

Trade Theory

ECON4001

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Autumn 2023
Class: Monday 678 (13:20-16:20)
Location: College of Social Sciences Bldg. Rm 503

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(Please write [Trade theory] as the header of your email title so that I can easily spot your email)

Teaching Assistant
TBA

1 Overview

This course studies the issues in international trade, or any trade in general.

I start by discussing the two concepts that underlie trades between any individuals or groups of individuals, not just international trade: Division of labor and comparative advantage from Adam Smith and David Ricardo.¹ We will obtain the fundamental insight that trade enables the division of labor, which leads to productivity increase and prosperity.

Then this class will study the empirics and theories that are more specific to trade between countries. Empirically, gravity equations will be introduced. I will show you where to obtain important international trade data. You will perform simple exercises of using these data either in class or as homework. I will also review empirical international trade literature. Theoretically, I will introduce simple versions of key models in the modern trade literature. For each theoretical model, I will provide empirical motivations. As you can see, empirics and theory are closely intertwined in this class.

2 Homeworks and Exams

Homeworks

- There will be occasional Stata homeworks. I will often just give you the entire code which you will be required to slightly edit. You can use Stata at the computing lab the Social Science building.
- There might be occasional additional homeworks.

Exams

- Only less than 30% of the exams and homeworks will be about solving mathematical models.
- But it is still important to remember and understand the models covered in the class.

¹The first three chapters of The Wealth of Nations by Adam Smith are devoted to the discussion of the division of labor.

- Chapter 1: “On the division of labour”
- Chapter 2: “On the principle which gives occasion to the division of labour”
- Chapter 3: “That the division of labour is limited by the extent of the market”

- Instead, I will ask more about economics. For example,
 - Here is the model. What is an economic interpretation of assumption 1 and equation 3?
 - A politician says XXX. Criticize it from the perspective of Ricardian model.
 - What empirical facts motivated this model?
 - Which of the following is true about NAFTA?
 - Which assumption was introduced to replicate those empirical facts?
 - What predictions do you expect this model to make?
 - You want to verify XXX. Which organization's website has the data you need?
 - What policy recommendation does model X make? What assumptions led to the conclusion?
 - What theory did this empirical paper use to rationalize their finding?

3 Grading

Requirement	% of Grade
1. Midterm exam	30%
2. Final exam	50%
3. Homeworks	20%

4 Prerequisites

- Taking the Econ101 (Principles of Economics) might help, but not essential.
- No prior knowledge of statistical software is required, although it will be useful.
- No prior knowledge beyond high school math and very basic calculus is needed.
- Very basic calculus
 - Differentiate it, and you obtain the slope of the graph.
 - If $f(x) = x^n$, then $f'(x) = nx^{n-1}$.
 - If $f(x) = \ln x$, then $f'(x) = 1/x$.
 - If you differentiate $f(g(x))$, you get $f'(g(x))g'(x)$.
 - Suppose f is twice differentiable. If $f'(x^*) = 0$ and $f''(x) < 0$, then $f(x)$ is maximized at $x = x^*$.
 - Little more than the above basic knowledge is required.
 - Anyways, as I said above, solving mathematical models will be less than 30% of the exams.

5 Health and Accommodations

- If you have physical disabilities, feel free to tell me how I can help.
- If you suspect that you might have infectious airborne diseases such as Covid-19, you should follow the advice of the public health authorities.

6 Topics Covered (tentative)

- Division of labor and trade
- Comparative advantage and trade
- Increasing returns to scale and trade
- Trade data, concepts, and measurement
- Ricardian model
- Heckscher-Ohlin model
- Krugman model
- Melitz model
- Impact of trade with China on the US economy
- Offshoring
- Trade policies
- Political economy of trade policy
- Controversies in trade policy