Notes on: Comparative Advantage

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Specialization, Comparative Advantage, and Trade

- Specialization and trade increase production.
  - Between people within a nation
  - Between nations

- Trade happens when someone has a “comparative advantage.”
The Reason for Trade

- **Absolute advantage:** when one country can produce more of a good than another country.
- **Comparative advantage:** when one country can produce a good at a lower opportunity cost.
- Both countries can gain from trade if they follow comparative advantage.
Comparative Advantage

Should there be trade? Who should produce what?

[Graph showing production possibilities for the United States and Mexico for microcomputer chips and crude oil.]
Opportunity Cost of a certain good = Give Up / Gets

USAoil = 20mc/20oil = Opportunity Cost = 1.00mc
MEXoil = 4mc/10oil = Opportunity Cost = 0.40mc
USAmc = 20oil/20mc = Opportunity Cost = 1.00oil
MEXmc = 10oil/4mc = Opportunity Cost = 2.50 oil
Comparative vs. Absolute Advantage

• Don’t confuse absolute and comparative advantage…
  
  • Just because the U.S. can produce more of both goods doesn’t mean we’re better off without trade.

• Pay attention to opportunity costs:
  
  • If it’s cheaper for Mexico to produce crude oil than it is for the U.S., the U.S. will want to import oil from Mexico.
Comparative Advantage

• To decide **who should produce what**, compare the **opportunity costs** between nations
  
• What does it “cost” each nation to produce a million barrels of crude oil?
  
• The U.S.: could produce 40m chips OR 40m barrels of crude oil…
    • So, 1m barrels of oil cost the U.S. 1m chips
  
• Mexico: could produce 4m chips OR 10m barrels of oil…
    • So, each 1m barrels of oil costs chips costs Mexico .4m chips
Comparative Advantage

It’s cheaper for Mexico to produce oil than for the U.S. … Mexico has the “comparative advantage in oil production.”
The Gains from Trade

• More is produced when specialization and trade occurs...

• Both sides benefit...

Before Trade

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Initial Consumption-Production Pattern</th>
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<tbody>
<tr>
<td></td>
<td>United States</td>
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<tr>
<td>Oil</td>
<td>20</td>
</tr>
<tr>
<td>Chips</td>
<td>20</td>
</tr>
</tbody>
</table>

Total output rises with specialization

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Production after Mexico Specializes in Producing Crude Oil</th>
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<tbody>
<tr>
<td></td>
<td>United States</td>
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<tr>
<td>Oil</td>
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</tr>
<tr>
<td>Chips</td>
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</table>

If Mexico and the U.S. simply split the additional production they both consume beyond their own PPFs...

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Final Consumption Patterns after Trade</th>
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<tbody>
<tr>
<td></td>
<td>United States</td>
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<tr>
<td>Oil</td>
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<tr>
<td>Chips</td>
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Limitations on Trade and Globalization

• There are costs to trade: transportation, communication, etc.
  • However, these costs have been declining for decades.

• Diminishing returns
  • The more a nation specializes, the smaller the additional gains.

• Governments often limit trade (despite its benefits)
  • To help certain industries.
  • In response to a recession or other problem.