International Trade Theory

- Starting with Why Nations Trade, and
- Ending with a discussion of the Benefits to Trade.

Main Topics of the Lecture

- Mercantilism
- Absolute Advantage
- Comparative Advantage
- Opportunity Cost
- Production Possibilities Curves (Frontiers)
- Terms of Trade
- Gains to Trade
- New Trade Theories

Resource Endowments

- Countries experience unequal endowments of resources.
  - Natural Resources
  - Human Resources
  - Capital, and
  - Technology

Mercantilism

- Practiced throughout Europe to 1776.
- Believed that the possession of wealth, gold and silver, was the sign of a strong nation. (It was also useful when the king desired to finance a foreign war)
- Trade was conducted under the authority of governments, and trading rights were generally sold to the highest bidder.
Governments Generated Money
From the Manipulation of
Trade Monopolies

- Export and import rights were sold.
- The idea of a wealthy society was to have exports exceed imports so that the king’s treasure chests could be filled with money.
- David Hume showed the inconsistency of X>I in the long run by explaining inflation.

Advantages to Trade

1. We start with two countries not trading with each other
2. We define Production Possibility Curves
3. Then we introduce trade and observe the results

Adam Smith 1776

- Published the Wealth of Nations in which he described the operations of markets in a modern economy.
- The division of labor in modern industry, and
- The absolute advantage of certain resources in the production of goods
- Society’s primary productive element is seen as human labor

Absolute Advantage

A country is said to posses an absolute advantage over its trading partner when it can produce more of an output with a given amount of inputs.

This is shown in a Table of

<table>
<thead>
<tr>
<th>Outputs / unit of Input</th>
<th>Wine</th>
<th>Cloth</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Portugal</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

Example of Production/Consumption in Isolation

<table>
<thead>
<tr>
<th>Outputs / unit of Inputs</th>
<th>Production/Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wine Cloth</td>
<td>Inputs Wine Cloth</td>
</tr>
<tr>
<td>England 1 12</td>
<td>500/500 500 6,000</td>
</tr>
<tr>
<td>Portugal 6 10</td>
<td>500/500 3,000 5,000</td>
</tr>
<tr>
<td>Total production/consumption</td>
<td>3,500 11,000</td>
</tr>
</tbody>
</table>
in the two countries
A Production possibilities Curve (or boundary, or frontier)

- Defines the boundary of what is possible for a country to produce with its given resources. It represents all efficient combinations of products in a two product economy.
- All inefficient combinations are contained within the boundary curve, and
- The slope of the curve is the terms of trade.

International Terms of Trade

How shall the increase in output be divided between England and Portugal so that each is better off trading than by remaining self-sufficient?

For Wine: \( \frac{2}{3} \text{ Cloth} \leq 1 \text{ Wine} \leq 12 \text{ Cloth} \)

For Cloth: \( \frac{1}{12} \text{ Wine} \leq 1 \text{ Cloth} \leq \frac{3}{5} \text{ Wine} \)

Now assume that each country specializes in the production of that product for which it has an absolute advantage

- England has an absolute advantage in Cloth
- Portugal has an absolute advantage in Wine
- Outputs/1000 units of Inputs
  - Wine Cloth
  - England 0 12,000
  - Portugal 6,000 0
- Total output = 6,000 12,000

Question: Who gets the additional units?

Advantages to Trade

- Countries can Exceed the boundaries of their Production Possibilities Curves through trade.
- Both countries can be made better off, defined as having a higher standard of living through trade.

Terms of Trade

- How shall the increase in output be divided between England and Portugal?
- To answer this we must first define the domestic Terms of Trade “ToT” in each country.
- In England: 1 unit of Wine = 12 units of cloth, and
- 1 unit of Cloth = 1/12 barrel of Wine
- In Portugal: 1 unit of wine = 1 2/3 units of cloth, 1 unit of Cloth = 3/5 unit of Wine

The Theory of comparative Advantage: David Ricardo 1817

In a two product economy it can be shown that both Countries can gain from trade even if one country has the Absolute advantage in the production of both products.

Each country has a Comparative Advantage over its trading partner in the production of that good for which its Opportunity cost is lower than that of its trading partner.
Opportunity Cost Defined:

What you give up to produce the last/next unit of a good of the next best alternative product.

- Taking a new example:
  - Outputs/Input Paper Fish Finland has Absolute Advantage in the production of both product.
  - The opportunity cost of fish in each country is determined by how much paper production must be given up to produce more fish.

Opportunity Cost

Each country has a Comparative Advantage over its trading partner in the production of that good for which its Opportunity cost is lower than that of its trading partner.

Terms of Trade

How shall the increase in output be divided between Finland and Germany?

To answer this we must first define the domestic terms of trade “ToT” in each:

- In Finland: 1 unit of Paper = 1 1/3 fish and 1 unit of Fish = ¾ paper
- In Germany: 1 unit of Paper = 2 fish and 1 unit of Fish = ½ paper

International Terms of Trade

How shall the increase in output be divided between Finland and Germany so that each is better off trading than by remaining self-sufficient?

For Paper: 1 1/3 Fish ≤ 1 Paper ≤ 2 Fish
For Fish: 1/2 Paper ≤ 1 Fish ≤ 3/4 Paper
The Actual Terms of Trade Among Nations

- Determined by the relative bargaining power of the countries
- The relative sizes of their markets in each traded good
- And other factors

Vernon’s Product Cycle Theory

- Focuses on where products are designed and produced.
- Technical innovations leading to new products tend to occur where there are large concentrations of capital and knowledge.
- This is also where they will tend to be produced and consumed when new.
- Over time they tend first to be exported to, and later produced in countries with cheaper labor.

New Trade Theory

- Also called the Theory of Country Size
- Paul Krugman noted: If there are substantial economies to scale, and increasing returns to specialization in an industry, world demand may support only 1 or a very few firms.
- In such cases, for a firm to enter such an industry, subsidies may be required during a period of entry and growth, and justified for a nation. This theory is at seeming odds to ideas of free trade.