International Trade: Lecture 1

The Principle of Comparative Advantage

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- When this a reasonable criticism?
- My claim: a good model *must* simplify reality

What science truly means

On Exactitude in Science
Jorge Luis Borges, *Collected Fictions*, translated by Andrew Hurley.

…In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast Map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters. In the Deserts of the West, still today, there are Tattered Ruins of that Map, inhabited by Animals and Beggars; in all the Land there is no other Relic of the Disciplines of Geography.

—Suarez Miranda, *Viajes de varones prudentes*, Libro IV, Cap. XLV, Lerida, 1658

Most beautiful intro in all of economics

A CONTRIBUTION TO THE THEORY OF ECONOMIC GROWTH

By Robert M. Solow

I. Introduction

All theory depends on assumptions which are not quite true. That is what makes it theory. The art of successful theorizing is to make the inevitable simplifying assumptions in such a way that the final results are not very sensitive.[1] A "crucial" assumption is one on which the conclusions do depend sensitively, and it is important that crucial assumptions be reasonably realistic. When the results of a theory seem to flow specifically from a special crucial assumption, then if the assumption is dubious, the results are suspect.

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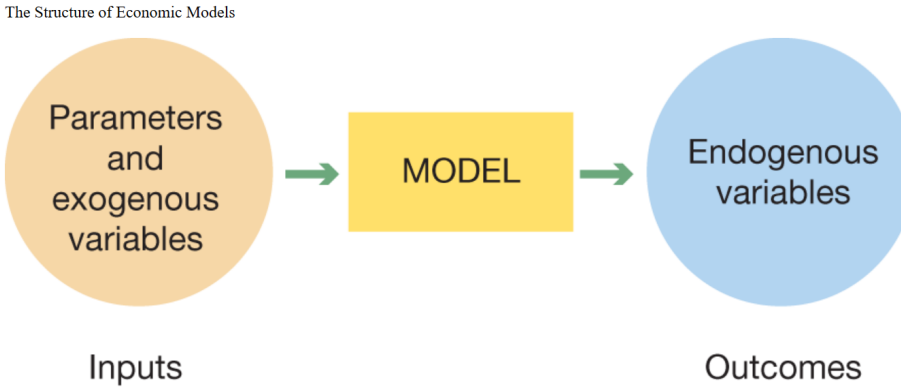
- A theory that tries to model everything is a bad theory
- Why? It obfuscates rather than illuminates.
- The point of science is to explain some causal relationship.
- Solow: crucial assumptions to explain that causal relationship must be realistic.

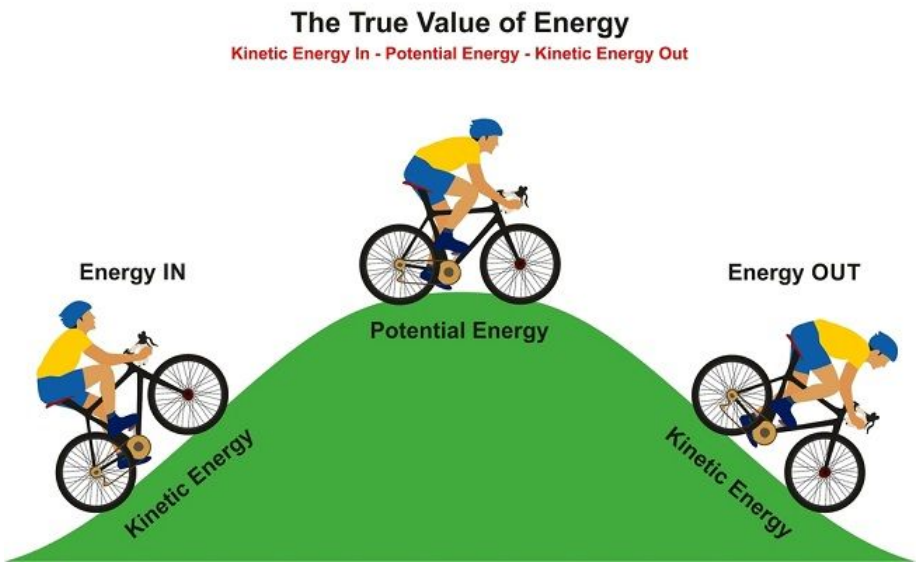
How to think like a economist (or like most scientists)?

- Document the facts
- Develop a simplified a model
- Compare the predictions of the model with the original facts (i.e., test the model)
- Use the model to make other predictions that may eventually be tested (i.e., run counterfactual experiments with the model).

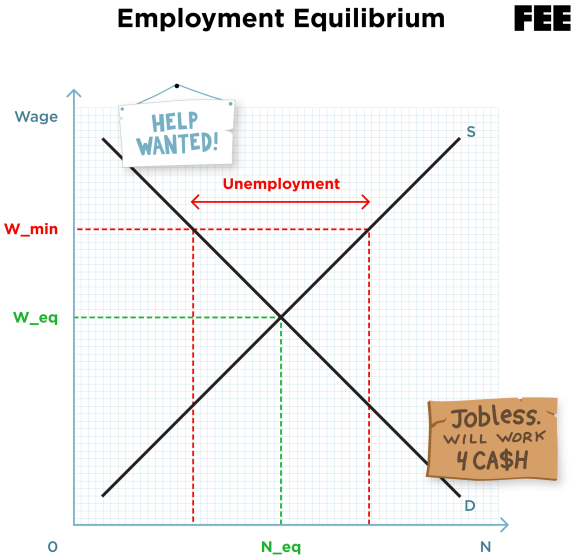
What is a model?



A model in HS physics



A model in Econ 101



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- If not why?
- In the real world, neither model fully generalizes.
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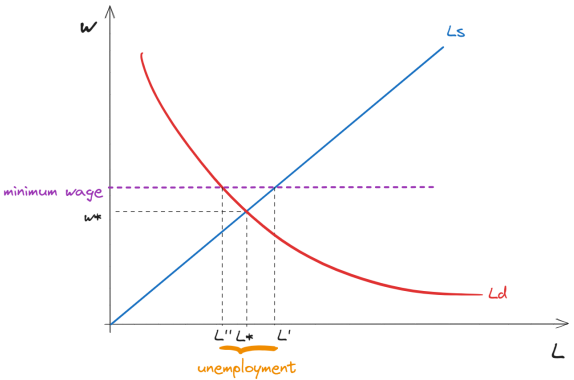
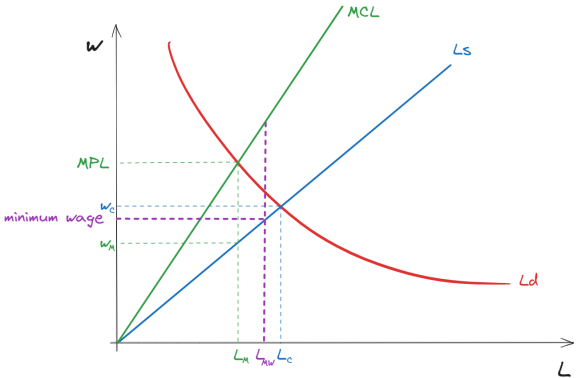
- But they both can explain the world *under certain assumptions*...

Two models in Econ 201





The Minimum Wage and Labor Market Structure

- Under perfectly competitive labor market, the minimum wage results in lower labor demand, and unemployment
- Under monopsony, the minimum wages results in higher labor supply, and lower unemployment
- **Bottom Line**: the stylized labor market we have studied should be used with extra care when thinking about labor market policies!
- **But context matters**: even under monopsony, there are limits to the minimum wage!

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- What happens if we change a parameter in the model?
- Gravity, temperature, altitude...?
- Taxes, government expenditure, inflation, elasticities, etc...?
- How would our predictions change? How does that align with reality? Which of these parameters can we observe? Which of them do we have to calibrate indirectly?

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  - I am teaching so that I can pay for my wife's handbags;

- What makes countries (or people) trade?

Why do we trade?

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- What makes countries (or people) trade?

  - Different skills (e.g., I am bad mechanic, so I pay Jiffy Lube instead)
  - Different endowments (e.g., Saudi Arabia has a lot of oil; Luxembourg does not);
  - Different products (e.g., both France and Italy produce wine, but trade for variety);

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  "To preserve the ballance of trade in favour of a nation ought to be a leading aim of its policy. The avarice of individuals may frequently find its account in pursuing channels of traffic prejudicial to that ballance, to which the government may be able to oppose effectual impediments." *Alexander Hamilton, The Continentalist V, 1782*

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- If it were true across states, why would it not be true across households?
- Should John try to grow his vegetables rather than trading with Whole Foods?
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- Would they be better off?

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"It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy. [...] What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom." *Adam Smith, The Wealth of Nations, 1776*

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we call these gains from trade

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- Can trade make US workers (as an aggregate) better off?

Production Possibilities Frontier: Numerical Example

	US	**Colombia**
Opportunity cost	$\frac{1}{100}$ **computers per rose**	$\frac{1}{900}$ **computers per rose**
Autarky consumption	10 million **roses** 100,000 **computers**	9 million **roses** 10,000 **computers**

All output measured in terms of roses for comparison

Production Possibilities Frontier in Autarky

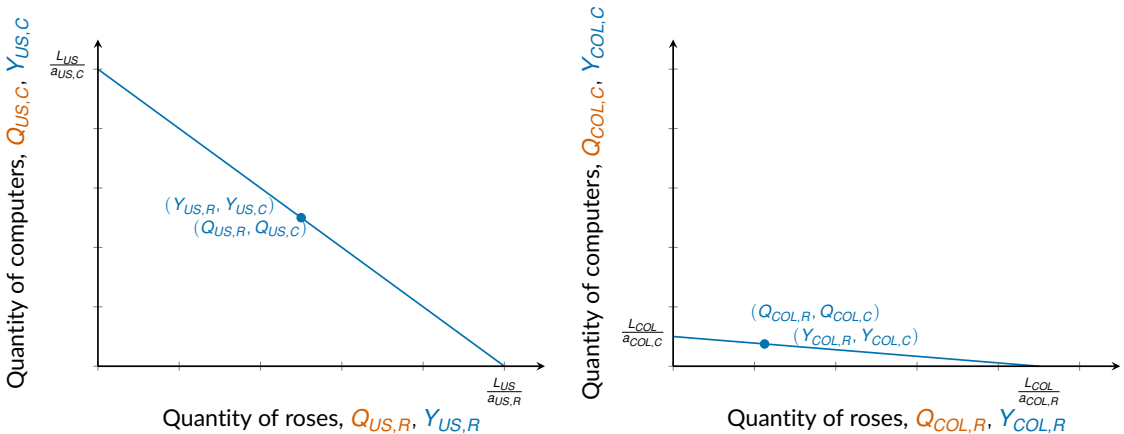

Figure: Autarky Equilibrium

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Suppose world price is	$\frac{1}{135}$ **computers per rose**	
Specialization	Make 100,000 **computers**; Trade for up to 13.5 million **roses**	Grow 9 million **roses**; Trade for up to 66,666 **computers**

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Production Possibilities Frontier + Trade Prices

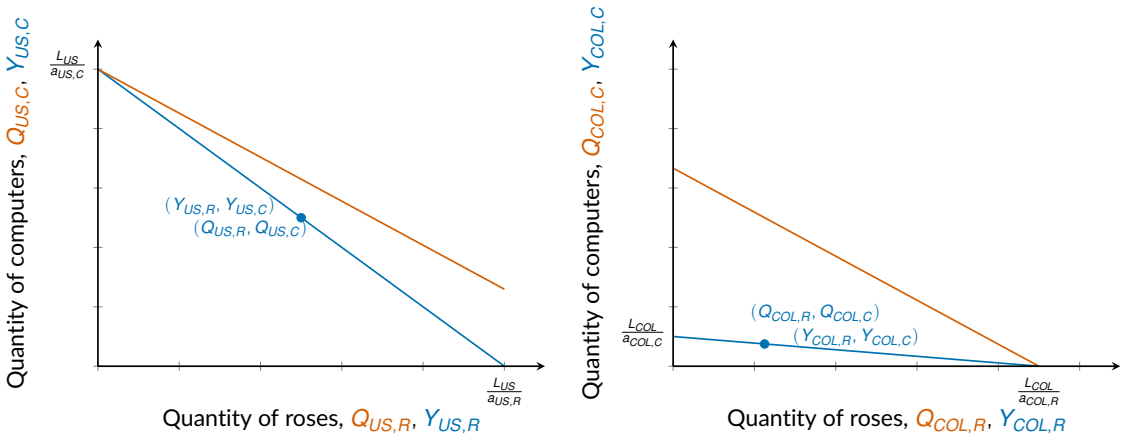

Figure: Autarky Equilibrium + Trade Prices = More possibilities for Consumption

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- Parameters and exogenous variables:
  - Endowments (as we will see, number of workers/labor hours)
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- Endogenous variables:
  - **Quantities produced** of each good in each country are optimal for producers
  - **Quantities consumed** of each good in each country are optimal for consumers
  - **Prices** adjust such that supply = demand

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- Even though the US benefits in aggregate terms (Caliendo, Dvorkin, & Parro, 2019), there were distributional consequences