

## Syllabus

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**Course: Theory and Quantitative Methods in International Trade**

**Professor: João Paulo Pessoa**

**Teaching Assistant: Rafael Bressan**

**2022 FIRST SEMESTER**

### COURSE OUTLINE AND METHODOLOGY

The aim of the course is to study recent developments in the field of international trade. It takes a theoretical and empirical approach. We will discuss core trade theories and their empirical applications. Hence, students will deal with both theoretical and empirical tools, including state-of-the-art structural estimation techniques used in the field.

I will cover five broad topics: (i) the Melitz model and firm heterogeneity; (ii) the Eaton-Kortum model and quantitative trade models; (iii) estimation of gravity equations; (iv) gains from trade and the ACR formula; (v) trade and labor markets. The sixth topic is flexible and may change according to students' interests.

### PROGRAM

**I. Increasing Returns to Scale, Intra-Industry Trade and Heterogeneous Firms**

**II. Technological Differences**

**III. The Gravity Equation**

**IV. Gains from Trade**

**V. Trade and Labor Markets**

V.1.Theory

V.2 Empirics

V2. Structural Models

**VI. Other Topics**

VI.1. Open – see list of potential topics.

### BIBLIOGRAPHY

**I. Increasing Returns to Scale, Intra-Industry Trade and Heterogeneous Firms**

- \* Krugman, P. "Increasing returns, monopolistic competition, and international trade," *Journal of International Economics* 9(4), 469–479, 1979.
- \* Bernard, A., S. Redding and P. Schott. "Firms in International Trade," *Journal of Economic Perspectives*, 21(3), 105–130, 2007.
- \* Melitz, M. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica* 1695-1725, 2003.

Dixit, A. and J. Stiglitz. "Monopolistic Competition and Optimum Product Diversity," *AER* 67(3), 297-308, 1977.

Krugman, P. "Scale Economies, Product Differentiation, and the Pattern of Trade," *AER* 70: 950-959, 1980.

**Hv4 (ch. 1, 1-54):** M. Melitz & S. Redding, "Heterogeneous Firms and Trade."

Mayer, T. and G. Ottaviano. "The Happy Few: the Internationalisation of European Firms – New facts based on firm-level evidence." Bruegel blueprint series, vol. 3, 2007.

Melitz, M. and G. Ottaviano. "Market Size, Trade, and Productivity," *Review of Economic Studies*, 75(1), 295-316, 2008.

Helpman, E., M. Melitz and S. Yeaple. "Export versus FDI with Heterogeneous Firms," *AER* 94, 300-316, 2004.

Bernard, A., S. Redding and P. Schott. "Comparative Advantage and Heterogeneous Firms," *Review of Economic Studies* 74: 31-66, 2007.

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

Arkolakis, C. "Market Penetration Costs and the New Consumers Margin in International Trade," *JPE* 118(6): 1151-1199, 2010.

Trefler, D. "The Long and Short of the Canada-U.S. Free Trade Agreement", *American Economic Review* 94, 870-895, 2004.

## II. Technological Differences

- \* Eaton, J. and S. Kortum. "[Technology, geography, and trade](#)," *Econometrica* 70(5), 1741-1779, 2002.

R. Dornbusch, S. Fischer and P. Samuelson. "[Comparative advantage, trade, and payments in a Ricardian model with a continuum of goods](#)," *AER* 67: 823-839, 1977.

Eaton, J., S. Kortum and F. Kramarz. "An Anatomy of International Trade: Evidence from French Firms," *Econometrica* 79: 1453-1498, 2011.

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

### III. The Gravity Equation

\* **Hv4 (ch. 3, 131-195):** K. Head and T. Mayer, "Gravity Equations: Workhorse, Toolkit, and Cookbook."

### IV. Gains from Trade

\* **Hv4 (ch. 4, 197-264):** A. Costinot and A. Rodríguez-Clare, "Trade Theory with Numbers: Quantifying the Consequences of Globalization."

\* C. Arkolakis, A. Costinot and A. Rodríguez-Clare. "[New Trade Model, Same Old Gains?](#)" *AER* 94-130, 2012.

Donaldson, D. "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure" *AER*, forthcoming.

Melitz, M. and S. Redding. "Firm Heterogeneity and Aggregate Welfare," NBER Working Paper No. 18919, 2013.

D. Bernhofen and J. Brown. "An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan," *AER* 95(1): 208-225, 2005.

### V. Trade and Labor Markets

#### V.1. Theory

Helpman, Elhanan and Oleg Itskhoki & Stephen Redding. "Inequality and Unemployment in a Global Economy," *Econometrica*, Econometric Society, vol. 78(4), pages 1239-1283, 07, 2010.

#### V.2 Empirics

\*Autor, David H. and David Dorn and Gordon H. Hanson. "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *American Economic Review*, American Economic Association, vol. 103(6), pages 2121-68, October, 2013.

\*Costa, Francisco and Jason Garred and Joao Paulo Pessoa. "Winners and Losers from a Commodities-for-Manufactures Trade Boom," *Journal of International Economics* (forthcoming), 2016.

Autor, David H. and David Dorn and Gordon H. Hanson and Jae Song. "Trade Adjustment:

Worker-Level Evidence," *The Quarterly Journal of Economics*, Oxford University Press, vol. 129(4), pages 1799-1860, 2014.

### V.3. Structural Models

- \*Artuç, Erhan, Shubham Chaudhuri and John McLaren. 2010. "Trade Shocks and Labor Adjustment: A Structural Empirical Approach." *American Economic Review*, 100(3): 1008-45.
- \* Dix-Carneiro, Rafael, João Paulo Pessoa, Ricardo Reyes-Heroles and Sharon Traiberman. 2021. "Globalization, Trade Imbalances, and Labor Market Adjustment," mimeo.

## VI. Other Topics

### VI.1. Trade and Environment

- \*Taylor, Scott. 2011. "Buffalo Hunt: International Trade and the Virtual Extinction of the North American Bison," *American Economic Review*, Vol. 101, No. 7, December 2011, 1-36.
- \*Costinot, A., Donaldson, D., and Smith, C. 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*, 124(1):205{248.

### VI.2. Trade and Uncertainty

- \*Handley, Kyle and Nuno Limão. "Policy Uncertainty, Trade and Welfare: Theory and Evidence for China and the U.S," NBER Working Papers 19376, 2013.
- Pierce, Justin R. and Peter K. Schott. "The Surprisingly Swift Decline of U.S. Manufacturing Employment," NBER Working Papers 18655, 2012.

### VI.3. Trade and Innovation

- \*Bloom, Nicholas and Mirko Draca and John Van Reenen. "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity," *Review of Economic Studies*, Oxford University Press, vol. 83(1), pages 87-117, 2016.
- Buera, F. and Ezra Oberfield. "The Global Diffusion of Ideas," NBER Working Paper Series 21844, 2016.

### VI.4 Suggestions are welcome!

## GRADING

Problem Sets/Empirical Exercises: 70% of the final grade.  
Presentation and class participation: 30% of the final grade.

[OBS: Art. 46º - Aos alunos dos Cursos de Mestrado Acadêmico e Doutorado é atribuída nota em cada disciplina, variável de 0 (zero) a 10 (dez).

I - A nota final dos alunos em cada disciplina, variável de 0 (zero) a 10 (dez), é a média ponderada das notas atribuídas:

I.I) a uma ou mais formas de avaliações intermediárias;

I.II) à avaliação final, que pode constar de prova escrita ou de trabalho final;

II - O peso atribuído à nota de cada uma das formas de avaliação da disciplina é determinado pelo professor da disciplina e deve constar explicitamente do respectivo programa, não sendo permitido atribuir peso superior a 60% (sessenta por cento) a nenhuma das formas de avaliação especificadas]

## **PROFESSOR - EMAILS**

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