

International Trade: Ricardian Model

Recap. . .

- ▶ What we have done so far:
 - A country's opportunity cost,
 - No trade relative prices,
 - A country's PPF and no trade equilibrium.
- ▶ Next. . .
 - Pattern of trade (i.e. who will produce and export what),
 - Prices at which countries are willing to trade internationally,
 - Production, consumption, and gains from trade.
 - Wages.

Comparative Advantage

- ▶ Home opportunity cost
 - A wheat: $1/4 \times 2 = 1/2$ cloth
 - A cloth: $1/2 \times 4 = 2$ wheat
- ▶ Foreign opportunity cost
 - A wheat: $1/1 \times 1 = 1$ cloth
 - A cloth: $1/1 \times 1 = 1$ wheat
- ▶ Who has the comparative advantage?
 - The country with the lowest opportunity cost in a particular good has a comparative advantage in that good.
 - Wheat? Home gives up $1/2$ cloth, Foreign gives up 1 cloth
 - Cloth? Home gives up 2 wheat, Foreign gives up 1 wheat

Comparative Advantage and Pattern of Trade

- ▶ Comparative advantage dictates the pattern of trade
 - Home has a comparative advantage in wheat. It will want to produce and export wheat in return for cloth.
 - Foreign has a comparative advantage in cloth. It will want to produce and export cloth in return for wheat.
- ▶ At what prices will international trade occur. . .
 - Note these prices must be consistent with voluntary exchange, i.e. where both countries are better off relative to no trade.

Relative Prices and Trade

- ▶ From the perspective of the Home country:
 - If $P_w/P_c < 1/2$ will trade occur?
 - If $P_w/P_c > 1/2$ will trade occur?
- ▶ From the perspective of the Foreign country:
 - If $P_w/P_c < 1/1$ will trade occur?
 - If $P_w/P_c > 1/1$ will trade occur?
- ▶ Only if P_w/P_c lies in the interval $(1/2, 1)$ will trade occur between the Home and Foreign country.

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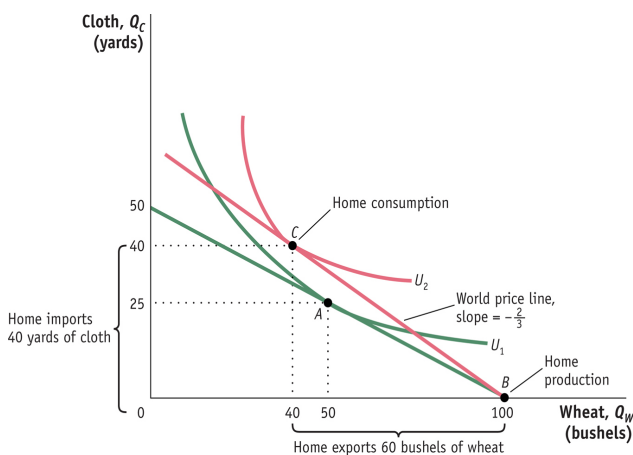
Recap

- ▶ Pattern of trade (i.e. who will produce and export what), ✓
- ▶ Prices at which countries trade, ✓
- ▶ Production, consumption, and gains from trade.
- ▶ Wages.

From here on out, we will assume the world price is $P_w^*/P_c^* = 2/3$.

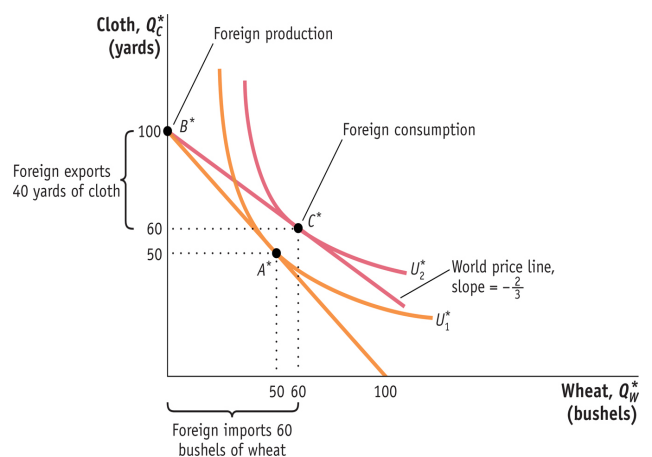
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Trade Equilibrium: Home Country



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Trade Equilibrium: Foreign Country



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Key Results

- ▶ Comparative advantage shaped the pattern of production and trade.
 - Home specializes in wheat, Foreign specializes in cloth.
- ▶ Consumers (in both countries) are strictly better off from trade. Two ways to see this. . .
 1. In the figures, we locate at a higher indifference curve $U_2 > U_1$.
 2. Trade enlarges the consumption possibility set. If you have more choices, you must be better off.

Home Wages

- ▶ Note that because there are two goods, we need to pick the units to measure real wages. We will do both.
- ▶ Home country real wages
 - In units of wheat = $MPL_w = 4$
 - In units of cloth = $(P_w^*/P_c^*) \times MPL_w = 8/3$
 - Notice, with no trade, real wages were 4 in units of wheat and 2 in units of cloth. Independent of units, real wages are weakly higher from trade.

Foreign Wages

- ▶ Note that because there are two goods, we need to pick the units to measure real wages. We will do both.
- ▶ Foreign country real wages
 - In units of wheat = $(P_c^*/P_w^*) \times MPL_c = 3/2$
 - In units of cloth = $MPL_c = 1$
 - Notice, with no trade, real wages were 1 in units of wheat and 1 in units of cloth. Independent of units, real wages are weakly higher from trade.

Wages Summary

- ▶ Home country real wages
 - In units of wheat = $MPL_w = 4$
 - In units of cloth = $(P_w^*/P_c^*) \times MPL_w = 8/3$
- ▶ Foreign country real wages
 - In units of wheat = $(P_c^*/P_w^*) \times MPL_c = 3/2$
 - In units of cloth = $MPL_c = 1$
- ▶ Home country real wages > Foreign country real wages. Why?
- ▶ The level of wages are determined by absolute advantage!

Recap

- ▶ Pattern of trade (i.e. who will produce and export what)
 - Determined by comparative advantage.
- ▶ Prices at which countries trade
 - Must be such that both countries are willing to trade given their comparative advantage.
- ▶ Production, consumption, and gains from trade.
 - Production specializes according to comparative advantage. Consumptions possibilities enlarge leading to gains from trade.
- ▶ Wages.
 - Real wages increase for all. Absolute advantage determines the level of wages across countries.