

# Graduate International Trade Course

ECON 8413 - Fall 2019

University of Colorado, Boulder

Instructor: Prof. Jeronimo Carballo

email: [jeronimo.carballo@colorado.edu](mailto:jeronimo.carballo@colorado.edu)

Office Hours: Wednesday 9:00am-10:30am, Econ 214

## Syllabus

This course takes a theoretical and empirical approach to the study of international trade. The class is structured around research papers, primarily recent contributions to the frontier of international trade research. We will first discuss core trade theories and empirical applications based on these theories. Next, we will turn to more recent theories that focus on the firm's decision to export, investigating the role of heterogeneity in firm productivity on patterns of trade. This will be followed by an exploration of multinational activity, including different types of foreign direct investment and different intersections between trade and other fields.

This course is targeted at second-year (and higher) Ph.D. students in economics. Students are expected to have completed first-year micro and macro theory courses. ‘

## Topics

1. Comparative Advantage, Gains from Trade, International Equilibrium
2. Ricardian Models
3. New Trade Theory

4. Firm-level Trade
5. Gravity Models
6. Multinationals
7. Demand Patterns and Trade
8. Trade and Labor
9. Trade policy

## Grading

Your final grade will be determined according to the following percentages

- Problem Sets/Reading checks 40%
- In class participation 10%
- Referee Report 15%
- Research Proposal 35%

Reading checks are going to be due almost weekly. These checks should detail: 1) a brief summary using your own words, 2) the most important contribution(s) of the paper, 3) its main limitations (if you find one), 4) and your questions (if any). The comments should be precise and clear, this is the most important part of the grade on these comments. Do not copy parts of the abstract or conclusion, but find your own way to write them. If you feel that you have not understood an important point of the paper, please say it in the comments. That way, I can put an emphasis on those points during the lectures (your questions will remain confidential).

Referee report should be on one of the following papers.

- Allen, Treb. "Information Frictions in Trade."
- Faber, Benjamin. "Trade Integration, Market Size, and Industrialization: Evidence from China's National Trunk Highway System." .

- Fort, Teresa. “Technology and Production Fragmentation: Domestic versus Foreign Sourcing”.
- Tiltelnot, Felix. “Global Production with Export Platforms”

These are recent and successful job market papers on in international trade. Your report should be around 5 pages long and include:

- a summary of the main features of the paper (one paragraph);
- a description of its contribution to the literature (one paragraph);
- its main strengths and weaknesses; your recommendations to improve it (2-3 pages).

The research proposal should be 15-20 pages long (double-spaced) and describe:

- the question you want to address;
- why you think it is important;
- why you think the answer of the previous literature is unsatisfactory;
- how you plan to improve it.

Your grade will reflect both the precision with which you answer these questions (in particular, the concreteness of your proposed improvement, i.e. how far you have thought it through and progressed to date) and the quality of the proposed improvement (i.e. how good an idea for a paper it seems).

## **Rules of Conduct**

*Academic Integrity.* All students of the University of Colorado at Boulder are responsible for knowing and adhering to this institution’s policy regarding academic integrity. Cheating, plagiarism, fabrication, lying, bribery, threatening behavior and assistance to acts of academic dishonesty are examples of behaviors that violate this policy (see <http://www.colorado.edu/policies/academic-integrity-policy> for more information). Ordinarily, a student engaged in any act of academic dishonest will receive a failing grade for the course. In addition, all incidents of academic misconduct shall be reported to the Honor Code Council. Depending on

its findings, students who are found to be in violation of the academic integrity policy will be subject to non-academic sanctions, including but not limited to university probation, suspension, or expulsion. The Honor Code Council can be contacted by email at [honor@colorado.edu](mailto:honor@colorado.edu) or by telephone at 303-725-2273. Additional information regarding the University Honor Code is available at <http://www.colorado.edu/policies/student-honor-code-policy> and at <http://honorcode.colorado.edu/>.

*Electronics in Class.* Cell phones must be turned off. Any sort of use of cell phones in class will not be tolerated and anyone violating such rule will be asked to leave the lecture hall. Computers are permitted in lectures. However, they must be used only for course-related purposes. If you use your laptop for class purposes, you are required to sit in one of the last three rows of the lecture hall. Uses for any other purpose impose negative externalities on others and are inappropriate during class time. For these reasons, anyone who uses computers for non-course-related purposes must leave the lecture hall.

## University Policies

The University adheres to the standards for student privacy rights and requirements as stipulated in the Federal Rights and Privacy Act (FERPA) of 1974 (see <http://www.colorado.edu/registrar/resources/family-educational-rights-and-privacy-act-ferpa>)

*Disability Accommodations.* Campus policy regarding disabilities requires that faculty adhere to the recommendations of Disability Services. Any student eligible for and needing academic adjustments or accommodations because of disability should submit to me a letter from Disability Services describing appropriate adjustments or accommodations and should arrange to meet with me as soon as possible so that arrangements can be made in a timely manner. University policies regarding disabilities are available at <http://disabilityservices.colorado.edu/>. Disability Services can be contacted by telephone at 303- 492-8671, or in person at the Center for Community.

*Religious Observance.* Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly accommodate all students who, because of religious obligations, have conflicts with scheduled examinations, assignments or required attendance. If you have scheduling conflict covered by this policy, please let me know as soon as possible so that we can reschedule the relevant assignment/examination. See full details at <http://www.colorado.edu/policies/observance-religious-holidays-and-absen>

*Harassment Policy.* The University of Colorado at Boulder policy on Discrimination and Harassment (<http://www.colorado.edu/policies/discrimination-and-harassment-policy-and-procedures>) applies to all students, staff and faculty. Any student, staff member or faculty member who believes (s)he has been the subject of discrimination or harassment based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy, should contact the Office of Discrimination and Harassment (ODH) at (303) 492-2127 or the Office of Judicial Affairs at (303) 492-5550.

*Classroom Behavior.* Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which students express opinions. University policies regarding classroom behavior are available at <http://www.colorado.edu/policies/student-classroom-and-course-related-behavior>

## Reading List

There are no required texts for the course. However, the following books are very useful sources for particular issues in trade theory:

R. Feenstra, *Advanced International Trade*, Princeton U Press, 2004 (F).

J. Markusen and K Maskus, *International Trade: Theory and Evidence*, manuscript 2014 (MM); I will email this text to you.

A. Dixit and V. Norman, *Theory of International Trade*, Cambridge U. Press. 1992 (DN).

Helpman and P. Krugman, *Market Structure and Foreign Trade*, MIT Press, 1986 (HK).

K. Bagwell and R.W. Staiger *The Economics of the World Trading System*, MIT Press, 2003 (BS).

P. Combes, T. Mayer, and J-F Thisse, *Economic Geography*, Princeton U Press, 2008 (CMT).

### 1. Gains from Trade and Comparative Advantage

- \*Dixit, Avinash and Victor Norman, Ch. 1, p., Ch. 2 p. 31-36, Ch. 2 p. 59-64, Ch. 3, p. 95-80.

- Feenstra, Robert, Ch. 1, p. 1-4.
- Deardorff, Alan (1980). "The General Validity of the Law of Comparative Advantage," *Journal of Political Economy*
- Dixit, Avinash and Victor Norman (1986). "Gains from Trade without Lump-Sum Compensation," *Journal of International Economics*
- Samuelson, P. "The Gains from International Trade." *Cambridge Journal of Economics* (1939): 195–205.
- \*Bernhofen, and Brown. "A Direct Test of the Theory of Comparative Advantage: The Case of Japan." *Journal of Political Economy* 112, no. 1 (2004): 48–67.
- \*Bernhofen, and Brown. "An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan." *American Economic Review* 95, no. 1 (2005): 208–25.
- \*Frankel, J., and D. Romer. "Does Trade Cause Growth?" *American Economic Review* 89, no. 3 (1999): 379–99.
- \*Feyrer, J. "Trade and Income Exploiting Time Series in Geography." (PDF) NBER Working Paper no. 14910, 2009.
- Feyrer, J. "Distance, Trade and Income – The 1967 to 1975 Closing of the Suez Canal as a Natural Experiment." NBER Working Paper no. 15557, 2009.

## 2. Ricardian Setting

- \*Dornbusch, Rudiger, Stanley Fischer, and Paul Samuelson (1977). "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*
- \*Eaton, Jonathan and Samuel Kortum, "Technology, Geography, and Trade," *Econometrica* (Sept. 2002)
- \*Costinot, Arnaud, Dave Donaldson and and Ivana Komunjer. "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas." *Review of Economic Studies* 79, no. 2 (2012): 581-608.

- \*Nunn, Nathan. "Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade." *The Quarterly Journal of Economics* 122, no. 2 (2007): 569–600.
- Donaldson, Dave (2010). "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure." *American Economic Review*.
- Mac Dougall, G. "British and American Exports: A Study Suggested by the Theory of Comparative Costs. Part I." *The Economic Journal* 61, no. 244 (1951): 697–724.
- Stern, R. "British and American Productivity and Comparative Costs in International Trade." *Oxford Economic Papers New Series* 14, no. 3 (1962): 275–96.
- Balassa, B. "An Empirical Demonstration of Classical Comparative Cost Theory." *Review of Economics and Statistics* 45, no. 3 (1963): 231–8.
- Golub, and Hsieh. "Classical Ricardian Theory of Comparative Advantage Revisited." *Review of International Economics* 8, no. 2 (2000): 221–34.

### 3. Factor Endowment Models

#### A. Heckscher-Ohlin

- Dixit, Avinash and Victor Norman, Ch. 1, p. 8-19, Ch. 2, Ch. 4 p. 96-102, 106-122
- \* Feenstra, Robert, Ch. 1-4
- \* Treffer, Daniel (1995). "The Case of the Missing Trade and other Mysteries," *American Economic Review*
- Jones, Ronald (1965). "The Structure of Simple General Equilibrium Models," *Journal of Political Economy*
- Deardorff, Alan and Robert Staiger (1988). "An Interpretation of the Factor Content of Trade," *Journal of International Economics*

- Davis, Donald and David Weinstein (2001). “An Account of Global Factor Trade,” American Economic Review
- Zhu, Susan and Daniel Trefler (2005). “Trade and Inequality in Developing Countries: A General Equilibrium Analysis,” Journal of International Economics

### **3. Monopolistic Competition and Trade**

- Helpman, Elhanan and Paul Krugman, Ch. 6-11
- \* Krugman, Paul, (1980). “Scale Economies, Product Differentiation, and the Pattern of Trade,” American Economic Review, p. 950-959
- Helpman, Elhanan, (1981). “International Trade in the Presence of Product Differentiation, Economies of Scale, and Imperfect Competition: A Chamberlin-Heckscher-Ohlin Approach,” Journal of International Economics.
- Krugman, Paul, (1979). “Increasing Returns, Monopolistic Competition, and International Trade,” Journal of International Economics.

### **4. Gravity Models, Geography and Trade Costs:**

- \* Anderson and van Wincoop, “Gravity with Gravitas: A Solution to the Border Puzzle,” AER 2003, 170-92
- \* Head and Mayer, “Gravity Equations: Workhorse, Toolkit, and Cookbook,”
- \* Redding and Sturm, “The Costs of Remoteness: Evidence from German Division and Reunification,” AER 2008, 1766-97
- Anderson and van Wincoop, “Trade Costs,” Journal of Economic Literature 2004, 691-751
- Hummels, “Transportation Costs and International Trade in the Second Era of Globalization,” Journal of Economic Perspectives 2007, 131-54



- Baier and Bergstrand, "Bonus Vetus OLS: A Simple Method for Estimating International Trade Cost Effects Using the Gravity Equation," JIE 2009, 77-85.

## **5. Firms and the Decision to Export: Theoretical Models with Firm Heterogeneity**

- \* Melitz, Marc (2003). "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica*, 71(6), p. 1695-1725
- \* Bernard, Andrew, Stephen Redding and Peter Schott (2007). "Comparative Advantage and Heterogeneous Firms," *Review of Economic Studies* 74
- \* Chaney, Thomas (2008). "Distorted Gravity: The Intensive and Extensive Margins of International Trade," *American Economic Review*, 98(4)
- Melitz, Marc and Gianmarco Ottaviano (2008). "Market Size, Trade and Productivity," *Review of Economic Studies*, 75, p. 295-316
- Bernard, Andrew, Jonathan Eaton, Bradford Jensen and Samuel Kortum (2003). "Plants and Productivity in International Trade," *American Economic Review*, 93(4), p. 1268-1290
- Arkolakis, Costas, Arnaud Costinot, and Andres Rodriguez-Clare (2010). "New Trade Mode Same Old Gains?" *American Economic Review* 102(1).

## **6. Empirical Evidence on Firm Heterogeneity**

- \* Eaton, Jonathan, Samuel Kortum and Francis Kramarz (2011). "An Anatomy of International Trade: Evidence from French Firms," *Econometrica*, 79(5).
- \* Eaton, Jonathan, Samuel Kortum and Francis Kramarz (2004). "Dissecting Trade: Firms, Industries, and Export Destinations," *American Economic Review* P&P, 94, p. 150-154
- \* Arkolakis, Costas (2010). "Market Access Costs and the New Consumers Margin in International Trade," *Journal of Political Economy*, 118(6), p. 1151-1199

- 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 and Jensen (1995). "Exporters, Jobs and Wages in U.S. Manufacturing, 1976-1987," Brookings Papers on Economic Activity: Microeconomics
- \* Helpman, Elhanan, Marc Melitz and Yona Rubinstein (2008). "Estimating Trade Flows: Trading Partners and Trading Volumes," Quarterly Journal of Economics, 123(2), p. 441-487
- \* Broda, Christian and David Weinstein (2006). "Globalization and the Gains from Variety," Quarterly Journal of Economics 121(2)
- \* Morales, Eduardo, Gloria Sheu, Andres Zahler (2010). "Gravity and Extended Gravity: A Structural Model of Export Entry," Columbia University mimeo
- Hummels, David and Peter Klenow (2005). "The Variety and Quality of a Nation's Exports," American Economic Review 95, p. 704-723
- Baldwin, Richard and James Harrigan (2011). "Zeros, Quality and Space: Trade Theory and Trade Evidence," American Economic Journal: Microeconomics, 3, p. 60-88
- 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
- Costinot, Arnaud, Dave Donaldson, and Ivana Komunjer (2012). "What Goods Do Countries Trade? New Ricardian Predictions," Review of Economic Studies, 79(2).

## 7. Demand Patterns and Trade:

- \* Markusen, "Putting Per-Capita Income Back into Trade Theory," JIE 2013, 255- 65

- \* Caron, Fally and Markusen, "International Trade Puzzles: A Solution Linking Production and Preferences," working paper 2013, QJE 2014
- Markusen, "Explaining the Volume of Trade: an Eclectic Approach," AER 1986, 1002-1011
- MM, Ch. 14 Hunter, "The Contribution of Nonhomothetic Preferences to Trade," JIE 1991
- Bergstrand, "The Heckscher-Ohlin Theorem, the Linder Hypothesis, and the Volume and Pattern of International Trade," EJ 1990

## 8. Horizontal FDI and the Proximity-Concentration Hypothesis

- \* Helpman, Elhanan and Paul Krugman, Ch. 12-14
- \* 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
- Markusen, James and Anthony Venables (2000). "The Theory of Endowment, Intra-industry and Multi-national Trade," Journal of International Economics, 52, p. 209-234
- \* 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 (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

## 9. Vertical FDI

- \* Helpman, Elhanan (1984). "A Simple Theory of International Trade with Multinational Corporations," *Journal of Political Economy*, 92(3), p. 451-471
- \* Yeaple, Stephen (2003a). "The Role of Skill Endowments in the Structure of U.S. Outward FDI," *Review of Economics and Statistics*, August, 85(3), p. 726-734
- \* 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
- \* Ramondo, Natalia and Andres Rodriguez-Clare (2010). "Trade, Multinational Production, and the Gains from Openness," mimeo
- \* Arkolakis, Costas, Natalia Ramondo, Andres Rodriguez-Clare, Stephen Yeaple (2012). "Innovation and Production in the Global Economy," mimeo
- \* Hanson, Gordon, Raymond Mataloni and Matthew Slaughter (2005). "Vertical Production Networks in Multinational Firms," *Review of Economics and Statistics*, 87(4), p. 664-678.
- Helpman, Elhanan and Paul Krugman (1985). *Market Structure and Foreign Trade*, Cambridge, MA: MIT Press. Chapter 12
- 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
- Yi, Kei-Mu (2003). "Can Vertical Specialization Explain the Growth of World Trade?" *Journal of Political Economy*, 111(1), p. 52-102 13.

## 10. The Boundaries of the Multinational Firm

- Antràs, Pol (2003). "Firms, Contracts, and Trade Structure," *Quarterly Journal of Economics*, 118(4), p. 1375-1418

- \* Antràs, Pol (2005). "Incomplete Contracts and the Product Cycle," *American Economic Review*, 95(4), p. 1054-1073
- \* Antràs, Pol and Elhanan Helpman (2004). "Global Sourcing," *Journal of Political Economy*, 112, p. 552-580
- Antràs, Pol and Elhanan Helpman (2008). "Contractual Frictions and Global Sourcing," forthcoming in E. Helpman, D. Marin, and T. Verdier (eds.), *The Organization of Firms in a Global Economy*, Harvard University Press
- Yeaple, Stephen (2006). "Offshoring, Foreign Direct Investment, and the Structure of U.S. Trade," *Journal of the European Economic Association*, 4, p. 602-611
- \* Nunn, Nathan and Daniel Trefler (2008). "The Boundaries of the Multinational Firm: An Empirical Analysis," forthcoming in E. Helpman, D. Marin, and T. Verdier (eds.), *The Organization of Firms in a Global Economy*, Harvard University Press
- Feenstra, Robert C. and Gordon H. Hanson (2005). "Ownership and Control in Outsourcing to China: Estimating the Property-Rights Theory of the Firm," *Quarterly Journal of Economics*, 120(2), p. 729-761
- Bernard, Andrew, Jensen, Bradford, Redding, Stephen, and Peter Schott (2010). "Intra-firm Trade and Product Contractibility." *American Economic Review P&P*, 100(2), p. 444-448.
- Helpman, Elhanan (2006). "Trade, FDI and the Organization of Firms," *Journal of Economic Literature*, 44, p. 589-630
- McLaren, John (2000). "Globalization and Vertical Structure," *American Economic Review* 90(5), p. 1239-1254
- Grossman, Gene and Elhanan Helpman (2002). "Integration vs. Outsourcing in Industry Equilibrium," *Quarterly Journal of Economics*, 117(1), p. 85-120
- Desai, Mihir, Fritz Foley and James Hines (2004). "Foreign Direct Investment in a World of Multiple Taxes," *Journal of Public Economics*, 88(12), p. 2727-2744

## 11. Organization of Production Within Firms

- Antràs, Pol and Esteban Rossi-Hansberg, (2009). "Organizations and Trade," Annual Review
- Antràs, Pol, Luis Garicano and Esteban Rossi-Hansberg (2006). "Offshoring in a Knowledge Economy," Quarterly Journal of Economics, 121(1), p. 31-77
- Garicano, Luis and Esteban Rossi-Hansberg (2004). "Inequality and the Organization of Knowledge," American Economic Review P&P, 94(2), p. 197-202
- Garicano, Luis and Esteban Rossi-Hansberg (2006). "Organization and Inequality in a Knowledge Economy," Quarterly Journal of Economics, 121(4), p. 1383-1435
- Grossman, Gene and Esteban Rossi-Hansberg (2008). "Trading Tasks: A Simple Theory of Offshoring," American Economic Review, 98(5), p. 1978-1997
- Costinot, Arnaud (2009). "On the Origins of Comparative Advantage," Journal of International Economics, 77, p. 255-264
- Costinot, Arnaud, Jonathan Vogel, and Su Wang (2011). "An Elementary Theory of Global Supply Chains," MIT mimeo

## 12 Trade policy

- \* Feenstra, 2003, chapters 7 and 9
- \* Bagwell, Kyle, and Robert W. Staiger. 1999. "An Economic Theory of GATT." American Economic Review, 89(1): 215-48.
- \* Broda, C, N Limao and D. Weinstein, "Optimal Tariffs and Market Power: The Evidence" American Economic Review, 2008
- Koujianou Goldberg, P. and G. Maggi, "Protection for Sale: An Empirical Investigation," American Economic Review 89(5): 1135-55, December 1999.

- \* Grossman, G.M. and E. Helpman, "Protection for Sale," American Economic Review, September 1994, 84(4), 833-50.
- Bagwell, Kyle, and Robert W. Staiger. 2006. "What Do Trade Negotiators Negotiate About?" Empirical Evidence from the World Trade Organization. National Bureau of Economic Research Working Paper 12727.
- Grossman, G.M. and E. Helpman, "The Politics of Free Trade Agreements," American Economic Review, September 1995, 84(4), 667-90.