Lecture 3: How Trade Creates Wealth

Benjamin Graham
Today’s Plan

• Housekeeping
• Reading quiz
• How trade creates wealth
  • Comparative vs. Absolute Advantage
Housekeeping

• Does everyone have their books and clickers?
  • All clickers registered?
• Homework 1 will be on my website by tonight
  • Due Thursday Sept. 12
• Sections meet this week.
  • Participation grade
• Reading quizzes: Send me multiple choice questions by 7pm the night before, and if I use your question, you get an automatic 110% on the quiz.
Reading Quiz (1)

• The modern understanding of how trade creates wealth is based on:
  • A. The principle of the least-cost buyer
  • B. The principle of the highest-cost buyer
  • C. The principle of absolute advantage
  • D. The principle of comparative advantage
Reading Quiz (2)

• Autarky is:
  • A. Complete trade openness
  • B. The absence of trade
  • C. Mercantilism on steroids
If two countries have different resources and workers with different skills, then trade between these two countries will lead to:

A. Specialization
B. Production gains
C. Both A and B
D. Neither A nor B
The Big Puzzles

• Economists tell us that completely free trade will maximize global wealth. Why do we still see so many barriers to trade?

• Removing (or implementing) trade barriers creates both winners and losers. Who wins, who loses?
Taking a Step Back

• How does trade create wealth?

• Today: The principle of comparative advantage
Factors of Production

• Inputs
  • Anything that is used to produce a good (or service) is called a factor of production.

• Primary factors:
  • Land
    • Farm land, space to set up a factory, etc. (acres)
  • Labor
    • Person-hours of work.
  • Capital
    • Anything that helps you make more product with less land and labor
      • Money, equipment, tools
      • “Human capital” = education, knowledge
Absolute Advantage

• A country has absolute advantage when it can make a good using less inputs (labor, land, capital) than another country can.

• Adam Smith says: if two countries each have absolute advantage over the other in at least one thing, they can trade productively.
Absolute Advantage

• A country has absolute advantage when it can make a good using less inputs (labor, land, capital) than another country can.

World output possibilities in the absence of specialization

<table>
<thead>
<tr>
<th>Nation</th>
<th>Wine</th>
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<tbody>
<tr>
<td>United States</td>
<td>5 bottles</td>
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Absolute Advantage

- Trade and specialization makes us better off:
  - US makes 40 yards of cloth
  - UK makes 30 bottles of wine
  - They trade 10 bottles of wine for 15 yards of cloth
  - Now the US has 10 bottles and 25 yards of cloth and the UK has 20 bottles and 15 yards of cloth. Both are better off.

**OUTPUT PER LABOR HOUR**

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Principal of Comparative Advantage

• Two countries can both benefit from trade EVEN IF one of them has an absolute advantage in everything.

• What matters is the marginal rate of transformation (MRT)
  • How many bottles of wine do I have to give up to make an extra yard of cloth?
Marginal Rate of Transformation

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- The US MRT from wine to cloth is $40/40 = 1$
  - The US would have to make 1 less bottle of wine in order to make one extra yard of cloth
- The UK MRT from wine to cloth is $20/2 = 2$
  - The UK has to give up 2 bottles to make 1 extra yard of cloth
Clicker Question

• What is the MRT from steel to TVs for the US?
  • A. 1/3 of a ton per TV
  • B. 3 tons per TV
  • C. 5 tons per TV
  • D. 1/2 of a ton per TV

Table 2.1. Output Possibilities of the U.S. and the U.K.

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Clicker Question

### OUTPUT PER LABOR HOUR

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- If these were the only two countries in the world (and the only two products), who should specialize in what?
  - A. The UK should specialize in wine, the US should specialize in cloth
  - B. The US should specialize in wine, the UK should specialize in cloth
  - C. The UK should specialize in wine, it doesn’t matter for the US
  - D. The UK should specialize in cloth, it doesn’t matter for the US
Comparative Advantage

• Trade and specialization makes us better off:
  • US makes 60 yards of cotton and 20 bottles of wine
  • UK makes 40 bottles of wine
  • UK trades 20 bottles of wine for 15 yards of cloth
  • Now the US has 40 bottles and 45 yards of cloth and the UK has 20 bottles and 15 yards of cloth. Both are better off.

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Clicker Question

• The UK has a comparative advantage in:
  • A. Steel
  • B. Televisions
  • C. Neither
  • D. Both

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Clicker Question

- If the world had only two countries and two products, the US should specialize in producing:
  - A. Steel
  - B. Televisions
  - C. Neither
  - D. Both

Table 2.1. Output Possibilities of the U.S. and the U.K.

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Clicker Question

Mutually advantageous trade will occur between the United States and the United Kingdom so long as one ton of steel trades for:

a. At least 1 television, but no more than 2 televisions
b. At least 2 televisions, but no more than 3 televisions
c. At least 3 televisions, but no more than 4 televisions
d. At least 4 televisions, but no more than 5 televisions

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There are more than two products, yo

• Rank the products by the degree of comparative cost

• Each country produces (and exports) the products in which they have the greatest comparative advantage
There are more than two countries, yo

- Multilateral trade
Who wins, who loses?

• If the UK and the US decided to start trading with each other, who loses out?
  • A. Winemakers in the US and clothmakers in the UK
  • B. Clothmakers in the US and winemakers in the UK
  • C. Clothmakers in the UK only
  • D. Everyone in the UK

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Who wins, who loses?

• Suppose that cold temperatures cause the quantity of tea harvested to decrease. What should happen in the market for coffee?
  • A. Decrease both the equilibrium price and quantity
  • B. Increase both the equilibrium price and quantity
  • C. Decrease the equilibrium price and increase the equilibrium quantity
  • D. Increase the equilibrium price and decrease the equilibrium quantity.
What determines comparative advantage?

- Factor endowments -- land, natural resources, weather...
  - Saudi Arabia has a comparative advantage in producing oil
  - Florida has a comparative advantage producing oranges

- Past investments -- how much of what type of capital you have
  - Education, infrastructure, factories, machinery
Group Question

• Draw on the concepts from the last two lectures to answer this question:

• Assume there are no barriers to trade. I am a wealthy investor. Where should I build factories and place new equipment (i.e. where should I invest my capital)?

• Country A, with lots of land and labor and no capital of any kind

• Country B, with lots of capital of all kinds already in place

• Why?