Boston University
Department of Economics

# Economics 791 – International Trade
# Fall 2021

## *Syllabus*

**Stefania Garetto (September 3 - October 8)**
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**Yuhei Miyauchi (October 15 – November 19)**
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Course Website: Blackboard

Lectures take place on Fridays, 11.15-2.00 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 explore their most 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 of 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:

- Six problem sets (15%)
- A referee report (15%)
- 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 three problem sets are based on the knowledge of workhorse trade models. The second three problem sets are empirical implementation 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 will 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. The referee report is due on **October 22**. A sample referee report will be provided close to the deadline.

**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 3** and **December 10.** Each student will give a 20' presentation of their work. 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.

*COVID-19 Health Protocol Compliance*

We expect all students to comply with all of the commitments they have made with regard to COVID-19 health protocols, such as wearing an appropriate mask and, on request, producing the badge that indicates the student is up-to-date with testing and attestation. We reserve the right to make the final judgement as to whether a student is in compliance with the health protocols.

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

Items marked with (**) are essential and will be covered extensively in class. Items market 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. 3rd)

(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.

Disdier, A.C., and K. Head (2008), "The Puzzling Persistence of the Distance Effect on Bilateral Trade", *Review of Economics and Statistics* 90(1): 37-48.

## II. Trade Theories

### 1. Factor endowments: the Heckscher-Ohlin model (Sept. 10th)

(**) 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. 17th- 24th)

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.

(*) 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. 1st)

(**) 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.

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

### b) With Heterogeneous Firms (Oct. 8th)

(*) Melitz, M. J. (2008). "International Trade and Heterogeneous Firms". *The New Palgrave Dictionary of Economics*. 2nd Edition. Eds. Steven N. Durlauf and Lawrence E. Blume. Palgrave Macmillan.

(**) 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.

### 4. Gains from Trade (Oct. 8th)

(*) 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

### 5. Empirics of Gains from Trade

**Reduced-form approach (Oct 15th)**

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

Feyrer, J. (2018), "Trade and Income – Exploiting Time Series in Geography," forthcoming in AEJ: Micro

Feyrer, J. (2009b), "Distance, Trade and Income – The 1967 to 1975 Closing of the Suez Canal as a Natural Experiment", NBER working paper.

**Sufficient statistics approach (Oct 15th)**

(*) 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 (Oct 22th)**

(**) 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

## 6. Heterogeneous Gains from Trade

**Factor content approach and Heckscher-Ohlin model (Oct 22th)**

(**) Adao, R., Carrillo, P., Costinot, A., Donaldson, D., & Pomeranz, D. (2021), "Imports, Exports, and Earnings Inequality: Measures of Exposure and Estimates of Incidence". Working Paper.

(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 (Oct 29th)**

(**) 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 (Oct 29th)**

(**) 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.

Borusyak, K., & Hull, P. (2020). Non-random exposure to exogenous shocks: Theory and applications (No. w27845). National Bureau of Economic Research.

# III. TRADE TOPICS

## 7. Economic geography

**Spatial Equilibrium Models (Nov. 5th)**

(**) 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 (Nov. 12th)**

(**) 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.

Tsivanidis, N. (2019): "Evaluating the Impact of Urban Transit Infrastructure: Evidence from Bogotá's TransMilenio," Working Paper.

Miyauchi, Y., K. Nakajima, and S. J. Redding. (2021): "Consumption Access and Spatial Concentration of Economic Activity: Evidence from Smartphone Data," Working Paper.

## 8. Global Value Chains and Production Networks (Nov. 19th)

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

Johnson, R. C., & Noguera, G. (2012). Accounting for intermediates: Production sharing and trade in value added. Journal of international Economics, 86(2), 224-236.

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

(**) Arkolakis, Huneeus, Miyauchi (2021): "Spatial Production Networks," Working Paper.

**Student presentations: December 3rd-10th**

**Final research project due December 17th**