Problem 1

Illustrate how a change in taste can reverse the pattern of trade for a small country (its export good becomes its import good).

a. The initial conditions are represented by the graph below. First answer the following question:
   i. Which line corresponds to the autarky relative price? __________
   ii. Which line corresponds to the world relative price \( \frac{P_T}{P_C}^W \)? __________
   iii. Which good is exported? __________
b. Now assume that a change in taste occurs such that *the export good becomes the import good and vice versa*.

i. Draw on the graph above the corresponding new indifference map (draw the 2 new indifference curves where consumption in autarky and consumption with trade take place).

ii. Draw the corresponding new autarky price line 3.

iii. Show the corresponding point where production/consumption take place in autarky (name this point Q^A).

iv. Show the corresponding point where production takes place with trade (name this point Q^T).

v. Show the corresponding point where consumption takes place with trade (name this point C^T).

c. You could interpret the completed graph as a situation where 2 separate countries have the same PPF and a different indifference map. In this case, what determine whether beneficial trade could take place?

Supply and demand conditions demand conditions only supply conditions only

Relate your answer to the models of chapters 2, 3 and 4
Problem 2

Two countries of similar sizes, Banglin (a relatively labor abundant country) and Atria produce baskets and steel\(^1\). Banglin suddenly hosts a large number of immigrants displaced by civil unrest in their own country.

a. Show the effect of this influx of labor on Banglin’s production possibility frontier.

b. What happens to Banglin’s terms of trade?

improve deteriorate stay the same unknown

c. Show the terms of trade effect on the RS/RD graph with Banglin’s terms of trade (specifying the 2 goods) on the y-axis and the corresponding relative quantities on the x-axis.

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\(^1\) You might guess accurately that steel is the relatively capital intensive good.
d. What is the effect on Banglin’s welfare? (Banglin is not Prebish)

- increases
- decreases
- stays the same
- unknown

e. What is the resulting effect on Atria’s terms of trade?

- improve
- deteriorate
- stay the same
- unknown

f. What is the resulting effect on Atria’s welfare?

- increases
- decreases
- stays the same
- unknown

**Problem 3**

Assume a transfer of income (Y) equal to £1,000,000 from the UK (donor country) to Ireland. The UK and Ireland consume only 2 tradable goods, whisky and potatoes. The UK has a comparative advantage in whisky and Ireland in potatoes. The UK marginal propensity to spend on whisky is .6 while it is .5 in Ireland.

a. Fill the table below indicating the resulting changes in income $\Delta Y$, consumption of whisky $\Delta C_w$, and consumption of potatoes $\Delta C_p$ for the two countries (include the signs).

<table>
<thead>
<tr>
<th></th>
<th>$\Delta Y$</th>
<th>$\Delta C_w$</th>
<th>$\Delta C_p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What happens to the UK’s terms of trade.

- improve
- deteriorate
- no effect
- unknown
b. Use the world RD-RS curves to illustrate your findings above. Name all axes and curves.

\[
P_{w}/P_{p}
\]

\[\text{Diagram of RD-RS curves}\]

c. Now assume that both the UK and Ireland also consume a third good, take away food, a non-tradable. The marginal propensity to spend on each of the 3 goods consumed is the same in the 2 countries: .4 for whisky, .3 for potatoes, and .3 for take-away food.

Show below what happens to the UK’s terms of trade when Ireland transfers £1,000,000 of income to the UK.

- improve
- deteriorate
- no effect
- unknown

Explain how you reached these conclusions.
d. What would have happened to the UK’s terms of trade if the UK and Ireland were only consuming 2 tradables (and no non-tradable) and had exactly the same marginal propensity to spend on these two goods.

improve  deteriorate  no effect  unknown

e. So what determined your answer in Part c.