Comparative Advantage

Week Two Recitation
Comparative Advantage

Comparative Advantage accounts for the Wealth of Nations
The Principle of Comparative Advantage
Comparative Advantage and Production Possibilities
What have we learned?

Assignment for Week 2 Recitation

Read Chapters 1-4 of The Wealth of Nations by Adam Smith. There is a pdf copy of the reading on the course web page, www.unc.edu/~salemi. Review the discussion questions for the article also on the web page.
Bring copies of the reading and questions to recitation.
Come to recitation with preliminary answers to the questions. Expect a quiz. You need not write out your answers.

Review: Scarcity Principle

Your “Reservation Price” is the most you would pay to obtain a good or service.
Your “Surplus” in a transaction is the difference between your reservation price and what you actually pay.
On Saturday morning, you have decided to wash, wax, and detail your car. The improvements to your car’s appearance are worth $50 to you. You have decided to do the work yourself because the next best use of your time is working a morning shift at your job for $30. Now a friend suggests a fun outing that will take all morning. Your opportunity cost for that outing is...

A. $0  
B. $20  
C. $30  
D. $50

I have read the syllabus for Econ 101 Section 8 and agree to abide by the course rules.

A. Yes  
B. No

Comparative Advantage

If person A can do either of two tasks in less time than person B, person A will have an “absolute advantage” in both tasks.

It is likely, however, that person A will have a comparative advantage in only one task.

Who should undertake each task depends on comparative advantage, not on absolute advantage.
Comparative Advantage

Person A has a comparative advantage over Person B if Person A’s opportunity cost of performing a task is lower than Person B’s opportunity cost of performing the same task.

Comparative Advantage

Ari and Sam must write a class report with charts. In one hour...

<table>
<thead>
<tr>
<th></th>
<th>Cost of 100 Words</th>
<th>Cost of One Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ari</td>
<td>1 Chart</td>
<td>100 Words</td>
</tr>
<tr>
<td>Sam</td>
<td>½ Chart</td>
<td>200 Words</td>
</tr>
</tbody>
</table>

Who should do each task?

To the extent possible, Sam should write and Ari should make charts.

Sam has a lower opportunity cost for word craft.
Sam has a comparative advantage in word craft.
Ari has a lower opportunity cost in chart making.
Ari has a comparative advantage in chart making.

Ari has an absolute advantage in chart making and word craft.

But...

It would be inefficient for Ari to write if Sam is available to write and there are still charts to be made.
Comparative Advantage

Suppose the report must include 600 words and two charts and that both must contribute. How much time will it take if...

<table>
<thead>
<tr>
<th>Ari</th>
<th>Sam</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writes</td>
<td>Charts</td>
<td>2 + 2 = 4 hours</td>
</tr>
<tr>
<td>Charts</td>
<td>Writes</td>
<td>2/3 + 3 = 3.67 hours</td>
</tr>
</tbody>
</table>

The Principle of Comparative Advantage

Everyone does best when each person (or each country) concentrates on the activities for which his or her opportunity cost is the lowest.

Use Your Clicker To Answer The Following Graded Question.

In one eight hour work day....
Sam can: wax 4 cars or wash 12 cars.
Ari can: wax 3 cars or wash 6 cars.

Which of the following is true? Sam’s cost of washing one car is ...
A. Greater than Ari’s Cost of washing a car.
B. One third of a waxed car.
C. Three waxed cars.
D. One half of a waxed car.
Comparative Advantage

In one eight hour day...

Ari can wax 3 cars or wash 6 cars.

Sam can wax 4 cars or wash 12 cars.

Who should do each task?

<table>
<thead>
<tr>
<th></th>
<th>Cost of A Waxed Car</th>
<th>Cost of A Washed Car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ari</td>
<td>2 Washed Cars</td>
<td>½ Waxed Car</td>
</tr>
<tr>
<td>Sam</td>
<td>3 Washed Cars</td>
<td>1/3 Waxed Car</td>
</tr>
</tbody>
</table>

Comparative Advantage

Many corporations willingly provide their CEOs with a personal assistant who accomplishes both business and personal tasks for the CEO.

Why do corporations provide personal assistants?

Should the shareholders complain?

Use Your Clickers To Answer The Following Non-Graded Question
Many corporations provide their CEOs with a personal assistant who accomplishes both business and personal tasks. Which of the following is closest to your view? Shareholders should...

A. Oppose the practice because it lowers firm profits and shareholder dividends.
B. Oppose the practice but acknowledge that CEOs expect to have a personal assistant.
C. Approve the practice because it amounts to tax free compensation for the CEO.
D. Approve the practice because it frees the CEO to perform more important tasks.

Production Possibilities

The production possibilities graph describes the maximum amount of one good that can be produced for every possible level of production of the other good.

The PPF shows that resource scarcity implies that production of any good entails an opportunity cost.

Production Possibilities

In 8 hours

Ari can write 2400 words or make 24 charts.

Sam can write 1600 words or make 8 chart.

<table>
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Law of Increasing Cost

Optimal Resource Allocation
In expanding the production of any good, first employ those resources with the lowest opportunity cost, and only afterward turn to resources with higher opportunity costs.

Law of Increasing Cost
As production of a good expands, the opportunity cost of the good increases.

Survivors

Four survivors are stuck on an island. Each can either fish or gather berries. The following table shows what each survivor can produce in a day.

<table>
<thead>
<tr>
<th></th>
<th>Jean</th>
<th>Joe</th>
<th>Jerry</th>
<th>Jack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(lbs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berries</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(lbs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Which survivor should be the first assigned to pick berries?

<table>
<thead>
<tr>
<th></th>
<th>Jean</th>
<th>Joe</th>
<th>Jerry</th>
<th>Jack</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Jean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Joe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Jerry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Jack</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Questions for Further Study
Suppose at their evening meeting, the survivors decide to make a stew using 6 pounds of fish. They would want, in addition, as many berries as possible.

How should work be assigned the next day? Who should fish and who should gather? Why?
Given their work assignments, what is the group’s opportunity cost for fish? Explain.
Why does the cost of fish increase as the survivors decide to produce more fish?

Survivors Challenge
Suppose at their evening meeting, the survivors decide to make a stew using 6 pounds of fish. They would want, in addition, as many berries as possible.

Draw a graph showing the survivors production possibilities for fish and berries.
I will pay $10 to the first student who sends me a correct production possibilities graph for the survivors.

Comparative Advantage
Prepare to discuss Wealth of Nations
Everyone does best when they concentrate on activities for which their opportunity cost is the lowest.
Comparative Advantage accounts for the Wealth of Nations
The Production Possibilities Frontier production of any good entails an opportunity cost because productive resources are finite.