#### Economics 247 — Spring 2020

# **Empirical Topics in International Economics**

April 6, 2020

Instructors: Marc-Andreas Muendler & Natalia Ramondo

Offices: Economics 312 & GPS RBC 1419 (not in use during spring 2020)

Office hours: by appointment (please email)

Phones: +1 (858) 534-4799 & +1 (858) 534-7642

E-mail: muendler@ucsd.edu & nramondo@ucsd.edu

Class Time: Mon 2:00pm - 4:50pm

Course Web Pages: canvas.ucsd.edu/courses/12995 & econ.ucsd.edu/muendler/teach/20s/247

Zoom meeting ID: see ID on Canvas (password protected)

Section ID: 4018

## 1 Course Objectives

This course examines active research topics in international trade and international capital markets, mostly from an empirical perspective with the relevant theoretical foundations. On the theory side, the course is a continuation of the international trade course Economics 245. The lectures consider the determinants of multinational production at the industry and at the firm level, causes of the trade pattern in goods and services, as well as the interaction of international trade and capital markets with the income distribution, labor-market outcomes, and the current account.

## 2 Prerequisites

Instructors' consent.

## 3 Course Format and Discussion

Every class (from 2pm to 4:50pm on Mondays) is divided into two lectures, with a short break between the lectures.

Given the containment efforts against the spread of the SARS-Cov-2 virus, the course will be held as a synchronous lecture using Zoom (a web-based video conference solution), starting at 1:45pm (Pacific Time) on every Monday of the quarter (except Memorial Day on May 25). The Zoom meeting ID is 589-922-378 (*ucsd.zoom.us/j/589922378*). It is password protected. The password will be communicated to all enrolled students on March 27, 2020.

You can join the meeting before the host and co-host (Marc Muendler and Natalia Ramondo) enter. All participants will be muted upon entry. The lectures will be automatically recorded in the cloud and available to all course participants subsequently.

To use Zoom effectively with two-way audio and one-way video (receiving), you will need one of the following:

- A computer (Windows, Apple or Linux) with speakers and a microphone (a webcam can be useful but is not required); or
- a mobile device (iOS or Android).

To participate in the meeting, you will need an internet connection (broadband wired or wireless, 3G or 4G/LTE).

If you do not have this equipment or a sufficient internet connection, you can participate in the lecture using a phone (mobile device or landline), but you will not be able to participate in the meeting's chat or see the lecture slides. However, you can download the slides in advance and follow by audio only.

For in-class discussions, as a student you can use the chat feature of the Zoom meeting to raise your hand. For after-class discussions, please email the instructor (please expect a response time of up to 48 hours) or use the Discussion Board on the course web page (canvas.ucsd.edu/courses/12995).

## 4 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 course web pages (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 pages (see above). On the course web page *econ.ucsd.edu/muendler/teach/20s/247*, these copyrighted slides are password protected. The password will be communicated to all enrolled students on March 27, 2020.

# 5 Paper reports

Each class day in April, for which a paper report is due, has two lectures with designated *main* readings as well as additional readings on this syllabus (unless the additional reading is a survey article).

You are asked to send to Marc Muendler *one* paper report by e-mail per week (per class day), starting in week 2 (lectures 3 and 4) and lasting through week 5 (lectures 9 and 10). You can pick among the main and the additional readings for your report. There will be a total of four such reports.

Please paste your report into the *body of the e-mail*. No report is due for lectures 1 and 2, and none for lectures 11 and 12. Starting with lecture 3 on April 6, there are two lectures per week; one report is due for each of the four remaining weeks in April. For one lecture the main readings are followed by the remark "cumulatively" and the report for the main readings is meant to be based on all the (short) main readings in this case.

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 double class, at 1:45pm.

#### 6 Problem sets

In the area of international trade, most empirical research is grounded in theoretical foundations. Two problem sets therefore ask you to derive key aspects of trade models that inform and discipline the empirical work covered in this course for yourself. One problem set addresses key aspects of parts I (Multinational Production) and II (Trade and Labor-market Interactions) of the course, and the other problem set parts III (Multi-Product Firms) and IV (International Capital Markets).

Both problem sets are posted online already but may be considered as "given out" close to the beginning of the according topic block (April 6 and April 27) and due after conclusion of the according topic block (April 27 and May 11). Also see the Class Schedule for dates.

To submit your problem set, please email to Marc Muendler a scanned file in pdf format (if you prefer to handwrite your problem set) or a typed file in pdf format.

## 7 Project presentation

In lieu of a final exam, you will give one long and one short student presentation, either on May 11, May 18 or June 1. You will present one of the papers assigned to you by Natalia Ramondo. Please email Natalia with your research interests and she will propose a list of papers that you can choose from. From the proposed list, please choose two papers by Friday, April 24 at 5pm. For the short presentation, you can choose either an assigned paper or your own research project in progress. For the long presentation, you must choose an assigned paper.

Guidelines for the presentations are at the Canvas course web page (*canvas.ucsd.edu/courses/*12995) under the folder *Files/Presentations guidelines* in *presentation-rules-Econ-*247.docx. If you are not presenting a given class, you are expected to read the fellow student's assigned paper and come prepared to ask questions, offer critique, and explore avenues for future research. The materials will be posted prior to the presentations.

The presentations will be delivered by Zoom (meeting ID 589-922-378) and the presenter will be made a formal co-host of the meeting to facilitate interaction.

#### 8 Assessment

There are three components of assessment: four paper reports (due in weeks 2-5 of the quarter), two problem sets (throughout the quarter), and a project presentation. The paper reports will count for 20 percent and the oral presentation for 50 percent of the final letter grade; the problem sets will count 30 percent (15 percent each). Strong Zoom participation throughout the quarter will be counted towards performance.

Given the unusual circumstances of remote instruction under the containment efforts against the spread of the SARS-Cov-2 virus, the graduate division advises that you may want to take the course under the S/U grading option in spring 2020.

### 9 Class Schedule

#### I. Multinational Production

1. Mon, March 30: Multinational Production (Natalia Ramondo)

Basic reading: Ramondo and Rodríguez-Clare (2013)

2. Mon, March 30: Innovation and Scale Effects in the Global Economy (Natalia Ramondo)

Basic readings: Arkolakis, Ramondo, Rodríguez-Clare, and Yeaple (2018)

(Additional reading: Ramondo, Rodríguez-Clare, and Saborío-Rodríguez 2016)

Paper Report on Lecture 3 or 4 DUE by Mon, April 6, 1:45pm

3. Mon, April 6: Horizontal Foreign Direct Investment (Marc Muendler)

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)

4.Mon, April 6: Firm Boundaries and Vertical Foreign Direct Investment (Marc Muendler)

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)

PAPER REPORT ON LECTURE 5 OR 6 DUE BY MON, APRIL 13, 1:45PM

PROBLEM SET 1 OUT

#### II. International Trade and Labor-market Interactions

5. Mon, April 13: Trade in Intermediate Inputs and Wages (Marc Muendler)

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)

**6. Mon, April 13:** Trade in Tasks (Marc Muendler)

Main reading: Grossman and Rossi-Hansberg (2008)

(Additional readings: Jensen and Kletzer 2010, Ottaviano, Peri, and Wright 2013)

PAPER REPORT ON LECTURE 7 OR 8 DUE BY MON, APRIL 20, 1:45PM

7. Mon, April 20: Determinants and Consequences of Multinational Firm Activity (Marc Muendler)

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)

8. Mon, April 20: Trade and Labor-market Outcomes (Marc Muendler)

Main reading: Autor, Dorn, and Hanson (2013) or Caliendo, Dvorkin, and Parro (2019), your choice

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

PAPER REPORT ON LECTURE 9 OR 10 DUE BY MON, APRIL 27, 1:45PM

Fri, April 24, 5pm: PROJECT PROPOSAL DUE

### III. Multi-Product Firms and Multidimensional Panel Data

9. Mon, April 27: Multi-product Firms (Marc Muendler)

Main reading: Eckel and Neary (2010)

(Additional readings: Arkolakis, Ganapati, and Muendler 2020, Bernard, Redding, and Schott 2011)

**10. Mon, April 27:** Multidimensional Panel Data (Marc Muendler)

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

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

PROBLEM SET 1 DUE

PROBLEM SET 2 OUT

### IV. Intertemporal Trade and International Capital Markets

- **11. Mon, May 4:** Intertemporal Trade in a Multi-sector Model (Marc Muendler) *Basic reading*: Dornbusch, Fischer, and Samuelson (1977)
- **12. Mon, May 4:** The Real Exchange Rate, Nontraded Goods and Current Account Adjustment (Marc Muendler)

Basic reading: Nason and Rogers (2006)

#### V. Presentations

Mon, May 11: STUDENT PRESENTATIONS (Natalia Ramondo) PROBLEM SET 2 DUE

Mon, May 18: STUDENT PRESENTATIONS (Natalia Ramondo)

Mon, June 1: STUDENT PRESENTATIONS (Natalia Ramondo)

### 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.
- ANTRAS, 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 *Hand-book 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 (2020): "The Extensive Margin of Exporting Products: A Firm-level Analysis," *American Economic Journal: Macroeconomics*, p. forthcoming.
- ARKOLAKIS, C., N. RAMONDO, A. RODRÍGUEZ-CLARE, AND S. YEAPLE (2018): "Innovation and Production in the Global Economy," *American Economic Review*, 108(8), 2128–73.
- 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.
- BERNARD, A. B., S. J. REDDING, AND P. K. SCHOTT (2011): "Multiproduct Firms and Trade Liberalization," *Quarterly Journal of Economics*, 126(3), 1271–1318.
- BHAGWATI, J. N., A. PANAGARIYA, AND T. N. SRINIVASAN (1998): Lectures on International Trade. MIT Press, Cambridge, Massachusetts, 2nd edn.
- 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.
- 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.
- CALIENDO, L., M. DVORKIN, AND F. PARRO (2019): "Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock," *Econometrica*, 87(3), 741–835.
- 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.
- DIX-CARNEIRO, R. (2014): "Trade Liberalization and Labor Market Dynamics," Econometrica, 82(3), 825–885.
- 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.
- EATON, J., AND S. KORTUM (2010): "Technology in the Global Economy: A Framework for Quantitative Analysis," University of Chicago, unpublished manuscript.

- 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.
- EECKHOUT, 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.
- 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.
- 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.
- HELPMAN, E. (2006): "Trade, FDI, and the Organization of Firms," Journal of Economic Literature, 44(3), 589-630.
- 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.
- 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.
- 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.
- NASON, J. M., AND J. H. ROGERS (2006): "The Present-Value Model of the Current Account Has Been Rejected: Round Up the Usual Suspects," *Journal of International Economics*, 68(1), 159–87.
- OTTAVIANO, G. I. P., G. PERI, AND G. C. WRIGHT (2013): "Immigration, Offshoring, and American Jobs," *American Economic Review*, 103(5), 1925–59.

RAMONDO, N., AND A. RODRÍGUEZ-CLARE (2013): "Trade, Multinational Production, and the Gains from Openness," *Journal of Political Economy*, 121(2), 273–322.

RAMONDO, N., A. RODRÍGUEZ-CLARE, AND M. SABORÍO-RODRÍGUEZ (2016): "Trade, Domestic Frictions, and Scale Effects," *American Economic Review*, 106(10), 3159–3184.