“Modeling Economic Integration: Latin America and Europe”

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The European Union is expanding eastwards. Will Western Europe be flooded with workers looking for jobs and willing to work for low pay? Or will the restrictions on labor mobility keep these workers at home but lead to a “giant sucking sound” as firms from the West invest in the East, moving jobs there? What sorts of sectors in the East will expand their production and exports, leading to contractions of these sectors and displacement of workers in the West? In which sectors will trade and foreign investment liberalization lead to expansion of opportunities for investors and workers in the West?

These are essential questions for economists, policy makers, workers, investors, and academics — just about everyone — in Europe, especially in Germany, Europe’s economic and industrial leader. Ten new members have joined the European Union in 2004: the Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. Romania and Bulgaria are planning to join the EU in 2007. Turkey is hoping to join later, but is not currently negotiating with the EU to do so.

Changes in polices governing trade and foreign investment and international labor mobility can have important impacts that are not captured by sorts of traditional economic models that were used in the early 1990s to analyze the impact of the North American Free Trade Agreement on the economies of Canada, Mexico, and the United States. This course would use the experience in North America — as well as previous experience — in Europe to develop new analytical techniques for studying the impact of expanding the European Union eastwards.

The policies involved in joining NAFTA or the EU can change the incentives for both domestic savings and foreign investment, thereby changing the rate of capital accumulation. Furthermore, trade and foreign investment liberalization can affect the rate of technological change. Each of these two sets of effects can alter the rate of economic growth in an economy and dwarf the effects analyzed static economic models. Historical evidence indicates that this was the case of the impact of the integration into what was then the European Community on the Spanish economy and of joining the North American Free Trade Area on the Mexican economy. Static applied general equilibrium models of the sort used to analyze the impact of NAFTA are intended to capture the efficiency gains for policy changes that result for the reallocation of resources across sectors that result from changes in relative prices. Even here, however, there are large potential impacts of policy changes that are not captured by static models. The large capital inflows that accompany trade and foreign investment liberalization produce an initial appreciation of the country’s real exchange rate followed by a later depreciation. These exchange rate movements are changes in relative prices that accompany the initial reallocation of resources from the traded goods sector to the nontraded goods sector and the later reallocation back to the traded goods sector.

1. Introduction to static applied general equilibrium models

P. J. Kehoe and T. J. Kehoe, "Capturing NAFTA's Impact with Applied General Equilibrium Models," *Federal Reserve Bank of Minneapolis Quarterly Review*, 18:2 (1994), 17-34.

P. J. Kehoe and T. J. Kehoe, "A Primer on Static Applied General Equilibrium Models," *Federal Reserve Bank of Minneapolis Quarterly Review*, 18:2 (1994), 2-16.

T. J. Kehoe, "Social Accounting Matrices and Applied General Equilibrium Models," in I. Begg and S. G. B. Henry, editors, *Applied Economics and Public Policy*, Cambridge University Press, 1998, 59-87.

2. Experience in Spain

T. J. Kehoe, A. Manresa, P. J. Noyola, C. Polo, and F. Sancho, "A General Equilibrium Analysis of the 1986 Tax Reform in Spain," *European Economic Review*, Papers and Proceedings, 32 (1988), 334-342.

T. J. Kehoe, C. Polo, and Ferran Sancho, "An Evaluation of the Performance of an Applied General Equilibrium Model of the Spanish Economy," *Economic Theory*, 6 (1995), 115-141.

3. Experience in North America

E. H. Fry, "North American Economic Integration Policy Options," Center for Strategic and International Studies, 2003.

G. H. Hanson, "What Has Happened to Wages in Mexico since NAFTA? Implications for Hemispheric Free Trade," NBER Working Paper 9563, 2003.

T. Hertel, D. Hummels, M. Ivanic, and R. Keeney, "How Confident Can We Be in CGE-Based Assessments of Free Trade Agreements?" NBER Working Paper 10477, 2004.

T. J. Kehoe, "An Evaluation of the Performance of Applied General Equilibrium Models of the Impact of NAFTA," ," in T. J. Kehoe, T. N. Srinivasan, and J. Whalley, editors, *Frontiers in Applied General Equilibrium Modeling: Essays in Honor of Herbert Scarf*, Cambridge University Press, forthcoming.

T. J. Kehoe and J. Serra-Puche, "A Computational General Equilibrium Model with Endogenous Unemployment: An Analysis of the 1980 Fiscal Reform in Mexico," *Journal of Public Economics*, 22 (1983), 1-26.

T. J. Kehoe and J. Serra-Puche, "A General Equilibrium Appraisal of Energy Policy in Mexico," *Empirical Economics*, 16 (1991), 71-93.

D. Lederman, W. F. Maloney, and L. Servén, "Lessons From NAFTA for Latin America and the Caribbean Countries: A Summary of Research Findings," The World Bank, 2004.

J. Romalis, "NAFTA's and CUSFTA's Impact on North American Trade," University of Chicago, 2002.

M. Sánchez and N. Karp, "NAFTA's Economic Effects on Mexico," Economic Research Department, Grupo Financiero Bancomer, 2000.

A. Tornell, F. Westermann, and L. Martínez, "Liberalization, Growth, and Financial Crises: Lessons from Mexico and the Developing World," in W. C. Brainard and G. L. Perry, editors, *Brookings Papers on Economic Activity*, 2003, number 2, 1-88.

D. Trefler, "The Long and Short of the Canada-U.S. Free Trade Agreement," University of Toronto, 2001.

4. Dynamic Applied General Equilibrium Modles

R. Bems and K. Jönsson, "Trade Deficits in the Baltic States: How Long Will the Party Last?" Stockholm School of Economics, 2003.

R. Bergoeing, P. J. Kehoe, T. J. Kehoe, and R. Soto, "A Decade Lost and Found: Mexico and Chile in the 1980s," *Review of Economic Dynamics*, 5 (2002), 166-205.

G. Fernández de Córdoba and T. J. Kehoe, "Capital Flows and Real Exchange Rate Fluctuations Following Spain's Entry into the European Community," *Journal of International Economics*, 51 (2000), 49-78.

T. J. Kehoe, "Towards a Dynamic General Equilibrium Model of North American Trade," in J. Francois and C. R. Shiells, editors, *Modeling Trade Policy: Applied General Equilibrium Assessments of North American Free Trade*, Cambridge University Press, 1994, 328-347.

T. J. Kehoe, "What Can We Learn from the Current Crisis in Argentina?" *Scottish Journal of Political Economy*, 50 (2003), 609-633.

T. J. Kehoe and K. J. Ruhl, "How Important is the New Goods Margin in International Trade?" University of Minnesota, 2002.

T. J. Kehoe and K. J. Ruhl, "Recent Great Depressions: Aggregate Growth in New Zealand and Switzerland 1973-2000," *New Zealand Economic Papers*, 37 (2003), 5-40.

K. J. Ruhl, "Solving the Elasticity Puzzle in International Economics," University of Minnesota, 2003.