

## Topics in International Trade

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This is the 2<sup>nd</sup> graduate course in the International Economics sequence. In contrast to the 1<sup>st</sup> course in this sequence, which provides a perspective on how the field has evolved and has an emphasis on theory, this course primarily covers very recent contributions to both the theories and empirics of international trade. It aims to consolidate the tools and models learned in the introductory course. By the end of the semester, students are expected to know the big picture of the most recent development of literature and modern approaches. Students should also have a better understanding of what a good trade paper should be and how to identify and start their own research.

**Room and Time:** Frist Teaching Building Room 207, Wednesday 3:10 pm - 6:00pm

**Contact:** xin.wang@nsd.pku.edu.cn, 6276-6091, Overseas Exchange Center, Room 419N.

**Office Hours:** TBD.

### Prerequisites

This course is targeted at second-year (and higher) graduate students in economics. Students are expected to have completed first-year micro and macro theory courses, and have good knowledge in the core trade theories.

### Grading

Classes will consist of lectures by myself, student presentations, and discussion. Students' grade will be computed based on the following:

1. Paper presentation (25%): Roughly from the third week of class on, there will be student presentations in class, in the form of a short seminar. Depending on the final enrollment in the class, I expect that most students will present three papers during the term.
2. Class participation (20%): Those who are not presenting should carefully read the paper that will be presented that day and write-up 3 slides for class discussion.
3. Referee report (15%): You are required to write a 2-4 page referee report on one of the recent job market papers in international economics or one recent NBER working paper.
4. Research proposal and in-class presentation (40%): The proposal should motivate a question related to the course and discuss existing research that is related to that question. It is also expected to include strategy and approach, and potential data sources. The presentations will take place during the last 2 weeks of class.

## **Reading list (tentative)**

### **1. Classic models: Ricardian, Heckscher-Ohlin and more (Week 1)**

#### **(a) Ricardian model and comparative advantages**

- Bernhofen and Brown (2005), “An empirical assessment of the comparative advantage gains from trade: Evidence from Japan,” AER.
- Costinot (2009), “On the origins of Comparative Advantage,” JIE.
- Costinot, Arnaud (2009), “An Elementary Theory of Comparative Advantage”, *Econometrica*.
- Costinot, Arnaud and David Donaldson, and Ivana Komunjer (2012) “What Goods Do Countries Trade? A Quantitative Exploration of Ricardo’s Ideas,” *REStud*.

#### **(b) Factor proportions**

- Anderson, J.E., “The specific factors continuum model, with implications for globalization and income risk,” *JIE* 2011.
- Costinot and Vogel (2010), "Matching and Inequality in the World Economy," *JPE*.
- Mayda, A. M. and D. Rodrik, “Why are some people (and countries) more protectionist than others?” *European Economic Review*.
- Romalis, J., “Factor Proportions and the Structure of Commodity Trade,” *AER* 2004.
- Schott, P. K., “One Size Fits All? Heckscher-Ohlin Specialization in Global Production,” *AER* 2003.
- Trefler, D., and S.C. Zhu, “Beyond the Algebra of Explanation: HOV for the Technology Age,” *AERPP* 2000

### **2. Heterogeneous Producers and Competitive Effects (Week 2)**

- Arkolakis, Costinot, Donaldson and Rodriguez Clare (2017), “The Elusive Pro-Competitive Effects of Trade,” NBER working paper.
- Bernard, A.B., S. J. Redding, and P.K. Schott, “Multiple-Product Firms and Product Switching,” *AER* 2010.
- Chaney (2008), “Distorted Gravity: Heterogeneous Firms, Market Structure and the Geography of International Trade,” *AER*.
- Feenstra and Weinstein (2010), "Globalization, Markups and the U.S. Price Level," NBER.
- Melitz and Ottaviano (2005), “Market Size, Trade, and Productivity.” *REStud*.
- Midrigan, Edmond, and Xu (2015), “Competition, Markups, and the Gains from International Trade,” *AER*.
- De Loecker, Goldberg, Khandelwal, and Pavcnik (2016), “Prices, markups, and trade reform”, *Eca*.

### **3. Firm Dynamics (Week 2-3)**

- Arkolakis (2016), “A Unified Theory of Firms Selection and Growth,” *QJE*
- Arkolakis, (2008), “Market Penetration Costs and the New Consumers Margin in International Trade,” NBER working paper 14214.
- Chaney (2005), "Productivity Overshooting: The Dynamic Impact of Trade Opening with Heterogeneous Firms."

- Das, M., M. Roberts, and J. Tybout, "Market Entry Costs, Producer Heterogeneity and Export Dynamics," ECA 2007.
- Eaton J., M. Eslava, C. J. Krizan, M. Kugler, J. Tybout, (2008), "A Search and Learning Model of Export Dynamics," mimeo, NYU and Penn State
- Ederington and McCalman (2008), "Endogenous Firm Heterogeneity and the Dynamics of Trade Liberalization," JIE
- Pavcnik, N., "Trade Liberalization, Exit, and Productivity Improvement: Evidence from Chilean Plants," RES 2002.
- Caliendo and Rossi-Hansberg. 2012. "The Impact of Trade on Organization and Productivity," Quarterly Journal of Economics

#### **4. Trade and Economic Geography (Week 3)**

- Allen and Arkolakis (2014), "Trade and the Topography of the Spatial Economy," QJE.
- Ahlfeldt, G., S. Redding, D. Sturm, and N. Wolf, "The Economics of Density: Evidence from the Berlin Wall", Eca 2015
- Bleakley, H., and J. Lin, "Portage and Path Dependence", QJE 2012
- Davis, D. and D. Weinstein, "Bones, Bombs, and Break Points: The Geography of Economic Activity," AER 2002.
- Greenstone, M., R. Hornbeck, and E. Moretti, "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings", JPE 2010.
- Holmes (2014), "An Alternative Theory of the Plant Size Distribution, with Geography and Intra- and International Trade," JPE.
- Rossi-Hansberg (2002), "A Spatial Theory of Trade," AER.
- Redding and Venables (2004), "Economic Geography and International Inequality," JIE.

#### **5. Trade and Labor Market (Week 4-5)**

##### **(a) Labor market dynamics**

- Autor, Dorn, Hanson, and Song (2014): "Trade Adjustment: Worker-level Evidence," QJE
- Brussevich, M. "Does Trade Liberalization Narrow the Gender Wage Gap? The Role of Sectoral Mobility", mimeo, 2016, Purdue
- Caliendo, Dvorkin and Parro. 2015. "The impact of Trade and Labor Market Dynamics," NBER, WP
- Cosar, Guner and Tybout (2016), "Firm Dynamics, Job Turnover, and Wage Distributions in Open Economy," AER
- Cosar (2013): "Adjusting to Trade Liberalization: Reallocation and Labor Market Policies," Working Paper
- Davis and Harrigan (2011), "Good jobs, bad jobs, and trade liberalization" JIE.
- Dix-Carneiro, R. , "Trade Liberalization and Labor Market Dynamics", Eca 2014
- Eckel and Kreckemeier (2009), "Firm Heterogeneity and the Labor Market Effects of Trade Liberalization," IER.

##### **(b) Labor market frictions**

- Davidson, Matusz and Shevshenko (2008), "Globalization and Firm Level Adjustment with Imperfect Labor Markets," JIE.

- Fajgelbaum (2013), “Labor Market Frictions, Firm Growth, And International Trade,” NBER, WP.
- Felbermayr, Prat, and Schmerer (2011), “Globalization and labor market outcomes: Wage bargaining, search frictions, and firm heterogeneity,” JET.
- Helpman and Itzhoki (2010), "Labour Market Rigidities, Trade and Unemployment," REStud.
- Helpman, Itzhoki, and Redding (2011), "Inequality and Unemployment in the Global Economy," Ecma.
- Topalova (2010), “Factor Immobility and Regional Impacts of Trade Liberalization: Evidence on Poverty from India,” AEJ.

## **6. Distributional Effects of Trade (Week 6-7)**

### **(a) General discussion of trade and inequality**

- Fajgelbaum and Khandelwal (2015), "Measuring the Unequal Gains from Trade," QJE.
- Waugh (2010), "International Trade and Income Differences," AER.

### **(b) Wage effects of trade in developed countries**

- Acemoglu, Daron and David Autor and David Dorn and Gordon Hanson and Brendan Price (2016), “Import Competition and the Great U.S. Employment Sag of the 2000s,” JLE
- Autor, David and David Dorn (2013), “The Growth of Low Skill Service Jobs and the Polarization of the U.S. Labor Market,” AER
- Autor, David and David Dorn and Gordon Hanson (2013), “The China Syndrome: Local Labor Market Effects of Import Competition in the United States,” AER
- Autor, David and David Dorn and Gordon Hanson (2015), “Untangling Trade and Technology: Evidence from Local Labor Markets,” EJ
- Firpo, Sergio and Nicole Fortin & Thomas Lemieux, (2013), “Occupational Tasks and Changes in the Wage Structure” Working Paper, University of British Columbia
- Helpman, Itzhoki, Muendler, and Redding (2017): “Trade and Inequality: From Theory to Estimation,” ReStud
- Keller, W., and H. Utar, “International Trade and Job Polarization: Evidence at the Worker-level”, mimeo, 2016
- Pierce, Justin R, and Peter K Schott, (2016) “The Surprisingly Swift Decline of U.S. Manufacturing Employment.” AER.
- Utar, H., “When the floodgates open: Northern Firms’ Responses to Removal of Trade Quotas on Chinese Goods”, AEJ: Applied 2014

### **(c) Wage effects of trade in developing countries**

- Brambilla, Lederman, and Porto (2012), “Exports, Export Destinations, and Skills,” AER.
- Bustos (2011), “The Impact of Trade Liberalization on Skill Upgrading: Evidence from Argentina,” manuscript.
- Burstein and Vogel (2017), "International Trade, Technology, and the Skill Premium, " JPE.
- Dix-Carneiro (2014): Trade Liberalization and Labor Market Dynamics,” Econometrica
- Dix-Carniero and Kovak (2017) “Trade Liberalization and Regional Dynamics” American

Economic Review

- Kovak, B., “Regional Effects of Trade Reform: What is the Correct Measure of Liberalization?”, AER 2013
- Edmonds, Pavcnik, Topalova, 2010, “Trade adjustment and human capital investments: Evidence from Indian tariff reform”, AEJ: Applied economics

## **7. Multinationals, Offshoring, and Fragmentation (Week 8-10)**

### **(a) Horizontal, vertical and network production**

- Carr, D., J.R. Markusen, and K.E. Maskus, “Estimating the Knowledge-Capital Model of the Multinational Enterprise,” AER 2001.
- Irarrazabal, Moxnes, Oromolla (2013): “The Margins of Multinational Production and the Role of Intrafirm Trade,” JPE
- Baldwin, R., & Venables, A. J. (2013). Spiders and snakes: offshoring and agglomeration in the global economy. JIE
- Fajgelbaum, Grossman, and Helpman (2015), “A Linder Hypothesis for FDI,” RES.
- Grossman and Rossi-Hansberg. 2012. “Task Trade between Similar Countries”, *Econometrica*
- 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, E., M. Melitz, and S.R. Yeaple, “Exports versus FDI with Heterogeneous Firms,” AER 2004.
- Ramondo, Ruhl, and Rappaport (2016): “Intrafirm Trade and Vertical Fragmentation in U.S. Multinational Corporations,” JIE
- Rodriguez-Clare. 2009. “Offshoring in a Ricardian World,” AEJ: Macroeconomics
- Bernard, Moxnes, and Saito (2016): “Production Networks, Geography and Firm Performance,” WP
- Eaton, Kortum, and Kramarz (2016): “Firm-to-Firm Trade: Imports, Exports and the Labor Market,” WP
- Eaton, Jinkins, Tybout, and Xu (2016): “Two-Sided Search in International Markets,” WP
- Tintelnot. 2017. “Global Production with Export Platforms,” QJE

### **(b) Incomplete contract and Boundaries of the Multinational Firm**

- Antràs, P., “Firms, Contracts, and Trade Structure,” QJE 2003.
- Antras and Chor (2013): “Organizing the global value chain,” *Econometrica*
- Antras, Fort, and Tintelnot (2014): “The Margins of Global Sourcing,” Working Paper
- Bernard, Jensen, Redding, and Schott (2010). “Intra-firm Trade and Product Contractibility.” AER P&P
- Burstein and Monge (2009): “Foreign Know-How, Firm Control, and the Income of Developing Countries,” QJE
- Caliendo, Monte, and Rossi-Hansberg. 2014. “The Anatomy of French Production Hierarchies,” JPE
- Costinot, A., L. Oldenski, and J.E. Rauch, “Adaptation and the Boundary of Multinational Firms,” *RESTAT*, 93(1): 298-308, 2011.

- Costinot, Vogel, and Wang. 2013. “An Elementary Theory of Global Supply Chains,” Review of Economic Studies
- Grossman, G. M., E. Helpman, and A. Szeidl, “Complementarities between Outsourcing and Foreign Sourcing,” AERPP 2005.
- Head and Mayer (2015): “Brands in Motion: How frictions shape multinational production,” Working Paper
- Garetto and Fillat (2015), “Risk, Returns, and Multinational Production,” QJE.
- Eckel and Egger (2009), “Wage bargaining and multinational firms,” JIE.

**(c) Impacts of multinationals**

- Ramondo and Rodriguez-Clare (2012), "Trade, Multinational Production, and the Gains from Openness," JPE.
- David Hummels & Rasmus Jorgensen & Jakob Munch & Chong Xiang, (2014), "The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data," American Economic Review
- Goos, M., A. Manning, and A. Salomons, "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring", AER 2014
- Hummels, D., et al., The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data, AER 2014
- Burstein and Monge. 2009. “Foreign Know-How, Firm Control, and the Income of Developing Countries,” Quarterly Journal of Economics
- Javorcik, B., Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers Through Backward Linkages, AER 2004

**8. Quantitative model and Structural estimation (Week 11)**

- Caliendo, Parro, Rossi-Hansberg, and Sarte (2014): “The Impact of Regional and Sectoral Productivity Differences on the U.S. Economy”
- Fajgelbaum and Redding (2014), “External Integration, Structural Transformation and Economic Development: Evidence from Argentina, 1870-1914,” NBER WP.
- Redding (2016), "Goods Trade, Factor Mobility and Welfare," JIE.
- Hottman, Redding, and Weinstein (2016), “Quantifying the sources of firm heterogeneity”, QJE
- Artuc, E., S. Chaudhuri, J. McLaren, Trade Shocks and Labor Adjustment: A Structural Empirical Approach”, AER 2010

**9. Trade and Growth (Week 12-13)**

**(a) Factor Accumulation**

- Acemoglu and Ventura (2002), “The World Income Distribution,” QJE.
- Caliendo (2011), "On the Dynamics of the Heckscher-Ohlin Theory," manuscript.

**(b) Innovation**

- Aghion, P., N. Bloom, R. Blundell, R. Griffith, and P. Howitt, “Competition and Innovation: an inverted-U relationship, QJE 2005
- Atkeson and Burstein (2010), “Innovation, Firm Dynamics, and International Trade,”

JPE.

- Autor, D., D. Dorn, G. Hanson, G. Pisanu, P. Shu, "Foreign Competition and Domestic Innovation: Evidence from U.S. Patents", mimeo, 2016
- Bloom, N., M. Draca, and J. van Reenen, "Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity", ReStud 2016
- Coelli, F, A Moxnes and K H Ulltveit-Moe, "Better, Faster, Stronger: Global Innovation and Trade Liberalization", CEPR Discussion paper No. 11506, 2016
- Eaton and Kortum (2001), "Technology, Trade and Growth: A unified framework," EER.
- Grossman and Helpman (1991), "Quality Ladders in the Theory of Growth," RES.

### (c) Technology Diffusion

- Alvarez, Buera and Lucas (2013), "Idea Flows, Economic Growth, and Trade," NBER WP.
- Bloom, Schankermann, and Van Reenen (2013): "Identifying technology spillovers and product market rivalry," Econometrica
- Buera and Oberfield (2015): "The Global Diffusion of Ideas," Working Paper
- Eaton and Kortum (1999), "International Technology Diffusion: Theory and Measurement," IER.
- Keller, W., and S. Yeaple, "The Gravity of Knowledge", AER 2013
- Keller, W., "International Technology Diffusion," JEL2004.
- Perla, Tonetti, and Waugh (2015): "Equilibrium Technology Diffusion, Trade, and Growth," Working Paper
- Sampson (2015): "Dynamic Selection: An Idea Flows Theory of Entry, Trade and Growth," QJE

## 10. Demand Patterns and Trade: (Week 14)

- Caron, Fally and Markusen, "International Trade Puzzles: A Solution Linking Production and Preferences," working paper 2013, QJE 2014
- Caron, Fally, and Markusen (2014), "International Trade Puzzles: a Solution Linking Production and Preferences," QJE.
- Fieler, C., "Non-Homotheticity and Bilateral Trade: Evidence and a Quantitative Explanation." ECA 2011.
- Markusen, "Explaining the Volume of Trade: an Eclectic Approach," AER 1986, 1002-1011
- Markusen, "Putting Per-Capita Income Back into Trade Theory," JIE 2013, 255- 65
- Matsuyama (2000), "A Ricardian Model with a Continuum of Goods under Nonhomothetic Preferences: Demand Complementarities, Income Distribution, and North-South Trade." JPE.
- Zhelobodko, Kokovin, Parenti, and Thisse (2012), "Monopolistic Competition: Beyond the CES," Econometrica

## 11. Product Quality (Week 15)

- Feenstra and Romalis (2012), "International Prices and Endogenous Quality," QJE.
- Hallak, Juan Carlos (2006), "Product Quality and the Direction of Trade," JIE.
- Eric Verhoogen (2008) "Trade, Quality Upgrading and Wage Inequality in the Mexican

- Manufacturing Sector” The Quarterly Journal of Economics, Vol. 123, No. 2, pp 489-530.
- Fajgelbaum, Grossman and Helpman (2011), “Income Distribution, Product Quality, International Trade,” JPE.
  - Verhoogen (2008), “Trade, Quality Upgrading, and Wage Inequality in the Mexican Manufacturing Sector,” QJE.

Week 16: Students presents their research proposals