

Economics 247 — Spring 2018

# Empirical Topics in International Economics

April 3, 2018

Instructor: Marc-Andreas Muendler  
Office: Economics 312  
Office hours: Thu 11:15a - 12:15p (or by appointment)  
Phone: (858) 534-4799  
E-mail: muendler@ucsd.edu  
Class Time: TueThu 8:00a - 9:50a  
Classroom: Econ 300  
Class Web Page: [econ.ucsd.edu/muendler/teach/18s/247](http://econ.ucsd.edu/muendler/teach/18s/247)

## 1 Course Objectives

This course examines empirical work in international trade and its theoretical foundations. On the theory side, the course considers the determinants of the trade pattern in goods and services, explanations of export-market participation and multinational activity at the firm level, as well as the interaction of international trade with the income distribution, labor-market outcomes, and the current account. The empirical part of the course presents tests of theories of international trade and international capital movements, and the analysis of their consequences for economic outcomes.

## 2 Prerequisites

Instructor's consent.

## 3 Readings

**Textbooks:** Feenstra (2015); Eaton and Kortum (2010);  
partly Bhagwati, Panagariya, and Srinivasan (1998)

**Readings:** See Class schedule and References.

The Eaton and Kortum textbook draft and readings are available through the class web page (see above). For each lecture, there are up to three types of readings. The *basic reading* is the textbook reference, or the classic article, on which a large part of the lecture notes will be based; you are *not* asked to write your weekly report on those. The *main* readings include original papers or book chapters, on which you are asked to write your weekly report; the main reading is a recent academic publication (rarely more than one) for you to understand and discuss. *Additional readings* are points of departure for related research questions; you may choose to write your weekly report on an additional reading.

Lecture slides are available for download from the course web page.

## 4 Paper reports

Each lecture has designated *main readings* as well as *additional readings* on this syllabus (unless the additional reading is a survey article).

You are asked to send me *one* paper report by e-mail per week, starting in week 2, on the readings of either the Tuesday lecture or the Thursday lecture. You can pick among the main and the additional readings for your report. Please paste your report into the *body of the e-mail*. No report is due for lectures 1 and 2. Starting with lecture 3 on April 10, there are two lectures per week; one report is due for each of these eight weeks. On lecture days when the main readings are followed by the remark “cumulatively” the report for the main readings is meant to be based on all the (short) main readings, when followed by the remark “you choose” there are two alternative (mutually exclusive) main readings and you pick.

Your report should be no longer than two (2) paragraphs and provide a summary of the paper’s main insights and lessons. For theoretical papers, and the occasional historic conceptual paper, the summary should describe the main hypothesis and building blocks of the model, recount the main steps of the reasoning in the derivation, and assess the novelty and generality of the model. For empirical papers, the summary should describe the main features of the data source, explain the empirical procedure and identification strategy, and assess the robustness and generality of the results. For each paper, the summary concludes with a brief assessment of the role and relevance of the paper in the literature.

The paper report e-mail is due *before* the respective class, at 7:50am.

## 5 Problem sets

Three problem sets will be distributed for the first three blocks of the quarter. The problem sets ask you derive key aspects of trade models that typically inform and discipline empirical work on related topics. Problem set 1 will cover Industry-level Trade Theory, problem set 2 Firm-level Trade Theory and problem set 3 Global Production. Each problem set is posted online already but may be considered as “given out” close to the beginning of the according topic block (April 10, April 24 and May 10) and due upon conclusion of the according topic block (April 24, May 10, May 31). Also see the Class Schedule for dates.

## 6 Project presentation

In lieu of a final exam, you will give student presentations on June 14, 2018 (during the reserved finals week time 8:00a to 11:00a). By yourself or in a pairing of two students, you will choose a recent research paper at the frontier of research in international trade and use work of your own to replicate or go beyond the paper you present. For this purpose, you will propose a paper of your choice by Friday, May 18 at 5pm. In rare cases, I may ask you to select another paper by Monday, May 21. The paper presentation should explain the paper’s main insights in a style similar to a seminar and emphasize your own (envisaged) research work beyond the paper you present. Ideally, you will conclude with ideas for serious own follow-up research. The presentation should be based on slides.

## 7 Assessment

There are three components of assessment: eight paper reports (due in weeks 2-9 of the quarter), three problem sets (throughout the quarter), and the oral presentation (in finals week). The paper reports will count for 25 percent and the oral presentation for 30 percent of the final letter grade; the problem sets will count 45 percent (15 percent each). Strong class room participation throughout the quarter will be counted towards performance.

## 8 Class Schedule

### I. Foundations

**1. Tue, April 3:** Empirical Foundations

*Basic reading:* Eaton and Kortum (2010)/Ch. 2

*(Additional readings:* Bernard and Jensen 1995, Bernard, Jensen, Redding, and Schott 2007, Bernard, Jensen, and Schott 2009, Eaton, Kortum, and Kramarz 2004)

**2. Thu, April 5:** Analytic Foundations and the Gravity Equation

*Basic readings:* Eaton and Kortum (2010)/Ch. 3, Feenstra (2015)/Ch. 5-6, Head and Mayer (2014)

*Main reading:* Anderson and van Wincoop (2003)

*(Additional readings:* Armington 1969, Anderson 1979, Anderson and van Wincoop 2004)

### II. Industry-level Trade Theory and Empirics

**3. Tue, April 10:** Classic Productivity Differences and Trade

*Basic readings:* Eaton and Kortum (2010)/Ch. 3, Feenstra (2015)/Ch. 1

*Main reading:* Dornbusch, Fischer, and Samuelson (1977)

*(Additional readings:* Eaton and Kortum 2012, Ricardo 1821, Obstfeld and Rogoff 1996/Ch. 4.5)

PROBLEM SET 1 OUT

**4. Thu, April 12:** Technology and Geography in the Global Economy

*Basic reading:* Eaton and Kortum (2010)/Ch. 4-6 (sections 4.1, 4.4, 5.1-5.4, 6.1-6.5)

*Main reading:* Eaton and Kortum (2002)

*(Additional readings:* Alvarez and Lucas 2007, Eaton, Kortum, and Kramarz 2011, Armenter and Koren 2014)

**5. Tue, April 17:** Endowment Differences and Trade

*Basic readings:* Feenstra (2015)/Ch. 1-2, Bhagwati, Panagariya, and Srinivasan (1998)/Ch. 5-6

*Main reading:* Ohlin (1931)

*(Additional readings:* Schott 2004; Dornbusch, Fischer, and Samuelson 1980, Costinot and Vogel 2010), Bernhofen and Brown 2004, Romalis 2004)

**6. Thu, April 19:** Extensions, Evidence and Trade Policy

*Basic readings:* Feenstra (2015)/Ch. 3 and 8-10, Bhagwati, Panagariya, and Srinivasan (1998)/Ch. 12, Maggi (2014)

*Main reading:* Davis and Weinstein (2001) or Broda, Limão, and Weinstein (2008), your choice

*(Additional reading:* Leontief 1953, Trefler 1995, Bergstrand and Egger 2013)

### III. Firm-level Trade Theory and Empirics

**7. Tue, April 24:** Exporter Heterogeneity and the Size Distribution of Firms

*Main readings:* Axtell (2001), Eaton, Kortum, and Kramarz (2004), Bernard, Jensen, Redding, and Schott (2007), cumulatively

*(Additional readings:* Roberts and Tybout 1997, Clerides, Lach, and Tybout 1998, Gibrat 1931, Sutton 1997; Krugman (1980), Helpman and Krugman 1985/Ch. 6-9, Dixit and Stiglitz 1977)

PROBLEM SET 1 DUE

PROBLEM SET 2 OUT

**8. Thu, April 26:** Intermission on Multidimensional Panel Data

*Main reading:* Abowd, Kramarz, and Woodcock (2008)

*(Additional readings:* Abowd, Kramarz, and Margolis 1999, Moreira 2009, Eeckhout and Kircher 2011)

**9. Tue, May 1:** Heterogeneity with Fixed Costs of Exporting  
*Basic readings:* Melitz (2003), Melitz and Redding (2014)  
*Main reading:* Das, Roberts, and Tybout (2007)  
*(Additional readings:* Melitz and Trefler 2012, Bernard, Redding, and Schott 2007, Chaney 2008)

**10. Thu, May 3:** Multi-product Firms  
*Main reading:* Eckel and Neary (2010)  
*(Additional readings:* Arkolakis, Ganapati, and Muendler 2015, Bernard, Redding, and Schott 2011)

#### IV. Global Production

**11. Tue, May 8:** Trade in Intermediate Inputs and Wages  
*Basic reading:* Feenstra (2015)/Ch. 4  
*Main reading:* Koopman, Wang, and Wei (2014)  
*(Additional readings:* Feenstra and Hanson 1999, Ebenstein, Harrison, McMillan, and Phillips 2014, Johnson and Noguera 2012)

**12. Thu, May 10:** Trade in Tasks  
*Main reading:* Grossman and Rossi-Hansberg (2008)  
*(Additional readings:* Leamer and Storper 2001, Levy and Murnane 2004, Blinder 2009, Jensen and Kletzer 2010)  
PROBLEM SET 2 DUE  
PROBLEM SET 3 OUT

**13. Tue, May 15:** Horizontal Foreign Direct Investment  
*Basic readings:* Feenstra (2015)/Ch. 12, Antràs and Yeaple (2014)  
*Main reading:* Helpman, Melitz, and Yeaple (2004)  
*(Additional readings:* Brainard 1997, Markusen and Venables 2000, Ekholm, Forslid, and Markusen 2007)

**14. Thu, May 17:** Firm Boundaries and Vertical Foreign Direct Investment  
*Basic readings:* Feenstra (2015)/Ch. 12, Antràs and Yeaple (2014)  
*Main reading:* Antràs (2003)  
*(Additional readings:* Antràs and Helpman 2004, Hanson, Mataloni, and Slaughter 2005)

#### V. Local Impacts of Global Markets

**Fri, May 18, 5pm:** PROPOSAL FOR PAPER PRESENTATION DUE

**15. Tue, May 22:** Determinants and Consequences of Multinational Firm Activity  
*Basic reading:* Feenstra (2015)/Ch. 12  
*Main readings:* Carr, Markusen, and Maskus (2001), Blonigen, Davies, and Head (2003) and Carr, Markusen, and Maskus (2003), cumulatively  
*(Additional reading:* Muendler and Becker 2010, Helpman 2006)

**16. Thu, May 24:** Trade and Wage Inequality  
*Main reading:* Davidson, Heyman, Matusz, Sjöholm, and Zhu (2014) or Coşar, Guner, and Tybout (2015), your choice  
*(Additional readings:* Helpman, Itskhoki, and Redding 2010, Helpman, Itskhoki, Muendler, and Redding 2017, Amiti and Davis 2012)

**Fri, May 25:** SCHEDULE OF STUDENT PRESENTATIONS OUT

**17. Tue, May 29:** Trade and Labor-market Outcomes

*Main reading:* Autor, Dorn, and Hanson (2013) or Caliendo, Dvorkin, and Parro (2015), your choice

*(Additional readings:* Artuç, Chaudhuri, and McLaren 2010, Harrison, McLaren, and McMillan 2011, Dix-Carneiro 2014, Menezes-Filho and Muendler 2011)

**18. Thu, May 31:** Trade under Non-homothetic Preferences

*Main reading:* Fajgelbaum, Grossman, and Helpman (2011) or Fajgelbaum and Khandelwal (2016), your choice

*(Additional readings:* Boppart 2014, Comin, Lashkari, and Mestieri 2015)

PROBLEM SET 3 DUE

## VI. Intertemporal Trade in the Open Economy

**19. Tue, June 5:** Intertemporal Trade in a Multi-sector Model

**20. Thu, June 7:** The Real Exchange Rate, Nontraded Goods and Current Account Adjustment

**Thu, June 14:** STUDENT PRESENTATIONS IN LIEU OF FINAL EXAM 8:00a-11:00a

## References

- ABOWD, J. M., F. KRAMARZ, AND D. N. MARGOLIS (1999): "High Wage Workers and High Wage Firms," *Econometrica*, 67(2), 251–333.
- ABOWD, J. M., F. KRAMARZ, AND S. WOODCOCK (2008): "Econometric Analyses of Linked Employer-Employee Data," in *The econometrics of panel data*, ed. by L. Mátyás, and P. Sevestre, vol. 46 of *Advanced Studies in Theoretical and Applied Econometrics*, chap. 22, pp. 727–760. Springer, Berlin.
- ALVAREZ, F., AND R. E. J. LUCAS (2007): "General Equilibrium Analysis of the Eaton-Kortum Model of International Trade," *Journal of Monetary Economics*, 54(6), 1726–68.
- AMITI, M., AND D. R. DAVIS (2012): "Trade, Firms, and Wages: Theory and Evidence," *Review of Economic Studies*, 79(1), 1–36.
- ANDERSON, J. E. (1979): "A Theoretical Foundation for the Gravity Equation," *American Economic Review*, 69(1), 106–16.
- ANDERSON, J. E., AND E. VAN WINCOOP (2003): "Gravity with Gravitas: A Solution to the Border Puzzle," *American Economic Review*, 93(1), 170–92.
- (2004): "Trade Costs," *Journal of Economic Literature*, 42(3), 691–751.
- ANTRÀS, P. (2003): "Firms, Contracts, and Trade Structure," *Quarterly Journal of Economics*, 118(4), 1375–1418.
- ANTRÀS, P., AND E. HELPMAN (2004): "Global Sourcing," *Journal of Political Economy*, 112(3), 552–580.
- ANTRÀS, P., AND S. R. YEAPLE (2014): "Multinational Firms and the Structure of International Trade," in *Handbook of International Economics*, ed. by E. Helpman, K. Rogoff, and G. Gopinath, vol. 4, chap. 2, pp. 55–130. Elsevier, Amsterdam.
- ARKOLAKIS, C., S. GANAPATI, AND M.-A. MUENDLER (2015): "The Extensive Margin of Exporting Products: A Firm-level Analysis," University of California, San Diego, unpublished manuscript (earlier version *NBER Working Paper*, 16641).
- ARMENTER, R., AND M. KOREN (2014): "A Balls-and-Bins Model of Trade," *American Economic Review*, 104(7), 2127–51.

- ARMINGTON, P. S. (1969): "A Theory of Demand for Products Distinguished by Place of Production," *International Monetary Fund Staff Papers*, 16(1), 159–178.
- ARTUÇ, E., S. CHAUDHURI, AND J. MCLAREN (2010): "Trade Shocks and Labor Adjustment: A Structural Empirical Approach," *American Economic Review*, 100(3), 1008–1045.
- AUTOR, D. H., D. DORN, AND G. H. HANSON (2013): "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*, 103(6), 2121–68.
- AXTELL, R. L. (2001): "Zipf Distribution of U.S. Firm Sizes," *Science*, 293(5536), 1818–20.
- BERGSTRAND, J. H., AND P. EGGER (2013): "What Determines BITs?," *Journal of International Economics*, 90(1), 107–22.
- BERNARD, A. B., AND J. B. JENSEN (1995): "Exporters, Jobs, and Wages in U.S. Manufacturing: 1976-1987," *Brookings Papers on Economic Activity: Microeconomics*, 1995(1), 67–112.
- BERNARD, A. B., J. B. JENSEN, S. J. REDDING, AND P. K. SCHOTT (2007): "Firms in International Trade," *Journal of Economic Perspectives*, 21(3), 105–30.
- BERNARD, A. B., J. B. JENSEN, AND P. K. SCHOTT (2009): "Importers, Exporters, and Multinationals: A Portrait of Firms in the U.S. that Trade Goods," in *Producer Dynamics: New Evidence from Micro Data*, ed. by T. Dunne, J. B. Jensen, and M. J. Roberts, vol. 68 of *Studies in Income and Wealth*, chap. 14, pp. 513–552. University of Chicago Press, Chicago.
- BERNARD, A. B., S. J. REDDING, AND P. K. SCHOTT (2007): "Comparative Advantage and Heterogeneous Firms," *Review of Economic Studies*, 74(1), 31–66.
- (2011): "Multiproduct Firms and Trade Liberalization," *Quarterly Journal of Economics*, 126(3), 1271–1318.
- BERNHOFEN, D. M., AND J. C. BROWN (2004): "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," *Journal of Political Economy*, 112(1), 48–67.
- BHAGWATI, J. N., A. PANAGARIYA, AND T. N. SRINIVASAN (1998): *Lectures on International Trade*. MIT Press, Cambridge, Massachusetts, 2nd edn.
- BLINDER, A. S. (2009): "How Many U.S. Jobs Might Be Offshorable?," *World Economics*, 10(2), 41–78.
- BLONIGEN, B. A., R. B. DAVIES, AND K. HEAD (2003): "Estimating the Knowledge-Capital Model of the Multinational Enterprise: Comment," *American Economic Review*, 93(3), 980–994.
- BOPPART, T. (2014): "Structural Change and the Kaldor Facts in a Growth Model With Relative Price Effects and Non-Gorman Preferences," *Econometrica*, 82(6), 2167–2196.
- BRAINARD, S. L. (1997): "An Empirical Assessment of the Proximity-Concentration Trade-off between Multinational Sales and Trade," *American Economic Review*, 87(4), 520–544.
- BRODA, C., N. LIMÃO, AND D. E. WEINSTEIN (2008): "Optimal Tariffs and Market Power: The Evidence," *American Economic Review*, 98(5), 2032–65.
- CALIENDO, L., M. DVORKIN, AND F. PARRO (2015): "The Impact of Trade on Labor Market Dynamics," *NBER Working Paper*, 21149.
- CARR, D. L., J. R. MARKUSEN, AND K. E. MASKUS (2001): "Estimating the Knowledge-Capital Model of the Multinational Enterprise," *American Economic Review*, 91(3), 693–708.
- (2003): "Estimating the Knowledge-Capital Model of the Multinational Enterprise: Reply," *American Economic Review*, 93(3), 995–1001.

- CHANEY, T. (2008): "Distorted Gravity: The Intensive and Extensive Margins of International Trade," *American Economic Review*, 98(4), 1707–21.
- CLERIDES, S. K., S. LACH, AND J. R. TYBOUT (1998): "Is Learning by Exporting Important? Micro-dynamic Evidence from Colombia, Mexico, and Morocco," *Quarterly Journal of Economics*, 113(3), 903–47.
- COŞAR, A. K., N. GUNER, AND J. TYBOUT (2015): "Firm Dynamics, Job Turnover, and Wage Distributions in an Open Economy," *American Economic Review*, forthcoming.
- COMIN, D. A., D. LASHKARI, AND M. MESTIERI (2015): "Structural Change with Long-run Income and Price Effects," *NBER Working Paper*, 21595.
- COSTINOT, A., AND J. VOGEL (2010): "Matching and Inequality in the World Economy," *Journal of Political Economy*, 118(4), 747–86.
- DAS, S., M. J. ROBERTS, AND J. R. TYBOUT (2007): "Market Entry Costs, Producer Heterogeneity, and Export Dynamics," *Econometrica*, 75(3), 837–873.
- DAVIDSON, C., F. HEYMAN, S. MATUSZ, F. SJÖHOLM, AND S. C. ZHU (2014): "Globalization and Imperfect Labor Market Sorting," *Journal of International Economics*, 94(2), 177–94.
- DAVIS, D. R., AND D. E. WEINSTEIN (2001): "An Account of Global Factor Trade," *American Economic Review*, 91(5), 1423–53.
- DIX-CARNEIRO, R. (2014): "Trade Liberalization and Labor Market Dynamics," *Econometrica*, 82(3), 825–885.
- DIXIT, A. K., AND J. E. STIGLITZ (1977): "Monopolistic Competition and Optimum Product Diversity," *American Economic Review*, 67(3), 297–308.
- DORNBUSCH, R., S. FISCHER, AND P. A. SAMUELSON (1977): "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*, 67(5), 823–39.
- (1980): "Heckscher-Ohlin Trade Theory with a Continuum of Goods," *Quarterly Journal of Economics*, 95(2), 203–24.
- EATON, J., AND S. KORTUM (2002): "Technology, Geography, and Trade," *Econometrica*, 70(5), 1741–79.
- (2010): "Technology in the Global Economy: A Framework for Quantitative Analysis," University of Chicago, unpublished manuscript.
- (2012): "Putting Ricardo to Work," *Journal of Economic Perspectives*, 26(2), 65–90.
- EATON, J., S. KORTUM, AND F. KRAMARZ (2004): "Dissecting Trade: Firms, Industries, and Export Destinations," *American Economic Review: Papers and Proceedings*, 94(2), 150–54.
- (2011): "An Anatomy of International Trade: Evidence from French Firms," *Econometrica*, 79(5), 1453–98.
- EBENSTEIN, A., A. E. HARRISON, M. MCMILLAN, AND S. PHILLIPS (2014): "Estimating the Impact of Trade and Offshoring on American Workers using the Current Population Surveys," *Review of Economics and Statistics*, 96(4), 581–95.
- ECKEL, C., AND J. P. NEARY (2010): "Multi-Product Firms and Flexible Manufacturing in the Global Economy," *Review of Economic Studies*, 77(1), 188–217.
- ECKHOULT, J., AND P. KIRCHER (2011): "Identifying Sorting-In Theory," *Review of Economic Studies*, 78(3), 872–906.
- EKHOLM, K., R. FORSLID, AND J. R. MARKUSEN (2007): "Export-Platform Foreign Direct Investment," *Journal of the European Economic Association*, 5(4), 776–795.

- FAJGELBAUM, P., G. M. GROSSMAN, AND E. HELPMAN (2011): "Income Distribution, Product Quality, and International Trade," *Journal of Political Economy*, 119(4), 721–65.
- FAJGELBAUM, P. D., AND A. K. KHANDELWAL (2016): "Measuring the Unequal Gains from Trade," *Quarterly Journal of Economics*, 131(3), 1113–1180.
- FEENSTRA, R. C. (2015): *Advanced international trade: Theory and evidence*. Princeton University, Princeton, New Jersey, 2nd edition edn.
- FEENSTRA, R. C., AND G. H. HANSON (1999): "The Impact of Outsourcing and High-Technology Capital on Wages: Estimates for the United States, 1979-1990," *Quarterly Journal of Economics*, 114(3), 907–40.
- GIBRAT, R. (1931): *Les inégalités économiques. Applications: Aux inégalités des richesses, a la concentration des entreprises, aux populations des villes, aux statistiques des familles, etc., d'une loi nouvelle: La loi de l'effect proportionnel*. Librairie du Recueil Sirey, Paris.
- GROSSMAN, G. M., AND E. ROSSI-HANSBERG (2008): "Trading Tasks: A Simple Theory of Offshoring," *American Economic Review*, 98(5), 1978–97.
- HANSON, G. H., R. J. MATALONI, AND M. J. SLAUGHTER (2005): "Vertical Production Networks in Multinational Firms," *Review of Economics and Statistics*, 87(4), 664–678.
- HARRISON, A. E., J. MCLAREN, AND M. MCMILLAN (2011): "Recent Perspectives on Trade and Inequality," *Annual Review of Economics*, 3(1), 261–89.
- HEAD, K., AND T. MAYER (2014): "Gravity Equations: Workhorse, Toolkit, and Cookbook," in *Handbook of International Economics*, ed. by E. Helpman, K. Rogoff, and G. Gopinath, vol. 4, chap. 3, pp. 131–195. Elsevier, Amsterdam.
- HELPMAN, E. (2006): "Trade, FDI, and the Organization of Firms," *Journal of Economic Literature*, 44(3), 589–630.
- HELPMAN, E., O. ITSKHOKI, M.-A. MUENDLER, AND S. J. REDDING (2017): "Trade and Inequality: From Theory to Estimation," *Review of Economic Studies*, 84(1), 357–405.
- HELPMAN, E., O. ITSKHOKI, AND S. J. REDDING (2010): "Inequality and Unemployment in a Global Economy," *Econometrica*, 78(4), 1239–1283.
- HELPMAN, E., AND P. KRUGMAN (1985): *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. MIT Press, Cambridge, Massachusetts.
- HELPMAN, E., M. J. MELITZ, AND S. R. YEAPLE (2004): "Export versus FDI with Heterogeneous Firms," *American Economic Review*, 94(1), 300–316.
- JENSEN, J. B., AND L. G. KLETZER (2010): "Measuring Tradable Services and the Task Content of Offshorable Services Jobs," in *Labor in the New Economy*, ed. by K. G. Abraham, J. R. Spletzer, and M. J. Harper, no. 71 in *Studies in Income and Wealth*, chap. 8, pp. 309–35. University of Chicago Press, Chicago and London.
- JOHNSON, R. C., AND G. NOGUERA (2012): "Accounting for Intermediates: Production Sharing and Trade in Value Added," *Journal of International Economics*, 86(2), 224–36.
- KOOPMAN, R., Z. WANG, AND S. J. WEI (2014): "Tracing Value-Added and Double Counting in Gross Exports," *American Economic Review*, 104(2), 459–94.
- KRUGMAN, P. R. (1980): "Scale Economies, Product Differentiation, and the Pattern of Trade," *American Economic Review*, 70(5), 950–59.
- LEAMER, E. E., AND M. STORPER (2001): "The Economic Geography of the Internet Age," *Journal of International Business Studies*, 32(4), 641–65.

- LEONTIEF, W. (1953): "Domestic Production and Foreign Trade; The American Capital Position Re-Examined," *Proceedings of the American Philosophical Society*, 97(4), 332–349.
- LEVY, F., AND R. J. MURNANE (2004): *The New Division of Labor*. Princeton University Press, Princeton.
- MAGGI, G. (2014): "International Trade Agreements," in *Handbook of International Economics*, ed. by E. Helpman, K. Rogoff, and G. Gopinath, vol. 4, chap. 6, pp. 317–390. Elsevier, Amsterdam.
- MARKUSEN, J. R., AND A. J. VENABLES (2000): "The Theory of Endowment, Intra-industry and Multi-national Trade," *Journal of International Economics*, 52(2), 209–234.
- MELITZ, M. J. (2003): "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica*, 71(6), 1695–1725.
- MELITZ, M. J., AND S. J. REDDING (2014): "Heterogeneous Firms and Trade," in *Handbook of International Economics*, ed. by E. Helpman, K. Rogoff, and G. Gopinath, vol. 4, chap. 1, pp. 1–54. Elsevier, Amsterdam.
- MELITZ, M. J., AND D. TREFLER (2012): "Gains from Trade When Firms Matter," *Journal of Economic Perspectives*, 26(2), 91–118.
- MENEZES-FILHO, N. A., AND M.-A. MUENDLER (2011): "Labor Reallocation in Response to Trade Reform," *NBER Working Paper*, 17372.
- MOREIRA, M. J. (2009): "A Maximum Likelihood Method for the Incidental Parameter Problem," *Annals of Statistics*, 37(6A), 3660–3696.
- MUENDLER, M.-A., AND S. O. BECKER (2010): "Margins of Multinational Labor Substitution," *American Economic Review*, 100(5), 1999–2030.
- OBSTFELD, M., AND K. ROGOFF (1996): *Foundations of international macroeconomics*. MIT Press, Cambridge, Mass. and London.
- OHLIN, B. (1931): *Interregional and International Trade*, vol. 39 of *Harvard Economic Studies*. Harvard University, Cambridge, 2nd (1952) edn., Chapter 6, pp. 91–113.
- RICARDO, D. (1821): *On the Principles of Political Economy and Taxation*. John Murray, London, 3rd edn.
- ROBERTS, M. J., AND J. R. TYBOUT (1997): "The Decision to Export in Colombia: An Empirical Model of Entry with Sunk Costs," *American Economic Review*, 87(4), 545–64.
- ROMALIS, J. (2004): "Factor Proportions and the Structure of Commodity Trade," *American Economic Review*, 94(1), 67–97.
- SCHOTT, P. K. (2004): "Across-Product versus Within-Product Specialization in International Trade," *Quarterly Journal of Economics*, 119(2), 647–78.
- SUTTON, J. (1997): "Gibrat's Legacy," *Journal of Economic Literature*, 35(1), 40–59.
- TREFLER, D. (1995): "The Case of the Missing Trade and Other Mysteries," *American Economic Review*, 85(5), 1029–46.