

Introduction to Microeconomics

ECO1104 Section B, Fall 2011
(Lecture #3, Sept. 14)

Today's lecture

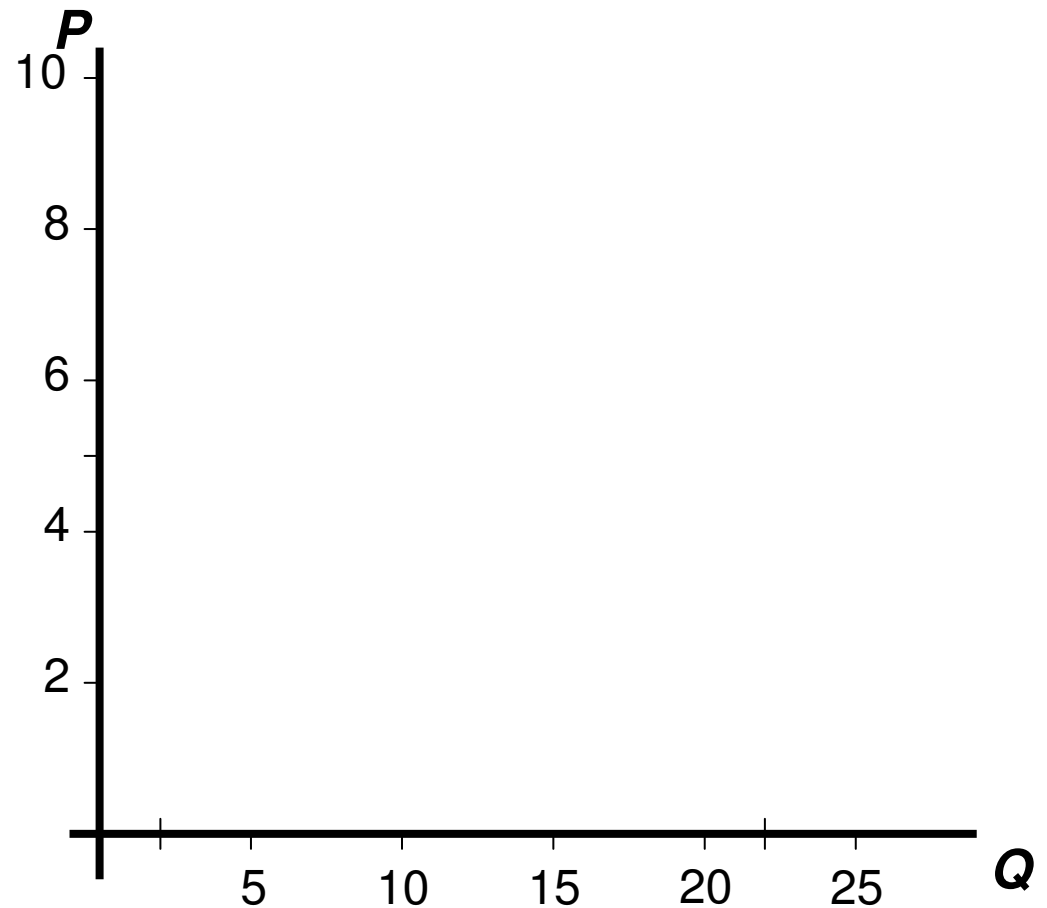
- Chapter 2 Appendix
- Start Chapter 2

Chapter 2--Appendix

Graphing Curves in the Coordinate System

- *Example:* (Table 2.A.1 and Figure 2A.3, p.45)
Income

Price	\$20,000
\$10	2 novels
9	6
8	10
7	14
6	18
5	22



Graphing Curves in the Coordinate System (cont)

- Important observations:
 - When a variable that is not named on either axis changes \Rightarrow
 - When two variables move in the same direction δ variables are _____ or, equivalently, the curve is _____
 - Conversely, when two variables move in opposite directions (such as Emma's demand curve) \Rightarrow variables are _____ or, equivalently, the curve is _____

Graphing Curves in the Coordinate System (cont.)

- **Slope of a curve:** a measure of how much one variable responds to changes in another variable.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

- **Example:** choose the two coordinates (14,7) and (22,5).

Chapter 2: Thinking Like an Economist

- Economists play two roles:
 - Scientists: try to explain the world
 - Policy advisors: try to improve it
- **The Scientific Method**
 - Make assumptions and uses abstract models to help explain how a complex, real world operates.
 - Develops theories, collects, and analyzes data to evaluate the theories.

Assumptions

- Assumptions simplify the complex world, make it easier to understand.
- **Example:** When studying international trade, we might assume the world consists of two countries and two goods.
Very unrealistic, but simplifies the problem and yields useful insights about the more complicated real world.
- The art in scientific thinking is deciding which assumptions to make.
Example 1: The case of a physicist measuring how long it would take for an object to fall from the top of a building.

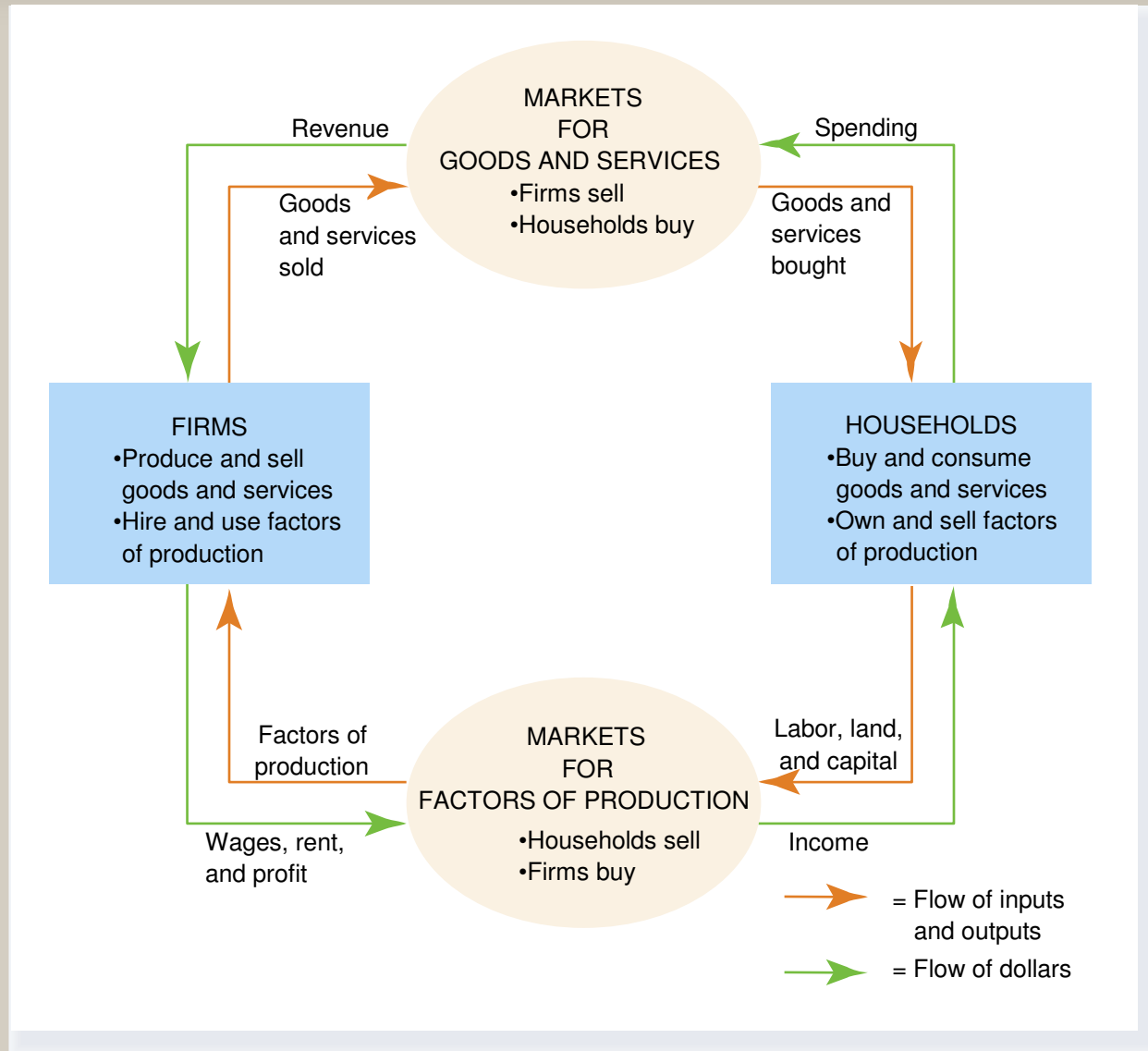
Models

- Economists use **models** to study economic issues.
 - A model is a highly simplified representation of a more complicated reality.
- Two basic economic models:
 - The Circular Flow Diagram
 - The Production Possibilities Frontier

First Model: The Circular Flow Diagram

- The *circular-flow diagram* is a visual model that shows how the economy is organized and how participants in the economy interact.

The Circular Flow Diagram (Fig. 2.1, p. 25)



Second Model: Production Possibilities Frontier

- The *production possibilities frontier (PPF)* is a graph that shows the combinations of output that the economy can possibly produce given the available factors of production and the available production technology.

PPF example

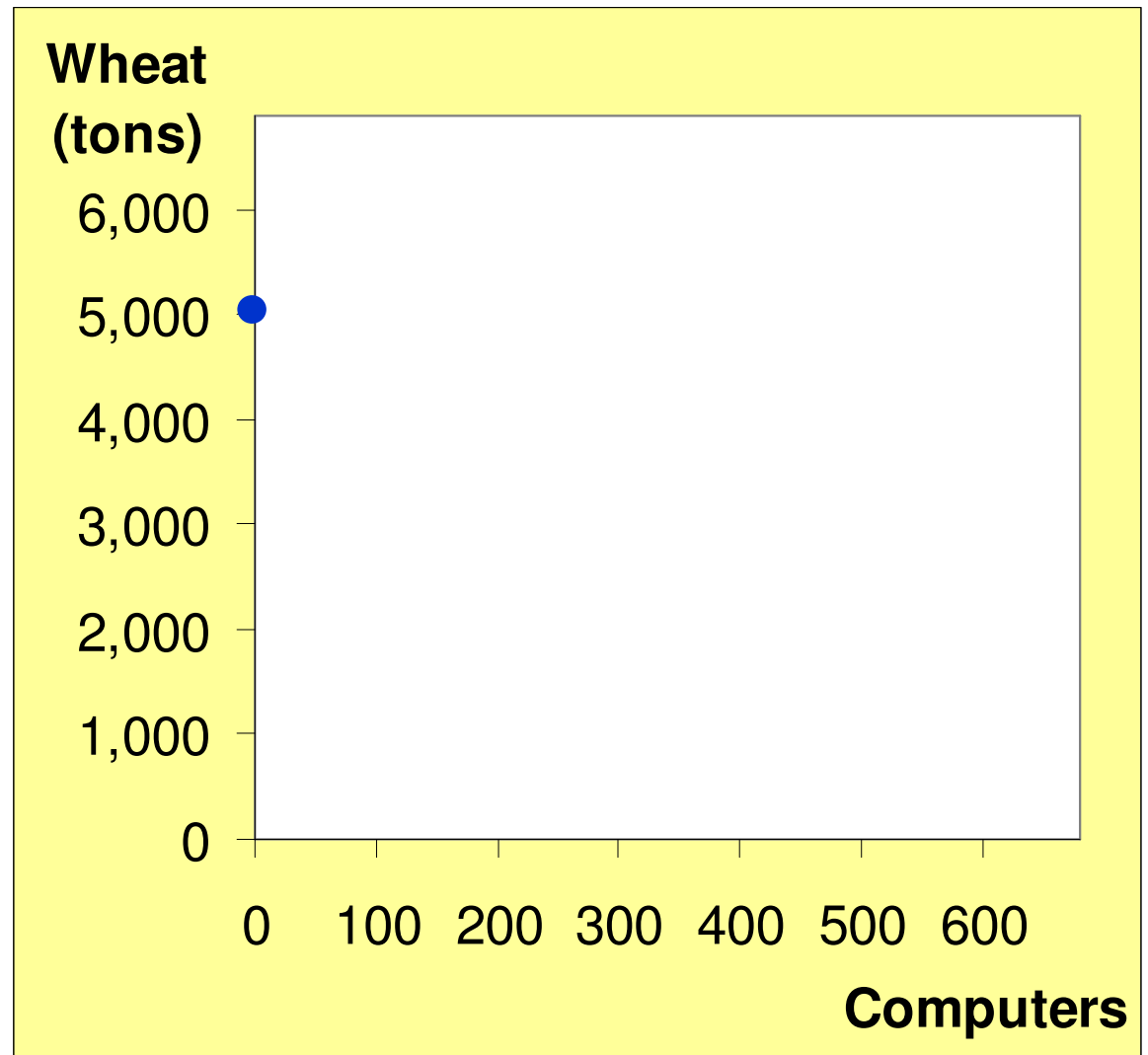
- Two goods: computers and wheat
- One resource: labour (measured in hours)
- Economy has 50,000 labour hours per month available for production.
- One computer requires 100 hours labour and one ton of wheat requires 10 hours labour.

Questions:

A.What is the PPF?

B.Find the point that represents (300 computers, 3500 tons of wheat), label it **A**. Could the economy produce this combination of the two goods?

C.Find the point that represents (100 computers, 3000 tons of wheat), label it **B**. Could the economy produce this combination of the two goods?

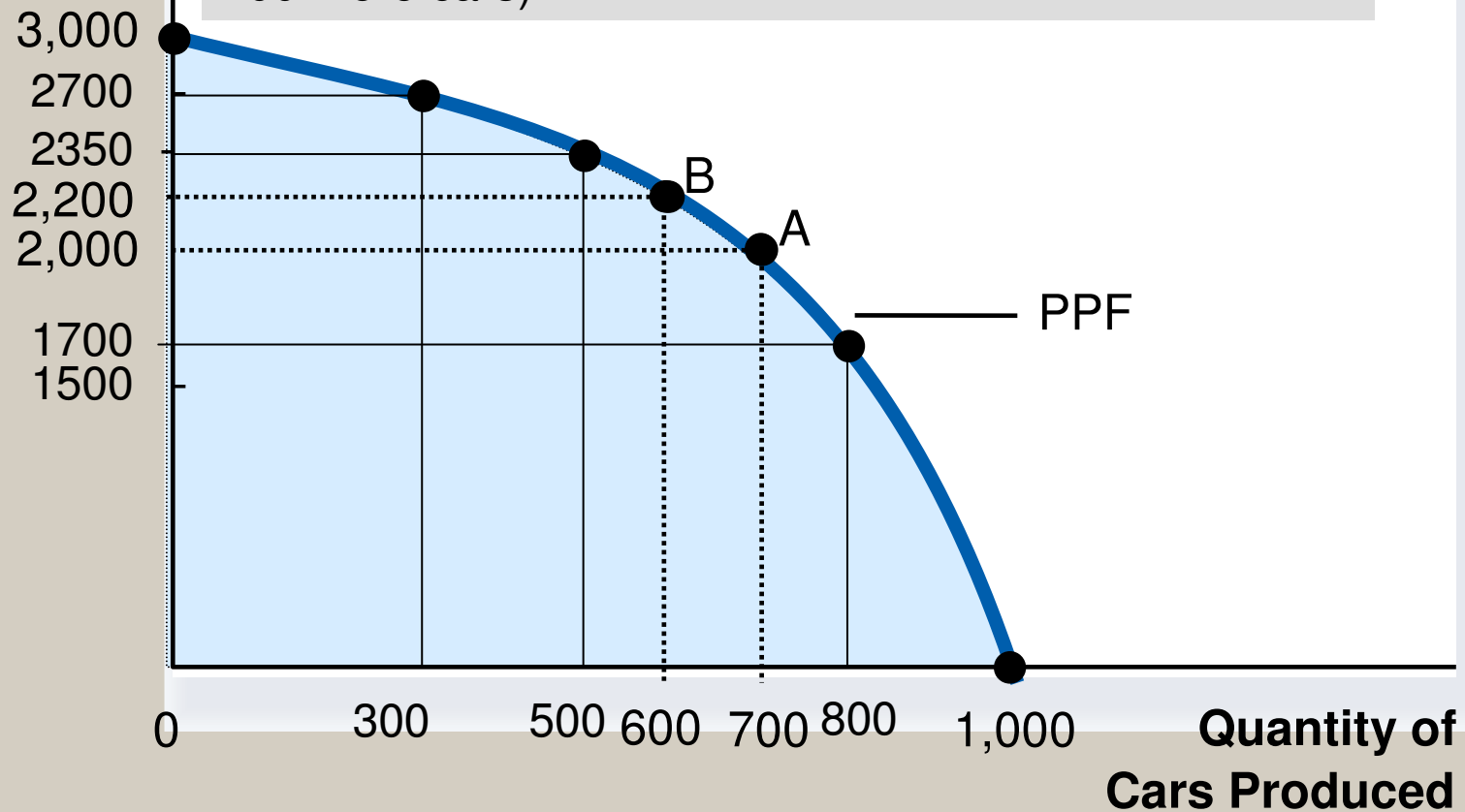


The *PPF* (cont.)

Quantity of
Computers
Produced

The *PPF* also shows the opportunity cost of one good in terms of the other.

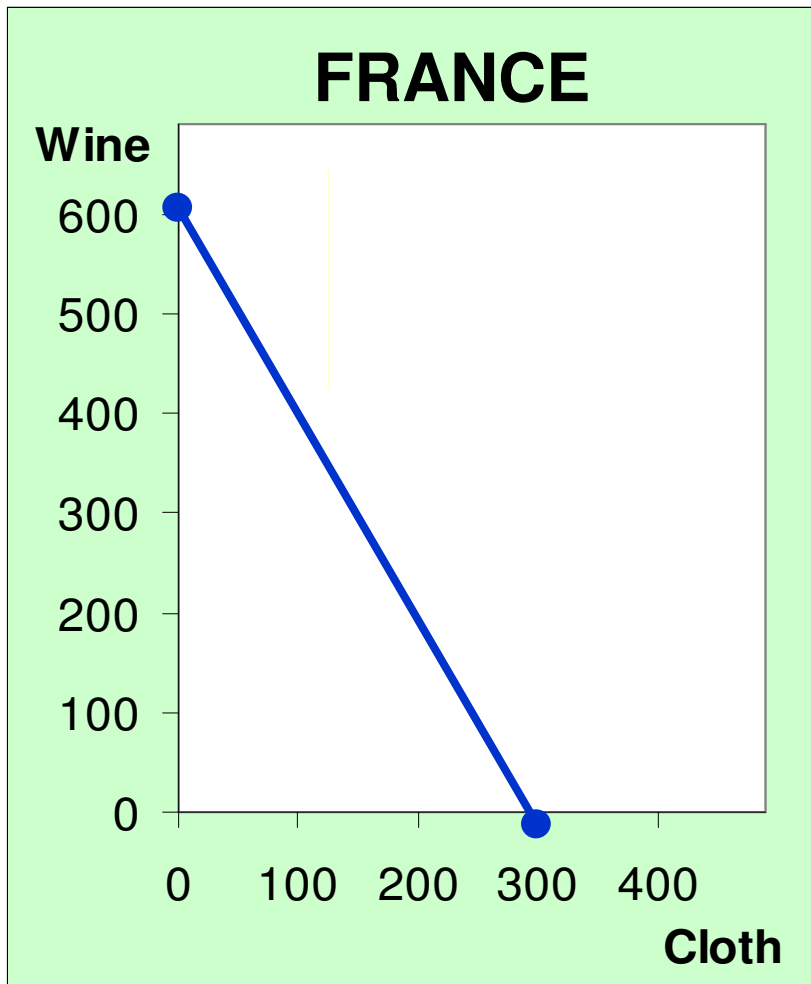
For example if the economy is at point B, what is the opportunity cost of moving to point A (i.e., producing 100 more cars)?



Example: In which country is the opportunity cost of cloth lower ?

Note:

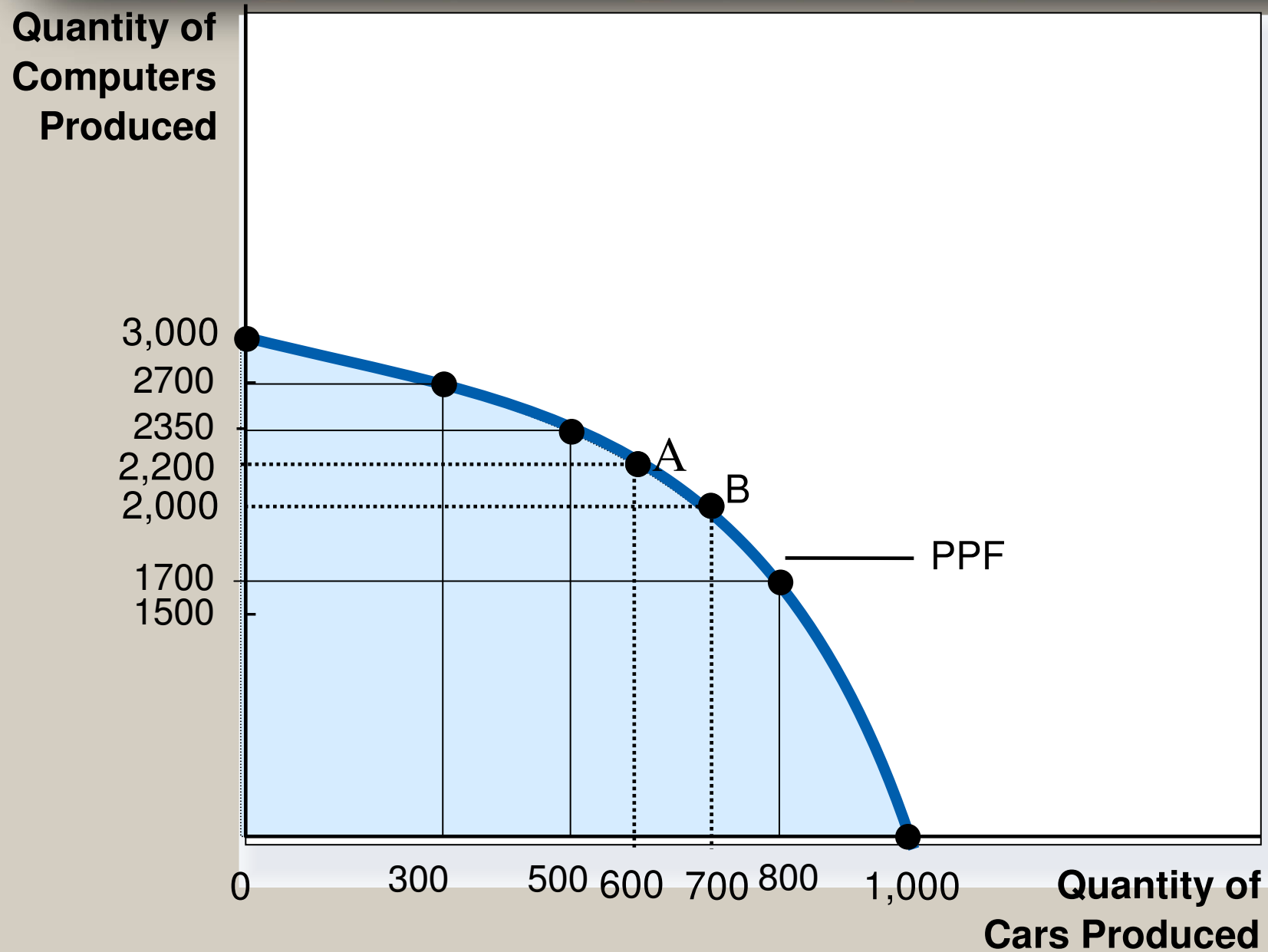
Opportunity cost = absolute value of slope



The Shape of the PPF

- The *PPF* could be a straight line, or bow-shaped
- Depends on what happens to opportunity cost as the economy shifts resources from one industry to the other.

Example of a bow-shaped PPF



Impact of A Technological Advance on the Production Possibilities Frontier (Fig. 2.3, p. 29)

