

Topics in International Trade: Syllabus

International Economics (GPEC 435) — Fall 2021

September 22, 2021

Course number:	GPEC 435
Lecture:	TueThu 11:00a-12:20p
Lecture hall:	RBC Auditorium (GPS 3201)
Course web page:	econ.ucsd.edu/muendler/teach/21f/435
Instructor:	Marc-Andreas Muendler
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Office hours:	by Zoom, Tuesdays 2pm, Thursdays 4pm

DESCRIPTION

This course aims to equip students with the conceptual understanding of causes and consequences of international trade, to advance their empirical skills for contemporary international economic research and policy analysis, and to develop professional capabilities in evaluating current research, making presentations, and completing written projects. By the end of the course, each student will have completed guided data exercises that underly typical international trade analysis, conducted a research-based trade policy debate, and completed an original project that serves as a demonstration of quantitative aptitude in international economics.

On the conceptual side, the course addresses the economic forces of the global division of labor, the determinants of international trade flows and trade imbalances, and predictions of consequences for income levels and disparities. The conceptual material is intertwined with practical guidance on trade policy analysis based on the so-called gravity model of trade, covering concurrent empirical methods for estimation and a toolkit for theory-consistent simulations of policy alternatives. The course thus pairs a rigorous conceptual exposition with the relevant empirical applications. Estimation and simulation account for the importance of general-equilibrium effects as they ripple through the world economy and local markets. Examples of analysis include the formation and dissolution of trade agreements, the imposition or removal of trade barriers and subsidies, and assessments of consequences of globalization for local markets.

Class meetings will be a combination of lectures with programming instruction for the early meetings, an in-class discussion of the labor-market consequences of globalization, and research presentations of class projects with a discussant towards the end of the quarter.

OBJECTIVES

After completion of this course, you will be able to:

- Explain the economic forces that drive the global division of labor.
- Predict the global location of export-leading and import-competing industries across countries.
- Analyze causes and consequences of specialization in economic activity and their evolution over time.
- Associate trade imbalances with the foundational macroeconomic conditions.
- Apply the gravity model of international trade to estimate trade patterns and predict trade flows.
- Assess the relative importance of geographic and political barriers to trade and the economic consequences of their change.
- Provide explanations for the empirical success of the gravity model of international trade, based on theoretical foundations.
- Interpret and adequately treat the individual components of the gravity model of international trade for theoretical analysis, estimation, and simulation.
- Use the theoretical foundations to estimate a structural gravity model of international trade, employing state-of-the-art data and methods.
- Produce rigorous counterfactual simulations of the global economy under alternative trade policy scenarios.
- Discuss local impacts of global integration, including labor-market consequences.
- Produce original quantitative work to address a global economic or policy issue of your choice.

PREREQUISITES

QM II (or equivalent), QM III (concurrent enrollment permitted), and fluency in statistical programming; or instructor's consent. Students may not receive credit for GPEC 435 and IRGN 435.

FORMAT

The course will be taught in a hybrid format. You can take the course in three ways.

- Synchronous-remote: Follow a live stream of the lecture, answer Canvas surveys live, and ask live questions using the Zoom chat (moderated by Teaching Assistant Jacob Orchard).
- In-person: Be physically present in the classroom to actively participate in person during lecture, answer Canvas surveys live (using your own electronic device), ask questions, and talk to the instructor in person before or after lecture at a distance.
- Asynchronous-remote: Follow a Podcast/Zoom recording of lecture, answer Canvas surveys within 36 hours of the lecture, but no opportunity to ask live questions.

Following campus safety requirements, you must wear a mask in the lecture hall at all times (as inside any UC San Diego location). The instructor and teaching assistant will wear a mask and maintain proper physical distancing at all times. For the UC San Diego campus safety policy, please see returntolearn.ucsd.edu.

MATERIALS

Lecture notes become available online at canvas.ucsd.edu and at econ.ucsd.edu/muendler/teach/21f/435 before each lecture.

Similarly, instructions for empirical exercises become available online at canvas.ucsd.edu and at econ.ucsd.edu/muendler/teach/21f/435 before each lecture.

Textbooks (required): Yoto V. Yotov, Roberta Piermartini, José-Antonio Monteiro and Mario Larch (2016), see www.wto.org/english/res_e/booksp_e/advancedwtoundctad2016_e.pdf; Marc-Andreas Muendler (2020)/Ch. 1-4, 14; Jonathan Eaton and Samuel Kortum (2010)/Ch. 2-3.

Article Readings (recommended): James E. Anderson (2011); Rudiger Dornbusch, Stanley Fischer and Paul A. Samuelson (1977); Marc-Andreas Muendler (2017, section 3); Marc-Andreas Muendler (2018).

Background Readings (optional): James E. Anderson and Van Wincoop, Eric (2003); James E. Anderson and Yoto V. Yotov (2010); James E. Anderson, Mario Larch and Yoto V. Yotov (2018); Costas Arkolakis, Arnaud Costinot and Andrés Rodríguez-Clare (2012); Thomas Chaney (2018); Keith Head and Thierry Mayer (2014); Arnaud Costinot and Andrés Rodríguez-Clare (2014); João M. C. Santos Silva and Silvana Tenreyro (2006).

The practitioner's textbook by Yotov et al. (2016) serves as the main resources for estimation and simulation. The textbook drafts Muendler (2020) and Eaton and Kortum (2010) present key theoretical concepts. Yotov et al. (2016) is freely accessible at www.wto.org/english/res_e/booksp_e/advancedwtoundctad2016_e.pdf. Electronic copies of these textbook drafts are available from canvas.ucsd.edu and econ.ucsd.edu/muendler/teach/21f/435.

The remaining readings are available online and electronically accessible from campus (or through a VPN connection to campus). The recommended article readings complement the material in class, and the optional background readings can serve as points of departure into additional research topics.

SOFTWARE

Please install the software package Stata/SE 17 on a suitable computer and have the computer next to you during class, so you can actively follow the coding portion of lecture. You can download Stata/SE 17 and the license file from the campus provided links on Canvas. To update your version to the most recent release, launch Stata/SE 17 and type *update all*.

Please consider installing the Canvas app on a portable device and have the device with you and ready for class. There will be occasional live Canvas surveys in lecture (with a permitted 36 hours delay for asynchronous students). On the first day of class, it will be important to survey your preferences for participation mode and time zones to plan details of the course.

EMPIRICAL EXERCISES

From September 23 through October 21, and on October 28 and November 2, there will be short assigned empirical exercises. The exercises will ask you to implement statistical and econometric approaches from class, using Stata/SE 17. You receive readily prepared global data sets for this purpose on canvas.ucsd.edu and at econ.ucsd.edu/muendler/teach/21f/435, as well as starting Stata code.

There are two deliverables for each empirical exercise: (i) a file with results in the form of figures or tables (pdf preferred), and (ii) your Stata code. While it is acceptable that you exchange ideas with your classmates, you must deliver **your own code file and results**.

For each empirical exercise, you have more than one week to complete it, until Friday, 5pm in the following week. For example, the empirical exercise for September 23 will be due on October 1 at 5pm; the empirical exercise for November 2 will be due on November 12 at 5pm. For the final empirical exercise, we strongly recommend, however, that you plan on completing it by Friday the week before, November 5, so that you have all tools in place for your gravity project proposal (which is due on November 9).

Please **upload** the pdf file with results and the Stata do file to *canvas.ucsd.edu*.

Assessment: You can earn up to four (4) points per empirical exercise. There are 11 empirical exercises. We will count the ten best scores. In total, you can therefore earn up to 40 points in your empirical exercises, and they will count for 40 percent of the final grade.

Compensating points: On October 7 and 8, you will be asked to engage in a Canvas discussion of your thoughts on weeks 1 and 2 of class. You must post before seeing posts made by peers. This discussion is worth up to 2 points. The points will be used to compensate for any foregone points on an empirical exercise. You can earn 1 point for posting and 1 point for replying or giving feedback to one other post that was posted by peers.

DEBATE: LABOR-MARKET CONSEQUENCES OF GLOBALIZATION

There will be an in-class debate on November 16. The theme of the debate is *Labor-market Consequences of Globalization*. This research area goes beyond the gravity model of international trade in approach, as it investigates local impacts of global trade, and in method.

Your preparations in this area will help you assess research on your own and then verbally present arguments in favor or against a topic. You will be randomly assigned to a group of four to six students and assigned to argue either in favor or against an issue, such as *China trade is or is not responsible for economy-wide U.S. employment losses*, *Structural estimation is or is not more conclusive than reduced-form estimation*, *Trade reform is or is not the cause of adverse long-term labor-market outcomes*, *Offshoring is or is not responsible for the hollowing out of domestic manufacturing value added*.

Your discussion topic and random team assignments will be announced on November 9.

Debate presentations should be concise and widely intelligible. Your arguments should be versatile in response to those presented by others, both in combating counter-arguments to your assigned point of view and in avoiding duplication of arguments supportive of your point of view.

Assessment: Your participation in the debate will be graded, counting 5 percent of your final grade. Your performance will not be graded.

GRAVITY PROJECT

You will research, write on, and present a project that involves gravity estimation and, if you wish, simulation to answer a policy issues in international economics, such as: the trade impact of distance, of China's export performance, of existing regional trade agreements such as Mercosur or Canada-EU, possible trade agreements such as CPTPP, of disintegration such as Brexit, of WTO dispute settlements, or of currency unions or a possible Brexit.

You can work by yourself on the project or in a team of two. (We may consider rare exceptions.) You can form a team of two by yourselves, or ask to be randomly assigned to a classmate, or opt to do single-authored work.

A topic elaboration (proposal) is due by October 7, and a first draft of the paper on November 9. Every project team will be randomly assigned a discussant or discussant team. The discussants will receive the first draft of the paper and work on their discussion. For the final version of your project paper, you will have time to incorporate feedback from the discussion.

The project paper should have 10-12 pages and be presented in around 15 to 20 minutes using 5 to 7 slides. The final project paper can take the discussant's comments into account and is due on the Friday of Finals week.

The discussant should take 3 to 5 minutes and cannot use slides. The discussion should address main strengths and weaknesses, make concrete proposals for improvement, and assess the conceptual approach as well as the conclusiveness of results.

The time line and grade shares are as follows:

October 7. Circulation of sample project ideas

October 26, 5pm. Due date for one-page topic elaboration (proposal), submission through Canvas: 5 percent

November 9, 5pm. Due date for paper/presentation draft (10-12 pages of slides or text), to TA and instructor as well as Discussant(s), submission through Canvas and by email to Discussant(s): 10 percent

November 23–December 2. Project presentations and discussions in-class: 20 (15+5) percent

December 10, 5pm. Due date final project paper (10-12 pages of text), submission through Canvas: 20 percent

In summary, the presentation and paper together count for 50 percent of your total grade, and your discussion of someone else's paper 5 percent.

The presentation should cover the entire project. For both paper and presentation, keep the following questions in mind. First, what is the treatment effect that you are trying to estimate? What is the economic significance of this treatment (in terms of policy or other motivations)? Is there likely to be heterogeneity in this treatment effect within the sample (such as across time or regions)? What are the econometric challenges that you face in the estimation? Present data in graph or table format that help motivate the potential existence of your treatment.

Second, describe the main specifications that you use in your analysis. For each specification, what is the counterfactual for the treatment? If you choose to pursue counterfactual simulation (using the code from class), what are potential shortcomings that the simulation setup does not capture (what assumptions may be violated)? Present your main estimation (and simulation) results. How does your treatment effect vary across the specifications you have estimated? Which set of results do you find most credible in terms of causality? What are the policy implications of your estimation exercise?

Your project work must adhere to the highest standards of academic integrity. If you base your work on other sources, cite them accordingly. If you use programming code and data from existing sources, make according attributions in text and footnotes.

Your writing should be succinct and devoid of grammatical errors (your prose does not have to be elegant but it does have to communicate your ideas accurately and clearly, free of mistakes). Presentations should use data concisely and avoid information overload. There are simple rules for effective writing: omit needless words and do not overuse key words, write in the active voice, avoid adverbs, do not interject subjective opinion in place of objective analysis. There are also simple rules for presentation: favor graphs over tables, scale numerical values appropriately, be realistic about the number of slides you can present in the allotted time, limit the number of words that appear on each slide, practice repeatedly using a timer, review video of your presentations.

Assessment: Grading of the gravity project will be based on the professional quality of your written paper and oral presentations, as outlined above. Your own gravity project will count for a total of 50 percent of your final grade. Your discussion of another paper will be graded for participation (but not performance) and count 5 percent of your final grade.

WRITING TUTOR

The Writing Tutor at GPS, Karuna Kumar, offers advice for your project. Her advising hours will be Mondays and Fridays 10am-1p (Zoom) and Mondays and Fridays 2p-6p (in-person). Any student may drop by during office hours to brainstorm ideas, to discuss how to approach an assignment, or to ask general questions about writing. For feedback on a draft, email the writing assignment and the draft to Karuna Kumar (k1kumar@ucsd.edu). For a detailed response on structure, language and citations, please allow for feedback over up to 48 hours. To discuss your draft in-person, schedule an appointment during office hours. Please email your draft at least 24 hours before the appointment for a meaningful and constructive discussion. If on a tight deadline, you may walk in during the in-person appointment hours or seek an appointment for a Zoom session during the virtual office hours.

GRADE

Your final grade is based on both the empirical exercises and the gravity project (paper and presentation). The empirical exercises count for 40 percent, the gravity project for 50 percent (presentation 15 percent and paper in stages 35 percent). Your participation, but not your performance, on the in-class debate counts 5 percent and the discussion of someone else's paper counts 5 percent.

ACADEMIC INTEGRITY

Students are expected to honor the highest standards of academic integrity. Failure to honor that code will be reported to the office of academic integrity. To review the campus policy, please visit: students.ucsd.edu/academics/academic-integrity.

ACADEMIC ACCOMMODATIONS

Any student with documented disability in accordance with UC San Diego policy has the right to a special accommodation. Please present the formal requests within the first two weeks of class so that the necessary arrangements can be made. Please contact GPS student services with any questions about documentation.

NON-DISCRIMINATION AND NO HARASSMENT

UC San Diego and GPS are committed to creating an environment free from all forms of discrimination and harassment, in which all students are able to learn and openly express themselves.

COURSE SCHEDULE

I. Foundations of Global Specialization and Gravity

- 1. Thu, September 23:** The Global Division of Labor and Comparative Advantage
Reading: Muendler (2020, ch. 1)
Empirical exercise 1: Trade imbalances per capita

2. Tue, September 28: The Standard Trade Model

Reading: Muendler (2020, ch. 2)

Empirical exercise 2: Changes of revealed comparative advantage over time

3. Thu, September 30: The Gravity Equation

Readings: Anderson (2011), Eaton and Kortum (2010, ch. 2, sections 2.1.1 and 2.1.2)

Empirical exercise 3: Plot gravity for services

Fri, October 1: Due date Empirical exercise 1

4. Tue, October 5: Traditional Gravity, Distance, and Trade Barriers

Reading: Yotov et al. (2016, p. 40-49, 90-91)

Empirical exercise 4: Gravity for manufacturing vs. services

5. Thu, October 7: Comparative Advantage and Many Industries

Reading: Muendler (2020, ch. 3, sections 3.3 and 3.4)

Empirical exercise 5: Gravity and the unitary distance coefficient

Out: Possible research topics for gravity project (topic elaboration due on October 26)

Canvas discussion of your thoughts on weeks 1 and 2 of class (due October 8)

Fri, October 8: Due date Empirical exercises 2 and 3

II. Structural Gravity and Trade Policy

6. Tue, October 12: Structural Gravity

Readings: Yotov et al. (2016, p. 12-17), Eaton and Kortum (2010, ch. 3, sections 3.1.1), optional: Head and Mayer (2014)

Empirical exercise 6: Gravity with and without self-trade

7. Thu, October 14: Challenges for Gravity Estimation

Readings: Yotov et al. (2016, p. 17-27, 43-45)

Empirical exercise 7: Traditional gravity vs. Poisson Pseudo Maximum Likelihood gravity

Fri, October 15: Due date Empirical exercises 4 and 5

8. Tue, October 19: Gains from Trade and the Terms of Trade

Reading: Muendler (2020, ch. 4, section 4.4), Yotov et al. (2016, p. 17-27), optional: Arkolakis, Costinot and Rodríguez-Clare (2012) and Costinot and Rodríguez-Clare (2014)

Empirical exercise 8: Measures of the U.S. gains from trade

9. Thu, October 21: Trade Agreements

Reading: Yotov et al. (2016, p. 49-54)

Empirical exercise 9: Estimating the effects of WTO accession

Out: Discussion topics and random team assignments for in-class debate on November 16

Fri, October 22: Due date Empirical exercises 6 and 7

III. Structural Gravity in General Equilibrium

10. Tue, October 26: Multilateral Resistances and General Equilibrium

Readings: Yotov et al. (2016, p. 70-80), Anderson, Larch and Yotov (2018)

Gravity Project: Elaborate topic

Due date for topic elaboration: Tue, October 26, 5pm.

11. Thu, October 28: Gravity Approaches to General Equilibrium I
Reading: Yotov et al. (2016, p. 88-102, 121-125)
Empirical exercise 10: The dynamics of comparative advantage

Fri, October 29: Due date Empirical exercises 8 and 9

12. Tue, November 2: Gravity Approaches to General Equilibrium II
Reading: Yotov et al. (2016, p. 88-102, 111-117)
Empirical exercise 11: Quantifying the effects of NAFTA

IV. Trade Imbalances and Local Consequences of Trade

13. Thu, November 4: Intertemporal Trade
Reading: Muendler (2020, ch. 14)

Fri, November 5: Due date Empirical exercise 10, **recommended hand-in** Empirical exercise 11

14. Tue, November 9: Intertemporal Trade with Many Industries
Reading: Dornbusch, Fischer and Samuelson (1977)
Gravity Project: Submit project paper draft to Instructor and Teaching Assistant
Due date for paper draft: Tue, November 9, 5pm.
Assignment: Preparation for discussion of labor-market consequences of globalization

Thu, November 11: Veteran's Day Holiday (no class)

Fri, November 12: Due date Empirical exercise 11

15. Tue, November 16: Labor-market Consequences of Globalization: A Debate
Reading: Muendler (2017, section 3)

16. Thu, November 18: Globalization, Prosperity, and Equity
Reading: Muendler (2018)
Gravity Project: Prepare discussion of one other paper

V. Topics

17. Tue, November 23: Project Presentations

Thu, November 25: Thanksgiving Day Holiday (no class)

18. Tue, November 30: Project Presentations

19. Thu, December 2: Project Presentations
Gravity Project: Submit final project paper to Instructor and Teaching Assistant
Due date for final project paper: Fri, December 10, 5pm.

References

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- Muendler, Marc-Andreas.** 2017. "Trade, Technology, and Prosperity: An Account of Evidence from a Labor-market Perspective." *World Trade Organization Staff Working Paper*, ERSD-2017-15. Background study for the World Trade Report 2017 *Trade, Technology and Jobs*.
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- Muendler, Marc-Andreas.** 2020. "The Economics of Globalization." University of California, San Diego, unpublished textbook manuscript.
- Silva, João M. C. Santos, and Silvana Tenreyro.** 2006. "The Log of Gravity." *Review of Economics and Statistics*, 88(4): 641–58.
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