EC3355 International Trade
Problem Set 4: Specific factor model

Consider Nambutu which is a country with a small open economy. It produces two goods, X and Y, and initially only exports good X. You are hired by the government of Nambutu in order to advise them on trade by analysing how a number of scenarios could affect the following:

i output of X and Y

ii real wage of labour

iii real rental price of capital in the X industry

iv quantity of X exported

You are given the following scenarios:

(*Tip: Graphs are extremely useful in explaining the changes*)

1. Due to the adaptation of a new technology, world output of Y has increased while the price of X has remained constant.
2. The country relaxes some of the immigration laws opening its borders for foreign workers which leads to an increase in the size of the labour force.
3. Climate change leads to an increase in the incidence of extreme weather events. As a result a category 5 hurricane has destroyed part of the country's capital stock employed in industry Y.

Consider another country, San Monique, which produces textile and food. You have the following information about the economy and are asked to examine the effect of changes in international prices on the economy. For the textile industry sales revenue was 150, payments to labour equalled 100, and payment to capital 50.
For the food industry sales revenue was 150, payments to labour equalled 50, and payments to land 100.
Let's say that we hold the price of textile constant and that there is a 10% increase in the price of food accompanied by a 5% increase in wage.

4. Calculate the impact of the price increase of food on the rental to land and rental to capital.

5. Discuss what has happened to the real rental on land and the real rental on capital.

6. Let's say that instead the price of textile falls by 10%. Who would be better off: capitalists or landowners? And how would this decrease affect labourers?

Consider two countries, Isthmus and San Marcos , which both produce the same land-intensive good which isn't traded. Isthmus' economy employs 120 workers and has a marginal productivity of labour of 10, while San Marcos' economy employs 60 workers which have a marginal productivity of labour of 20 Let's say that 30 workers move from Isthmus to San Marcos, marginal productivity of labour is now 15 in both countries.

7. Calculate what kind of effect this has on the landowners and output in Isthmus

8. Calculate what kind of effect this has on the landowners and output in San Marcos

9. What is the general welfare effect? Is the world better or worse off by this labour migration?