Tutorial: Heckscher Ohlin Model

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Problem 1: Multiple Choice Questions

1. Which of the following are the assumptions of the Heckscher-Ohlin model?
   - Perfect mobility of factors across industries
   - Perfect mobility of factors across countries
   - Constant returns to scale
   - Law of diminishing returns
   - Identicle technologies across industries
   - Identicle technologies across countries
   - Perfect competition
   - Monopolistic competition
   - Identicle preferences
2. Assume a country produces a labour intesive good, say A and a land intensive good, say B. If a country's endowment of labour rises by 10%, the real wage of labour will
   - fall
   - rise
   - stay the same
3. In the question above, the output of the land intesive good will
   - fall
   - rise
   - stay the same

Problem 2

Consider an economy which produces manufactures Q_m and food Q_f. It uses two factors of production - capital K and land L. To produce one unit of Q_m requires a_{KM} units of capital, and to produce one unit of Q_f requires a_{LM} units of labour. Assume that the relative prices are $\frac{P_F}{P_M}$ where P_F is the price of food and P_M is the price of manufactures. The factor price ratio is $\frac{w}{r}$, where w is the wage rate of labour and r is the rental rate of capital. The total supply of labour in the economy is L_1 and capital is K_1.

1. Assume manufactures is capital intensive relative to food. Putting manufactures on O_y and food on O_x, draw a box diagram to show the allocation of capital and labour across manufactures and food. Label the diagram to show the inital allocation. Describe what it means for a production to be labour intensive and capital intensive.
2. Suppose the available capital stock in the economy increases. Draw another box diagram to show the effect on allocation of capital and labour across manufactures and food.
3. Suppose instead of capital stock, there is an increase in the supply of labour. Draw another box diagram to show the effects of this change on the allocation of labour and capital across manufactures and food, comparing it to the inital case in part(1).

Problem 3

Consider the economy in Problem 2. Call it Home. Now consider another economy called Foreign producing manufactures and food. Assume Home is labour-abundant and foreign is capital abundant. Assume that relative demand at Home and Foreign are the same and both Home and Foreign have the same technologies to produce manufactures and food.

1. What does it mean for home to be 'labour-abundant' and foreign to be 'capital-abundant'?
2. If Home and Foreign trade, describe the patterns of trade
3. Who gains and who loses from trade at Home? At Foreign?
4. Comment on what happens to relative prices and factor price ratios in each country.