


# AP MACROECONOMICS

## Unit 2.2



Unit 2  
**Adam Smith  
and the  
Free Market**

Lesson 2  
Krugman, Module 4 pp. 24 - 29

4-1

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# Trade



**Absolute and  
Comparative  
Advantage**

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### What you will learn in this Module:

- How trade leads to gains for an individual or an economy
- The difference between absolute advantage and comparative advantage
- How comparative advantage leads to gains from trade in the global marketplace



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## Unit 2.2



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**Consider your typical day:**

- You wake up to an alarm clock made in Korea.
- You pour yourself orange juice made from Florida oranges and coffee from beans grown in Brazil.
- You take a shower built with concrete from Oregon and plumbing fixtures from Italy.
- You put on some clothes made of cotton grown in Georgia and sewn in factories in Thailand.
- You watch the morning news broadcast from New York on your TV made in Japan.
- You drive to class in a car made of parts manufactured in a half-dozen different countries.

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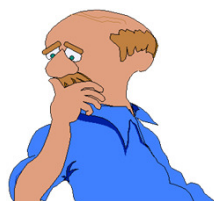
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**Interdependence and the Gains from Trade**

- Why is interdependence the norm?
- What determines the pattern of production and trade?



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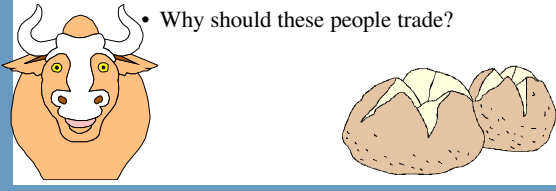
# AP MACROECONOMICS

## Unit 2.2

**A PARABLE FOR THE BENEFITS OF TRADE**

Imagine an economic system with only two goods, *potatoes and cows* and only two people, *Scrooge McDuck and Grunkle Stan*

- What should each person produce?
- Why should these people trade?




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**Scrooge McDuck**

Cows	Potatoes
0	32
2	24
4	16
6	8
8	0



**Grunkle Stan**

Cows	Potatoes
0	24
3	18
6	12
9	6
12	0

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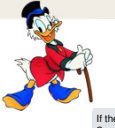
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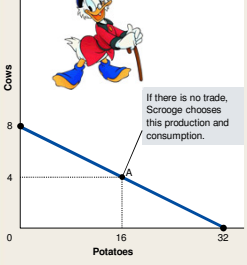
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**Each individual is in AUTARKY – complete self reliance.**  
**What is total world production of potatoes and cows?**



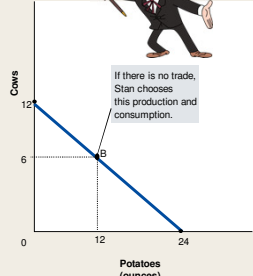
If there is no trade, Scrooge chooses this production and consumption.



Y-axis: Cows (0 to 8)  
X-axis: Potatoes (0 to 32)  
Point A: (16, 4)



If there is no trade, Stan chooses this production and consumption.



Y-axis: Cows (0 to 12)  
X-axis: Potatoes (ounces) (0 to 24)  
Point B: (12, 6)

**The Production Possibilities Frontiers**

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# AP MACROECONOMICS

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**COMPARATIVE ADVANTAGE**

- Differences in the opportunity costs answer these questions:

$$OC = L/G$$

- The producer who has the smaller opportunity cost of producing a good is said to have a *comparative advantage* in producing that good.

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**What is total possible production for both goods if they specialize in producing the good with the lowest cost?**

**The Production Possibilities Frontiers**

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**GAINS FROM TRADE!**

**If each specializes in what they do best and trades, their possibilities increase, and their PPF shift to the right.**

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# AP MACROECONOMICS

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### Comparative Advantage and Trade

#### • Benefits of Trade

- Trade can benefit everyone in a society because it allows people to specialize in activities in which they have a comparative advantage.



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### APPLICATIONS OF COMPARATIVE ADVANTAGE

Should the United States trade with other countries?



- Each country has many citizens with different interests. International trade can make some individuals worse off, even as it makes the country as a whole better off.

- *Imports*—goods produced abroad and sold domestically
- *Exports*—goods produced domestically and sold abroad

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### GLOBAL PERSPECTIVE Shares of World Exports, Selected Nations, 2011

Country	Exports (in billion USD)
United States	1796.26
China	1747.82
Germany	1509.87
Japan	908.84
Netherlands	686.36
France	663.66
United Kingdom	632.67
Korea, Republic of	548.38
Italy	544.53
Belgium	494.22

Source: International Trade Statistics 2011, WTO

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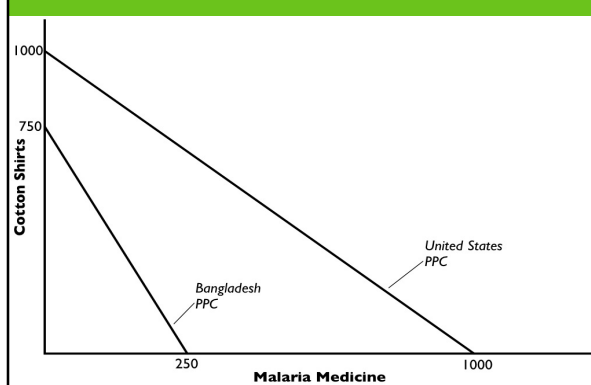
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# AP MACROECONOMICS

## Unit 2.2

### Production Possibilities for Two Countries




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### Absolute Advantage

- The comparison of producers according to total productivity.
  - The producer that can produce more of BOTH goods is said to have an *absolute advantage*.
  - **Trade is NOT based on Absolute Advantage, only Comparative Advantage!**

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### Production Possibilities for Two Countries

Will these two countries gain from trade if 100 units of malaria medicine are traded for 200 cotton shirts?

To find out:

1. Calculate the opportunity costs of production for each country
2. Determine the comparative advantage for each country
3. Determine if the terms of trade are mutually beneficial

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# AP MACROECONOMICS

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### Production Possibilities for Two Countries



	Bangladesh	United States
Cotton Shirts (C)	750C = 250M 1C = 1/3M	1000C = 1000M 1C = 1M
Malaria Medicine (M)	250M = 750C 1M = 3C	1000M = 1000C 1M = 1C

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### Production Possibilities for Two Countries



	Bangladesh	United States
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Malaria Medicine (M)	250M = 750C 1M = 3C	1000M = 1000C <b>1M = 1C</b>

The United States has a comparative advantage in Malaria Medicine.

Bangladesh has a comparative advantage in Cotton Shirts

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### Production Possibilities for Two Countries



	Bangladesh	United States
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Malaria Medicine (M)	250M = 750C <b>1M = 3C</b>	1000M = 1000C <b>1M = 1C</b>

TERMS OF TRADE are mutually beneficial if the RELATIVE PRICE is between the two country's opportunity costs.

The Relative Price of Medicine must be greater than 1 Shirt but less than 3 Shirts.

Conversely, the Price of Cotton Shirts must be greater than 1/3 Medicine but less than 1 Medicine.

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# AP MACROECONOMICS

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**Interdependence and the Gains from Trade**

- Why is interdependence the norm?
  - Interdependence occurs because people are better off when they specialize and trade with others.
- What determines the pattern of production and trade?
  - Patterns of production and trade are based upon differences in opportunity costs.



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**Summary**

- Interdependence and trade are desirable because they allow everyone to enjoy a greater quantity and variety of goods and services.
- There are two ways to compare the ability of two people producing a good.
  - The person who can produce a good with a smaller quantity of inputs has an absolute advantage.
  - The person with a smaller opportunity cost has a comparative advantage.

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**Summary**

- The gains from trade are based on comparative advantage, not absolute advantage.
- Trade makes everyone better off because it allows people to specialize in those activities in which they have a comparative advantage.
- The principle of comparative advantage applies to countries as well as people.

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