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Columbia University
Department of Economics
Economics G6903: International Trade

This is a PhD level course in positive international trade – that is, understanding patterns and volumes of trade (less emphasis on trade policy). It will also touch on closely related problems in spatial economics, drawn largely from the systems of cities literature. The **prerequisite** is knowledge of the first year PhD economics core material. Familiarity with international trade at an undergraduate level is helpful, although not required.

The readings have been divided, with two ** indicating the most important, one * indicating the next most important, and no stars indicating additional valuable readings.

The course will have the following requirements, *each counting for one-third of the grade*:

- A term paper that may serve as the start on your required second year PhD paper. At a minimum, this should provide a critical (not merely expository) perspective on an important paper or cluster of papers on a topic relevant to this class. If in doubt, ask me if the topic is appropriate.
- Final Exam
- Active participation in the class blog at <http://internationaltradeatcolumbia2011.wordpress.com/> .

Electronic Resources

Virtually all of the papers and resources listed here should be downloadable online. The key sites are Google Scholar, RePec, Social Sciences Citation Index, and Econlit. You **must** be familiar with all of these. Note that Google Scholar allows you to set preferences for Columbia University, so to retrieve a tremendous amount of the literature via e-link_@_columbia.

Of course, you should also visit the websites of the people whose work in an area you find most exciting to see frontier working papers.

Strongly Recommended Books

Combes, Pierre-Philippe, Mayer, Thierry, Thisse, Jean-Jacques, Economic Geography: The Integration of Regions and Nations, Princeton U. Pr., 2008.
Dixit, Avinash and Victor Norman *Theory of International Trade* Oxford U. Pr. 1980. (DN)
Feenstra, Robert C., *Advanced International Trade: Theory and Evidence*, Princeton U. Pr. 2004.
Fujita, M. Krugman, P., and Venables, A. *The Spatial Economy*, MIT Press (2001). (FKV)
Grossman, Gene and E. Helpman, *Innovation and Growth in the Global Economy*, 1991 MIT. (GH)
Helpman, Elhanan and Krugman, Paul, *Market Structure and Foreign Trade*, MIT 1985. (HK1)
Helpman, Elhanan and Krugman, Paul, *Trade Policy and Market Structure*, MIT 1989. (HK2)

Recommended Books

Richard Baldwin, Philippe Martin, Frederic Robert-Nicoud, Gianmarco Ottaviano, Rikard Forslid, *Economic Geography and Public Policy*, Princeton U. Pr., 2005.
Choi, E.K. and James Harrigan, eds. *Handbook of International Trade*, Malden, MA: Blackwell, 2003.
Davis, Donald R., *Notes on Competitive Trade Theory*
Grossman, Gene and Rogoff, Ken, eds. *Handbook of International Economics*, Volume 3 , Elsevier 1995. (HIE3)
Jones, Ronald W. and Kenen, Peter, eds. *Handbook of International Economics*, Volume 1 , Elsevier 1984. (HIE)

Rivera-Batiz, Luis A. and Oliva, Maria-Angels, *International Trade: Theory, Strategies, and Evidence*, Oxford U. Pr. 2003

Wong, Kar Yiu, *International Trade in Goods and Factor Mobility*, MIT Pr. 1995.

I. Perfect Competition

A. Equilibrium in a Trading World and the Gains From Trade

Davis, Donald R., Notes on Competitive Trade Theory, Ch. 2.

* Dixit, A. "Tax policy in open economies," Handbook of Public Economics, Volume 1, 1985, Pages 313-374.

B. Comparative Advantage

Theory

** DN. pp. 1-8 and "Mathematical Appendix."

Ethier, W. "Higher Dimensional Issues in Trade Theory," sections 1 and 2, HIE

Deardorff, A., "The General Validity of the Law of Comparative Advantage," JPE 88 1980.

Data

** Bernhofen, Daniel M; Brown, John C, "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," Journal of Political Economy, vol. 112, no. 1, Part 1 Feb. 2004, pp. 48-67

* Davis, Donald R; Weinstein, David E, "What Role for Empirics in International Trade?" Bertil Ohlin: A centennial celebration (1899-1999). 2002, pp. 363-87

C. An Exchange Economy

Jones, Ronald W. and Peter Neary, "The Positive Theory of International Trade," in HIE Section 2.1

D. Ricardo

** Dornbusch, Fischer, and Samuelson "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods." AER, (67) 1977

Jones, R. and P. Neary, "The Positive Theory of International Trade," HIE Section 2.2

Jones, Ronald "Technical Progress and Real Incomes in a Ricardian Trade Model," in Jones, Ronald, International Trade: Essays in Theory, North-Holland 1979.

DN pp. 36-38.

E. Heckscher-Ohlin

Theory

* DN pp. 1-19, 85-86, 93-122, 133-137.

** HK1 Ch. 1.

* Feenstra, Ch. 1

Rivera-Batiz and Oliva, Ch. 1

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

Jones, R. and P. Neary, "The Positive Theory of International Trade," HIE Section 2.3

Davis, D. "Critical Evidence on Comparative Advantage? North-North Trade in a Multilateral World" Journal of Political Economy, vol. 105, no. 5, October 1997, pp. 1051-60

Ethier, W. "Higher Dimensional Issues in Trade Theory." in HIE.

Grossman G. and E. Rossi-Hansberg, "Trading Tasks: A Simple Theory of Offshoring", *American Economic Review*, 2008.

Data

Bowen, Leamer and Sveikauskas, "Multicountry, Multifactor Tests of the Factor Abundance Theory," *American Economic Review* 77:5, 1987, 791-809.

** Davis, Donald R; Weinstein, David E, "An Account of Global Factor Trade," *American Economic Review*, vol. 91, no. 5, December 2001, pp. 1423-53

** Davis, Donald R; Weinstein, David E, "The Factor Content of Trade," National Bureau of Economic Research, Inc, NBER Working Papers: 8637, 2001, also in Choi, E.K. and James Harrigan, eds. *Handbook of International Trade*, Malden, MA: Blackwell, 2003.

* Harrigan, James, "Technology, Factor Supplies, and International Specialization: Estimating the Neoclassical Model," *American Economic Review*, vol. 87, no. 4, September 1997, pp. 475-94

* Trefler, Daniel, "The Case of the Missing Trade and Other Mysteries," *American Economic Review*, vol. 85, no. 5, December 1995, pp. 1029-46.

** Feenstra Chs. 2-3

Feenstra, R. "Offshoring in the Global Economy: Ohlin Lectures," part 1, 2008.

Davis, Donald R; Weinstein, David E, et al, "Using International and Japanese Regional Data to Determine When the Factor Abundance Theory of Trade Works," *American Economic Review*, vol. 87, no. 3, June 1997, pp. 421-46

Leamer, E., Chs. 2 and 6 in *Sources of International Comparative Advantage: Theory and Evidence* MIT 1984.
Rivera-Batiz and Oliva, Ch. 3

Trefler, Daniel, "International Factor Price Differences: Leontief Was Right!" *Journal of Political Economy*, vol. 101, no. 6, December 1993, pp. 961-87

F. Specific Factors (Ricardo-Viner) Model

* DN pp. 38-43, 122-125.

** Jones, R. and P. Neary, "The Positive Theory of International Trade," HIE Section 2.4

* Neary, J.P. "Short Run Capital Specificity and the Pure Theory of International Trade" *Economic Journal* 1978.

G. Hybrid Competitive Models

** Costinot, A. "An Elementary Theory of Comparative Advantage," *Econometrica*, July 2009.

* Davis, D. "A Heckscher-Ohlin-Ricardo Model," *Journal of International Economics*, 1995.

* Ruffin, RJ, "The Missing Link: The Ricardian Approach to the Factor Endowments Theory of Trade", *American Economic Review*, 1988.

H. Unemployment and Factor Markets under Perfect Competition

** Burstein, Ariel and Jon Vogel, "Globalization, Technology and the Skill Premium, WP 2010.

** Costinot, Arnaud and Jon Vogel, "Matching and Inequality in the World Economy," JPE 2010.

** Davis, Donald R. "Does European Unemployment Prop Up American Wages?" *American Economic Review*, vol. 88, no. 3, June 1998, pp. 478-94.

I. Immigration

* Borjas, George J, "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market," *Quarterly Journal of Economics*, vol. 118, no. 4, November 2003, pp. 1335-74

* Card, David, "The Impact of the Mariel Boatlift on the Miami Labor Market," *Industrial and Labor Relations Review*, vol. 43, no. 2, January 1990, pp. 245-57

- * Davis, Donald R; Weinstein, David E, "Technological Superiority and the Losses from Migration," National Bureau of Economic Research, Inc, NBER Working Papers: 8971, 2002
- * Hatton, T. and Williamson, J., *The Age of Mass Migration*, U. of Chicago Pr. 1998.
- Hendricks, Lutz, "How Important Is Human Capital for Development? Evidence from Immigrant Earnings," *American Economic Review*, vol. 92, no. 1, March 2002, pp. 198-219
- Mishra, Prachi, "Emigration and Wages in Source Countries: Evidence From Mexico," *Journal of Development Economics*, 2007
- Lant Pritchett, "Boom Towns and Ghost Countries: Geography and Population Mobility" *Brookings Trade Forum* 2006.
- Lant Pritchett, *Let Their People Come: Breaking the Gridlock on Global Labor Mobility*, Center for Global Development, 2006. (Available as pdf.)
- Rivera-Batiz and Oliva, Ch. 5.1-5.4

J. External Increasing Returns

- * Bhagwati, Panagariya, and Srinivasan, Section 1 of Chapter 11 (Economies of Scale) of *Lectures on International Trade*.

II. Imperfect Competition Theory (static)

A. Monopoly

Helpman and Krugman, *Market Structure and Trade Policy*, MIT Pr. 1989.

B. Monopolistic Competition

- * Krugman, Paul "Increasing Returns, Monopolistic Competition and International Trade," *JIE* 9 1979,
- ** HK1 Chs. 7-8, 9.5, 10.4, 11.4.
- Krugman, P., "Growth, Trade and Income Distribution Under Increasing Returns," mimeo 1984.
- DN Ch. 9.
- Ethier, W. "National and International Returns to Scale in the Modern Theory of International Trade" *AER* 72 June 1982.
- HK1 Chs. 6, 9-11.
- * Davis, D. "Intraindustry Trade: A Heckscher-Ohlin-Ricardo Approach." *Journal of International Economics*, vol. 39, no. 3-4, November 1995.
- ** Broda, Christian; Weinstein, David E.; "Globalization and the Gains from Variety" *Quarterly Journal of Economics*, May 2006, v. 121, iss. 2, pp. 541-85
- * David Hummels & Peter J. Klenow, 2005. "The Variety and Quality of a Nation's Exports," *American Economic Review*, American Economic Association, vol. 95(3), pages 704-723, June.
- * Feenstra, Robert C, 1994. "New Product Varieties and the Measurement of International Prices," *American Economic Review*, American Economic Association, vol. 84(1), pages 157-77, March.
- Feenstra, R. "Measuring the Gains from Trade under Monopolistic Competition," *Canadian J of Ec*, 2010.
- * Romalis, J. "Factor Proportions and the Commodity Structure of Trade," *AER* 2004.

C. Oligopoly

- * Brander, James, "Strategic Trade Policy," NBER # 5020, Feb. 1995.
- * Brander, James and Krugman, Paul "A Reciprocal Dumping Model of International Trade" *Journal of International Economics*, 1983.
- ** HK1 Ch. 5

Markusen, J. "Trade and Gains From Trade with Imperfect Competition," JIE 11 1981.

D. Firms and Trade

- ** Pol Antras's notes for Ec 2535 at Harvard. See Antras Lectures.
- ** Antras, Pol, "Firms, Contracts, and Trade Structure," Quarterly Journal of Economics, vol. 118, no. 4, November 2003, pp. 1375-1418
- Antràs, P., L. Garicano and E. Rossi-Hansberg. 2006. "Offshoring in a Knowledge Economy," Quarterly Journal of Economics, 2006.
- ** Bernard, A.B. and Jensen, J.B. and Redding, S.J. and Schott, P.K., "Firms in International Trade," Journal of Economic Perspectives, 2007.
- * Bernard, Andrew B; Redding, Stephen; Schott, Peter K, "Comparative Advantage and Heterogeneous Firms," Review of Economic Studies, 2007.
- * Bernard, A., Eaton, J., Jensen, B., and Kortum, S. "Plants and Productivity in International Trade," AER 2003.
- * Chaney, Thomas, "Distorted Gravity: The Intensive and Extensive Margins of International Trade," American Economic Review, 2008.
- * Eckel, C. and Neary, P., "Multi-Product Firms and Flexible Manufacturing in the Global Economy," Review of Economics Studies, 2010.
- ** Khandelwal, A. "The Long and Short (of) Quality Ladders," Review of Economic Studies, 2010.
- ** Melitz, Marc J, "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity," Econometrica, vol. 71, no. 6, November 2003, pp. 1695-1725.
- * Melitz, MJ and GIP Ottaviano, "Market Size, Trade, and Productivity", Review of Economic Studies, 2008.
- Arkolakis, Costas, "Market Penetration Costs and the New Consumers Margin in International Trade," Journal of Political Economy, 2010.
- * Manova, K. and Z. Zhang, "Export Prices Across Firms and Destinations," Quarterly Journal of Economics, 2011.
- Sethupathy, Guru "Offshoring, Wages, and Employment: Theory and Evidence", WP 2009.

E. Multinational Corporations

- * Brainard, S. Lael, "An Empirical Assessment of the Proximity-Concentration Trade-off between Multinational Sales and Trade," American Economic Review, vol. 87, no. 4, September 1997, pp. 520-44
- ** Costinot, A, Vogel, J., Wang, Su, "An Elementary Theory of Global Supply Chains," 2011.
- ** Feenstra, Ch. 11
- ** HK1 Chs. 12.1-12.4, 13.1-13.3
- * Markusen, J., Multinational Firms and the Theory of International Trade, Cambridge: MIT Pr. 2002. Chs. 2-4, 13.
- Markusen, J. "The Boundaries of Multinational Enterprises and the Theory of International Trade," JEP, Spring 1995.
- * J. Markusen and A. Venables (2000), "The Theory of Endowment, Intra-industry and Multi-national Trade", JIE, 209-234
- * Helpman, E. "A Simple Theory of International Trade with Multinational Corporations," JPE 92 No. 3 1984.
- * Helpman, Elhanan; "Trade, FDI, and the Organization of Firms" Journal of Economic Literature, September 2006, v. 44, iss. 3, pp. 589-630.

F. Factor Markets under Imperfect Competition

- ** Davidson, Carl, L. Martin, and S. Matusz, "Trade and Search Generated Unemployment," Journal of International Economics, 48 (1999) 271-299.
- * Davis, Donald R. and James Harrigan, "Good Jobs, Bad Jobs, and Trade Liberalization," Journal of International Economics 2011.
- Egger, H. and Kreickemeier, U., "Firm Heterogeneity and the Labor Market Effects of Trade Liberalization," International Economic Review, 2009.

- ** Helpman, Elhanan and Oleg Itskhoki,, and Stephen Redding, “Inequality and Unemployment in a Global Economy,” *Econometrica* 2010.
- * Verhoogen, Eric, “Trade, Quality Upgrading and Wage Inequality in the Mexican Manufacturing Sector.” *QJE* 2008.
- * Yeaple, Stephen Ross; “A Simple Model of Firm Heterogeneity, International Trade, and Wages” *Journal of International Economics*, January 2005, v. 65, iss. 1, pp. 1-20.

III. Economic Geography

A. Gravity and the Volume of Trade

- ** Anderson, James E; van Wincoop, Eric, “Gravity with Gravitas: A Solution to the Border Puzzle,” *American Economic Review*, vol. 93, no. 1, March 2003, pp. 170-92
- * Anderson, James E; van Wincoop, Eric, “Trade Costs,” *Journal of Economic Literature*, vol. 42, no. 3, September 2004, pp. 691-751
- Richard Baldwin and James Harrigan; “Zeros, Quality and Space: Trade Theory and Trade Evidence”, *AEJ: Micro* 2011.
- ** Eaton, Jonathan; Kortum, Samuel, “Technology, Geography, and Trade,” *Econometrica*, vol. 70, no. 5, September 2002, pp. 1741-79
- ** Feenstra Ch. 5
- * Harrigan, James, “Specialization and the Volume of Trade: Do the Data Obey the Laws?” in Choi, E.K. and James Harrigan, eds., *Handbook of International Trade*, Malden, MA: Blackwell, 2003.
- * Head, K., Disdier, A., “The Puzzling Persistence of the Distance Effect on Bilateral Trade,” *Review of Economics and Statistics*, 2008.
- * Hillberry, R. and D. Hummels, “Trade responses to geographic frictions: A decomposition using micro-data,” *European Economic Review*, 2008.
- * Hummels, D. and Klenow, P., “The Variety and Quality of a Nation’s Exports,” *AER*, June 2005.
- Santos-Silva, João M. C. and Silvana Tenreyro, “The Log of Gravity,” *Review of Economics and Statistics* 2006.
- * Schott, Peter K, “Across-Product versus Within-Product Specialization in International Trade,” *Quarterly Journal of Economics*, vol. 119, no. 2, May 2004, pp. 647-78
- ** Yi, Kei-Mu, “Can Vertical Specialization Explain the Growth of World Trade?” *Journal of Political Economy*, vol. 111, no. 1, February 2003, pp. 52-102.
- * Yi, K. 2009. “Can Multi-Stage production Explain the Home Bias in Trade?,” *American Economic Review*.

B. Economic Geography

Theory

- * Krugman, Paul, “Scale Economies, Product Differentiation, and the Pattern of Trade,” *AER* 70 Dec. 1980 950-959.
- * Krugman, Paul, “Increasing Returns and Economic Geography,” *JPE* 99:3, 1991, pp. 483-499.
- * Krugman and Venables, “Globalization and the Inequality of Nations,” *QJE*, Nov. 1995.
- ** Fujita, Krugman and Venables Chapters 4,5, 14
- Krugman, P., *Geography and Trade*, Cambridge: MIT Pr. 1992.
- Fujita, M. and Thisse, J. *Economics of Agglomeration*, Cambridge U. Pr., 2002.
- * Chs. 2-8 in Richard Baldwin, Philippe Martin, Frederic Robert-Nicoud, Gianmarco Ottaviano, Rikard Forslid, *Economic Geography and Public Policy*, Princeton U. Pr., 2005.
- Rivera-Batiz and Oliva, Ch. 4

Data

- ** Davis, Donald R; Weinstein, David E, "Bones, Bombs, and Break Points: The Geography of Economic Activity," *American Economic Review*, vol. 92, no. 5, December 2002, pp. 1269-89
- Davis, Donald R; Weinstein, David E, "A Search for Multiple Equilibria in Urban Industrial Structure," *Journal of Regional Science*, 2008.
- * Davis, Donald R; Weinstein, David E, "Economic Geography and Regional Production Structure: An Empirical Investigation," *European Economic Review*, vol. 43, no. 2, February 1999, pp. 379-407
- ** Hanson, G., Xiang, C. "The Home Market Effect and Bilateral Trade Patterns," *American Economic Review*, September 2004, 94: 1108-1129
- Head, K., Mayer, T. *The Empirics of Agglomeration and Trade*, *Handbook of Regional and Urban Economics*, vol. 4, 2004.
- Overman, H., Redding, S., and Venables, A.J. "The Economic Geography of Trade, Production and Income: A Survey of Empirics", in Choi, E.K. and James Harrigan, eds. *Handbook of International Trade*, Malden, MA: Blackwell, 2003.
- * Rappaport, Jordan; Sachs, Jeffrey D, "The United States as a Coastal Nation," *Journal of Economic Growth*, vol. 8, no. 1, March 2003, pp. 5-46
- Redding, Stephen and Anthony Venables, "Economic Geography and International Inequality," *Journal of International Economics*, 2004.

D. Systems of Cities

- Behrens, K., F. Robert-Nicoud, "Survival of the Fittest in Cities -- Agglomeration, Selection, Polarization," Working Paper, 2011.
- * Combes, P., G. Duranton, L. Gobillon, "Identification of Agglomeration Economies," *Journal of Economic Geography* 2011.
- * Davis, D. and Dingel, J. "Why is the College Premium Higher in Larger Cities?" working paper 2011.
- ** Gottlieb, J. and Glaeser, E. "The Wealth of Cities: Agglomeration Economies and Spatial Equilibrium in the United States," *Journal of Economic Literature*, 2009.
- Henderson, V. "Sizes and Types of Cities," *American Economic Review*, 1974.
- ** Moretti, E. "Local Labor Markets," in *Handbook of Labor Economics*, 2010.
- * Moretti, E. "Real Wage Inequality," working paper 2010.
- Roback, J. "Wages, Rents, and the Quality of Life," *Journal of Political Economy* 1982

IV. Trade and Growth

A. Perfectly Competitive Framework

- * Lucas, Robert "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22, July 1988. (The second model in the paper of learning by doing).
- * Young, Alwyn, "Learning by Doing and the Dynamic Effects of International Trade," *QJE* 106 May 1991.
- Findlay, Ronald, "Capital, Trade and the Rate of Interest," Chapter 2 in *Factor Proportions, Trade and Growth*, Cambridge: MIT Pr., 1995.
- Findlay, Ronald and H. Kierzkowski, "International Trade and Human Capital: A Simple General Equilibrium Model," *JPE* 1983.
- ** Ventura, J. "Growth and Interdependence," *Quarterly Journal of Economics*, vol. 112, no. 1, February 1997, pp. 57-84
- Stiglitz, J. "Factor Price Equalization in a Dynamic Economy," *JPE* 1970.
- * Acemoglu, Daron and Ventura, Jaume, "The World Income Distribution," *Quarterly Journal of Economics*, Vol. 117, No. 2 (May, 2002), pp. 659-694.

B. Research and Development

- ** GH Chs. 3, 6, 13.

- ** Krugman, P., "A Model Of Innovation, Technology Transfer, and the World Distribution of Income," JPE 87 1979.
- * Rivera Batiz, Luis A. and Paul Romer, "Economic Integration and Endogenous Growth," QJE 106 May 1991.
- Demidova, Svetlana and Andres Rodriguez-Clare, "Trade Policy under Firm-Level Heterogeneity in a Small Economy," WP 2008.

C. Empirics

- Estevadeordal, Antoni and Alan M. Taylor, "Is the Washington Consensus Dead? Growth, Openness, and the Great Liberalization, 1970s-2000s, NBER WP 14264, August 2008.
- Feenstra Ch. 10
- Feyrer, James, "Trade and Income – Exploiting Time Series in Geography," Working Paper. 2009.
- ** Frankel, Jeffrey A; Romer, David, "Does Trade Cause Growth?" American Economic Review, vol. 89, no. 3, June 1999, pp. 379-99
- Gancia, Gina and Fabrizio Zilibotti, "Technological Change and the Wealth of Nations," *Annual Review of Economics*, 2009:1.
- Rivera-Batiz and Oliva Ch. 6
- Rodriguez F, Rodrik D., "Trade policy and economic growth: A skeptic's guide to the cross-national evidence," NBER Macroeconomics Annual 15: 261+ 2001

IV. Elements of Trade Policy (to be expanded)

Theory

- ** Helpman, Elhanan and Krugman, Paul, *Trade Policy and Market Structure*, MIT 1989.
- ** Dixit, A. "Tax policy in open economies," Handbook of Public Economics, Volume 1, 1985, Pages 313-374.
- ** Arkolakis, C. Costinot, A., and Rodriguez-Clare, A. "New Trade Models, Same Old Gains," AER 2011.

Empirics

- ** Amiti, M. and Davis, D. "Trade Firms and Wages: Theory and Evidence," Review of Economic Studies, 2011.
- ** Goldberg, P. and Pavcnik, N., "Distributional Effects of Globalization in Developing Countries," JEL 2007.