

Graduate International Trade Course – 8413  
Thibault Fally, University of Colorado-Boulder  
Fall 2009

Course outline (subject to marginal changes)

Economics 8413 is a course on International Trade designed for Ph.D. students in the Economics Department. It will cover theoretical as well as empirical issues, with an emphasis on firms.

The prerequisites are first-year graduate courses in microeconomics, macroeconomics and econometrics. Students from other departments are welcome subject to instructor's approval.

Note: 1 “course” = 1h15.

First part: General theories (7 courses)

Block 1 (1 course)

General introduction, access to trade and firm-level data

Block 2 (2 courses).

Traditional models: Ricardo, Heckscher Ohlin (simple review, empirical tests)

Block 3 (2 courses or less)

Recent Ricardian models (Eaton Kortum 2002 and related developments)

Block 4 (2 courses or more)

Increasing returns to scale, gravity equations, home market effect, New Economic Geography

Second part: Firms in Trade (12 courses)

Block 5 (4 courses)

Theoretical insights on firm heterogeneity and international trade: preliminary evidence on firm heterogeneity (motivation), Melitz 2003 model, endogenous markup models.

Block 6 (3 courses)

Empirics on firm heterogeneity, firm-level evidence

Block 7 (5 courses)

Multinational firms: classical models, incomplete contract models.

Third part: Policy (8 courses)

Block 8 (3 courses)

Trade and Institutions: sources of comparative advantage, financial constraints, labor market rigidities, effect of trade on institutions.

Block 9 (5 courses)

Trade Policy (quotas, tariffs, FTA), political economy of trade policy

Other topics can be discussed, if time permits:

Trade and growth, Technology transfers, Trade and wage inequalities, Networks, Trade and environmental issues, Culture and trade, Quality and product standards, Multi-product firms

## Course requirements and grading

At the end of each class, I will tell you which article(s) or book chapter(s) to read before the following course.

As part of the grade (20%), I will ask to write comments on one article within the list of required readings before each course. I would like to receive these comments on Saturday if they concern the Monday class or before Tuesday 5pm if it's for the Wednesday class. Please include "8413" in the title of your email.

These comments should take about 10 lines, and should explain the most important contribution of the paper, its main limitations, and your questions. If you feel that have not understood an important point of the paper, please say it in the comments. That way, I can put an emphasis on this point during the course (your questions will remain confidential). Moreover, it is more important for a researcher to ask the right questions than having answers to everything.

I will also ask you to comment two articles more in details (25% of the grade). These comments should take the form of referee reports. Please choose two articles in the syllabus and send me an email with your preferences before I give my approval.

Class participation counts for another 15% of the grade

The written final exam counts for 40%.

Attendance at the International/Development seminars is required.

## Contact information

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Office: 11

Office hours: Monday and Wednesday 11am-12pm

## Reading list

Asterisks (\*) signal required readings.

### **Main book:**

- \* Feenstra, R.C., *Advanced International Trade: Theory and Evidence* (Princeton, Princeton University Press), 2003.

### **Other recommended books:**

- Helpman, E. and P. Krugman, *Market Structure and Foreign Trade*, (Cambridge, MA, and London, The MIT Press), 1985.
- Grossman, G.M. and E. Helpman, *Innovation and Growth in the Global Economy*, (Cambridge, Ma, and London, The MIT Press), 1991.
- Grossman, G.M. and K. Rogoff (eds.), *Handbook of International Economics*, Vol. III, (Amsterdam, North Holland), 1995.
- Markusen J.R., J.R. Melvin, W.H. Kaempfer, K.E.Maskus, "International Trade: Theory and Evidence", McGraw-Hill, 1995

## First part: General theories

### **Ricardian theory and tests**

- \* Feenstra, 2003, chapter 1
- \* Dornbusch, R., S. Fischer and P.A. Samuelson, "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*, 1977, 823-39.
- \* Eaton, J. and S. Kortum, "Technology, Geography, and Trade," *Econometrica*, 70 (5), 2002, 1741-1779.
- \* Costinot, Arnaud and Ivana Komunjer, "What Goods Do Countries Trade: A Structural Ricardian Model," 2008, MIT mimeo
- \* Donaldson, Dave, "Railroads of the Raj: Estimating the Economic Impact of Transportation Infrastructure", LSE mimeo
- Bernhofen, D.M. and J.C. Brown, "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," *Journal of Political Economy* 112(1), 2004, 48-67.

### **Factor content of trade**

- \* Feenstra, 2003, chapter 2, 3 and 4
- \* Davis, D.R. and D.W. Weinstein, "An Account of Global Factor Trade," *American Economic Review*, December 2001, 91(5), 1423-53.
- \* Helpman, E. "The Structure of Foreign Trade," *Journal of Economic Perspectives*, Spring 1999, 13(2), 121-44.

- \* Trefler, D., "The Case of the Missing Trade and Other Mysteries," American Economic Review, December 1995, 85(5), 1029-46.
- Choi, Y-S. and P. Krishna, "The Factor Content of Bilateral Trade: An Empirical Test," Journal of Political Economy 112(4), 2004, 887-914.
- Deardorff, A., "The General Validity of the Heckscher-Ohlin Theorem", American Economic Review, 72(4), September, 1982, 683-94.
- Deardorff, A.V., "Testing Trade Theories and Predicting Trade Flows", in Jones and Kenen, 1984
- Dornbusch, R., S. Fischer and P.A. Samuelson, "Heckscher-Ohlin Theory with a Continuum of Goods", Quarterly Journal of Economics Papers, 1980.
- Helpman, E., "The Factor Content of Foreign Trade ", Economic Journal, 1984.
- Helpman, E. "The Structure of Foreign Trade," Journal of Economic Perspectives, Spring 1999, 13(2), 121-44.
- Romalis, J., "Factor Proportions and the Structure of Commodity Trade," American Economic Review, March 2004, 94(1), 67-97.
- Schott, Peter K., "One Size Fits All? Heckscher-Ohlin Specialization in Global Production," American Economic Review, 2003, Vol. 93, 686-708.
- Trefler, D., "International Factor Price Differences: Leontief was Right!," Journal of Political Economy, December, 1993, 101(6), 961-87.
- Vanek, J., "Factor Proportions Theory: The N-factor Case", Kyklos, 1968.

### **Product varieties, increasing returns, gravity equation**

- \* Feenstra, 2003, chapter 5
- \* Anderson, J. and van Wincoop, E. (2004) "Trade Costs", Journal of Economic Literature, 42, 691-751.
- \* Anderson, J. and E. van Wincoop, "Gravity with Gravitas: A Solution to the Border Puzzle," American Economic Review, 2003, 170-192.
- \* Broda, Christian and David Weinstein (2006). "Globalization and the Gains from Variety," Quarterly Journal of Economics 121(2).
- \* Head, K. and T.Mayer (2004). "The Empirics of Agglomeration and Trade". In V.Henderson and J.F.Thisse (Eds.), Handbook of Regional and Urban Economics, Vol 4: 2609-2669. North Holland.
- \* Krugman, P., "Increasing Returns, Monopolistic Competition, and International Trade", Journal of International Economics 1979.
- \* Santos Silva, J. and Tenreyro, S. "The Log of Gravity", Review of Economics and Statistics } Vol. 88, No. 4, Pages 641-658.
- Antweiler, W. and D. Trefler, "Increasing Returns and All That: A View from Trade," American Economic Review, March 2002, 92(1), 93-119.
- Evenett, S., and W. Keller, "On Theories Explaining the Success of the Gravity Equation", Journal of Political Economy 2002.
- Helpman, E. and P. Krugman, Market Structure and Foreign Trade, (Cambridge, MA, and London, The MIT Press), 1985. Monopolistic competition: chapters 6 to 11.
- Hummels, David and Peter Klenow (2005). "The Variety and Quality of a Nation's Exports," American Economic Review 95, p.704-723.
- Krugman, P.R., "Scale Economies, Product Differentiation and the Pattern of Trade", American Economic Review, 1980.
- Krugman, P., "Increasing Returns and Economic Geography", Journal of Political Economy 1991.

- Krugman, P.R. and A. Venables, "Globalization and the Inequality of Nations," Quarterly Journal of Economics, November 1995, CX(4), 857-80.

## **Second part: Firms in trade**

### **Firm heterogeneity: theory**

- \* Melitz, Marc (2003). "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica*, 71(6), p.1695-1725.
- \* Chaney, Thomas (2008). "Distorted Gravity: The Intensive and Extensive Margins of International Trade," *American Economic Review*, forthcoming.
- \* Melitz, Marc and Gianmarco Ottaviano (2008). "Market Size, Trade and Productivity," *Review of Economic Studies*, forthcoming.
- \* Bernard, Andrew, Jonathan Eaton, Bradford Jensen and Samuel Kortum (2003), "Plants and Productivity in International Trade," *American Economic Review*, 93(4), p.1268-1290.
- \* Helpman, E., "Trade, FDI, and the Organization of Firms," *Journal of Economic Literature*, XLIV, 2006, 589-630
- \* Yeaple, S., "A Simple Model of Firm Heterogeneity, International Trade, and Wages", *Journal of International Economics* 2005.
- Arkolakis, Costas (2007). "Market Access Costs and the New Consumers Margin in International Trade," Yale University mimeo.
- Bernard, Andrew, Stephen Redding and Peter Schott (2007). "Comparative Advantage and Heterogeneous Firms," *Review of Economic Studies* 74.

### **Empirics on firm heterogeneity**

- \* Bernard, Andrew, Bradford Jensen and Peter Schott (2007). "Importers, Exporters, and Multinationals: A Portrait of Firms in the U.S. that Trade Goods," Dartmouth Tuck mimeo.
- \* Bernard, Andrew B., J. Bradford Jensen, Stephen J. Redding and Peter K. Schott, "Firms in International Trade," *Journal of Economic Perspectives*, 2007, 21(3), 105-130.
- \* Bernard and Jensen (1995). "Exporters, Jobs and Wages in U.S. Manufacturing, 1976-1987," *Brookings Papers on Economic Activity: Microeconomics*.
- \* Eaton, Jonathan, Samuel Kortum and Francis Kramarz (2004a). "An Anatomy of International Trade: Evidence from French Firms," New York University mimeo.
- \* Eaton, Jonathan, Samuel Kortum and Francis Kramarz (2004b). "Dissecting Trade: Firms, Industries, and Export Destinations," *American Economic Review P&P*, 94, p.150-154.
- \* Helpman, Elhanan, Marc Melitz and Yona Rubinstein (2008). "Estimating Trade Flows: Trading Partners and Trading Volumes," *Quarterly Journal of Economics*, forthcoming.
- Baldwin, Richard and James Harrigan (2007). "Zeros, Quality and Space: Trade Theory and Trade Evidence," NBER Working Paper No. 13214.
- Eaton, Jonathan, Marcela Eslava, Maurice Kugler and James Tybout (2008). "The Margins of Entry into Exports Markets: Evidence from Columbia," in E. Helpman, D.

Marin and T. Verdier, eds., *The Organization of Firms in a Global Economy*, forthcoming, Harvard University Press.

- Tybout, James (2001). "Plant- and Firm-level Evidence on the New Trade Theories," in E. Kwan Choi and James Harrigan, ed., *Handbook of International Trade*, Oxford: Basil-Blackwell, 2003, and NBER Working Paper No. 8418.
- Bernard, Andrew and Bradford Jensen (1999). "Exceptional Exporter Performance: Cause, Effect, or Both?" *Journal of International Economics*, 47(1), p.1-25.
- Aw, B.Y., S. Chung and M.J. Roberts (2000). "Productivity and Turnover in the Export Market: Micro-level Evidence from the Republic of Korea and Taiwan(China)," *World Bank Economic Review*, 14(1), p.65-90.

### **... and particularly about sunk costs**

- \* Roberts, Mark and James Tybout (1997). "The Decision to Export in Colombia: An Empirical Model of Entry with Sunk Costs," *American Economic Review*, 87(4), p.545-564.
- \* Dixit, Avinash (1989a). "Entry and Exit Decision under Uncertainty," *Journal of Political Economy*, 97(3), p.620-638.
- Dixit, Avinash (1989b). "Hysteresis, Import Penetration, and Exchange Rate Pass-Through," *Quarterly Journal of Economics*, 104(2), p.205-228.
- Das, Mita, Mark Roberts and James Tybout (2007). "Market Entry Costs, Producer Heterogeneity and Export Dynamics," *Econometrica*, 75(3).
- Bernard A. and J. B. Jensen (2004). "Why Some Firms Export," *The Review of Economics and Statistics*, 86(2).

### **Horizontal FDI**

- \* Brainard, Lael (1997). "An Empirical Assessment of the Proximity-Concentration Trade-off Between Multinational Sales and Trade," *American Economic Review*, 87(4), p.520-544.
- \* Helpman, Elhanan, Marc Melitz, and Stephen Yeaple (2004). "Exports versus FDI with Heterogeneous Firms," *American Economic Review*, 94(1), p.300-316.
- \* Markusen, James (1984). "Multinationals, Multi-Plant Economies, and the Gains from Trade," *Journal of International Economics*, 16, p.205-226.
- \* Markusen, James and Anthony Venables (2000). "The Theory of Endowment, Intra-industry and Multi-national Trade," *Journal of International Economics*, 52, p.209-234.
- Ethier, J.W. and J.R. Markusen, "Multinational Firms, Technology Diffusion and Trade," *Journal of International Economics*, 1996.
- Markusen, James (1995). "The Boundaries of Multinational Enterprises and the Theory of International Trade," *Journal of Economic Perspectives*, 9(2), p.169-189.
- Markusen, James and Anthony Venables (1998). "Multinational Firms and the New Trade Theory," *Journal of International Economics*, 46(2), p.183-203.
- Markusen, James (2002). *Multinational Firms and the Theory of International Trade*, Cambridge, MA, MIT Press.
- Ramondo, Natalia (2007). "Size, Geography, and Multinational Production," University of Texas at Austin mimeo.

### **Offshoring, vertical FDI,**

- \* Antràs, Pol, Luis Garicano and Esteban Rossi-Hansberg (2006). "Offshoring in a Knowledge Economy," *Quarterly Journal of Economics*, 121(1), p.31-77.
- \* Grossman, G., and E. Rossi-Hansberg, "Trading Tasks: A Simple Theory of Offshoring", *AER*, forthcoming
- \* Hanson, Gordon, Raymond Mataloni and Matthew Slaughter (2001). "Expansion Strategies of U.S. Multinational Firms," in Dani Rodrik and Susan Collins, eds., *Brookings Trade Forum 2001*, pp. 245-282.
- \* Helpman, Elhanan (1984). "A Simple Theory of International Trade with Multinational Corporations," *Journal of Political Economy*, 92(3), p.451-471.
- \* Yeaple, Stephen (2003b). "The Complex Integration Strategies of Multinationals and Cross Country Dependencies in the Structure of FDI," *Journal of International Economics*, 60, p.293-314.
- Carr, David, James Markusen and Keith Maskus (2001). "Estimating the Knowledge-Capital Model of the Multinational Enterprise," *American Economic Review*, 91(3), p.693-708.
- Grossman, G. M. and E. Helpman (2003) "Outsourcing versus FDI in Industry Equilibrium", *Journal of the European Economic Association*, vol. 1, no.2.
- Helpman, Elhanan and Paul Krugman (1985). *Market Structure and Foreign Trade*, Cambridge, MA: MIT Press. Chapter 12.
- Nunn, Nathan and Daniel Trefler, "The Boundaries of the Multinational Firm: An Empirical Analysis," in E. Helpman, D. Marin, and T. Verdier (eds.), *The Organization of Firms in a Global Economy* (Cambridge, MA: Harvard University Press), 2008.
- Yeaple, S.R., "Offshoring, Foreign Direct Investment, and the Structure of U.S. Trade," *Journal of the European Economic Association*, April-May 2006, 4(2-3), 602-611.
- Yi, Kei-Mu (2003). "Can Vertical Specialization Explain the Growth of World Trade?" *Journal of Political Economy*, 111(1), p.52-102.

### **Incomplete contracts and multinational production**

- \* Antràs, P., "Firms, Contracts, and Trade Structure," *Quarterly Journal of Economics*, 2003, 1375-1418.
- \* Antràs, P. and E. Helpman, "Global Sourcing," *Journal of Political Economy* 112(3), 2004, 552-580.
- \* Antràs, Pol and Esteban Rossi-Hansberg, "Organizations and Trade," 2008, forthcoming in *Annual Review of Economics*.
- Antras, P. (2005) "Incomplete Contracts and the Product Cycle," *American Economic Review*, Vol. 95, No. 4, September, pp. 1054-1073.
- Grossman, S. and Hart, O. (1986) "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration", *Journal of Political Economy* 94 (4).
- Hart, O. and Moore, J. (1990) "Property Rights and the Nature of Firms", *Journal of Political Economy* 98.

### **Host economy effect of FDI**

- Aitken, B. and Harrison, A. (1999), "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela", *American Economic Review*, Vol. 89.

- Javorcik Smarzyska B (2004), "Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages", American Economic Review, Vol. 94.
- Markusen, J., and Venables, A.(1999), "Foreign direct investment as a catalyst for industrial development", European Economic Review, Vol. 43.
- Rodriguez-Clare, A. (1996) "Multinationals, Linkages, and Economic Development", American Economic Review, Vol. 86.

### **Third part: Policy**

#### **Institutions and trade**

- \* Nunn, Nathan (2007). "Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade," Quarterly Journal of Economics, 122(2), p.569-600.
- \* Acemoglu, Daron, Pol Antràs and Elhanan Helpman (2005). "Contracts and Technology Adoption," American Economic Review 97(3), p.916-943.
- Levchenko, Andrei (2007). "Institutional Quality and International Trade," Review of Economic Studies, 74(3), p.791-819.
- Costinot, Arnaud (2006). "On the Origins of Comparative Advantage," University of San Diego mimeo.

#### **Financial constraints and trade**

- \* Antràs, Pol, Mihir Desai, and Fritz Foley (2007). "Multinational Firms, FDI Flows and Imperfect Capital Markets," Harvard University mimeo.
- \* Carluccio J. and T. Fally (2008) "Global Sourcing under Imperfect Capital Markets"
- \* Desai, Mihir, Fritz Foley and Kristin Forbes (2006). "Financial Constraints and Growth: Multinational and Local; Firm Responses to Currency Depreciations," Review of Financial Studies, forthcoming.
- \* Manova, Kalina (2007). "Credit Constraints, Heterogeneous Firms and International Trade," Stanford University mimeo.
- Manova, Kalina (2008). "Credit Constraints, Equity Market Liberalizations and International Trade," Journal of International Economics, forthcoming.
- Antràs, Pol and Ricardo Caballero (2007). "Trade and Capital Flows: A Financial Frictions Perspective," Harvard University mimeo.
- Do, Quy-Toan and Andrei Levchenko (2007). "Comparative Advantage, Demand for External Finance, and Financial Development," Journal of Financial Economics, 86(3), p.796-834.

#### **Labor markets and trade**

- \* Helpman, Elhanan and Oleg Itskhoki (2007). "Labor Market Rigidities, Trade and Unemployment," Harvard University mimeo.
- \* Cuñat, Alejandro and Marc Melitz (2007). "Volatility, Labor Market Flexibility and Comparative Advantage," NBER Working Paper #13062.
- Davidson, Carl, Lawrence Martin and Steven Matusz (1999). "Trade and Search Generated Unemployment," Journal of International Economics 48, p.271-299.



- Davis, Donald (1998). "Does European Unemployment Prop Up American Wages? National Labor Markets and Global Trade," American Economic Review 88, p.478-494.
- Davis, Donald and James Harrigan (2007). "Good Jobs, Bad Jobs, and Trade Liberalization," Columbia University mimeo.

#### **Trade policy (to be completed)**

- \* Feenstra, 2003
- \* Grossman, G.M. and E. Helpman, "Protection for Sale," American Economic Review, September 1994, 84(4), 833-50.
- \* Grossman, G.M. and E. Helpman, "The Politics of Free Trade Agreements," American Economic Review, September 1995, 84(4), 667-90.
- \* Koujianou Goldberg, P. and G. Maggi, "Protection for Sale: An Empirical Investigation," American Economic Review 89(5): 1135-55, December 1999.

#### **Other topics:**

##### **Trade and wage inequalities**

- Bustos, Paula (2006). "Rising Wage Inequality in the Argentinean Manufacturing Sector: The Impact of Trade and Foreign Investment on Technology and Skill Upgrading," CREI mimeo.
- Feenstra, R. and Hanson, G. (1996) "Globalization, Outsourcing, and Wage Inequality", American Economic Review Papers and Proceedings, vol. 96 no 2, pp. 240-45.
- Helpman, Elhanan, Oleg Itskhoki and Stephen Redding, "Inequality and Unemployment in a Global Economy," mimeo, 2008.
- Muendler, Marc (2004). "Trade, Technology and Productivity: A Study of Brazilian Manufacturers, 1968-1998," UCSD mimeo.
- Pavcnik, Nina (2002). "Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants," The Review of Economic Studies, 69, January, p.245-76.
- Verhoogen, Eric (2004). "Trade, Quality Upgrading and Wage Inequality in the Mexican Manufacturing Sector: Theory and Evidence from an Exchange-Rate Shock," Columbia University mimeo.
- Yeaple, Stephen (2005). "A Simple Model of Firm Heterogeneity, International Trade, and Wages," Journal of International Economics, 65(1), p.1-20.

##### **Multi-product firms:**

- Bernard, Andrew, Stephen Redding and Peter Schott (2006a). "Multi-Product Firms and Product Switching," Dartmouth Tuck mimeo.
- Bernard, Andrew, Stephen Redding and Peter Schott (2006b). "Multi-Product Firms and Trade Liberalization," Dartmouth Tuck mimeo.
- Bernard, Andrew, Stephen Redding and Peter Schott (2006c). "Products and Productivity," Dartmouth Tuck mimeo.
- Arkolakis, Costas and Marc Muendler (2007). "The Extensive Margin of Exporting Goods: A Firm-Level Analysis," UCSD mimeo.

**Trade, innovation and Growth:**

- Grossman, G.M. and E. Helpman, 1991
- Feenstra, 2003, Chapter 10.
- Frankel, Jeffrey A. and Romer, David, “Does Trade Cause Growth?” American Economic Review, June 1999, 89(3), 379-399.
- Keller, W., “International Technology Diffusion”, Journal of Economic Literature 2004.
- Rodriguez, Francisco and Rodrik, Dani, “Trade Policy and Economic Growth: A Skeptic’s Guide to the Cross-National Evidence,” NBER Macroeconomics Annual, Vol. 15, 2001.

**Trade and Networks:**

- Rauch, J., and V. Trindade, “Information, Substitutability, and Globalization”, American Economic Review 2003.
- Rauch, A. (1999) “Networks Versus Markets in International Trade” Journal of International Economics 48, 7-35.

University policies

- All policies:  
<http://www.colorado.edu/policies/>
- Class behavior:  
<http://www.colorado.edu/policies/classbehavior.html>  
[http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)
- Honor code:  
<http://www.colorado.edu/academics/honorcode/>  
<http://www.colorado.edu/policies/honor.html>
- Disabilities:  
<http://www.colorado.edu/disabilityservices/>
- Religious practices:  
[http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)
- Sexual harassment:  
<http://www.colorado.edu/odh/>