RICARDIAN TRADE THEORY

Questions:
Who Produces What?
Who Gains From Trade

MODEL

Two goods A and B, 2 countries, Us and Them (*)

Wages are W, W*

Unit labor requirements are a and b here, and a* and b* abroad

Prices are unit labor costs;
P_A = wa, P_B = wb; P^*_a = w^*a^*, P^*_B = w^*b^*

Technology differences: suppose we are worse at everything a>a*, b>b* but we are
relatively better at A:

\[ a^*/a^* > b^*/b \]

**SPECIALIZATION PATTERNS**

Prices are equal to unit costs wherever goods are produced.

- We produce A if: \( w_a < w^*a^* \) or \( w/w^* < a^*/a \)
- We produce B if \( w_b < w^*b^* \) or \( w/w^* < b^*/b \)

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<th>I</th>
<th>II</th>
<th>III</th>
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<tbody>
<tr>
<td>0</td>
<td>b^*/b</td>
<td>a^*/a</td>
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Region I: \( w/w^* < b^*/b < a^*/a \) we produce both goods

Region II: \( b^*/b < w/w^* < a^*/a \) we produce only A

Region III \( w/w^* > a^*/a \) we produce nothing
For foreign country specialization oes the other way round

*Summary Table:*

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<tr>
<td>US</td>
<td>A,B</td>
<td>A</td>
<td>None</td>
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<tr>
<td>Them</td>
<td>None</td>
<td>B</td>
<td>A/B</td>
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Equilibrium will settle such that $b^*/b < w^*/w^* < a^*/a$ where at least one country is totally specialized. Demand conditions will determine where the relative wage settles.
Who Gains?

In autarchy we can buy with an hour of work w/wa= 1/a and w/w=l/b . With trade, with us specialized in A, we still get w/wa=1/a. But how much B can we get by trading? The answer is w/w*b*. Is that bigger than 1/b? w/w*b* >= 1/b or w/w* > b*/b and the answer is YES. Trade pays because it raises our purchasing power. QED .

Equilibrium Wages

Ex: Let the spending share of good A in both countries be c~. GNP at home is WN--labor force times wage. Demand equals supply means:

\[(2) \quad wN = \alpha(wN + w*N*) \quad \text{or} \quad w/w* = [\alpha / (1-\alpha)] N*/N\]

Thus if \(\alpha=.2\), say, and they are 3 times our
size in terms of population, \((N^*/N = 3)\) we get \(w/w^* = 3/4\).

- As they get larger relative to us, our equilibrium relative wage increases. At the worst our relative wage is \(b^*/b\) and at the best \(a^*/a\); within that range demand patterns and relative wage set the equilibrium relative wage.
- The bigger they are and the worse they are absolutely at the good we do relatively well \((a^*/a)\) the higher our relative wage.
- The higher the share of spending falling on the good we produce, the higher our relative wage.