

Boston University  
Department of Economics

**Economics 791 – International Trade  
Fall 2023**

*Syllabus*

**Stefania Garetto (September 5 - October 19)**

E-mail: [garettos@bu.edu](mailto:garettos@bu.edu)  
Office address: 270 Bay State Road, room 501  
Phone number: 617-358-5887  
Office hours: Tuesdays from 3.30 to 5pm – sign up [here](#)  
Course Website: <http://people.bu.edu/garettos/teaching.html>

**Yuhei Miyauchi (October 24 – December 12)**

E-mail: [miyauchi@bu.edu](mailto:miyauchi@bu.edu)  
Office address: 270 Bay State Road, room 404  
Phone number: 617-353-5682  
Office hours: TBA  
Course Website: Blackboard

Lectures take place on Tuesdays and Thursdays, 2:00-3:15pm in room 546.

*Course Overview*

This course is an advanced course in International Trade, targeted to second year PhD students.

The course introduces students to the main theories of international trade, with a special emphasis on the role of firms. In the first part of the course, Stefania Garetto covers the traditional theories of international trade (factor endowments, productivity-based comparative advantage, increasing returns to scale), and explores their recent developments, particularly focusing on explaining trade from the point of view of individual firms. In the second part of the course, Yuhei Miyauchi will continue by covering the various empirical approaches to estimate average and heterogeneous gains of trade. He will then cover several recent topics in international trade including economic geography and production networks.

## *Grading and Assignments*

A second-year topic class should introduce students to independent research and facilitate the transition from coursework to writing a PhD Thesis. For this reason, the course grade is based on four separate components:

- Four problem sets (30%)
- A referee report (optional)
- An individual research project, to be presented in class in December (25%) and handed in at the end of the semester (45%)

**Problem Sets.** The goal of this assignment is to promote an active, hands-on approach to learning the main methodologies used in the field of international trade. The first two problem sets are based on the knowledge of workhorse trade models. The remaining two problem sets are empirical implementations of key concepts covered in the second part of the class. These assignments must be completed individually. Each student must submit all the problem sets to pass the course. Late assignments will not be accepted.

**Referee Report.** The goal of this assignment is to introduce students to think critically about the literature in the field. Each student can choose a paper to referee on a topic of their choice (subject to instructors' approval). We encourage students to choose a topic related to their research project. A sample referee report will be provided.

**Individual Research Project Presentation and Write-up.** The goal of this assignment is to introduce students to the process of developing a research project in international trade. The assignment is meant to be contained within the Fall semester, but we will be happy to advise students who want to extend it into their second-year paper. Students will choose a topic of their choice (subject to instructors' approval) as early as possible into the semester and will work on it under our supervision. Each student will present their research progress at the end of the semester and hand in a written version of their project.

The presentations are tentatively scheduled for **December 7**. Each student will give a short presentation of their work (time depends on the number of students). All students are required to attend all presentations.

The final submission of the written research project will be due on **December 17**. A successful research project should include (1) an original research question, (2) a survey of the relevant literature and a statement of the contribution of the project, (3) a detailed plan of the body of the paper. For theoretical papers, this means developing a baseline model and making some conjectures about its predictions. For empirical papers, this means describing the data, empirical framework, and preliminary empirical results.

When developing a research project, it is crucial to receive feedback from other people. For this purpose, we mandate each student to meet with *both* Stefania and Yuhei at least twice prior to the final submission. We will coordinate the meeting time outside the lecture slots in **mid-October** and **mid-November** (precise dates and times TBA). Prior to

each meeting, students will have to submit a one-page summary of the status of the three points above.

### *Reading list*

There is no required textbook for this course. However, we will sometimes draw from the following:

- Feenstra, R. (2015). *Advanced International Trade: Theory and Evidence*. Second Edition. Princeton University Press. [Henceforth, F]
- Helpman, H., and P. Krugman (1995). *Market Structure and Foreign Trade*. Cambridge, MIT Press. [Henceforth, HK]
- Fujita, Masahisa, Paul R. Krugman, and Anthony Venables. *The spatial economy: Cities, regions, and international trade*. MIT press, 1999.

### *Academic Conduct*

It is your responsibility to know and understand the provisions of the CAS Academic Conduct Code (copies are available in room CAS 105). Cases of suspected academic misconduct will be referred to the Dean's Office.

### **Course Outline** (Tentative: may be subject to changes)

Items marked with (\*\*) are essential and will be covered extensively in class. Items marked with (\*) are required readings. We will briefly talk about them in class, but you are required to go through them on your own. The remaining items are suggested readings, which you should be familiar with if you plan to do research in this area. Finally, items marked with (R) are papers that review a particular aspect of the field. These papers are particularly useful to frame the discussion in class and to start research projects on a topic.

#### **I. Trade patterns and the gravity equation (Sept. 5)**

(R) Helpman, H (1999). "The Structure of Foreign Trade". *Journal of Economic Perspectives* 13(2): 121-144.

(\*\*) F, Chapter 5, pp. 132-144.

(\*) McCallum, J. (1995). "National Borders Matter: Canada-US Regional Trade Patterns". *The American Economic Review* 85(3): 615-623.

(\*) Anderson, J., and E. van Wincoop (2003). “Gravity with Gravitas: A Solution to the Border Puzzle”. *The American Economic Review* 93(1): 170-192.

## **II. Trade Theories**

### **1. Factor endowments: the Heckscher-Ohlin model (Sept. 7-14)**

(\*\*) F, Chapters 1-2. HK, Chapters 1-2.

Jones, R. (1965). “The Structure of Simple General Equilibrium Models”. *Journal of Political Economy* 73(6): 557-572.

Helpman, H. (1984). “The Factor Content of Foreign Trade”. *Economic Journal* 94: 84-94.

### **2. Comparative advantage: Ricardian Trade Theory (Sept. 19-Oct. 3)**

F, Chapter 1.

(\*\*) Dornbusch, R., S. Fischer, and P. Samuelson (1977). “Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods”. *The American Economic Review* 67(5): 823-839.

(\*\*) Eaton, J., and S. Kortum (2002). “Technology, Geography and Trade.” *Econometrica* 70(5): 1741-1779.

(\*) Alvarez, F., and R.E. Lucas, Jr. (2007). “General Equilibrium Analysis of the Eaton-Kortum Model of International Trade”. *Journal of Monetary Economics* 54 (6): 1726-1768.

Costinot, Arnaud (2009). “An Elementary Theory of Comparative Advantage”. *Econometrica* 77(4): 1165-1192.

Costinot, A., D. Donaldson, and I. Komunjer (2012). “What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas”. *Review of Economic Studies* 79(2): 581-608.

(\*) Bernard, A.B., J. Eaton, J.B. Jensen, and S. Kortum (2003). “Plants and Productivity in International Trade”. *The American Economic Review* 93(4): 1268-1290.

### **3. Monopolistic Competition and Increasing Returns**

#### **a) With Homogeneous Firms (Oct. 5)**

(\*\*) Krugman, P. (1979). “Increasing Returns, Monopolistic Competition, and International Trade”. *Journal of International Economics* 9(4): 469-479.

(\*\*) Krugman, P. (1980). “Scale Economies, Product Differentiation and the Pattern of Trade”. *The American Economic Review* 70(5): 950-959.

Dixit, A., and J. Stiglitz (1977). “Monopolistic Competition and Optimum Product Diversity”. *The American Economic Review* 67(3): 297-308.

Dhingra, S., and J. Morrow (2019). “Monopolistic Competition and Optimum Product Diversity under Firm Heterogeneity”. *Journal of Political Economy* 127(1).

F, Chapter 5. HK, Chapters 6-9.

### **b) With Heterogeneous Firms (Oct. 12-17)**

(\*\*) 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 G.I.P. Ottaviano (2008). “Market Size, Trade, and Productivity”. *Review of Economic Studies* 75 (1): 295–316.

Chaney, T. (2008). “Distorted Gravity: the Intensive and Extensive Margins of International Trade”. *The American Economic Review* 98(4): 1707-1721.

Arkolakis, C. (2010). “Market Penetration Costs and the New Consumers Margin in International Trade”. *Journal of Political Economy* 118 (6): 1151-1199.

### **Gains from Trade (Oct. 19)**

(\*) Arkolakis, C., P. Klenow, S. Demidova and A. Rodriguez-Clare (2008). “Endogenous Variety and the Gains from Trade”. *American Economic Review Papers and Proceedings* 98 (4): 444- 450.

(\*) Arkolakis, C., A. Costinot, and A. Rodriguez-Clare (2012). “New Trade Models, Same Old Gains?”. *The American Economic Review* 102(1):94-130.

Arkolakis, C., A. Costinot, D. Donaldson, and A. Rodriguez-Clare (2017). “The Elusive Pro-Competitive Effects of Trade”. *Review of Economic Studies*, Forthcoming.

### **III. Trade Empirics**

#### **1. Empirics of Gains from Trade (Oct. 24, 26, 31)**

##### **Reduced-form approach**

Frankel, J. and D. Romer (1999), “Does Trade Cause Growth?,” AER, 379-99.

Feyrer, J. (2019). Trade and income—exploiting time series in geography. *American Economic Journal: Applied Economics*, 11(4), 1-35.

Feyrer, J. (2021). Distance, trade, and income—The 1967 to 1975 closing of the Suez Canal as a natural experiment. *Journal of Development Economics*, 153, 102708.

##### **Sufficient statistics approach**

(R) Costinot, A., & Rodríguez-Clare, A. (2018). The US gains from trade: Valuation using the demand for foreign factor services. *Journal of Economic Perspectives*, 32(2), 3-24.

(\*\*) Bernhofen and Brown (2004), “A Direct Test of the Theory of Comparative Advantage: The Case of Japan.” *Journal of Political Economy*, 48-67.

Bernhofen and Brown (2005), “An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan,” AER, 208-25.

(R) Costinot, A., & Rodríguez-Clare, A. (2014). Trade theory with numbers: Quantifying the consequences of globalization. In *Handbook of international economics* (Vol. 4, pp. 197-261). Elsevier.

##### **Structural estimation approach**

(\*\*) Fajgelbaum, P. D., Goldberg, P. K., Kennedy, P. J., & Khandelwal, A. K. (2019). The return to protectionism, forthcoming in *Quarterly Journal of Economics*.

Amiti, M., Redding, S. J., & Weinstein, D. (2019). The impact of the 2018 trade war on US prices and welfare, forthcoming in *Journal of Economic Perspectives*

#### **2. Heterogeneous Gains from Trade (Nov. 2, 7, 9)**

##### **Factor content approach and Heckscher-Ohlin model**

(\*) Trefler (1995), “The Case of the Missing Trade and Other Mysteries,” AER, 1029-1046

Michaels, G. (2008). The effect of trade on the demand for skill: Evidence from the interstate highway system. *The Review of Economics and Statistics*, 90(4), 683-701.

(R) Davis and Weinstein (2003), “The Factor Content of Trade,” in *The Handbook of International Trade*, J. Choi and J. Harrigan, eds., London: Blackwell.

(R) Baldwin (2009), *The Development and Testing of Heckscher-Ohlin Trade Models: A Review (Ohlin Lectures)*, MIT Press.

### **Regional incidence and shift-share design**

(\*\*) Autor D, Dorn D, Hanson GH. The China syndrome: Local labor market effects of import competition in the United States. *American Economic Review*. 2013 Oct;103(6):2121-68.

Borusyak, Kirill, Peter Hull, and Xavier Jaravel. (2020). Quasi-experimental shift-share research designs. Forthcoming in *Review of Economic Studies*.

Adao, R., Kolesár, M., & Morales, E. (2019). Shift-share designs: Theory and inference. *The Quarterly Journal of Economics*, 134(4), 1949-2010.

Goldsmith-Pinkham, P., Sorkin, I., & Swift, H. (2020). Bartik instruments: What, when, why, and how. *American Economic Review*, 110(8), 2586-2624.

(R) Redding, S. J. (2020): “Trade and Geography,” Handbook Chapter.

### **Market access approach**

(\*\*) Donaldson, D., & Hornbeck, R. (2016). Railroads and American economic growth: A “market access” approach. *The Quarterly Journal of Economics*, 131(2), 799-858.

Redding, S. and Venables, A.J., 2004. Economic geography and international inequality. *Journal of international Economics*, 62(1), pp.53-82.

### **Structural approach and exact-hat algebra**

Dekle, R., Eaton, J., & Kortum, S. (2008). Global rebalancing with gravity: Measuring the burden of adjustment. *IMF Staff Papers*, 55(3), 511-540.

## **IV. TRADE TOPICS**

### **1. Economic geography (Nov. 14, 16, 21, 28)**

#### **Spatial Equilibrium Models**

(\*\*) Krugman, P. (1991). Increasing returns and economic geography. *Journal of political economy*, 99(3), 483-499.

(\*\*) Allen, T., and C. Arkolakis. (2014): “Trade and the Topology of the Spatial Economy,” *Quarterly Journal of Economics*, 129, 1085–1139.

Krugman, P., & Venables, A. J. (1995). Globalization and the Inequality of Nations. *The quarterly journal of economics*, 110(4), 857-880.

(R) Redding, S. J., & Rossi-Hansberg, E. (2017). Quantitative spatial economics. *Annual Review of Economics*, 9, 21-58.

#### **Quantitative Urban Models**

(\*\*) Ahlfeldt, G. M., S. J. Redding, D. M. Sturm, and N. Wolf. (2015): “The Economics of Density: Evidence From the Berlin Wall,” *Econometrica*, 83, 2127–89.

Monte, F., S. J. Redding, and E. Rossi-Hansberg. (2018): “Commuting, migration, and local employment elasticities,” *American Economic Review*, 108, 3855–90.

Miyauchi, Y., K. Nakajima, and S. J. Redding. (2022): “The Economics of Spatial Mobility: Theory and Evidence Using Smartphone Data,” Working Paper.

#### **Dynamic Migration Models**

(\*\*) Caliendo, L., Dvorkin, M., & Parro, F. (2019). Trade and labor market dynamics: General equilibrium analysis of the china trade shock. *Econometrica*, 87(3), 741-835.

### **2. Global Value Chains and Production Networks (Nov. 30, Dec. 5, 12)**

(R) Antras, Pol, and Davin Chor. 2021. “Global Value Chains,” Handbook Chapter.

(R) Bernard, A. B., and A. Moxnes. (2018): “Networks and Trade,” *Annual Review of Economics*, 10, 65–85.



(\*\*) Caliendo, L., and F. Parro. (2014): “Estimates of the Trade and Welfare Effects of NAFTA,” *Review of Economic Studies*, 82, 1–44.

(\*\*) Arkolakis, Huneus, Miyauchi (2023): “Spatial Production Networks,” Working Paper.

(\*\*) Korovkin, V., Makarin, A., & Miyauchi, Y. (2023). A Sufficient Statistics Approach for Endogenous Production Networks: Theory and Evidence from Ukraine’s War.

**Student presentations: December 7<sup>th</sup>**

**Final research project due December 17<sup>th</sup>**