Principles of
Macroeconomics

Kittichai Saelee
Faculty of economics
Thammasat university


Wojciech Gerson (1831-1901)

Lecture
2

Thinking like an economist and the Scope of economics study

Thinking like economists: questions and methodology.

- What are economists' two roles? How do they differ?
- What are models? How do economists use them?
- How is the Production Possibilities Frontier related to opportunity cost? What other concepts does it illustrate?
- What is the difference between microeconomics and macroeconomics? Between positive and normative?

The Economist as Scientist

- Economists play two roles:
  1. Scientists: try to explain the world
  2. Policy advisors: try to improve it
- In the first, economists employ the **scientific method**, the dispassionate (unbiased) development and testing of theories about how the world works.

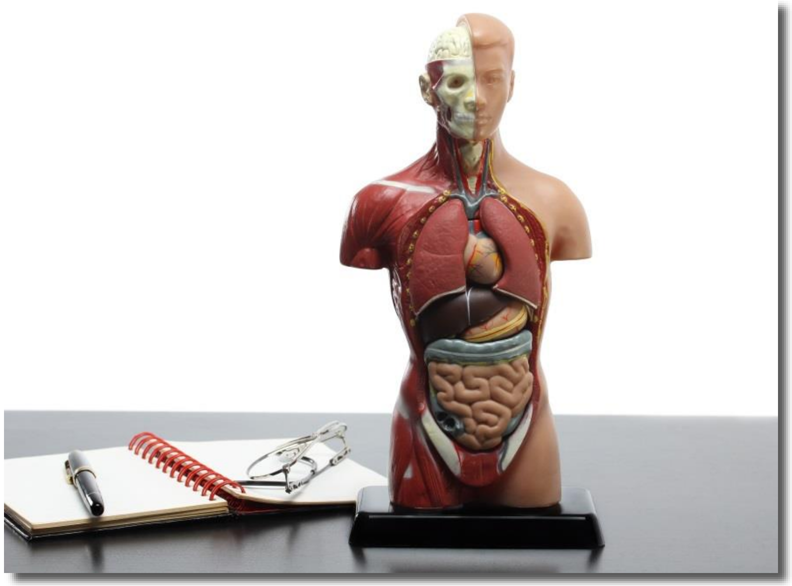
Assumptions & Models

- Assumptions simplify the complex world, make it easier to understand.
- Example: To study international trade, assume two countries and two goods.

  Unrealistic, but simple to learn and gives useful insights about the real world.
- **Model**: a highly simplified representation of a more complicated reality.

  Economists use models to study economic issues.

Some Familiar Models



Assumptions & Models

- **Economics model**
  - A formal statement of a theory, usually a mathematical statement of a *presumed relationship* between two or more variables.

- **Variable**
  - A measure that can change from time to time or from observation to observation.

Assumptions & Models

- **Example:** demand for Instant noodle

- **Quantity demanded (Q)** for Instant noodle of an individual depends on several determinants – e.g, prices and income.

- Q = f(Price of Instant noodle,

  Price of other foods,

  income)

ACTIVE LEARNING 1

Discussion Question

Do you think what is the presumed relationship between prices and quantity demanded of instant noodle?

Price of instant noodle itself

Price of other foods

ACTIVE LEARNING 2

Discussion Question

Do you think what is the presumed relationship between income and the quantity demanded for instant noodle?

Assumptions & Models

Presumed relation: All Else Equal

- ***ceteris paribus*, or all else equal** A device used to analyze the relationship between two variables while the values of other variables are held unchanged.

- Example: Statement for the **Law of demand**

Given other things else fixed, quantity demanded is negatively related to its own price.

Assumptions & Models

Expressing Models in Words, Graphs, and Equations

- Graphs and equations capture the quantitative side of economic observations and predictions.

Our first Model: Limited resource and allocation

The Production Possibilities Frontier

- The **Production Possibilities Frontier (PPF)**: a graph that shows the combinations of two goods the economy can possibly produce given the **available resources and the available technology.**
- Example:
  - Two goods: computers and wheat
  - One resource: labor (measured in hours)
  - Economy has 50,000 labor hours per month available for production.

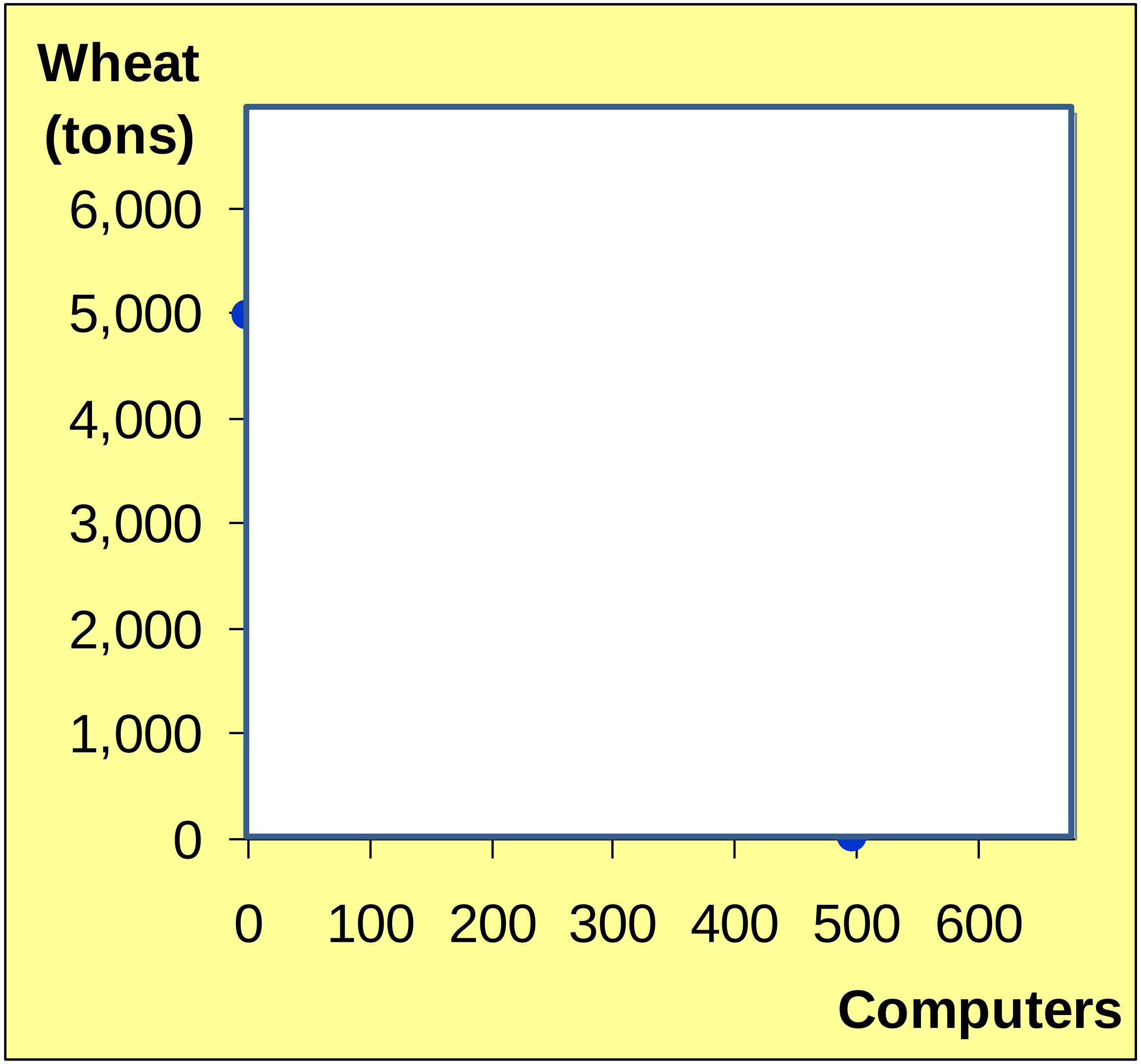
PPF Example

- Producing one computer requires 100 hours labor.
- Producing one ton of wheat requires 10 hours labor.

	Employment of labor hours		Production	
	Computers	Wheat	Computers	Wheat
A	50,000	0		
B	40,000	10,000		
C	25,000	25,000		
D	10,000	40,000		
E	0	50,000		

PPF Example

Point on graph	Production	
	Com-puters	Wheat
A	500	
B		
C		
D		
E		



13

ACTIVE LEARNING 1

Points off the PPF

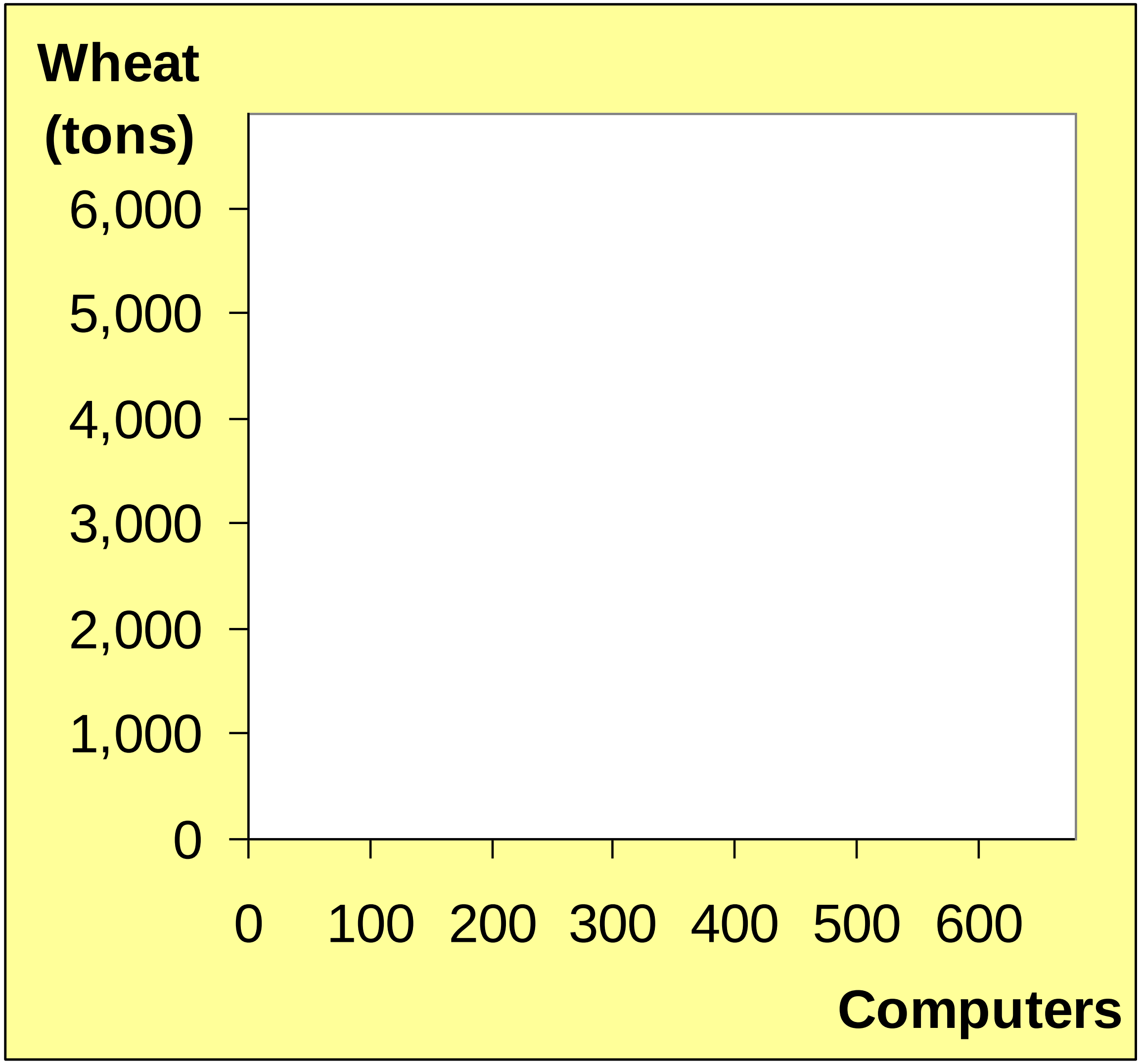
A. On the graph, find the point that represents (100 computers, 3000 tons of wheat), label it **F**. Would it be possible for the economy to produce this combination of the two goods?
Why or why not?

B. Next, find the point that represents (300 computers, 3500 tons of wheat), label it **G**. Would it be possible for the economy to produce this combination of the two goods?

ACTIVE LEARNING 1

Answers

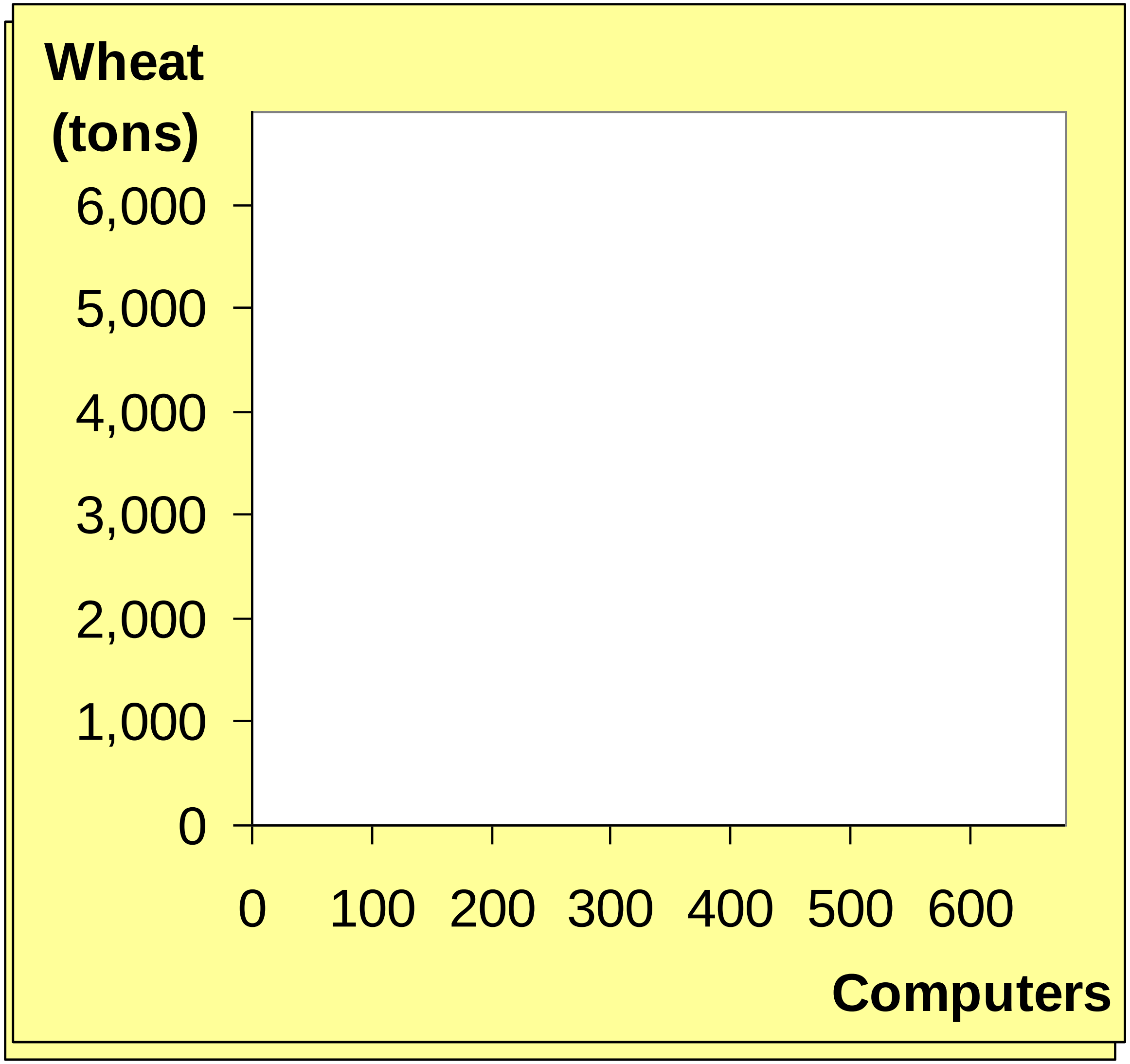
- Point **F**:
  100 computers,
  3000 tons wheat



ACTIVE LEARNING 1

Answers

- Point **G**:
  300 computers,
  3500 tons wheat



The PPF: What We Know So Far

Points on the PPF (like **A** – **E**)

- possible
- efficient: all resources are fully utilized

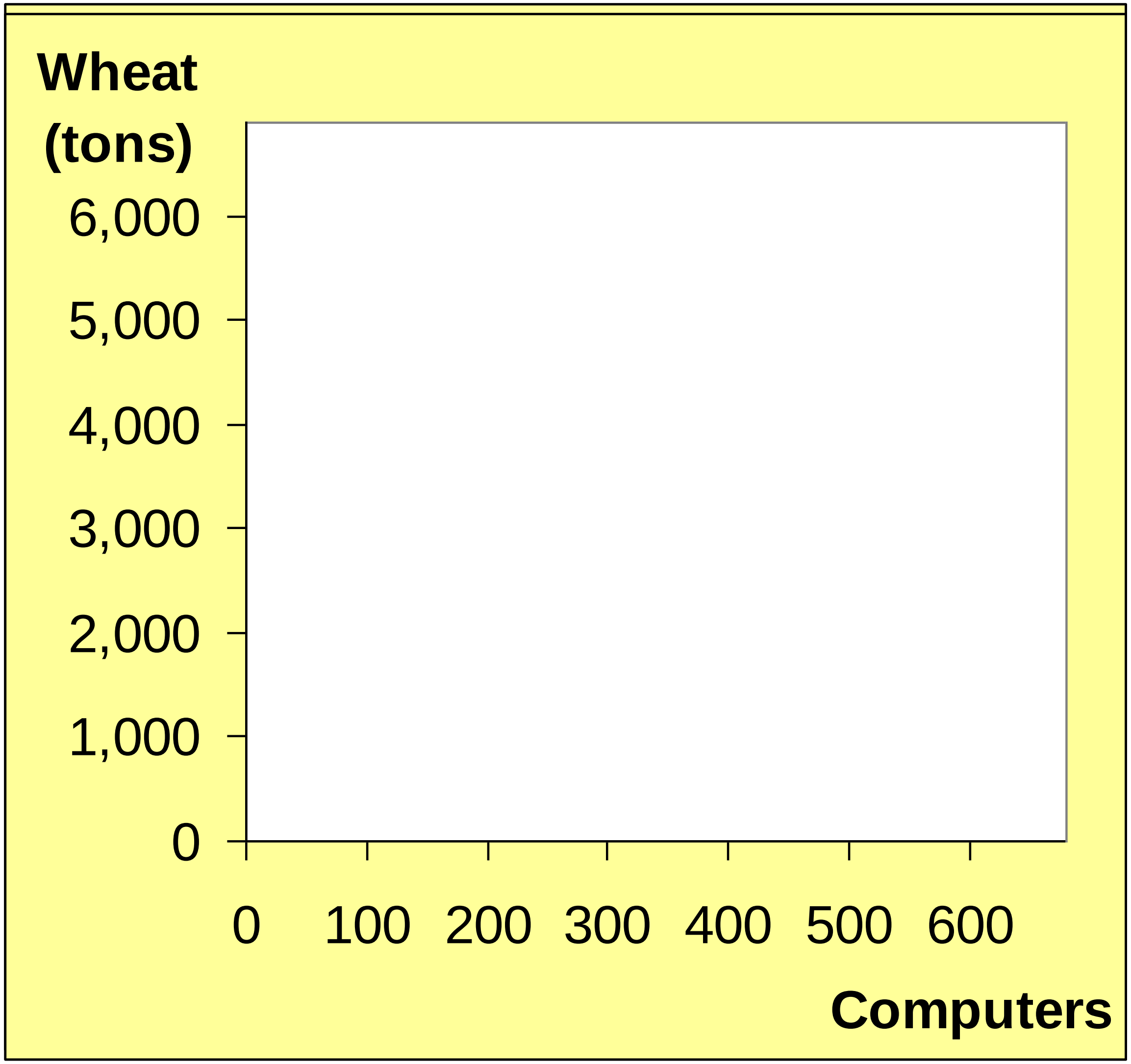
Points under the PPF (like **F**)

Points above the PPF (like **G**)

The PPF and Opportunity Cost

- Recall: The **opportunity cost** of an item is what must be given up to obtain that item.
- Moving along a PPF involves shifting resources (e.g., labor) from the production of one good to the other.
- Society faces a **tradeoff**: Getting more of one good requires sacrificing some of the other.
- The **slope of the PPF** tells you the opportunity cost of one good in terms of the other.

The PPF and Opportunity Cost

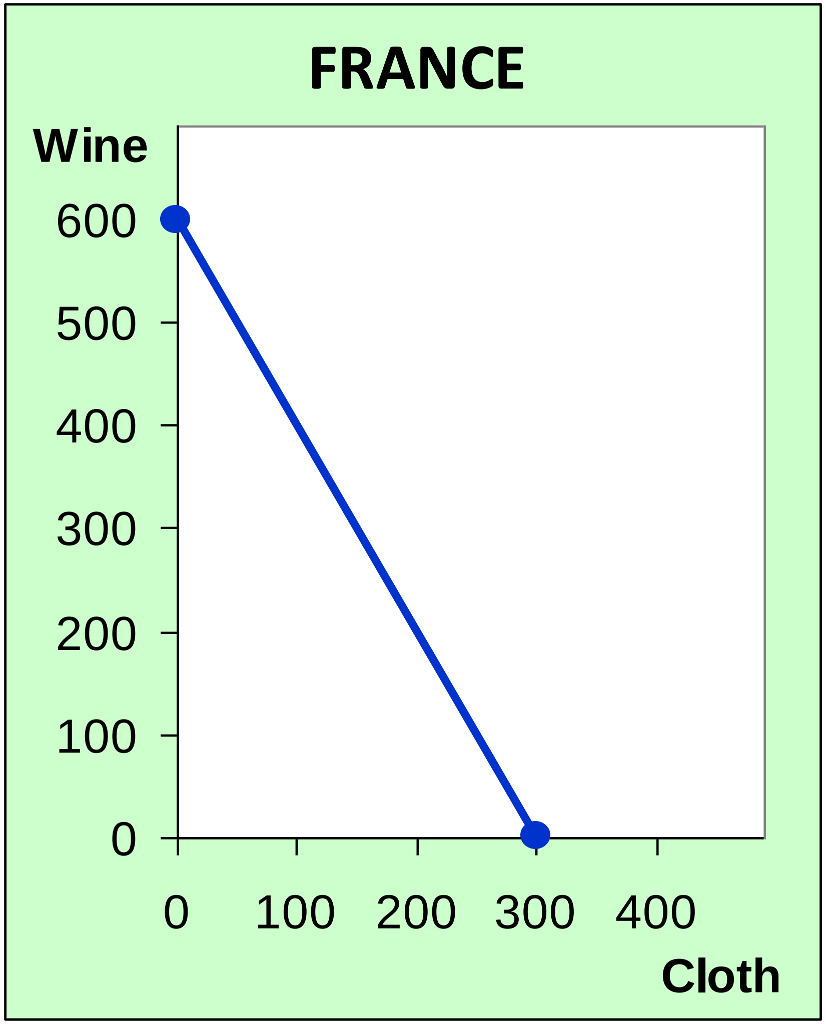


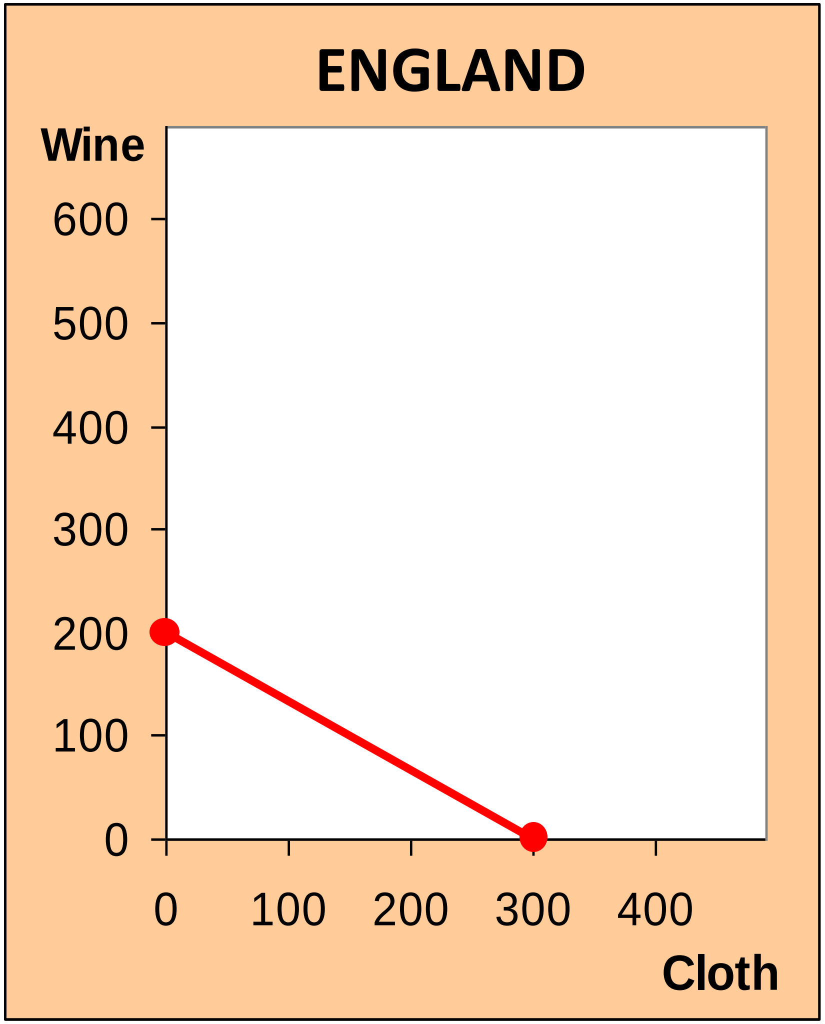
The slope of a line equals the "**rise** over the **run**," the amount the line rises when you move to the right by one unit.

ACTIVE LEARNING 2

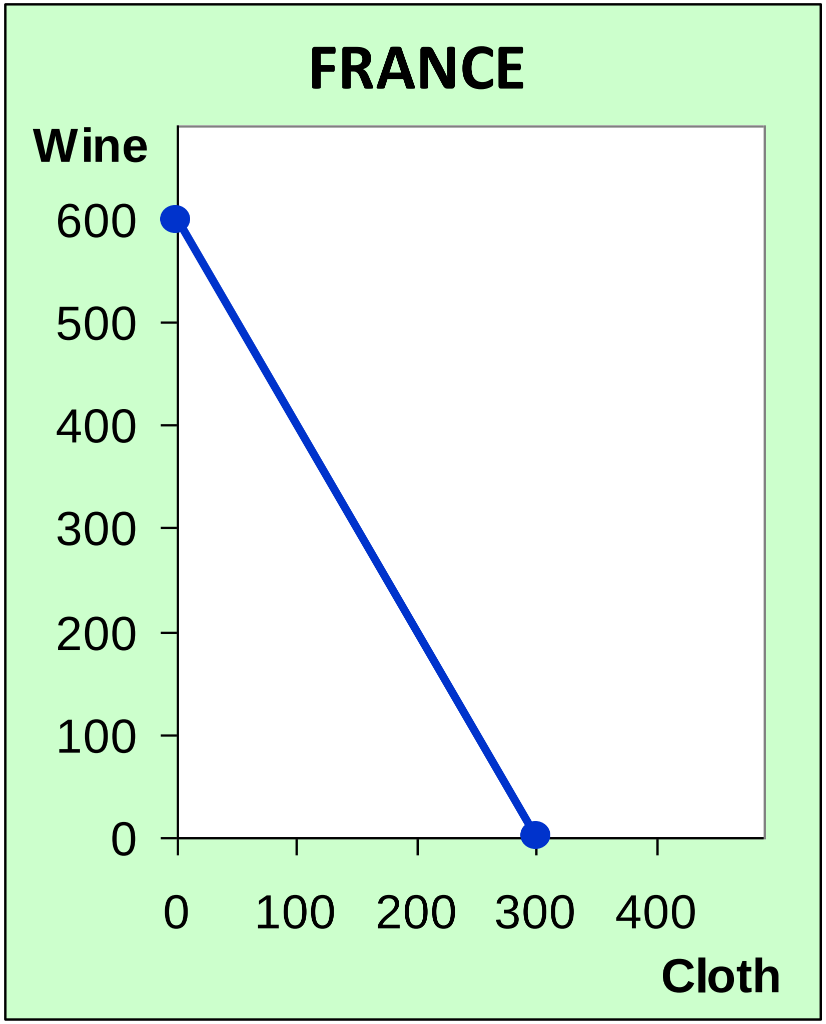
PPF and Opportunity Cost

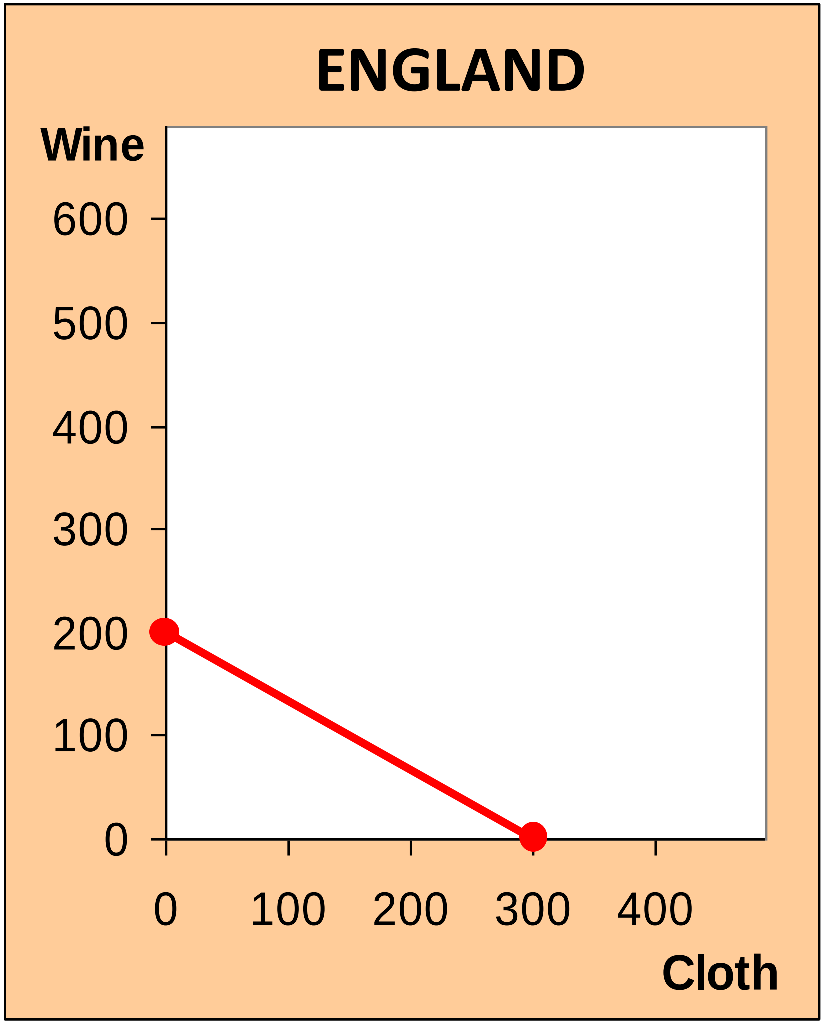
In which country is the **opportunity cost of cloth lower**?





ACTIVE LEARNING 2
Answers

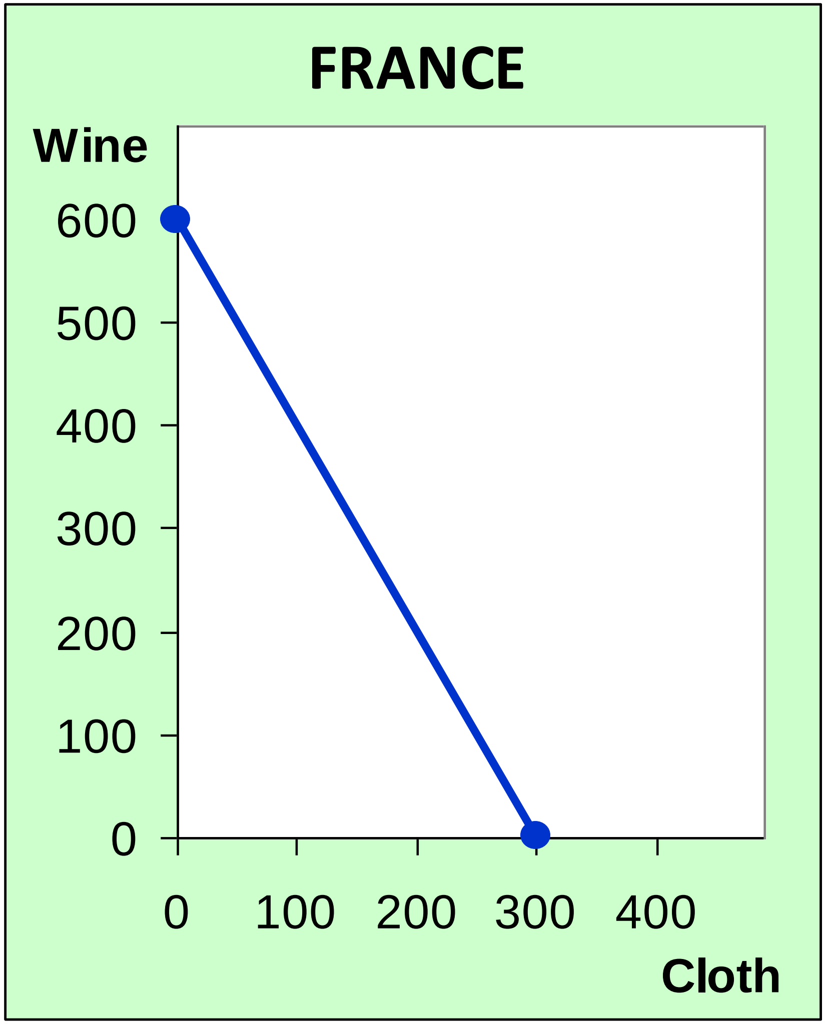


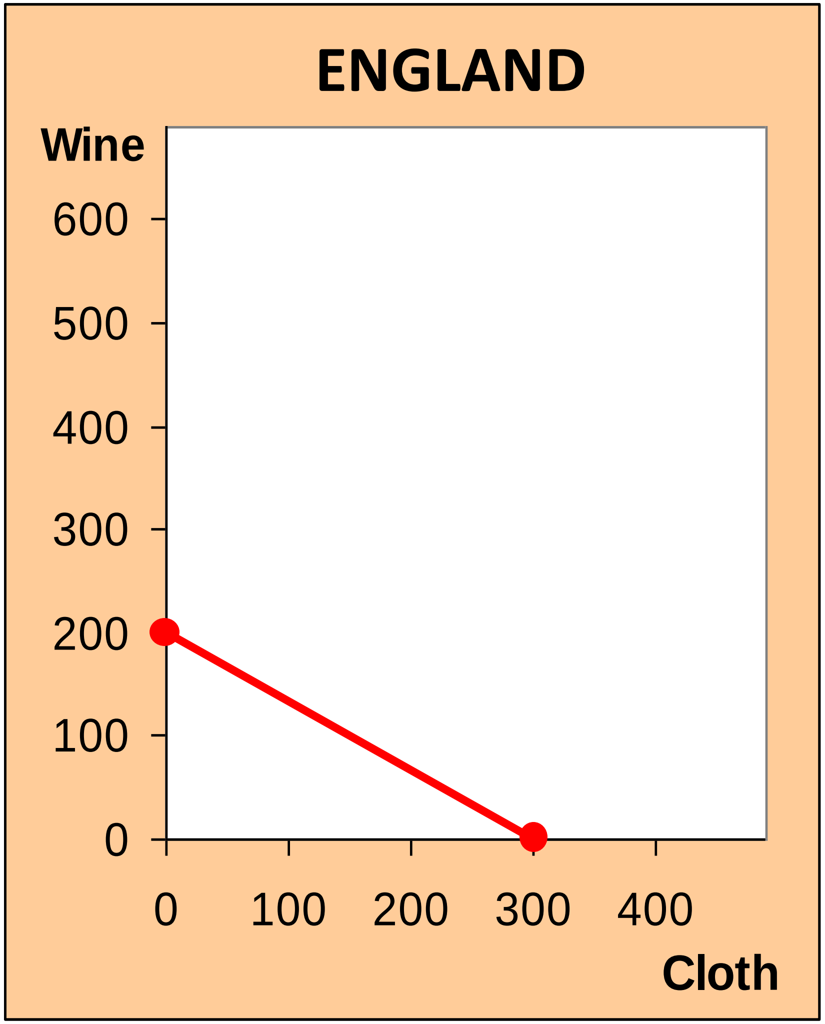


ACTIVE LEARNING 3

PPF and Opportunity Cost

What does the opportunity cost imply us about?





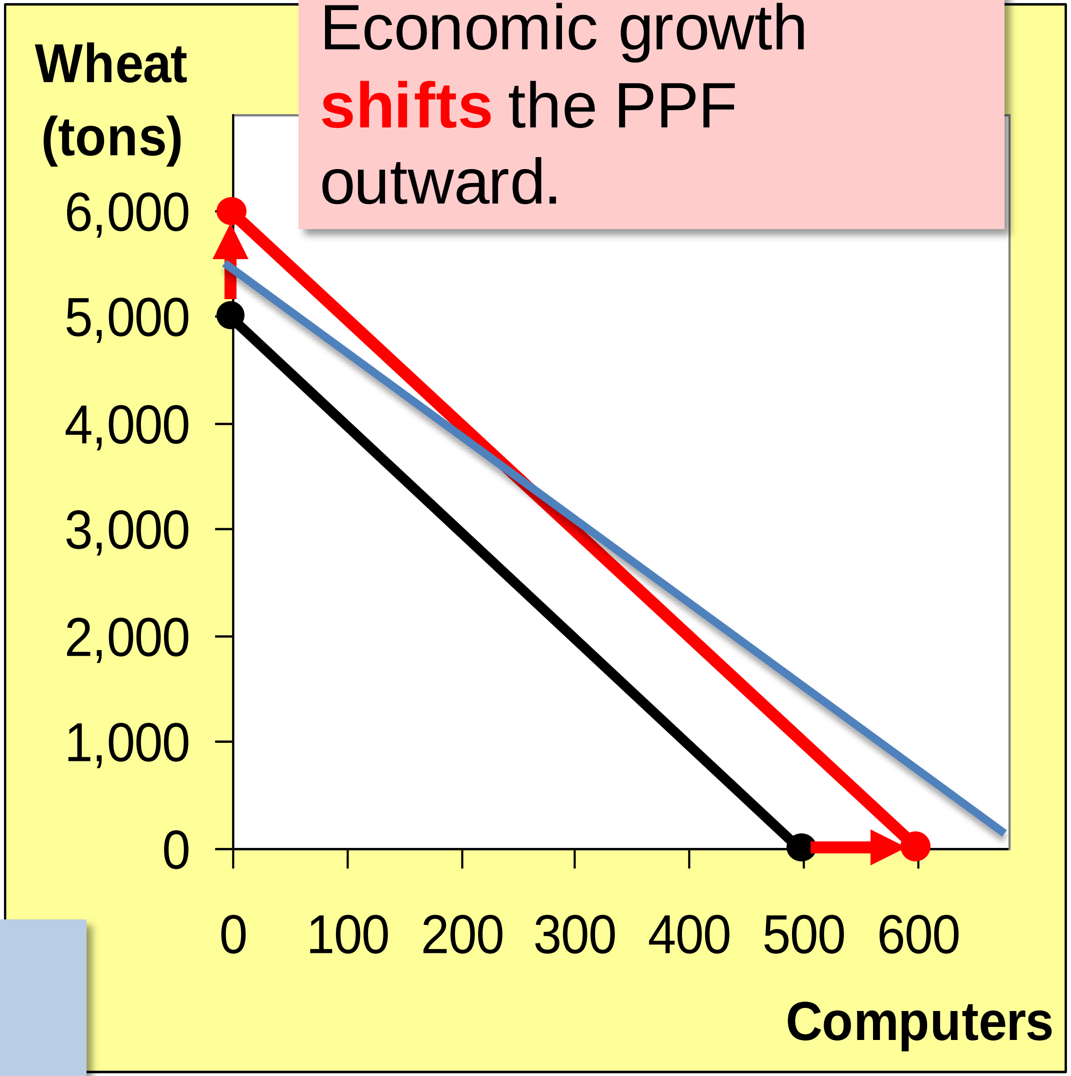
ACTIVE LEARNING 3

PPF and Opportunity Cost

- **Answers:**

Economic Growth and the PPF

With additional resources or an improvement in technology, the economy can produce more computers, more wheat, or any combination in between.



Economic growth **shifts** the PPF outward.

Biased economic growth **rotates** the PPF outward. (not parallel)

PPF Equation

Point on graph	Production	
	Com-puters	Wheat
A	500	0
B	400	1,000
C	250	2,500
D	100	4,000
E	0	5,000

W = amount of wheat
C = Units of computer

W = -10C + 5000

25

Microeconomics and Macroeconomics

- **Microeconomics** is the study of how households and firms make decisions and how they interact in markets.
- **Macroeconomics** is the study of economy-wide phenomena, including inflation, unemployment, and economic growth.
- These two branches of economics are closely intertwined, yet distinct—they address different questions.

TABLE 1.1 Examples of Microeconomic and Macroeconomic Concerns

Division of Economics	Production	Prices	Income	Employment
Microeconomics	*Production/output in individual industries and businesses* How much steel How much office space How many cars	*Prices of individual goods and services* Price of medical care Price of gasoline Food prices Apartment rents	*Distribution of income and wealth* Wages in the auto industry Minimum wage Executive salaries Poverty	*Employment by individual businesses and industries* Jobs in the steel industry Number of employees in a firm Number of accountants
Macroeconomics	*National production/output* Total industrial output Gross domestic product Growth of output	*Aggregate price level* Consumer prices Producer prices Rate of inflation	*National income* Total wages and salaries Total corporate profits	*Employment and unemployment in the economy* Total number of jobs Unemployment rate

The Economist as Policy Advisor

- As scientists, economists make **positive statements**, which attempt to describe the world as it is.
- As policy advisors, economists make **normative statements**, which attempt to prescribe how the world should be.
- Positive statements can be confirmed or refuted, normative statements cannot.
- Govt employs many economists for policy advice.

ACTIVE LEARNING 3

Identifying positive vs. normative

Which of these statements are “positive” and which are “normative”? How can you tell the difference?

a. Prices rise when the government increases the quantity of money.

b. The government should print less money.

c. A tax cut is needed to stimulate the economy.

d. An increase in the price of burritos will cause an increase in consumer demand for music downloads.

Summary

- As scientists, economists try to explain the world using models with appropriate assumptions.
- A simple model is the Production Possibilities Frontier.
- Microeconomics studies the behavior of consumers and firms, and their interactions in markets. Macroeconomics studies the economy as a whole.
- As policy advisers, economists offer advice on how to improve the world.