Lecture 3: Interdependence and Gains from Trade

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Scarcity...

... means that society has less to offer than people wish to have.

... implies decisions regarding economic and social activities pursued.

Managing society’s resources is important because resources are scarce.
How People Make Decisions: The Cost of Something Is What You Give Up to Get It

- Decisions require comparing costs and benefits of alternatives
  - Going to college vs. going to work
- **Opportunity Cost** is what you give up from one alternative (choice) to get what you want (from another choice).
How Do We Satisfy Our Wants and Needs Given Scarcity?

① We can be economically **Self-Sufficient**.

② We can specialize and trade with others leading to **Economic Interdependence**.
A general observation . . .
- Individuals and nations rely on specialized production and exchange as a way to address problems caused by scarcity.

This gives rise to two questions. . .
- Why is interdependence the norm?
- What determines production & trade?
Interdependence & 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 & trade?
  - Patterns of production and trade are based upon differences in opportunity costs.
An Example:

Imagine...

... only two goods (potatoes and meat)

... only two people (potato farmer and a cattle rancher)

... both have the same amount of land

What should each produce?

Why should they trade?
A World of Self-Sufficiency

*Note the graphs have different scales.

Linear PPF’s: imply what about the resources used to produce these goods?
By ignoring each other:

- the farmer and rancher will produce a limited amount of meat and potatoes.
- each consumes what they each produce.
- Suppose the rancher chooses to produce 20 lbs of meat and 2.5 lbs potatoes while the farmer produces 1 lb of meat and 2 lbs potatoes.
Self-Sufficiency: without trade, economic gains are limited.
Specialization and Trade
[Table 3-2 & Figure 3-2]

- If the farmer and the rancher were to specialize in producing the product that they were more suited to produce, and then trade with each other, they would be better off.
  - Farmer should produce potatoes.
  - Rancher should produce meat.
  - Farmer and Rancher should trade.
What determines who should produce what? And how much should be traded for each product?

Differences in Costs of Production

- Who can produce products (e.g. potato, meat) at a lower cost?
- There are two ways to measure...
The Principle of Comparative Advantage

- Measuring differences in costs of production:
  - inputs required to produce a standardized unit of output.
    - One pound of potatoes or meat
  - Opportunity Cost - amount of one item sacrificed to obtain another.
Absolute Advantage

- Describes the productivity of one person, firm, or nation to that of another.

  - The producer that requires a smaller quantity of inputs (such as land, time or resources) to produce a good is said to have an absolute advantage in producing that good.
Comparative Advantage

- Compares producers of a good according to their opportunity cost.
  - The producer who has the smaller opportunity cost of producing a good is said to have a comparative advantage in producing that good.
Specialization and Trade

- Who has the **absolute advantage**:  
  - The Farmer or The Rancher?
- Who has the **comparative advantage**:  
  - The Farmer or The Rancher?
The Principle of Comparative Advantage

- Comparative advantage and differences in opportunity costs are the basis for specialized production and trade.
- Whenever potential trading parties have differences in opportunity costs, they can each benefit from trade.
The Principle of Comparative Advantage

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

- Michael Jordan mowing his lawn or shooting a commercial?
  - Opportunity Costs...
  - Absolute Advantage...
  - Gains from trade...
Applications of Comparative Advantage

- Should the United States trade with Other Countries (e.g. Canada, Mexico, or Japan)?
  - Imports
  - Exports
  - Opportunity costs
Trade: U.S. and Canada

Cars

U.S.

Cars

Canada

4

2

2

2

Food

Food
Opportunity Cost: Sacrifice of Food Production for Car Production

Computing Opportunity Cost

Slope of PPF:

\[(0-4) \div (2-0) = -2\]

2 cars given up to get 1 Unit of food
Opportunity Cost: Sacrifice of Food Production for Car Production

Computing Opportunity Cost

Slope of PPF:

\[
\frac{\text{Units of food}}{\text{Unit of a car}} = \frac{2}{2}
\]

___ Units of food given up to get ___ Unit of a car
Who should produce cars and who should produce food?

Interdependence and trade are desirable because they allow everyone to enjoy a greater quantity and variety of goods and services. Founded upon the... Principle of Comparative Advantage
Summary:

- Scarcity implies decisions.
- The cost of something is what you give up to get it (opportunity cost).
- Trade can make us better off.
- Absolute advantage is when one can produce a unit of a good with less resources.
- Comparative advantage is when one’s opportunity cost of production is lower than another’s.
- Even if a country has an absolute advantage in all goods, if they do not have a comparative advantage trade can make them better off.