commonly used to infer implicit trade costs, for example, showing by how much, all else equal, a language barrier lowers trade. However, earlier work by Anderson and van Wincoop has shown that the empirical gravity model has typically been misspecified. Moreover, the theoretical gravity model is a full general equilibrium model. Unlike previous studies, their work exploits this feature, enabling them to analyze the effect of border barrier removals on real income.

The authors highlight a number of advantages of the gravity model over the frequently used computable general equilibrium (CGE) model for study-

ing the effects of international policy changes. First, the gravity model is estimated rather than assumed. Second, the gravity model is relative simple compared with the black box complexity of standard CGE models. Finally, in analyzing implications of NAFTA, the gravity model comes much closer to generating the actual trade flow changes than CGE models of NAFTA in the literature.

As shown by their model, the proper treatment of border barrier removal depends critically on whether the barriers generate rents (as do tariffs or quotas) or represent real costs. Anderson and van Wincoop show how to decompose the effects of border barrier removal into direct effects and terms of trade effects. In the case of regional trade agreements (with application to NAFTA) they further decompose the direct effects into trade creation and trade diversion.

Their first policy exercise is the removal of implicit border barriers. Taking the extreme position that border barriers confer no benefits and generate no rents, they show that welfare gains from deep integration are very large, especially for relatively small countries. For example, Canada's welfare rises 52 percent from complete border removal while, at the other extreme, even the United States gains more than 6 percent. Making the opposite assumption that all barriers generate rents, the gains fall to 30 percent for Canada and 3 percent for the United States.

Their second exercise is measuring the effect of currency unions, assuming that separate currencies confer no rents. Here, they find net welfare gains from European Monetary Union (EMU) of 11 percent. For smaller countries such as Canada or Mexico, dollarization generates net gains in excess of 20 percent.

A theme of both exercises is that smaller countries gain more from integration. This is a well-known rule of thumb among trade economists that is given a more solid foundation in the multicountry gravity model context of Anderson and van Wincoop's earlier work.

Their final exercise measures the effect of NAFTA. It finds small net welfare effects that are positive for the United States and Canada, and negative for Mexico. Interestingly, the decomposition shows that Mexico loses substantially on terms of trade effects, enough to offset the balance of trade creation over trade diversion that arises from reduction of its large tariffs. Large terms of trade effects are also found in the other exercises and are inevitable with the gravity model framework. An implication of this work is that standard models may understate the implications of terms of trade changes. The authors also note that their model understates the gains from NAFTA for Mexico, because it is static and does not allow for gains from production reallocation.

Conference participants welcomed the careful application of gravity models to a range of real world applications. However, much of the discussion focused on what these border effects actually are, and whether gravity-type trade models can adequately capture the implications of removing them. Participants noted that the border effects range from diverse legal and other institutions to disparate cultural factors. Some pointed to the literature on the provision of public goods for developing an alternative, promising framework for analysis.

IN THE FINAL PAPER, Gordon H. Hanson, Raymond J. Mataloni Jr., and Matthew J. Slaughter look empirically at the expansion strategies of U.S. multinational firms. They note that the share of cross-border capital flows accounted for by the foreign direct investment (FDI) of multinationals has been rising in recent years, particularly for many developing countries for which FDI is now the largest type of capital inflow. Such FDI links financial and product markets across countries via transfers of physical capital, technology, and management techniques.

Although the general role of multinationals in globalization is well recognized, these authors argue that not enough attention has been paid to examining why firms go abroad. To date, most research has focused on two answers to this question: that firms seek to gain access to host-country markets (that is, horizontal FDI), or that firms seek to exploit international factor-cost differences (vertical FDI). They argue that existing empirical research has concluded that market-seeking FDI matters more than FDI motivated by wage differentials, based on three findings. First, most foreign direct investment has flowed from large, rich countries to other large, rich countries. Second, sales by foreign affiliates of U.S. multinationals are higher in countries with higher tariffs and transport costs on U.S. goods. Third, U.S. firms serve foreign markets more through FDI and less through exports the larger is the scale of corporate operations relative to the scale of production.

This paper challenges the view that horizontal FDI is relatively more important than vertical FDI, using data that offer both more current and more detailed information on the foreign operations of U.S.-headquartered multinationals. In particular these data include the 1990s, a period in which factors other than market access may have played a larger role in the strategies of U.S. multinationals. The authors describe three main findings.

First, they find strong evidence of vertical FDI. Overall, U.S. parents outsource a small but growing share of production to their foreign affiliates as

they export intermediate goods to affiliates for further processing. Most of this activity is concentrated in North America and in various emerging economies. This activity is also concentrated in industries involving separable high-skill and low-skill tasks.

Second, even where FDI appears to be horizontal, U.S. multinationals seem to tailor their entry strategies—specifically, their destination of sales—to reflect host-country conditions. In larger, more-protected, and higher-tax economies, affiliates target most of their sales to the domestic market. But in smaller, less-protected, and lower-tax economies, U.S. multinationals set up export platforms that devote more of their sales to export markets in nearby regions and beyond.

Third, U.S. parents in manufacturing appear to serve each foreign market either through affiliates that produce goods locally or through wholesale trade affiliates that resell goods produced elsewhere, but rarely through both. Multinationals thus appear to face a decision between "production-oriented" and "distribution-oriented" FDI. This choice does not reflect the export-versus-FDI decision common to standard models in the literature, as that decision is only about alternative production modes. The authors offer some evidence suggesting that this production-versus-distribution choice turns partly on aspects of U.S. tax policy.

In summary, the authors argue that viewing foreign direct investment as either horizontal or vertical partly misses the point. Instead, the data seem to show evidence of both types of FDI, the relative importance of which depends on a host of industry and country factors. Further, the benchmark distinction between horizontal and vertical FDI does not capture the range of strategies that multinationals use. Conditional on choosing to become a multinational, a firm appears to face three overlapping choices about its global operations. First, should the foreign affiliate produce goods itself or should it distribute goods produced elsewhere? Second, for cases where the multinational chooses production-oriented FDI, should the affiliate be vertically integrated or vertically specialized? Vertically integrated affiliates can be stand-alone operations, but vertically specialized affiliates are presumably linked into the multinational's outsourcing network. Third, should an affiliate sell goods locally or export? Finally, this research finds that trade and tax policies are very important not just in terms of aggregate affiliate activity but also in terms of the mix of affiliate expansion strategies.