Why do Countries Trade?

Part II

AED/IS 540
International Commerce
and the World Economy

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Adam Smith (1776) writing in the “Wealth of Nations” argued in favor of free trade as a response to the doctrine of mercantilism.

Mercantilism based on premise that a nation’s well-being was based on its holdings of gold and silver – as a consequence they viewed exports as “good” and imports as “bad”.

Smith thought in terms of two countries (US and Britain), with two goods (wheat and cloth), each being produced with one resource (labor).
Suppose the US is better at producing wheat and Britain is better at producing cloth.

From this there should be gains from trade, i.e., the US specializes in producing and exporting wheat in exchange for cloth, and vice-versa for Britain.

Typically we think of “better at producing” in terms of labor productivity, e.g., how many units of wheat or cloth can be produced with an hour of labor?

From this idea, we can get at Smith’s idea that countries will trade on the basis of their absolute advantage.
Adam Smith
and Absolute Advantage

<table>
<thead>
<tr>
<th>Labor Productivity</th>
<th>US</th>
<th></th>
<th>Britain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units of Cloth/Hour</td>
<td>0.25</td>
<td>&lt;</td>
<td>1.0</td>
</tr>
<tr>
<td>Units of Wheat/Hour</td>
<td>0.5</td>
<td>&gt;</td>
<td>0.4</td>
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</tbody>
</table>

- **US has an absolute advantage in producing wheat, and vice-versa, Britain in producing cloth**
- **Each country should shift labor into sector in which it has an absolute advantage**
- **Trade ensures such shifts in production will occur**
David Ricardo and Comparative Advantage

- Smith’s arguments persuaded some countries to reduce their tariffs in late 18th Century and on.
- There was still a nagging concern – what happens if one country has an absolute advantage in producing both wheat and cloth?
- Ricardo introduced notion of opportunity cost of producing one good in terms of foregone production of the other good.
- In his “Principles of Economy and Taxation” (1817), Ricardo demonstrated idea of comparative advantage.
US has an absolute disadvantage in producing both wheat and cloth – will there be trade?

If prices of each good can be expressed in terms of opportunity costs, should be able to establish if US and British prices differ under autarky.
David Ricardo and Comparative Advantage

<table>
<thead>
<tr>
<th>Autarky prices</th>
<th>US</th>
<th>Britain</th>
</tr>
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<tbody>
<tr>
<td>Price of Cloth</td>
<td>2.0 W/C</td>
<td>&gt; 0.67 W/C</td>
</tr>
<tr>
<td>Price of Wheat</td>
<td>0.5 C/W</td>
<td>&lt; 1.5 C/W</td>
</tr>
</tbody>
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- In US, opportunity cost of producing 1 unit of cloth is 2 units of wheat, compared to 0.67 in Britain.
- In US, opportunity cost of producing 1 unit of wheat is 0.5 units of cloth, compared to 1.5 in Britain.
- There will be trade on basis of price differences, i.e., *arbitrage*, as a result prices will change.
Suppose both US and Britain have 100 hours of labor/year to produce amounts of the two goods.

Calculate maximum amount of each good a country can produce with labor:

- US: 50 units of wheat or 25 units of cloth
- Britain: 67 units of wheat or 100 units of cloth

Joining up endpoints – gives each country’s production possibility curve.

Slope is given by rate at which output of one good can be increased given reduction in output of other.
Suppose world price of cloth ends up at $W/C=1$, US will specialize in wheat, and Britain will specialize in cloth.
David Ricardo
and Comparative Advantage

Without trade, each country produces and consumes along its production possibility curve. e.g., at $S_0$

With trade, each country specializes in the good in which it has a comparative advantage, $S_1$, allowing it to trade and consume at a higher level $C$

Consumers and labor are better off in each country as a result of specialization

Ricardo’s model is very powerful, but it is based on assumption of constant *marginal productivity* of labor and predicts *complete specialization*