International Economic Cooperation

Unit-I

Heckscher-Ohlin theory

- In the 1920s and 1930s, Swedish economists Eli Heckscher and Bertil Ohlin formulated a theory addressing two questions left largely unexplained by Ricardo:
  - What determines comparative advantage?
  - And what effect does international trade have on the earnings of various factors of production in trading nations?
- Heckscher and Ohlin maintained that factor (resource) endowments determine a nation's comparative advantage, their theory became known as the **factor-endowment theory**.
- It is also known as the **Heckscher-Ohlin theory**.
- Ohlin was awarded the 1977 Nobel prize in economics for his contribution to the theory of international trade.

The Factor-Endowments Theory

❑ **Immediate Basis for Trade:**

•Trade arises due to differences in **pre-trade relative product prices** between nations.

•These prices are influenced by:

- •**Production possibilities curves** (technology and resource availability).
- •**Tastes and preferences** (demand conditions).

❑ **Ultimate Determinants of Comparative Advantage:**

•**Technology.**

•**Resource Endowments.**

•**Demand Conditions.**

❑ **Main Assumption:**

•Technology and demand are similar across nations.

•Emphasis is placed on **relative differences in resource endowments** as the key driver of comparative advantage.

- **Role of Resource Endowments**
- **Relative Resource-Endowment Ratio** (not the absolute amount) determines comparative advantage:
  - Countries with abundant resources export goods that intensively use those resources.
  - Countries with scarce resources import goods that require those resources.
- A country is relatively abundant in a resource if its resource ratio (e.g., capital/labor ratio) is higher compared to another country.
- Resource abundance is relative, not absolute—it compares the proportion of resources within each country.

- Illustration of Relative Resource Abundance

Country	Capital	Labor	Capital/Labor Ratio
United States	100 Machines	200 Workers	100/200=0.5
China	20 Machines	1,000 Workers	20/1,000=0.02

- U.S. Capital/Labor Ratio: 0.5 (0.5 machines per worker).
- China Capital/Labor Ratio: 0.02 (0.02 machines per worker).

The **United States**:

- Has a **higher capital/labor ratio**.
- Is the **relatively capital-abundant country**.
- Is the **relatively labor-scarce country**

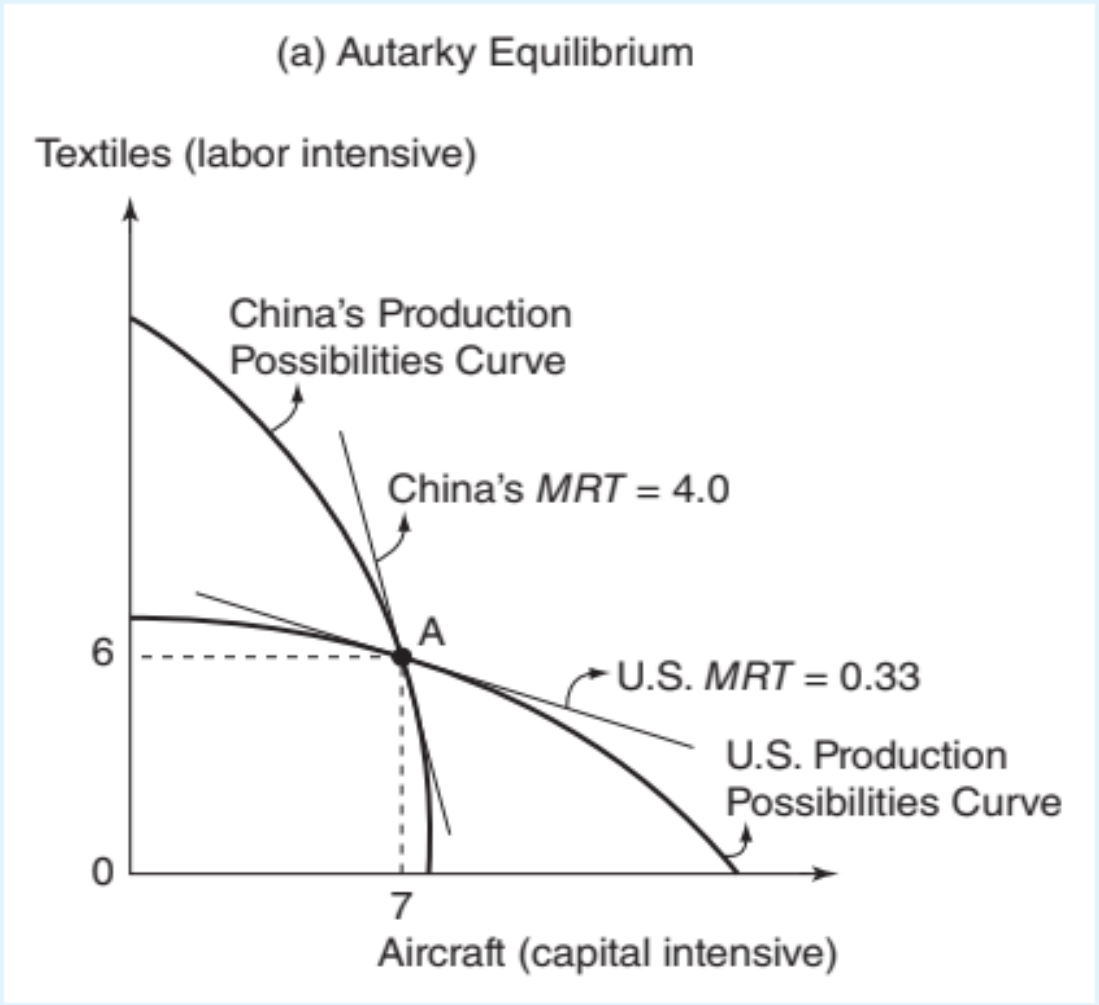
China:

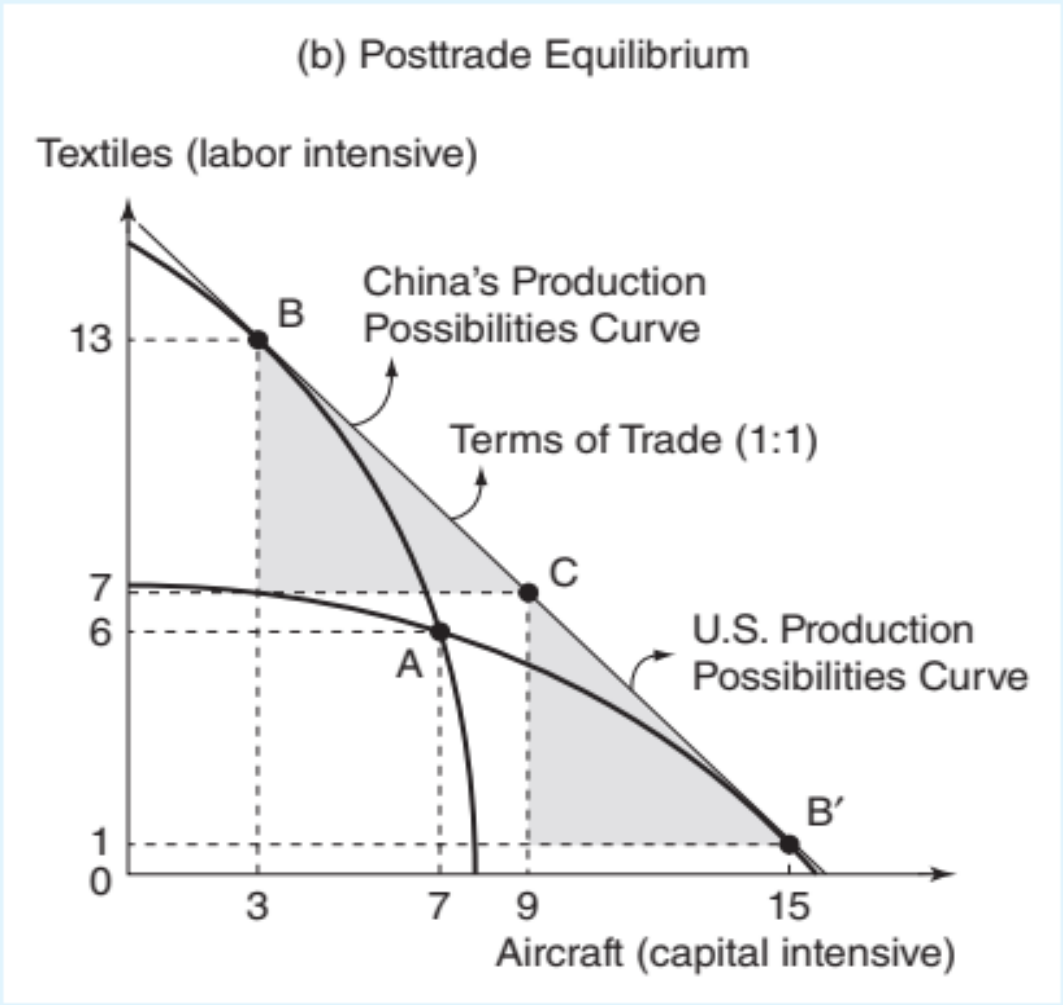
- Has a **lower capital/labor ratio**.
- Is the **relatively labor-abundant country**.
- Is the **relatively capital-scarce country**.

Differences in relative resource endowments	→	Differences in relative resource prices	→	Differences in relative product prices	→	Pattern of comparative advantage

- **Implications for Trade:**
- **United States** (capital-abundant):
  - Specializes in and exports capital-intensive goods (e.g., aircraft).
- **China** (labor-abundant):
  - Specializes in and exports labor-intensive goods (e.g., textiles).
- Hence, relative resource abundance influences production specialization and trade patterns between nations.

Visualizing the Factor-Endowment Theory





- Figure provides a graphical illustration of the factor-endowment theory. It shows the production possibilities curves of the United States, assumed to be the relatively capital-abundant country, and of China, assumed to be the relatively labor-abundant country.
- The figure also assumes that aircraft are relatively capital intensive in their production process and textiles are relatively labor intensive in their production process.
- Because the United States is the relatively capital-abundant country and aircraft are the relatively capital-intensive good, the United States has a greater capability in producing aircraft than China. Thus, the production possibilities curve of the United States is skewed (biased) toward aircraft, as shown in Figure.
- Similarly, because China is the relatively labor-abundant country and textiles are a relatively labor intensive good, China has a greater capability in producing textiles than does the United States.
- Thus, China’s production possibilities curve is skewed toward textiles.

- Suppose that in autarky, both countries have the same demand for textiles and aircraft that results in both countries producing and consuming at point A in Figure (a).
- At this point, the absolute slope of the line tangent to the U.S. production possibilities curve is smaller (U.S. MRT 0.33) than that of the absolute slope of the line tangent to China's production possibilities curve (China's MRT 4.0).
- Thus, the United States has a lower relative price for aircraft than China. This finding means that the United States has a comparative advantage in aircraft while China has a comparative advantage in textiles.
- Although Figure (*a*) helps us visualize the pattern of comparative advantage, it does not identify the ultimate cause of comparative advantage.
- In our trading example, capital is relatively cheap in the relatively capital-abundant country (the United States) and labor is relatively cheap in the relatively labor-abundant country (China).

- It is because of this difference in relative resource prices that the United States has a comparative advantage in the relatively capital-intensive good (aircraft) and China has a comparative advantage in the relatively labor-intensive good (textiles).
- Simply put, the factor endowment theory asserts that the difference in relative resource abundance is the cause of the pre-trade differences in the relative product prices between the two countries.
- With trade, each country continues to specialize in the production of the product of its comparative advantage until its product price equalizes with that of the other country.

- Specialization continues until the United States reaches point *B*’ and China reaches point *B*, the points at which each country’s production possibilities curve is tangent to the common relative price line that is assumed to have an absolute slope of 1.0.
- This relative price line becomes the equilibrium terms of trade. Also, let’s assume that with trade both nations prefer a post-trade consumption combination of aircraft and textiles given by point C.
- To achieve this point, the United States exports 6 aircraft for 6 units of textiles and China exports 6 units of textiles for 6 aircraft.
- Because point C is beyond the autarky consumption point A, each country realizes gains from trade.