

Course Outline for Economics 2300: International Trade
Fall 2020
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(This version: September 11th, 2020)

Quercus Link: <https://q.utoronto.ca/courses/162285>

Contact: peter.morrow@utoronto.ca . I will generally NOT be checking my office voicemail. You should only email me from your University of Toronto email as I will ignore any other email address (e.g. Gmail etc.). If I can answer your email briefly, I will try to respond to within 24 hours on week days but more slowly on the weekend.

Course Orientation

This class will generally be taught at a mixed *M.A./Ph.D.* level and will have three general goals. First, to develop an understanding of the theoretical models that economics has chosen to use to understand the structure of international trade. There will be a mix of classical models that serve as a theoretical foundation, as more recent developments. Second, we will cover empirical work that steers the development of these models. Third, to cover recent contributions to both the theory and empirics of international trade to show you “cutting edge” research.

Updating of the syllabus

This draft represents by best guess/ambition for the papers I will cover this semester. If the past is any lesson, this will likely change as the semester progresses. Refer to the date for the most recent version of the syllabus. The version on Quercus will always be the “right” version.

Online Delivery

This course will take place online. Core material will be posted for asynchronous consumption. For most weeks, I will use the period 9am-10am to present additional material that will be supplemental for Ph.D. students. Masters students are welcomed to attend but this is not required. The period 10am-11am will serve as office hours; I will also use the 10am-11am time for quizzes although these may be moved to asynchronously administered. You are expected to complete the readings and watch the videos in a timely fashion, and complete assessments by their due dates. You will have an opportunity to ask questions live during office hours, and during the supplementary time. *I reserve the right to change the combination of asynchronous and synchronous material based on the possibility of students being in different time zones (for example).*

Office Hours:

Office hours will be Tuesdays 10am-11am (online). You are welcome to stop by even if you do not have questions. You can learn from your classmates’ questions, get to know other students and find study group partners.

Technology Requirements

You must have access to a laptop or desktop computer with a strong, stable internet connection. A phone is not an acceptable substitute as some required components may not be accessible on smartphones. A camera and mic are required for online contact activities such as office hours although some desktops or laptops may have sufficiently high-quality cameras or mics. High speed broadband access is highly recommended. This course requires the use of computers, and of course, sometimes things can go wrong when using them. You are responsible for ensuring that you maintain regular backup copies of your files, use antivirus software (if using your own computer), and schedule enough time when completing an assessment to allow for delays due to technical difficulties. Computer viruses, crashed hard drives, broken printers, lost or corrupted files,

incompatible file formats, faulty internet, and similar mishaps are common issues when using technology, and are not acceptable grounds for a deadline extensions or grade appeals in an of themselves.

Civility Statement and Accessibility

I consider this “classroom” to be a place where you will be treated with respect, and I welcome individuals of all abilities, ages, backgrounds, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, and other visible and non-visible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. This is always true but takes special force this year when peoples’ circumstances may be stress inducing and out of their control. When sending any communication or participating in discussions, remember that there are real people with feelings on the receiving end. Be kind and treat people as you want to be treated.

I am attempting to design this class with an eye toward flexibility while still keeping some engagement. I strongly prefer that you engage during the synchronous portions of the class with your cameras on but this is only so that we can mimic some of the classroom interaction. If you are unable or uncomfortable doing so due to your home circumstances, please do not feel pressured.

Communication

I will use Quercus to post all course communication and content. I will send all email communication to your University of Toronto email linked to Quercus. Use email to inform me of course problems (e.g. typos, missing information etc.).

This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and myself. This platform allows for anonymous posting but that is not an excuse for a lack of civility. I reserve the right to deal with a lack of civility with a zero-tolerance policy. If you have any problems or feedback for the developers, email team@piazza.com.

Find our class signup link at: <https://piazza.com/utoronto.ca/fall2020/eco2300hflec0101>

Feedback

Aside from a few weeks in the Winter of 2020, This is my first time teaching an online course. I would highly appreciate your feedback on video-lectures, assessments, and communication. I will especially value your comments of the video-lectures. Specifically, I would appreciate your feedback about concepts that require further clarification and about mistakes I may have done when editing of the videos.

Books and Resources

Although there are no required books for this class, there are some that are recommended (*) if you specialize in international trade. These are easily available on Amazon or any other online vendor.

*Feenstra, Robert C., *Advanced International Trade: Theory and Evidence*, Princeton: Princeton University Press, 2004 (“F” below)

*Handbook of International Economics, (2014), edited by Gita Gopinath, Elhanan Helpman and Kenneth Rogoff

Dixit, A.K. and V. Norman, *Theory of International Trade: A Dual, General Equilibrium Approach*, Cambridge: Cambridge University Press, 1980 (“DN” below)

Helpman, E. and P.R. Krugman, *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*, Cambridge: MIT Press, 1985. (“HK” below)

Handbook of International Economics, (2003), edited by E. Kwan Choi and James Harrigan

Handbook of International Economics, (1995), edited by G.M. Grossman and Kenneth Rogoff

Handbook of International Economics, (1984), edited by R.W. Jones and P.B. Kenen

In addition, if you are uncertain about your familiarity with microeconomics, please reference

Varian, H., *Microeconomic Analysis*, 3rd edition, New York: W.W. Norton 1992.

Mas-Colel, Andreu and Michael D. Whinston and Jerry Green, *Microeconomic Theory*, 1st edition, New York: Oxford University Press (1995).

Given the attention that will be paid to empirical analysis in this class, you should have some idea of the data that is publicly available

1) Robert Feenstra (and collaborators) has assembled extensive data covering world trade and U.S. imports at varying levels of aggregation across a number of decades. This data is available at www.internationaldata.org and also at www.nber.org/data. In addition, researchers at CEPII in Paris have compiled more detailed data which they have made available at http://www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=1

2) The IPUMS [website](#) contains free data on the United States Current Population Survey (CPS), international population surveys, census public use sub-samples, and the United States American Community Survey. These provide very large (sample size) and extensive (number of variables) data for many years. These data sets have been used extensively in empirical work. They are very useful for almost all questions related to wages and occupational choice.

3) The World Bank has posted a series of useful data sets. First, the [Exporter Dynamics Database](#) provides providing indicators for close to 70 countries over the period 1997-2014 on the basic characteristics of their exporting firms, their concentration and diversification, their dynamics in terms of entry, exit and survival, and the unit prices of the goods they trade. Exporter-level data can often be obtained with a simple request.

4) Lastly, the University of Toronto has recently purchased a handful of useful data sets. One contains multiple years of Indian firm level data as recently used by one of our job market candidates (Scott Orr, now at UBC). Swapnika Rachapalli and John Cairncross (another Ph.D. student) is also used this data. Another useful data set is the Nielsen scanner data which contains barcode-time-location level data for purchases by US consumers. Torsten Jaccard is working with this data. Please contact me or one of them if you have any questions.

5) Many journals now require codes and data to be posted for published papers. This is a very nice way to ensure replication. Often, it also allows students to get “under the hood” of what authors did. These replication materials are posted on journal websites.

Grading

The grading metric will be slightly different between MA and Ph.D. students. MA students can choose to be graded as Ph.D. students but not the opposite. MA students must inform me by 1pm on September 22nd, 2020 if they wish to be graded as Ph.D. students otherwise they will be graded as MA students by default. There will be no formal midterm nor final exam.

MA Grading System

30% Problem Sets
50% Weekly Quizzes
20% Presentation

Ph.D. Grading System

25% Problem Sets
50% Weekly Quizzes
10% Presentation
15% Weekly Questions and Research Proposal

Problem Sets (both MA and Ph.D. students): The problem sets be a mix of theory and empirics. Some will be as simple as uploading data to STATA and running summary statistics and other will ask you to replicate a handful of very influential theory or empirical papers. The former will give you practical skills and teach you the more mundane tasks of the profession so that you will not waste time figuring them out later. The latter force you to get “under the hood” and see how these models work. **MA students may work in groups of 3 on the problem sets but each Ph.D. student must turn in their own.** These will be assessed “check plus” (100%), “check” (75%), “check minus” (50%), or 0%.

Weekly Quizzes (both MA and Ph.D. students): I will post short timed quizzes each week that are meant to be taken from 10:00-10:15am each week (Toronto time). **This may change depending on discussion the first day of class.** These are meant to be low stakes exercises to keep you all engaged during this time and to make sure you have been absorbing the content. They will usually pertain to the previous week’s content but I reserve the right to also include earlier material. They will never be on content that we have not yet covered.

Weekly Journal (Ph.D. Students): Weekly questions and the research proposal are meant to get you started thinking about research. While a journal-quality polished project is not required from the proposal, a simple question is a good place to start and this is the point of the weekly questions. Each week **prior to class** I ask that you write three simple questions and then 3-4 sentences for each fleshing out why it is an interesting question and how you might answer it. This will be done in a private Google Doc. Questions each week should be distinct from earlier questions although they need not be completely unrelated. The goal is for you to have 30 or so questions at the end of the semester on which to base your research question. All it takes is just one to have a job market paper. More details regarding the proposal will be given when it is assigned. This will be assessed “check plus” (100%), “check” (75%), “check minus” (50%), or 0%.

Presentation (both MA and Ph.D. Students): You will be asked to present other peoples' research. This may be a published or an unpublished paper. It is meant to critically assess the contribution of the paper providing a summary with a critical eye. This will be done in teams with a schedule drawn up as the semester progresses and the total class size becomes clearer.

Academic Misconduct

Students should note that I do not tolerate any form of academic misconduct. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the test or examination to dismissal from the university as outlined in the academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties.

If you do not turn in a problem set, you will receive a zero. For quizzes, your lowest quiz score will be dropped. If you miss more than one quiz, you must make the appropriate online declaration on ACORN. Your quiz marks will then be reweighted onto the quizzes you attended. If you are unable to attend your team's presentation, you will be shifted to another presentation date and you will not receive the initial team's mark. It is up to you to find an additional team in this circumstance.

Assigned Readings and Schedule

Readings with a double asterisk (**) are required. Readings with a single asterisk (*) are strongly suggested for Ph.D. students. Remaining readings are for those with further interest in the subject.

Basic Gains from Trade and Comparative Advantage (Lecture 1, September 15th)

**DN Ch. 3 (pg. 71-72) and Ch. 4 (pg. 93-95)

**F Ch. 1 (pg. 1-3)

*Costinot, Arnaud (2009), "An Elementary Theory of Comparative Advantage", *Econometrica*, Vol. 77 No. 4, pp. 1165-1192.

*Deardorff, Alan V. (1980) "The General Validity of the Law of Comparative Advantage" *The Journal of Political Economy*, Vol. 88, No. 5, pp. 941-957

Dixit, A.K., "Gains from Trade Without Lump Sum Compensation," *Journal of International Economics*, Vol. 21, 1986.

Bernhofen, Daniel M. and John C. Brown (2004), "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," *Journal of Political Economy*, Vol. 112, No. 1, pp. 48-67

The Ricardian Model (Lectures 1-3, September 15th, 22nd, 29th)

** Dornbusch, Rudiger and Stanley Fischer, and Paul Samuelson (1977) "Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods," *The American Economic Review*, Vol. 67, No. 5, pp. 823-839

** Eaton, Jonathan and Samuel Kortum (2002) "Technology, Geography, and Trade," *Econometrica*, Vol. 70, No. 5, pp. 1741-1779.

**Robert Dekle and Jonathan Eaton and Samuel Kortum (2007) "Unbalanced Trade", *American Economic Review: Papers and Proceedings*, Vol. 97 No. 2 pg. 351-355.

**Caliendo, Lorenzo and Fernando Parro (2015) "Estimates of the Trade and Welfare Effects of NAFTA" *Review of Economic Studies*, Vol. 82, No. 1, pp. 1-44

*Costinot, Arnaud and David Donaldson, and Ivana Komunjer (2012) "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas," *Review of Economic Studies*, Vol. 79, No. 2, pp 581-608.

Models of Increasing Returns to Scale (Lecture 4, October 6th)

**Krugman, Paul (1979) "Increasing Returns, Monopolistic Competition, and International Trade" *Journal of International Economics* Vol 15. Pp. 313-321

**Krugman, Paul (1980) "Scale Economies, Product Differentiation, and the Pattern of Trade," *The American Economic Review*, Vol. 70, No. 5 (Dec., 1980), pp. 950-959

Ottaviano, Gianmarco and Takatoshi Tabuchi, and Jacques-Francois Thiesse (2002) "Agglomeration and Trade Revisited," *International Economic Review*, Vol. 43, No. 2, pp. 409-435

Firm Heterogeneity: Empirics and theory (Lectures 5-7, October 13th, 20th, and 27th)

** Bernard, Andrew B. and J. Bradford Jensen and Stephen J. Redding and Peter K. Schott (2007) "Firms in international trade." *Journal of Economic perspectives* 21.3 (2007): 105-130.

** Melitz, Marc J. (2003) "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity", *Econometrica*, Vol. 71, No. 6, pp 1695-1725

** Melitz, Marc J. and Gianmarco Ottaviano (2008) "Market Size, Trade, and Productivity", *Review of Economic Studies*, Vol. 75, No. 1, pp 295-316

** Atkeson, Anthony and Ariel Burstein (2008) "Pricing to Market, Trade Costs, and International Relative Prices" *American Economic Review*. Vol. 98, No. 5, pp. 1998-2031

** De Loecker, Jan and Pinelopi Goldberg (2014) "Firm Performance in a Global Market", *Annual Review of Economics*, Vol. 6 pages 201-227

* Melitz, Marc J. and Stephen J. Redding (2014) "Heterogeneous Firms and Trade", *Handbook of International Economics*.

* Trefler, Daniel. (2004). The long and short of the Canada-US free trade agreement. *American Economic Review*, 94(4), 870-895

Holmes, Thomas J. and James A. Schimdt (2011) "Competition and Productivity: A Review of Evidence", *Annual Review of Economics*, Vol. 2 pages 619-642

Akerberg, Daniel, Lanier Benkard, Steven Berry and Ariel Pakes (2007) "Econometric Tools for Analyzing Market Outcomes", *Handbook of Econometrics*, Vol. 6, pages 4171-4276 **Section 2.**

Gravity, Geography, and Trade (Lecture 10, November 24th)

** [Revisited] Eaton, Jonathan and Samuel Kortum (2002) "Technology, Geography, and Trade," *Econometrica*, Vol. 70, No. 5, pp. 1741-1779

** Redding, Stephen and Anthony Venables (2004) "Economic Geography and International Inequality," *Journal of International Economics*, Vol. 62, No. 1, pp. 53-82

** Redding, Stephen J. (2016) "Goods Trade, Factor Mobility, and Welfare," *Journal of International Economics*, Vol. 101, pp. 148-167

* Anderson, James and Eric van Wincoop (2003) "Gravity with Gravitas: A solution to the border puzzle," *American Economic Review*, Vol. 92, No. 1, pp. 170-192

* Arkolakis, Costas, Arnaud Costinot, and Andrés Rodríguez-Clare. "New trade models, same old gains?." *American Economic Review* 102.1 (2012): 94-130.

* Thomas Chaney (2008) "Distorted Gravity: The Intensive and Extensive Margins of International Trade", *American Economic Review*, Vol. 98, No. 4, pp 1707-1721

* Allen, Treb and Costas Arkolakis (2014) "Trade and Topography of a Spatial Economy," *Quarterly Journal of Economics*, vol. 129, No. 3, pp. 1085-1140

- * Allen, Treb and Costas Arkolakis (2014) "Universal Gravity," *NBER Working Paper #20787*,
- Alvarez, Fernando and Robert Lucas (2007) "'General equilibrium analysis of the Eaton-Kortum model of international trade," *Journal of Monetary Economics*, vol. 70, No. 6, pp. 1726-1768
- Anderson, James (2011) "The Gravity Model", *Annual Review of Economics*, vol. 3, pp. 133-160.
- Fujita, Masahisa and Paul Krugman and Anthony Venables (1999) *The Spatial Economy: cities, regions, and international trade*, The MIT Press, Cambridge, MA.
- Head, Keith and Thierry Mayer (2014) "Gravity Equations: Workhorse, Toolkit, and Cookbook", *Handbook of International Economics*.
- Krugman, Paul and Anthony Venables (1995) "Globalization and the Inequality of Nations", *Quarterly Journal of Economics*, Vol. 110, no. 4 (1995): 857-880.
- Redding, Stephen and Esteban Rossi-Hansberg (2017) "Quantitative Spatial Economics", *Annual Review of Economics*, Vol. 9, pg. 21-58

Trade and Wages (Lectures 11 and 12 December 1st and 8th)

**F ch. 4

**Autor, David and Frank Levy, and Richard Murnane (2003) "The Skill Content of Recent Technological Change: An Empirical Exploration," *Quarterly Journal of Economics*, November.

**Autor, David and David Dorn and Gordon Hanson (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*, 103(6), 2121-2168

** Autor, David and David Dorn, and Gordon H. Hanson (2016) "The China shock: Learning from labor-market adjustment to large changes in trade", *Annual Review of Economics*, Vol. 8 pages 205-240. *This article summarizes much of the "China shock" literature by Autor, Dorn, and Hanson that is cited above.*

** Bloom, Nicholas and Kyle Handley and Andre Kurman and Phillip Luck (2019) "The Impact of Chinese Trade on U.S. Employment: The Good, The Bad, and The Debatable" *working paper*.

** Dix-Carneiro, Rafael, and Brian K. Kovak. (2017). "Trade liberalization and regional dynamics", *American Economic Review*, 107(10), 2908-46.

** Goldberg, Penny and Nina Pavcnik, (2007). "Distributional effects of globalization in developing countries." *Journal of economic Literature*, 45(1), 39-82.

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

*Autor, David and David Dorn and Gordon Hanson (2014), "Trade Adjustment: Worker Level Evidence," *Quarterly Journal of Economics*, 129(4), 1799-1860

*Borusyak, K., Hull, P., & Jaravel, X. (2018). *Quasi-experimental shift-share research designs* (No. w24997). National Bureau of Economic Research.

*Erhan Artuc & Shubham Chaudhuri & John McLaren, 2010. "Trade Shocks and Labor Adjustment: A Structural Empirical Approach," *American Economic Review*, vol. 100(3), pages 1008-45.

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

Acemoglu, Daron and David Autor and David Dorn and Gordon Hanson and Brendan Price (2015), "Import Competition and the Great U.S. Employment Sag of the 2000s," *Journal of Labor Economics*, forthcoming

Autor, David and David Dorn (2013), "The Growth of Low Skill Service Jobs and the Polarization of the U.S. Labor Market," *American Economic Review*, 103(5), 1553-1597

Autor, David and David Dorn and Gordon Hanson (2015), "Untangling Trade and Technology: Evidence from Local Labour Markets," *Economic Journal*, 125(584), 621-646

Hummels, David & Rasmus Jorgensen & Jakob Munch & Chong Xiang, (2014), "The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data," *American Economic Review*, vol. 104(6), pages 1597-1629.

Pierce, Justin R, and Peter K Schott, (2015) "The Surprisingly Swift Decline of U.S. Manufacturing Employment." Yale Department of Economics Working Paper.

Berman, Eli and John Bound, and Zvi Griliches, (1994) "Changes in the Demand for Skilled Labor Within U.S. Manufacturing Industries: Evidence from the Annual Survey of Manufacturing" *The Quarterly Journal of Economics*, Vol. 109, No. 2, pp. 367-397

Devlin, Allison and Brian Kovak and Peter Morrow (2020) "The Long Run Labor Market Effects of the Canada-U.S. Free Trade Agreement", *Working Paper*, The University of Toronto

Firpo, Sergio and Nicole Fortin & Thomas Lemieux, (2013), "Occupational Tasks and Changes in the Wage Structure", *Working Paper*, University of British Columbia

Harrison, Ann and John McLaren, and Margaret McMillen (2011) "Recent Perspectives on Trade and Inequality", *Annual Review of Economics*, Vol. 3 pp. 261-289

Katz, Lawrence and Kevin Murphy, (1992): "Changes in Relative Wages, 1963-1987: Supply and Demand Factors," *The Quarterly Journal of Economics*, Vol. 107, No. 1, pp. 35-78

McLaren, John (2017) "Globalization and Labor Market Dynamics", *Annual Review of Economics*, Vol. 9, pp. 177-200

Setzer, Bradley and Felix Tintlenot (2020) "The Effects of Foreign Multinationals on Workers and Firms in the United States", *Working Paper*, University of Chicago

Assorted Topics (Time Permitting)

Barjamovic, G., Chaney, T., Coşar, K., & Hortaçsu, A. (2019). “Trade, merchants, and the lost cities of the bronze age.” *The Quarterly Journal of Economics*, 134(3), 1455-1503.

Costinot, Arnaud and David Donaldson, and Cory Smith (2016) “Evolving comparative advantage and the impact of climate change in agricultural markets: Evidence from 1.7 million fields around the world”, *Journal of Political Economy*, Vol. 124(1) pp. 205-248

Shapiro, Joseph S. (2016) “Trade Costs, CO2, and the Environment”, *American Economic Journal: Economic Policy*, Vol. 8, No. 4, pp. 220-254.

Shapiro, Joseph. S., and Reed Walker, (2018). “Why is pollution from US manufacturing declining? The roles of environmental regulation, productivity, and trade.” *American Economic Review*, 108(12), 3814-54.

Van Patten, Diana and Esteban Méndez-Chacón (2020) “Multinationals, Monopsony, and Local Development: Evidence from the United Fruit Company”, *Working Paper*, UCLA