

**Economics 247: Applied International Trade  
Spring 2004**

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Class: MW 2:00-3:20  
Office hours: M 12:30-1:30 (and by appointment)

This is the third course in the graduate international economics sequence. It covers empirical research in the field and selected theoretical topics. We will strive to achieve a balance between reading classic papers and work that represents current research. The main prerequisite for the course is Economics 245.

The course requirements include an exam (worth 45% of the grade) towards the end of the term and a research paper (worth 45% of the grade) due on the last day of class (there will be no extensions of this deadline). The paper will be empirical in nature, using data sets that I will make available (or other data that students provide). We will discuss the paper requirement in the second week of class. Attendance of the Applied Economics Seminar is recommended heavily (especially the presentations relating to international trade and development). Participation in class is worth 10% of the grade.

Required readings are indicated by an asterisk (\*). Many of the readings we will discuss are journal articles. The text for the course is,

Feenstra, R.C. Advanced International Trade: Theory and Evidence. Princeton University Press, 2003.

Additional readings are optional, but recommended for those interested in the field. Recommendations for further readings are available on request.

I will place copies of required readings on electronic reserve. You can also access many of these readings online using one of the following web sites:

JSTOR: <http://www.jstor.org/jstor/>  
(for economics articles in leading journals published before 1999 or in the case of some journals before 1997)

NBER: <http://papers.nber.org/>  
(for NBER working papers online)



Key for journals:

AER	American Economic Review
BPEA	Brookings Papers on Economic Activity
EMA	Econometrica
EER	European Economic Review
EJ	The Economic Journal
IER	International Economic Review
JEP	Journal of Economic Perspectives
JIE	Journal of International Economics
JPE	Journal of Political Economy
QJE	Quarterly Journal of Economics
ReStud	Review of Economic Studies
ReStat	Review of Economics and Statistics

I. The Factor Content of Trade: Testing the Heckscher-Ohlin Model

A. Theoretical Background

(\*) Feenstra, chapters 1-3. (the theoretical material in these chapters is for review)

B. The Factor Proportions Model: Empirical Studies

1. Surveys

Leamer, E. 1984. Sources of Comparative Advantage. MIT Press.

Leamer, E. and J. Levinsohn. 1995. International Trade Theory: The Evidence. In Grossman, G. and K. Rogoff. Handbook of International Economics, Vol. 3. North-Holland. (also NBER Working No. 4940)

Helpman, E. 1999. The Structure of Foreign Trade. JEP 13(2): 121-44. (also NBER working paper no. 6752).

2. The Leontief Paradox

Leontief, W. 1954. Domestic Production and Foreign Trade: The American Capital Position Re-Examined. Economia Internazionale 7: 3-32. (Reprinted in R.E. Caves and H.G. Johnson, Readings in International Economics, Irwin, 1968.)

(\*) Leamer, E. 1980. The Leontief Paradox, Reconsidered. JPE 88: 495-503. (available on jstor)

(\*) Brecher, R. and Choudri, E. 1982. The Leontief Paradox, Continued. JPE 90: 820-823. (available on jstor)

(\*) Trefler, D. 1993. International Factor Price Differences: Leontief Was Right! JPE 101: 961-987. (available on jstor)

Gabaix, X. 1997. The Factor Content of Trade: A Rejection of the Heckscher-Ohlin-Leontief Hypothesis. Mimeo, Harvard University.

### 3. Multicountry, Multifactor Tests of the Heckscher-Ohlin Model

(\*) Bowen, H., E. Leamer, and L. Sveikauskas. 1987. Multicountry, Multifactor Tests of the Factor Abundance Theory. AER: 791-809. (available on jstor)

Harrigan, J. 1995. Factor Endowments and the International Location of Production: Econometric Evidence for the OECD, 1970-1985. JIE: 123-141.

(\*) Harrigan, J. 1997. Technology, Factor Supplies, and International Specialization: Estimating the Neoclassical Model. AER: 475-494. (also NBER Working Paper No. 5722)

(\*) Trefler, D. 1995. The Case of the Missing Trade and Other HOV Mysteries. AER 85: 1029-1046. (available on jstor)

(\*) Davis, D. and D. Weinstein. 2001. An Account of Global Factor Trade. AER 91: 1423-1453. (also NBER Working Paper No. 6785.)

## II. Globalization and Wages

### A. Theoretical Background

(\*) Feenstra, chapter 4.

Stolper, W., P. Samuelson. 1941. Protection and Real Wages. ReStud 9: 58-73.

Samuelson, P. 1949. International Factor-Price Equalization Once Again. EJ 59: 181-197.

Rybczynski, T.M. 1955. Factor Endowments and Relative Commodity Prices. Economica 22: 336-341.

(\*) Jones, R. 1965. The Structure of Simple General Equilibrium Models. JPE 73: 557-72. (available on jstor)

Deardorff, A.V. 1994. Overview of the Stolper-Samuelson Theorem. In A.V. Deardorff and R.M. Stern, eds., The Stolper-Samuelson Theorem: A Golden Jubilee. University of Michigan Press, 7-34.



## B. Recent Developments in U.S. Labor Markets

Rodrik, D. 1997. *Has Globalization Gone Too Far?* Washington, DC: Institute for International Economics.

Borjas, George J., Richard B. Freeman, and Lawrence F. Katz. 1997. How Much Do Immigration and Trade Affect Labor Market Outcomes? *BPEA* 1: 1-90.

(\*) Slaughter, M.J. 1999. Globalization and Wages: A Tale of Two Perspectives. *The World Economy* 22: 609-630. (available at <http://hermia.ingentaselect.com/>)

(\*) Borjas, George J. 2003. "The Labor Demand Curve is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market." *QJE* 118 (4): 1335-74, (available at <http://hermia.ingentaselect.com/>).

Katz, Lawrence F. and David Autor. 1999. Changes in the Wage Structure and Earnings Inequality. In Orley Ashenfelter and David Card, eds., Handbook of Labor Economics, Vol. 3A, Amsterdam: Elsevier, 1463-1555.

(\*) Freeman, Richard B, 2003. "Trade Wars: The Exaggerated Impact of Trade in Economic Debate," NBER Working Paper No. 10000.

## C. The Stolper Samuelson Theorem and U.S. Wages

Leamer, Edward E. 1998. In Search of Stolper-Samuelson Linkages between International Trade and Lower Wages. In Susan M. Collins, ed., Imports, Exports, and the American Worker. Brookings Institution Press, 141-203.

(\*) Slaughter, Matthew J. 2000. What Are the Results of Product-Price Studies and What Can We Learn From Their Differences? In Robert C. Feenstra (ed), International Trade and Wages. University of Chicago Press, 121-170. (also NBER working paper no. 6591)

Robertson, Raymond. 2004. Relative Prices and Wage Inequality: Evidence from Mexico. *JIE*, forthcoming.

## D. Foreign Outsourcing

Feenstra, R.C. and G.H. Hanson. 1997. Foreign Direct Investment and Wage Inequality: Evidence from Mexico's Maquiladoras. *JIE* 42: 371-393.

(\*) Feenstra, R.C. 1998. Integration of Trade and Disintegration of Production in the Global Economy. *JEP* 12: 31-50.



Feenstra, R.C. and G.H. Hanson. 1999. The Impact of Outsourcing and High-Technology Capital on Wages: Estimates for the United States, 1972-1990. QJE 114: 907-940.

Hsieh, Chang-Tai and Keong T. Woo. 2003. The Impact of Outsourcing to China on Hong Kong's Labor Market. Mimeo, UC Berkeley.

(\*) Hummels, David, Jun Ishii, and Kei-Mu Yi. 2001. The Nature and Growth of Vertical Specialization in World Trade. JIE 54: 75-96.

(\*) Feenstra, R.C. and G.H. Hanson. 2002. Global Production and Inequality: A Survey of Trade and Wages. In James Harrigan, ed., Handbook of International Trade, Basil Blackwell, forthcoming. (also NBER working paper no. 8372)

(\*) Yi, Kei-Mu. 2003. "Can Vertical Specialization Explain the Growth of World Trade?" JPE, 111(1), pp. 52-102, (available through Roger).

#### E. Related Work

Revenaga, A. 1992. Exporting Jobs: The Impact of Import Competition on Employment and Wages in U.S. Manufacturing. QJE 107: 255-284.

Borjas, G. and V. Ramey. 1995. Foreign Competition, Market Power, and Wage Inequality: Theory and Evidence. QJE 110: 1075-1111.

Gaston, N. and D. Trefler. 1995. Union Wage Sensitivity to Trade and Protection: Theory and Evidence. JIE 39: 1-25.

Bernard, A. and B. Jensen. 1997. Exporters, Skill Upgrading and the Wage Gap. JIE 42: 3-32.

Gaston, N. and D. Trefler. 1997. The Labour Market Consequences of the Canada-U.S. Free Trade Agreement. Canadian Journal of Economics 30: 18-41.

Slaughter, Matthew J. 2001. International Trade and Labor-Demand Elasticities. JIE, 54: 27-56.

Gandal, N., G.H. Hanson, and M.J. Slaughter. 2004. Technology, Trade, and Adjustment to Immigration in Israel. EER, forthcoming.

Hanson, G.H. and M.J. Slaughter. 2002. Labor-Market Adjustment in Open Economies: Evidence from U.S. States. JIE, 57: 3-29.

Attanasio, O., Pinelopi Goldberg, and Nina Pavcnik. 2003. Trade Reforms and Wage Inequality in Columbia. NBER Working Paper No. 9830.

### III. Increasing Returns to Scale and the Volume of Trade

#### A. Theoretical Background

(\*) Feenstra, chapter 5.

Anderson, J.E. 1979. A Theoretical Foundation for the Gravity Equation. AER 69(1): 106-116.

Helpman, E. and P. Krugman. 1985. Market Structure and Foreign Trade. MIT Press, chapters 7-8.

#### B. Gravity and Trade Costs

McCallum, J. 1995. National Borders Matter: Canada-US Regional Trade Patterns. AER 85: 615-23.

Engel, C. and J. Rogers. 1999. How Wide is the Border? AER 86: 1112-1125.

Hummels, D. 1999. Towards a Geography of Trade Costs. Mimeo, University of Chicago.

(\*) Harrigan, J. 2001. Specialization and the Volume of Trade: Do the Data Obey the Laws? In James Harrigan, ed., Handbook of International Trade, Basil Blackwell, forthcoming. (also NBER Working Paper No. 8675.)

(\*) Anderson, J.E. and E. van Wincoop. 2003. Gravity with Gravitas: A Solution to the Border Puzzle. AER, 93(1): 170-92, (also NBER Working Paper No. 8079).

#### C. Gravity and Increasing Returns

Helpman, E. 1987. Imperfect Competition and International Trade: Evidence from Fourteen Industrial Countries. Journal of the Japanese and International Economies 1: 62-81.

(\*) Hummels, D. and J. Levinsohn. 1995. Monopolistic Competition and International Trade: Reconsidering the Evidence. QJE 110: 799-836. (available on jstor)

Harrigan, J. 1995. The Volume of Trade in Differentiated Intermediate Goods: Theory and Evidence. ReStat 77: 283-293.

Evenett, Simon J. and Wolfgang Keller. 2002. On Theories Explaining the Success of the Gravity Equation. JPE, 110: 281-316 .



(\*) Debaere, P. 2002. Testing 'New' Trade Theory without Testing for Gravity: Re-interpreting the Evidence. Mimeo, University of Texas.

#### D. Related Work

Antweiler, W. and D. Trefler. 1997. Increasing Returns and All That: A View from Trade. Mimeo, University of Toronto.

Davis, D. and D. Weinstein. 1998. Economic Geography and Regional Production Structure: An Empirical Investigation. EER 43: 379-407.

Hanson, G.H. and C. Xiang. 2004. The Home Market Effect and Bilateral Trade Patterns. AER, forthcoming.

#### IV. Trade and Growth

(\*) Frankel, Jeffrey, and David Romer. 1999. "Does Trade Cause Growth?" AER 89(3): 379-399.

(\*) Rodriguez, Francisco and Dani Rodrik. 2001. "Trade Policy and Economic Growth: A Skeptic's Guide to Cross-National Evidence." NBER Macro Annual, 2000, (also NBER Working Paper No. 7081).

(\*) Wacziarg, Romain and Karen Horn Welch. 2003. "Trade Liberalization and Growth: New Evidence," NBER Working Paper No. 10152.

(\*) Hallak, Juan Carlos, and James Levinsohn. 2004. "Fooling Ourselves: Evaluating the Globalization and Growth Debate," NBER Working Paper No. 10244.

#### V. Trade Policy, Imperfect Competition, and Productivity

##### A. Theoretical Background

(\*) Feenstra, chapters 7 and 8.

Feenstra, R. 1995. Estimating the Effects of Trade Policy. In Grossman, G. and K. Rogoff. 1995. Handbook of International Economics, Vol. 3. North-Holland. (also NBER Working Paper No. 5051)

##### B. Trade Policy and Imperfect Competition

Feenstra, R. 1988. Quality Change under Trade Restraints in Japanese Autos. QJE 103: 131-146.

Knetter, M. 1989. Price Discrimination by U.S. and German Exporters. AER 79: 198-210. (available on jstor)

Koujianou, P. 1995. Product Differentiation and Oligopoly in International Markets: The Case of the U.S. Automobile Industry. EMA 63: 891-951. (available on jstor)

Feenstra, R., J. Gagnon, and M. Knetter. 1996. Market Share and Exchange Rate Pass-Through in World Automobile Trade. JIE 40: 187-207.

(\*) Berry, S., J. Levinsohn, and A. Pakes. 1999. Voluntary Export Restraints on Automobiles: Evaluating a Strategic Trade Policy. AER 89(3): 400-430 (also NBER Working Paper No. 5235).

### C. Trade, Productivity and Micro Data

Clerides, S., S. Lach and J. Tybout. 1998. Is Learning by Exporting Important? Micro-Dynamic Evidence from Colombia, Mexico and Morocco. QJE 113: 903-947.

Bernard, A. and B. Jensen. 1999. Exceptional Exporter Performance: Cause, Effect, or Both? JIE Jan., 1-25.

Bernard, A., J. Eaton, S. Kortum, and B. Jensen. 2003. Plants and Productivity in International Trade. AER, 1268-1290, (also NBER Working Paper No. 7688).

Tybout, J. 2001. Plant and Firm Level Evidence on "New" Trade Theories. . In James Harrigan, ed., Handbook of International Trade, Basil Blackwell, forthcoming. (also NBER Working Paper No. 8418)

Blonigen, B. and T. Prusa. 2001. Antidumping. In James Harrigan, ed., Handbook of International Trade, Basil Blackwell, forthcoming. (also NBER working paper 8398).

(\*) Melitz, M. 2003. "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity," EMA 71(6): 1695-1725 (also NBER Working Paper No. 8881).

## VI. Multinational Firms

### A. Theoretical Background

(\*) Feenstra, chapter 11.



Helpman, E. 1984. A Simple Theory of Trade with Multinational Corporations. JPE 92: 451-471.

Markusen, J.R. 1984. Multinationals, Multi-Plant Economies, and the Gains from Trade. JIE 16: 205-226.

Rodriguez-Clare, A. 1996. Multinationals, Linkages, and Economic Development. AER 86: 852-873.

Markusen, J. and A. Venables. 1998. Multinational Firms and the New Trade Theory. JIE 46: 183-203.

Markusen, J. 2003. General-Equilibrium Approaches to the Multinational Firm: A Review of Theory and Evidence. In J. Harrigan, ed., Handbook of International Trade, Basil Blackwell. (also NBER working paper no. 8334)

Markusen, J. 2002. Multinational Firms and the Theory of International Trade. MIT Press.

#### B. Testing Models of Multinational Firms

Froot, K. and J. Stein. 1991. Exchange Rates and Foreign Direct Investment and Imperfect Capital Market Approach. QJE Nov.: 1191 - 1217.

Blonigen, B. 1997. Firm-Specific Assets and the Link Between Exchange Rates and Foreign Direct Investment. AER 87: 447-465.

Brainard, L. 1997. An Empirical Assessment of the Proximity-Concentration Tradeoff between Multinational Sales and Trade. AER 87: 520-544.

Markusen, J.R. and K. Maskus. 1999. Discriminating among Alternative Theories of the Multinational Enterprise. NBER Working Paper No. 7164.

Carr, D.L., J.R. Markusen, and K.E. Maskus. 2001. Estimating the Knowledge-Capital Model of the Multinational Enterprise. AER, 91 (3), June: 693-708.

(\*) Blonigen B., Davies, R, Head, K. 2003. "Estimating the Knowledge-Capital Model of the Multinational Enterprise: Comment," AER June 2003; 93(3): 980-94 (also NBER Working Paper No. 8929).

(\*) Helpman, E., M. Melitz, and S. Yeaple. 2003. "Export Versus FDI With Heterogeneous Firms," AER, forthcoming (also NBER Working Paper No. 9439).

Hanson, Gordon, Raymond Mataloni, and Matthew Slaughter, 2003. "Vertical Production Networks in Multinational Firms," NBER Working Paper No. 9723.

### C. The Boundaries of the Firm

Grossman, G. and E. Helpman. 2004. Outsourcing in a Global Economy. *ReStud*, forthcoming, (also NBER Working Paper No. 8728).

Grossman, G. and E. Helpman. 2004. "Managerial Incentives and the International Organization of Production," *JIE*, forthcoming (also NBER Working Paper No. 9403).

(\*) Antras, Pol. 2003. "Firms, Contracts, and Trade Structure," *QJE* November 2003; 118(4): 1375-1418 (also NBER Working Paper No. 9740).

Antras, P. and E. Helpman. 2003. "Global Sourcing," NBER Working Paper No. 10082.

Antras, P. 2003. "Incomplete Contracts and the Product Cycle," NBER Working Paper No. 9945.

(\*) Feenstra, R. and G. Hanson 2003. "Ownership and Control in Outsourcing to China: Estimating the Property Rights Theory of the Firm," NBER Working Paper No. 10198.

### D. Spillovers and Foreign Direct Investment

Wheeler, D. and A. Mody. 1992. International Investment Location Decisions. *JIE* 33: 57-76.

Head, K., J. Ries, and D. Swenson. 1995. Agglomeration Benefits and Location Choice: Evidence from Japanese Manufacturing Investment in the United States. *JIE* 38: 223-247.

Aitken, B., A. Harrison, and R. Lipsey. 1996. Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. *JIE* 40: 345-371.

(\*) Aitken, B. and A. Harrison. 1999. Do Domestic Firms Benefit from Foreign Investment? Evidence from Venezuela. *AER* 89: 605-618.

(\*) Slaughter, M.J. and J. Haskell. 2002. Does Inward Foreign Direct Investment Boost the Productivity of Domestic Firms? NBER Working Paper No. 8724.

Hanson, G.H. 2001. Should Countries Promote Foreign Direct Investment? *G-24 Discussion Paper Series* No. 9.