International Trade: Ricardian Model

Recap. . .

- What we have done so far:
  - A country's opportunity cost,
  - No trade (autarky) 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

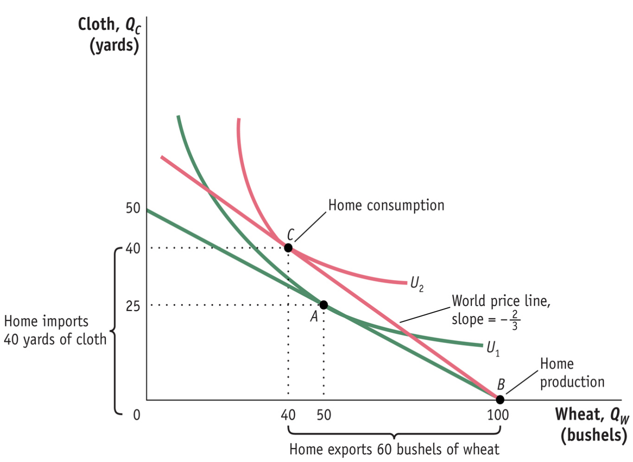
- From the perspective of the Home country:
  - If $P_w/P_c < 1/2$ will trade occur?
  - If $P_w/P_c > 1/2$ will trade occur?
- From the perspective of the Foreign country:
  - If $P_w/P_c < 1/1$ will trade occur?
  - If $P_w/P_c > 1/1$ will trade occur?
- Only if P_w/P_c lies in the interval $(1/2\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

Recap

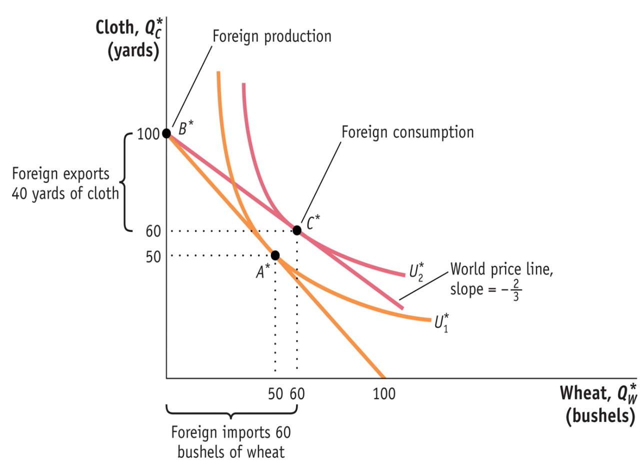
- Pattern of trade (i.e. who will produce and export what), ✓
- Prices at which countries trade, ✓
- Production, consumption, and gains from trade.
- Wages.

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

Trade Equilibrium: Home Country



Trade Equilibrium: Foreign Country



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.

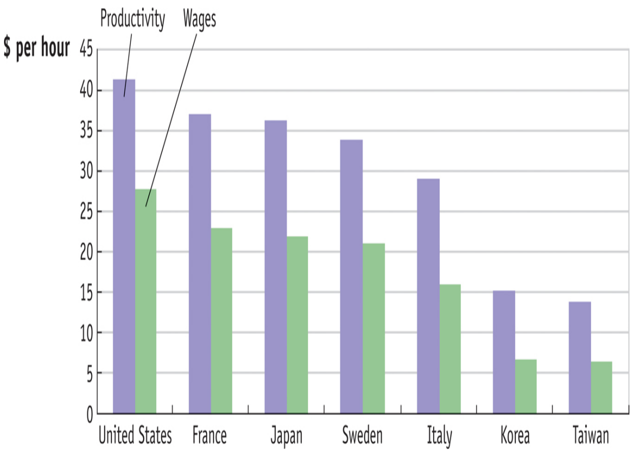
Foreign Wages

- 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!

Productivity and Real Wages



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.