## Economics 247: International Trade Spring 2005

Professor Gordon Hanson

Office: RCB 1324, ph. 822-5087, email: gohanson@ucsd.edu

Class: MW 2:00-3:20

Office hours: M 12:30-1:30 (and by appointment)

This is the second course in the graduate international economics sequence. We will strive to achieve a balance between theory, empirical literature, and current work on international trade. The course requirements include an exam (worth 45% of the grade) during final exam week and a research paper (worth 45% of the grade) due on the last day of class (there will be no extensions of this deadline). To help you prepare for the exam, I will circulate an optional problem set in late April. The paper will be empirical in nature, using either data that I will make available or that students provide. We will discuss the paper requirement in the second week of class. Attendance of the Applied Economics Seminar is recommended. Class participation is worth 10% of the grade.

Required readings are indicated by an asterisk (\*). The text for the course is,

Feenstra, R.C. Advanced International Trade: Theory and Evidence. Princeton University Press, 2004.

Additional readings are optional, but recommended for those interested in the field (I've tried to cite classic readings as well as examples of current work). I will make required readings available electronically. Key for journals: AER (American Economic Rev.), EMA (Econometrica), EER (European Economic Rev.), EJ (The Economic Jo.), IER (International Economic Rev.), JDE (Jo. of Development Economics), JIE (Jo. of Interntnl Economics), JPE (Jo. of Political Economy), QJE (Quarterly Jo. of Economics), ReStud (Rev. of Economic Studies), ReStat (Rev. of Economics and Statistics).

### I. The Gains from Trade and Comparative Advantage (3/28)

Ohyama, M. 1972. Trade and Welfare in General Equilibrium. Keio Economic Studies.

Samuelson, P. 1962. The Gains from International Trade Once Again. EJ 72: 820-829.

Deardorff, A. 1980. The General Validity of the Law of Comparative Advantage. JPE 88: 941-957.

Dixit, A. and V. Norman. 1986. Gains from Trade without Lump-Sum Compensation. JIE 21: 111-122.

### II. <u>International Trade under Perfect Competition</u>

### A. The Ricardian Model (3/28, 4/4)

(\*) Dornbusch, R., S. Fischer, and P. Samuelson. 1977. Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods. AER 67: 823-839.

Krugman, P. 1987. The Narrow Moving Band, the Dutch Disease, and the Competitive Consequences of Mrs. Thatcher. JDE 27: 41-55.

### B. The Specific Factors Model (4/6)

(\*) Neary, J.P. 1978. Short-Run Capital Specificity and the Pure Theory of International Trade. EJ 88: 488-510.

Mussa, M. 1974. Tariffs and the Distribution of Income: The Importance of Factor Specificity, Substitutability, and Intensity in the Short and Long Run. JPE 82: 1191-1203.

Mussa, M. 1978. Dynamic Adjustment in the HOS Model. JPE 86: 775-791.

#### C. The Factor Proportions Model (4/6, 4/11, 4/13, 4/18)

#### 1. International Equilibrium and the Four Theorems

(\*) Feenstra, chapters. 1 and 2.

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

Samuelson, P. 1949. International FPE Once Again. EJ 59: 181-197.

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

Mundell, R. 1957. International Trade and Factor Mobility. AER 47: 321-335.

Jones, R. 1965. The Structure of Simple General Equilibrium Models. JPE 73: 557-72.

Mussa, M. The Two-Sector Model in Terms of its Dual: A Geometric Exposition. JIE 1979 9: 513-526.

#### 2. Generalizations of HOS

Vanek, J. 1968. The Factor Proportions Theory: The N-Factor Case. Kyklos 21: 749-756.

Jones, R. and J. Scheinkman. 1977. The Relevance of the Two Sector Production Model in Trade Theory. JPE 85: 909-935.

Dornbusch, R., S. Fischer, and P. Samuelson. 1980. Heckscher-Ohlin Trade Theory with a Continuum of Goods. QJE 95: 203-224.

Deardorff, A. 1982. The General Validity of the Heckscher-Ohlin Theorem. AER 72: 683-694.

Helpman, E. 1984. The Factor Content of Foreign Trade. EJ 94: 84-94.

Ethier, W.J. 1984. Higher Dimensional Issues in Trade Theory. In Jones and Kennen, eds., Handbook of International Economics, Amsterdam: North-Holland.

### 3. Empirical Studies: The Leontief Paradox and Tests of the HOV Theorem

(\*) Feenstra, chapter 3.

Leontief, W. 1954. Domestic Production and Foreign Trade: The American Capital Position Re-Examined. <u>Economia Internazionale</u> 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.

Brecher, R. and Choudri, E. 1982. The Leontief Paradox, Continued. JPE 90: 820-823.

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

Bowen, H., E. Leamer, and L. Sveikauskas. 1987. Multicountry, Multifactor Tests of the Factor Abundance Theory. AER: 791-809.

Trefler, D. 1993. International Factor Price Differences: Leontief Was Right! JPE 101: 961-987.

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

Trefler, D. 1995. The Case of the Missing Trade and Other HOV Mysteries. AER 85: 1029-1046.

Harrigan, J. 1997. Technology, Factor Supplies, and International Specialization:

Estimating the Neoclassical Model. AER: 475-494. (also NBER Working Paper 5722)

Davis, D. and D. Weinstein. 2001. An Account of Global Factor Trade. AER 91: 1423-1453. (also NBER Working Paper 6785.)

#### III. Globalization and Wages

#### A. Theoretical Background and Empirical Preliminaries (4/20, 4/25, 4/27)

- (\*) Feenstra, chapter 4.
- (\*) 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., <u>Handbook of International Trade</u>, Basil Blackwell, forthcoming. (also NBER working paper 8372)

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

#### B. Globalization and the U.S. Labor Market

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

Berman, E., J. Bound, and Z.Griliches. 1994. Changes in the Demand for Skilled Labor within U.S. Manufacturing Industries: Evidence from the Annual Survey of Manufactures, QJE, May.

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

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

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.

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 6591)

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

(\*) Freeman, Richard B, 2003. Trade Wars: The Exaggerated Impact of Trade in Economic Debate, NBER Working Paper 10000.

### C. Globalization and Labor Markets Abroad

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

Revenga, Anna L. 1997. Employment and Wage Effects of Trade Liberalization: The Case of Mexican Manufacturing. Journal of Labor Economics 15(3): S20-43.

Currie, Janet, and Ann Harrison. 1997. Trade Reform and Labor Market Adjustment in Morocco. Journal of Labor Economics, 15: S44-71.

Berman, E., J. Bound, and S. Machin. 1998. Implications of Skill-Biased Technological Change: International Evidence. QJE, 113(4).

Pavcnik, Nina. 2003. What Explains Skill Upgrading in Less Developed Countries? JDE, 71: 311-328.

Attanasio, Orazio, Pinelopi Goldberg and Nina Pavcnik. 2004. Trade Reforms and Wage Inequality in Colombia. JDE, 74: 331-366.

Robertson, Raymond. 2004. Relative Prices and Wage Inequality: Evidence from Mexico. JIE, 64(2): 387-409.

Goldberg, Pinelopi and Nina Pavcnik. 2004. Trade, Inequality, and Poverty: What Do We Know? Evidence from Recent Trade Liberalization Episodes in Developing Countries, NBER Working Paper 10593.

Muendler, Marc. 2004. Trade, Technology and Productivity: A Study of Brazilian Manufactures. Mimeo, UCSD.

Winters, L. Alan, Neil McCulloch, and Andrew McKay. 2004. Trade Liberalization and Poverty: The Evidence So Far. JEL, 42: 72-115.

Chiquiar, Daniel. 2005. Why Mexico's Regional Income Convergence Broke Down. JDE, forthcoming.

Edmonds, Eric, Nina Pavcnik. 2005. The Impact of Trade Liberalization on Child Labor. JIE, forthcoming.

Hsieh, Chang-Tai and Keong T. Woo. 2005. The Impact of Outsourcing to China on Hong Kong's Labor Market. AER, forthcoming.

### D. How Do Open Economies Adjust to Labor Supply Shocks? (5/2)

Card, David. 1990. The Impact of the Mariel Boatlift on the Miami Labor Market. Industrial and Labor Relations Review 43 (2): 245-257.

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

- (\*) Borjas, George J. 2003. "The Labor Demand Curve is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market." QJE 118 (4): 1335-1374.
- (\*) Gandal, N., G.H. Hanson, and M.J. Slaughter. 2004. Technology, Trade, and Adjustment to Immigration in Israel. EER, 48: 403-428.

Chiquiar, Daniel, G.H. Hanson. 2005. International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States, JPE, forthcoming.

### IV. <u>Increasing Returns to Scale and the Volume of Trade</u> (5/4, 5/9, 5/11, 5/16)

### A. Theory

- (\*) Feenstra, chapter 5.
- (\*) Helpman, E. and P. Krugman. 1985. <u>Market Structure and Foreign Trade</u>. MIT Press, chapters 7-8.

Krugman, P. 1979. Increasing Returns, Monopolistic Competition and International Trade. JIE 9: 469-479.

Krugman, P. 1980. Scale Economies, Product Differentiation, and the Pattern of Trade. AER 70: 950-959.

Helpman, E. 1981. International Trade in the Presence of Product Differentiation, Economies of Scale, and Monopolistic Competition: A Chamberlin-Heckscher-Ohlin Approach. JIE 11: 305-340.

Krugman, P. 1981. Intraindustry Specialization and the Gains from Trade. JPE 89: 959-974.

Ethier, W. 1982. Decreasing Costs in International Trade and Frank Graham's Argument for Protection. EMA 50: 1243-1268.

Brander, J. and P. Krugman. 1983. A "Reciprocal Dumping" Model of International Trade. JIE 15: 313-323.

Flam, H. and E. Helpman. 1987. Vertical Product Differentiation and North-South Trade. AER 77: 810-822.

Krugman, P. 1991. Increasing Returns and Economic Geography. JPE 99: 483-499.

#### B. The Gravity Model and Related Work

(\*) Anderson, J.E. and E. van Wincoop. 2005. Trade Costs. JEL, forthcoming, (also NBER Working Paper 10480).

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

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

Hummels, D. and J. Levinsohn. 1995. Monopolistic Competition and International Trade: Reconsidering the Evidence. QJE 110: 799-836.

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

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

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., <u>Handbook of International Trade</u>, Basil Blackwell, forthcoming. (also NBER Working Paper 8675.)

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

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 8079).

Debaere, P. 2004. Testing 'New' Trade Theory without Testing for Gravity: Reinterpreting the Evidence. JIE, forthcoming.

Hanson, G.H. and C. Xiang. 2004. The Home Market Effect and Bilateral Trade Patterns. AER, 94: 1108-1129.

Chaney, T. 2005. Distorted Gravity: Heterogeneous Firms, Market Structure and the Geography of International Trade. Mimeo, MIT.

Hummels, D. and P. Klenow. 2005. The Variety and Quality of a Nation's Exports. AER, forthcoming.

Hummels, D., and A. Skiba. 2005. Shipping the Good Apples Out? An Empirical Confirmation of the Alchian-Allen Conjecture. JPE, forthcoming.

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

### A. <u>Background</u> (5/16, 5/18)

(\*) Feenstra, chapters 7 and 8.

# B. Trade Policy and Perfect Competition

Lerner, A. 1936. The Symmetry between Export and Import Taxes. Economica 3: 306-313.

Baldwin, R. 1969. The Case Against Infant Industry Protection. JPE 77: 295-305.

Bhagwati, J. 1965. On the Equivlance of Tariffs and Quotas. In R. Baldwin, ed., Trade, Growth, and the Balance of Payments, North-Holland.

Bhagwati, J. 1971. The Generalized Theory of Distortions and Welfare. In J. Bhagwati, R. Mundell, R. Jones, and J. Vanek, eds., Trade, Balance of Payments, and Growth, pp. 69-90.

Krueger, A. 1974. The Political Economy of the Rent-Seeking Society. AER 64: 291-303.

Bhagwati, J. 1982. Directly-unproductive, Profit-seeking (DUP) Activities. JPE 90: 988-1002.

Corden, M. 1984. The Normative Theory of International Trade. In Jones and Kenen, eds., <u>Handbook of International Economics</u>, Vols. 1 and 2. North-Holland.

Dixit, Avinash. 1985. Tax Policy in Open Economies. In A. Auerbach and M. Feldstein, eds., Handbook of Public Economics, North-Holland, pp. 313-374.

Grossman, G. and E. Helpman. 1994. Protection for Sale. AER 84: 833-850.

Feenstra, chapters 6 and 9.

## C. <u>Trade Policy and Imperfect Competition</u>

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.

Levinsohn, J. 1993. Testing the Imports as Market Discipline Hypothesis. JIE 35: 1-22.

Brander, J. 1995. Strategic Trade Policy. In Grossman and Rogoff, eds., Handbook of International Economics, Vol. 3. North-Holland.

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

Maggi, G. 1996. Strategic Trade Policies with Endogenous Mode of Competition. AER 86: 237-258.

Berry, S., J. Levinsohn, and A. Pakes. 1999. Voluntary Export Restraints on Automobiles: Evaluating a Strategic Trade Policy. AER 89(3): 400-430.

#### D. Trade, Productivity and Micro Data (5/23)

Clerides, S., S. Lach and J. Tybout. 1998. Is Learning by Exporting Important? Mirco 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.

Eaton, J., Kortum, S., 1999. International technology diffusion: theory and measurement. International Economic Review 40, 537-570.

Eaton, J., Kortum, S., 2002. Technology, geography, and trade. EMA, 70, 1741-1779.

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 8418)

Bernard, A., J. Eaton, S. Kortum, and B. Jensen. 2003. Plants and Productivity in International Trade. AER, 1268-1290, (also NBER Working Paper 7688).

- (\*) Melitz, M. 2003. The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity, EMA 71(6): 1695-1725 (also NBER Working Paper 8881).
- (\*) Yeaple, S. 2004. A Simple Model of Firm Heterogeneity, International Trade, and Wages, JIE, 65(1): 1-20.

### VI. Multinational Firms

### A. Theoretical Background (5/25)

(\*) 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.

Rauch, J. 1999. Networks versus Markets in International Trade. JIE, 48: 7-37.

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

Rauch, J. and A. Casella. 2003. Overcoming Informational Barriers to International Resource Allocation: Prices and Ties. EJ, 113: 21-42.

#### B. <u>Testing Models of Multinational Firms</u>

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 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.

Rauch, J. 2001. Business and Social Networks in International Trade. JEL, 39: 1177:1203.

Rauch, J. and V. Trindade. 2002. Ethnic Chinese Networks in International Trade." ReStat, 84: 116-130.

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 8929).

Helpman, E., M. Melitz, and S. Yeaple. 2003. "Export Versus FDI With Heterogeneous Firms," AER, forthcoming (also NBER Working Paper 9439).

Hanson, G., R. Mataloni, and M. Slaughter. 2005. Vertical Production Networks in Multinational Firms. ReStat, forthcoming, (also NBER Working Paper 9723).

#### C. The Boundaries of the Firm (6/1)

Grossman, G. and E. Helpman. 2002. Integration versus Outsourcing in Industry Equilibrium. QJE, 117: 85-120.

(\*) Antras, Pol. 2003. Firms, Contracts, and Trade Structure. QJE, 118(4): 1375-1418 (also NBER Working Paper 9740).

Marin, Dalia, and Thierry Verdier. 2003. Globalization and the Empowerment of Talent. Centre for Economic Policy Research Discussion Paper Number 4129.

Grossman, G. and E. Helpman. 2004. Outsourcing in a Global Economy. ReStud, forthcoming, (also NBER Working Paper 8728).

Grossman, G. and E. Helpman. 2004. Managerial Incentives and the International Organization of Production. JIE, 44: 237-262.

Antras, P., and E. Helpman. 2004. Global Sourcing. JPE, 112: 552-580.

Antras, P. 2005. Incomplete Contracts and the Product Cycle. AER, forthcoming (also NBER Working Paper 9945).

Feenstra, R. and G. Hanson 2005. Ownership and Control in Outsourcing to China: Estimating the Property Rights Theory of the Firm, QJE, forthcoming.