# Classical Theories of International Trade

Lecture 4

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Evolution of Trade Theories

- Mercantilism
- Absolute Advantage
- **Comparative Advantage**
- Factor proportion Trade
- International Product Cycle
- New Trade Theory
- National Competitive Advantage

# Comparative Advantage

- In economics, the law of **comparative advantage** refers to the ability of a person or a country to produce a particular good or service at a lower marginal refers to the ability of a person or a country to produce a particular good or service at a lower marginal and opportunity cost refers to the ability of a person or a country to produce a particular good or service at a lower marginal and opportunity cost over another. Even if one country is more efficient in the production of all goods (absolute advantage in all goods) than the other, both countries will still gain by trading with each other, as long as they have different relative efficiencies.



  - **Opportunity cost** is the cost of any activity measured

# Absolute Advantage versus Comparative Advantage

- A country enjoys an ***absolute advantage*** over another country in the production of a product when it uses fewer resources to produce that product than the other country does.

# Absolute Advantage versus Comparative Advantage

- A country enjoys a ***comparative advantage*** in the production of a good when that good can be produced at a lower cost *in terms of other goods*.

# Comparative Advantage

- **David Ricardo**: *Principles of Political Economy* (1817)
  - Extended free trade argument
  - **Should import even if the country is more efficient in the product's production than country from which it is buying.**
  - Look to see how much more efficient.  If only **comparatively** efficient, then import.

# Ricardo's Assumptions

**Ricardo explains his theory with the help of following assumptions :**

- There are two countries and two commodities.
- There is a perfect competition both in commodity and factor market.
- Cost of production is expressed in terms of labour i.e. value of a commodity is measured in terms of labour hours/days required to produce it. Commodities are also exchanged on the basis of labour content of each good.
- Labour is the only factor of production other than natural resources.

# Ricardo's Assumptions

- Labour is homogeneous i.e. identical in efficiency, in a particular country.
- Labour is perfectly mobile within a country but perfectly immobile between countries.
- There is free trade i.e. the movement of goods between countries is not hindered by any restrictions.
- Production is subject to constant returns to scale.
- There is no technological change.
- Trade between two countries takes place on barter system.
- Full employment exists in both countries.
- There is no transport cost.

# Gains from Comparative Advantage

- Even if a country had a considerable absolute advantage in the production of both goods, Ricardo would argue that *specialization and trade are still mutually beneficial*.

# Gains from Comparative Advantage

- When countries specialize in producing the goods in which they have a comparative advantage, they maximize their combined output and allocate their resources more efficiently.

# TRADE BASED ON COMPARATIVE ADVANTAGE

- Why would trade occur if one country had an absolute advantage in both goods?
- Comparative Advantage is the ability of a country to produce a good at a lower opportunity cost than another country
- We compare the degree of absolute advantage or disadvantage in the production of goods

# *Comparative Advantage: U.S. More Efficient in the Production of Both Commodities*

| | One Person Per Day of Labor Produces | |
|---|---|---|
| **Country** | **Machines** | **Cloth** |
| **U.S.** | **5 machines** | **15 yards of cloth** |
| **India** | **1 machine** | **5 yards of cloth** |

**U.S. has <u>bigger</u> Absolute Advantage in production of Machines**

**US - Opportunity Costs**

**1 Machine = 3 cloth**
**1 Cloth = 0.33 machine**

**India - Opportunity Costs**

**1 Machine = 5 cloth**
**1 Cloth = 0.2 machine**

# TRADE BASED ON COMPARATIVE ADVANTAGE

- The U.S. has a greater absolute advantage in producing machines than is does in producing cloth *(5x more efficient in machines … only 3x more efficient in cloth)*

- India's absolute <u>dis</u>advantage is smaller in producing cloth than in producing machines

- Thus the U.S. has a **comparative advantage** in machines and India has a **comparative advantage** in cloth

# TRADE BASED ON OPPORTUNITY COSTS

- Even though U.S. has an absolute advantage in both goods, India has a comparative advantage in cloth production
- Even if U.S. has an absolute advantage in both goods, beneficial trade is possible
- If both countries specialize according to their comparative advantage, they both can gain from this specialization and trade

**Since we are dealing with Opp. Costs, we will compare across 15 yards of cloth**

| | One person Per Day of Labor Produces | |
|---|---|---|
| **Country** | **Machines** | **Cloth** |
| U.S. | 5 machines | 15 yards of cloth |
| India | 1 machine | 5 yards of cloth |

**Let us allow India to produce cloth up to the level that the U.S. can…**

| | One Person Per Day of Labor Produces | | |
|---|---|---|---|
| **Country** | **Machines** | | **Cloth** |
| U.S. | 5 machines | | -15 yards of cloth |
| India (3 days) | -3 machines | *(per)* | 15 yards of cloth |
| World Output | +2 machines | | 0 cloth |

# TRADE BASED ON COMPARATIVE ADVANTAGE

*Change in World Output Resulting from Specialization According to Comparative Advantage*

| | Change in the Production of | |
|---|---|---|
| **Country** | **Machines** | **Cloth** |
| **U.S.** | **+5 machines** | **–15 yards of cloth** |
| **India** | **–3 machines** | **+15 yards of cloth** |
| **Change in World Output** | **+2 machines** | **0 yards of cloth** |

# Trade in the Ricardian Model (cont.)

- A country can be more efficient in producing both goods, but it will have a comparative advantage in only one good.

- Even if a country is the most (or least) efficient producer of all goods, it still can benefit from trade.

# DYNAMIC GAINS FROM TRADE

- Static Gains from trade are gains in word output that result from specialization and trade

- Dynamic gains from trade are gains from trade over time that occur because trade induces greater efficiency in the use of existing resources

# Assumptions and limitations

- Driven only by maximization of production and consumption
- Only 2 countries engaged in production and consumption of just 2 goods?
- What about the transportation costs?
- Only resource – labor (that too, non-transferable)
- No consideration for ‘learning theory’

# The Sources of Comparative Advantage

- ***Factor endowments*** refer to the quantity and quality of labor, land, and natural resources of a country.
- Factor endowments seem to explain a significant portion of actual world trade patterns.

# The Heckscher-Ohlin Theorem

- The ***Heckscher-Ohlin theorem*** is a theory that explains the existence of a country’s comparative advantage by its factor endowments.
- According to the theorem, a country has a comparative advantage in the production of a product if that country is relatively well endowed with inputs used intensively in the production of that product.

# Comparative Advantage: Guatemalan Textile


# Comparative Advantage: South Korea Electronic

# Comparative Advantage Theory

**What determines comparative advantage?**

- Comparative advantage is a **dynamic concept**. It can and does change over time. Some businesses find they have enjoyed a comparative advantage in one product for several years only to face increasing competition as rival producers from other countries enter their markets.

# Comparative Advantage Theory

**For a country, the following factors are important in determining the relative costs of production:**

- The **quantity and quality of factors of production available** (e.g. the size and efficiency of the available labour force and the productivity of the existing stock of capital inputs). If an economy can improve the quality of its labour force and increase the stock of capital available it can expand the productive potential in industries in which it has an advantage.
- **Investment in research & development** (important in industries where patents give some firms significant market advantage)
- **Movements in the exchange rate**. An appreciation of the exchange rate can cause exports from a country to increase in price. This makes them less competitive in international markets.

# Comparative Advantage Theory

- **Long-term rates of inflation** compared to other countries. For example if average inflation in Country X is 4% whilst in Country B it is 8% over a number of years, the goods and services produced by Country X will become ***relatively more expensive*** over time. This worsens their competitiveness and causes a switch in comparative advantage.

- **Import controls such as tariffs and quotas** that can be used to create an artificial comparative advantage for a country's domestic producers- although most countries agree to abide by international trade agreements.

- **Non-price competitiveness of producers** (e.g. product design, reliability, quality of after-sales support)

# Evaluation of the Classical Model

- The model does not explain why differences in productivity levels between countries exist.
- It makes extreme and unrealistic predictions such as countries will completely specialize in the production of exportables only.
- It maintains that the gains from trade are greater between countries of dissimilar production technologies (despite the fact that most trade occurs between DCs with similar technology and income levels).

# Evaluation (cont.)

- The classical model is a useful tool because:
  - It provides a motive for trade between developed and developing countries
  - It explains why high-wage countries may still benefit from trade even when faced with low-wage competing countries

# Summary of the Comparative Advantage Model

- It is not necessary for a country to possess absolute advantage in order to participate in trade. What is required is comparative advantage in production.

- A country will specialize in and export that good in which its has comparative advantage, i.e., has a lower pre-trade relative price than in the other country.

- The terms of trade or world price will settle between the autarky prices of the two countries and is determined by reciprocal demand.