

Ricardian Model I

- a) Home has a comparative advantage in food, foreign has a comparative advantage in clothing. Home has an absolute advantage in both goods
- b) No because at this price both countries would want to export food.
- c) Wages depend both on the labor productivity as well as on the terms of trade (that is, the prices at which the two countries trade). The price under trade must lie between the two autarky prices, meaning that $\frac{P_C}{P_F} \in [2, 3]$. The foreign country exports clothing. The best possible terms of trade for the foreign country is the highest possible relative price of clothing, which is $\frac{P_C}{P_F} = 3$. We have $w^* = \frac{P_C}{a_{LC}}$ and $w = \frac{P_F}{a_{LF}}$. We get $\frac{w^*}{w} = \frac{P_C}{P_F} \frac{a_{LF}}{a_{LC}^*} < 1$,
- $$\underbrace{\frac{P_C}{P_F}}_{\leq 3} \underbrace{\frac{a_{LF}}{a_{LC}^*}}_{\frac{1}{4}}$$
- so it is not possible that wages are higher in the foreign country.
- d) The home country only produces both good if the relative price equals $\frac{P_C}{P_F} = 3$. The foreign country only produces both goods if the relative price equals $\frac{P_C}{P_F} = 2$. With trade the price is the same in both countries so it is not possible that both countries produce both goods.

Ricardian Model II

- a) Home has an absolute advantage in both goods and a comparative advantage in clothing. Foreign has a comparative advantage in food.
- b) $\frac{P_F}{P_C} \in [\frac{5}{3}, 2]$
- c) If either $\frac{P_F}{P_C} < \frac{5}{3}$ (then both produce only C) or if $\frac{P_F}{P_C} > 2$ (then both produce only F).
- d) Since the home country produces both goods, we know that $\frac{P_F}{P_C} = 2$. Hence $P_C = 0.5\$$. The foreign country produces only food at these prices and the wage equals $w^* = \frac{P_F}{a_{LF}^*} = \frac{1}{5}\$$. Wages at home equal $w = \frac{1}{2}\$$.

H-O Model I

- a) Draw the "labor constraint" and the "capital constraint" as we did in the exercises.
- b) Wool is labor intensive and food is capital intensive. Hence if the relative price of wool increases in Australia then, by the Stolper-Samuelson theorem, workers in Australia gain and capital owners in Australia lose.
- c) Immigration shifts the labor constraint outwards. Production of wool increases and production of food decreases. This is the Rybczynski-Theorem

H-O Model II

- a) If the endowments with capital and labor are not extremely different, wages will be the same in the two countries with trade. (This is the factor price equalization result of the H-O theory). Since Algeria is capital abundant, the autarky price of the capital intensive good (M) is lower in Algeria than in Morocco. By the Stolper-Samuelson theorem this means that, if both countries live in autarky, wages in Algeria are higher than in Morocco. With trade, workers in Algeria lose and workers in Morocco gain, compared to the situation where both countries live in autarky.
- b) No, workers in Algeria and capital owners in Morocco are against trade.
- c) **CORRECTED** The trade price of food (the labor intensive good) is higher than the autarky price of food in Morocco (the labor abundant country). By the Stolper-Samuelson theorem, wages in Morocco increase and capital rental rates decrease. As long as the endowments (and hence the autarky prices) of the two countries are not extremely different, the production pattern will not change with trade. Morocco still produces at this point at the PPF where all capital and labor are employed. (This is because we are in the rigid-technology version of the H-O model. In the flexible-technology version of the H-O model, the production of food in Morocco would increase and the production of manufactures would decrease as a result of the price change).