

**Comparative Advantage:  
The Basis for Exchange**

CHAPTER  
**2**

### Exchange and Opportunity Cost

- Should Johnnie Cochran write his own will?
  - Cochran earns more than \$1,000 per hour.
  - The cost of having a will prepared is less than \$800.

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### Exchange and Opportunity Cost

- Absolute Advantage
  - One person has an absolute advantage over another if he or she takes fewer hours to perform a task than the other person.

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### Exchange and Opportunity Cost

- Comparative Advantage
  - One person has a comparative advantage over another if his or her opportunity cost of performing a task is lower than the other person's opportunity cost.

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### Exchange and Opportunity Cost

- The Principle of Comparative Advantage
  - Should Paula update her own web page?

	Time to update web page	Time to complete bicycle repair
<b>Paula</b>	<b>20 minutes</b>	<b>10 minutes</b>
<b>Beth</b>	<b>30 minutes</b>	<b>30 minutes</b>

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### Exchange and Opportunity Cost

- The Principle of Comparative Advantage
  - Should Paula update her own web page?

	Opportunity Cost of updating a web page	Opportunity Cost of a bicycle repair
<b>Paula</b>	<b>2 bicycle repairs</b>	<b>0.5 web page updates</b>
<b>Beth</b>	<b>1 bicycle repair</b>	<b>1 web page update</b>

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## Exchange and Opportunity Cost

- The Principle of Comparative Advantage
  - How many web pages and bicycle repairs can Paula and Beth produce a day if they both work eight-hour days?

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## Exchange and Opportunity Cost

- The Principle of Comparative Advantage

If they split their time evenly and produce 16 web pages

	Web Pages	Bicycle Repairs
Paula	12	24
Beth	4	12
<b>Total</b>	<b>16</b>	<b>36</b>

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## Exchange and Opportunity Cost

- The Principle of Comparative Advantage

If they specialized in their comparative advantage

	Web Pages	Bicycle Repairs
Paula	0	48
Beth	16	0
<b>Total</b>	<b>16</b>	<b>48</b>

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## Exchange and Opportunity Cost

- The Principle of Comparative Advantage
  - Should Barb update her own web page?

	Productivity in programming	Productivity in bicycle repair
Pat	2 web page updates per hour	1 repair/hr
Barb	3 web page updates per hour	3 repairs/hr

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## Exchange and Opportunity Cost

- 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 lowest.

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## Exchange and Opportunity Cost

- Economic Naturalist
  - Televisions and videocassette recorders were developed and first produced in the United States.
  - Why did the United States fail to retain its lead in these markets?

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## Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - A graph that describes the maximum amount of one good that can be produced for every possible level of production of another good.

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## Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - Assume a small economy that
    - ◆ Produces only two goods - coffee and nuts
    - ◆ Has only one worker who works 6 hrs/day
    - ◆ Worker is Susan in one country and Tom in another

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## Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - For Example
    - Susan: 4 lb coffee/hr      2 lb nuts/hr
    - Tom: 2 lb coffee/hr      4 lb nuts/hr
  - Opportunity cost for Susan of producing 1 lb of nuts is 2 lb of coffee.
  - With 6 hours of work in a day, Susan can produce 24 lb of coffee or 12 lb of nuts.

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## Susan's Production Possibilities

**Opportunity Cost (OC)**

1. OC nuts = Loss in coffee/gain in nuts
2. OC coffee = Loss in nuts/gain in coffee

Production Possibilities Curve: All combinations of coffee and nuts that can be produced with Susan's labor

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## Susan's Production Possibilities

**The scarcity principle:**  
Having more of one good generally means having less of another good.

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## Attainable and Efficient Points on Susan's Production Possibilities

- Combination F: Unattainable
- Combination E: Inefficient
- Combinations A, B, C, and D: Efficient

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### Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - Attainable Point
    - ◆ Any combination of goods that can be produced using currently available resources
  - Unattainable Point
    - ◆ Any combination that cannot be produced using currently available resources

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### Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - Efficient Point
    - ◆ Any combination of goods for which currently available resources do not allow an increase in the production of one good without a reduction in the production of the other

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### Comparative Advantage and Production Possibilities

- The Production Possibilities Curve
  - Inefficient Point
    - ◆ Any combination of goods for which currently available resources enable an increase in the production of one good without a reduction in the production of the other

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### Tom's Production Possibilities

Tom's Production Possibilities Curve for a 6 hour day

How Individual Productivity Affects the Slope and Position of the Production Possibilities Curve

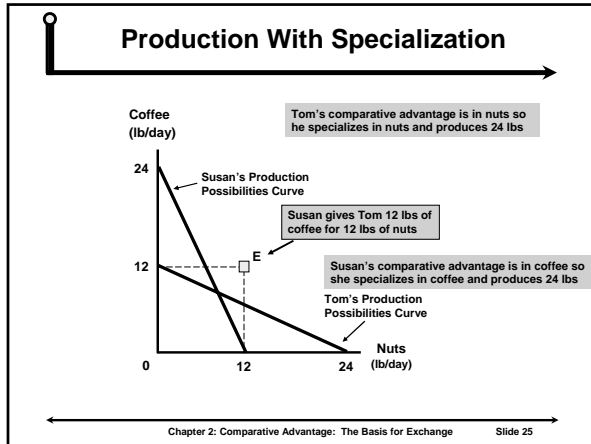
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### Individual Production Possibilities Curves Compared

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### Production Without Specialization

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### Comparative Advantage and Production Possibilities

- The gains from specialization grow larger as the difference in opportunity cost increases
  - For Example
 

Susan: 5 lb coffee/hr	1 lb nuts/hr
Tom: 1 lb coffee/hr	5 lb nuts/hr

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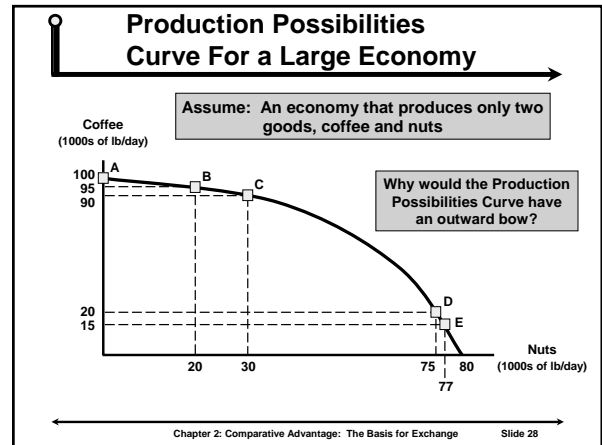
### Comparative Advantage and Production Possibilities

- Without Specialization
 

Tom: 5 hrs coffee = 5 lb	1 hr nuts = 5 lb
Susan: 1 hr coffee = 5 lb	5 hrs nuts = 5 lb
Total: 10 lb	10 lb
- With Specialization
 

Tom: 0 lb coffee	30 lb nuts
Susan: 30 lb coffee	0 lb nuts
Total: 30 lb	30 lb

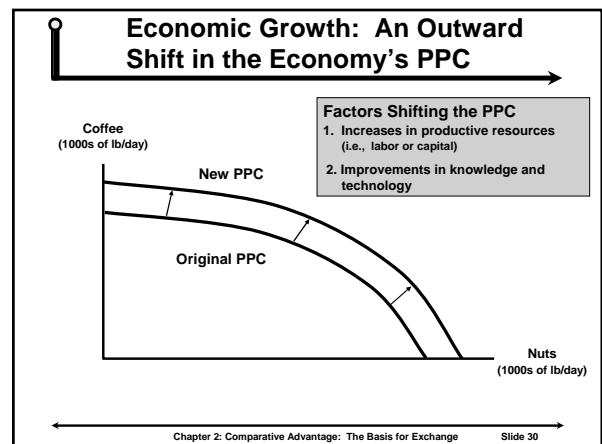
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### Comparative Advantage and Production Possibilities

- The Principle of Increasing Opportunity Cost ("The Low-Hanging-Fruit Principle")
  - In expanding the production of any good, first employ those resources with the lowest opportunity costs, and only afterward turn to resources with higher opportunity costs.

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## Factors That Shift The Economy's Production Possibilities Curve

- Increasing Productive Resources
  - Investment in new factories and equipment
  - Population growth
- Improvements in Knowledge and Technology
  - Increasing education
  - Gains from specialization

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## Comparative Advantage and International Trade

- Can we have too much specialization?
  - What are the costs of specialization?

### Economic Naturalist

- If trade between nations is so beneficial, why are free-trade agreements so controversial?

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