

# ECO 1110 Current Economic Problems

## What Do Economists Do?

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# Questions we want to address

- What are economists' two roles? How do they differ?
- What are models? How do economists use them?
- What are the elements of the Circular-Flow Diagram? What concepts does the diagram illustrate?
- 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

# Economists as Scientists

- Economists play two roles:
  - Scientists: try to explain the world
  - Policy advisors: try to improve it
- As scientists, economists employ the scientific method
  - Dispassionate development and testing of theories about how the world works

# Economists as Scientists

- Assumptions
  - Simplify the complex world and make it easier to understand
  - Example: to study international trade, assume two countries and two goods
- Economists use models to study economic issues
  - Highly simplified representation of a more complicated reality

# Examples of Models

- A model of human anatomy from high school biology class



- A road map



# Our own simple model

## Circular-flow diagram

- Visual model of the economy
- Shows how dollars flow through markets among households and firms
- Two decision makers
  - Firms and Households interacting in two markets
  - Market for goods and services
  - Market for factors of production (inputs)

# Our own simple Model

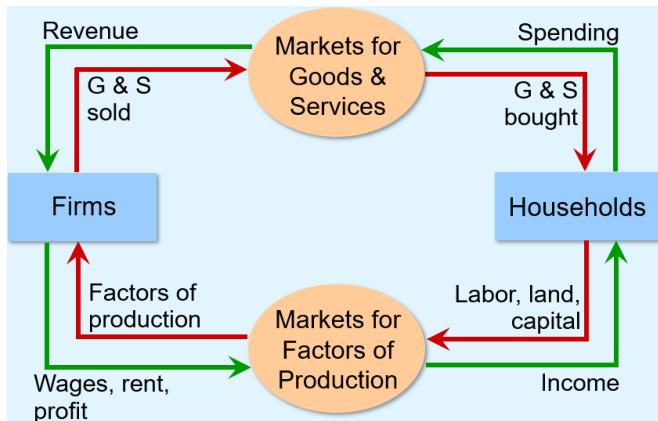
## What do Households do?

- Own the factors of production, sell/rent them to firms for income
- Buy and consume goods & services

## What do Firms do?

- Buy/hire factors of production, use them to produce goods and services
- Sell goods & services

# Circular Flow Diagram





# Production Possibilities Frontier (PPF)

## What is it?

- A graph: combinations of output that the economy can possibly produce given the available factors of production and technology

## Example:

- Two goods: computers and wheat
- One resource: labor (measured in hours)
- Economy has 50,000 labor hours per month available for production

## Example Continued

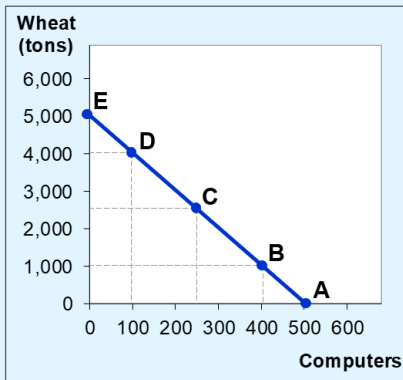
Producing one computer requires 100 hours labor.

Producing one ton of wheat requires 10 hours labor.

	Employment of labor hours		Production	
	Computers	Wheat	Computers	Wheat
A	50,000	0	500	0
B	40,000	10,000	400	1,000
C	25,000	25,000	250	2,500
D	10,000	40,000	100	4,000
E	0	50,000	0	5,000

## Example Continued

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



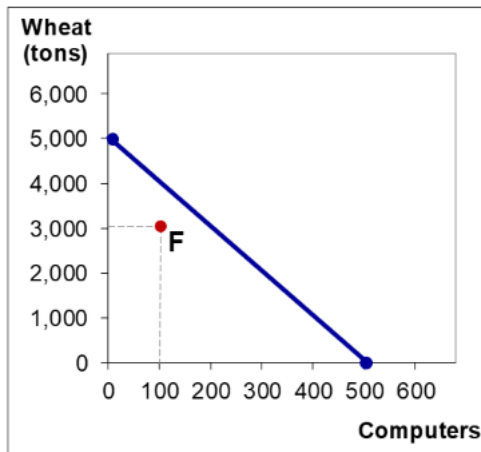
# Application

- On the graph above, 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?
- 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

# Application

Point **F**: 100 computers, 3000 tons wheat, which requires 40,000 hours of labor.

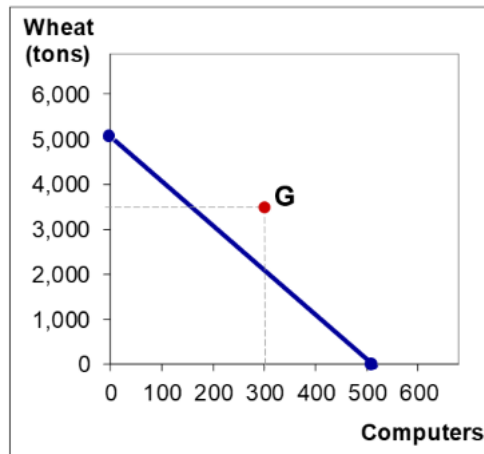
**Possible but not efficient:** could get more of either good without sacrificing any of the other.



# Application

Point **G**: 300 computers, 3500 tons wheat, which requires 65,000 hours of labor.

**Not possible** because the economy only has 50,000 hours.



## What we learned so far

- Points on the PPF (like **A – E**): possible
  - **Efficient**: all resources are fully utilized
- Points under the PPF (like **F**): possible
  - **Not efficient**: some resources are underutilized (e.g., workers unemployed, factories idle)
- Points above the PPF (like **G**)
  - **Not possible**

# How to interpret the PPF?

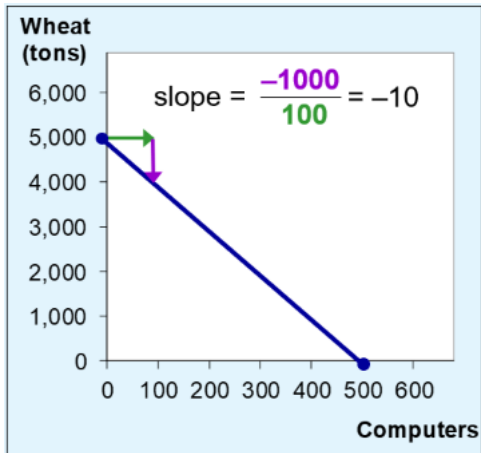
- Moving along a PPF
  - Involves shifting resources from the production of one good to the other
- Society faces a trade-off
  - Getting more of one good requires sacrificing some of the other
- The **slope** of the PPF
  - The opportunity cost of one good in terms of the other



# How to interpret the PPF?

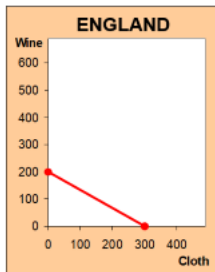
The slope of a line equals the “rise over the run.”

**Opportunity cost of 1 computer = 10 tons of wheat**



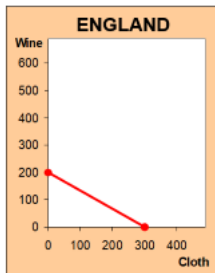
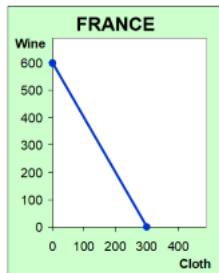
## Can you interpret it?

In which country is the opportunity cost of cloth lower?



## The Answer is. ....

**England**, because its PPF is not as steep as France's. In other words, to produce extra unit of clothing England does not have to give up as many wine bottles as France.



# Engoneous and Exogenous Variables

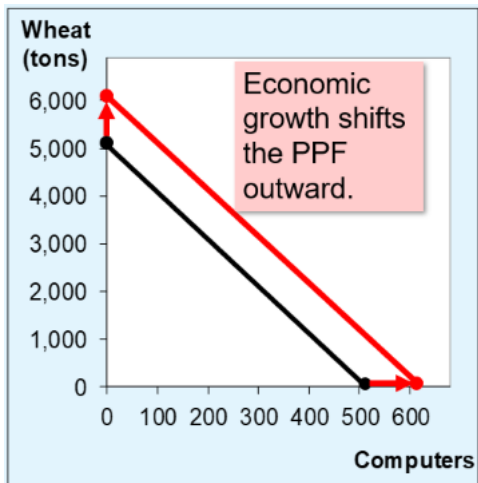
An endogenous variable is one that is **explained by a model**. On the other hand, if the model **does not explain the behavior of certain variable**, then those variables are exogenous.

In simple words, for you to remember, **Endogenous Variables** are the variables you see on a graph, where as **Exogenous Variables** are variables you do not see on a graph. Usually, the aim of a model to see how **Exogenous Variables affect Endogenous Variables**.

For example, number of computers and quantity of wheat produced are seen in the graph we have. They are endogenous variables. Whereas, rainfall is not seen on the graph. It is an exogenous variable. As stated earlier, we might be interested in knowing what happens if there is a lack of rainfall in a year. What will happen to our PPF? What happens to our PPF if there is a technological advancement (Again, exogenous variable)? What happens to our PPF if government enacts a new policy (again, do you see it in the graph? No. So it is an exogenous variable) related to computer manufacturing?

# 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.

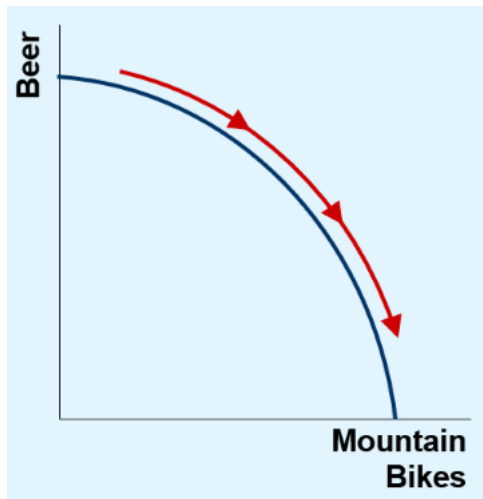


## Let us make it more complex

- The **shape** of the PPF we have seen so far
  - Straight line: constant opportunity cost
  - Previous example: the opportunity cost of 1 computer is 10 tons of wheat
- Let us make it more realistic
  - **Bowed outward: increasing** opportunity cost
  - As more units of a good are produced, we need to give up increasing amounts of the other good produced

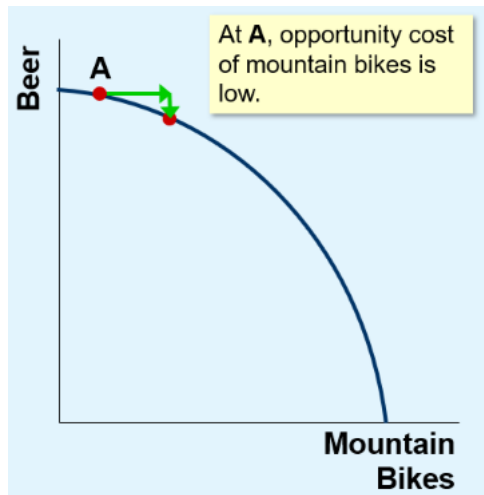
## Why the PPF might be bowed outward?

As the economy shifts resources from beer to mountain bikes: the PPF becomes steeper and the opportunity cost of mountain bikes increases



## Why the PPF might be bowed outward?

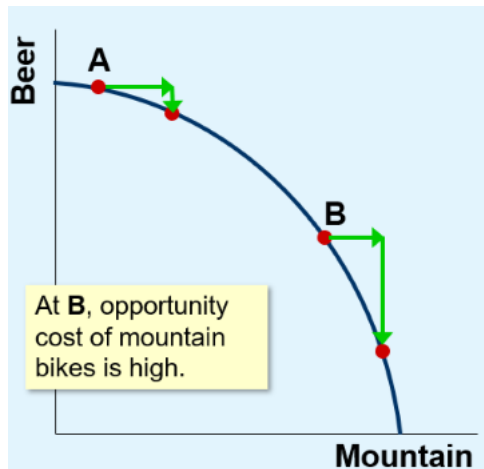
At point **A**, most workers are producing beer, even those who are better suited to building bikes. So, do not have to give up much beer to get more bikes.





## Why the PPF might be bowed outward?

At **B**, most workers are producing bikes. The few left in beer production are the best brewers. Producing more bikes would require shifting some of the best brewers away from beer production causing a big drop in beer output.



# What could be the explanation?

The PPF is bowed outward when:

- Different workers have different skills
- Different opportunity costs of producing one good in terms of the other
- There is some other resource, or mix of resources with varying opportunity costs
  - E.g., different types of land suited for different uses

# Major Fields

## Microeconomics

The study of how households and firms make decisions and how they interact in markets

## Macroeconomics

The study of economy-wide phenomena, including inflation, unemployment, and economic growth

# Economists as Policy Advisors

## Positive statements

- Descriptive
- Attempt to describe the world as it is
- Confirm or refute by examining evidence: “Minimum-wage laws cause unemployment”

## Normative statements

- Prescriptive
- Attempt to prescribe how the world should be: “The government should raise the minimum wage”

# Positive vs Normative

Can you tell which statement is Positive and which one is Normative?

- 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.

# Positive vs Normative

- a. Prices rise when the government increases the quantity of money.
  - **Positive** – *describes a relationship, could use data to confirm or refute.*
- b. The government should print less money.
  - **Normative** – *this is a value judgment, cannot be confirmed or refuted.*

# Positive vs Normative

- A tax cut is needed to stimulate the economy.
  - **Normative** – *another value judgment.*
- An increase in the price of burritos will cause an increase in consumer demand for music downloads
  - **Positive** – *describes a relationship.*

P.S. A statement need not be true to be positive.

# Why Economists Disagree?

- Economists often give conflicting policy advice
- Can disagree about the validity of alternative positive theories about the world
- May have different values and, therefore, different normative views about what policy should try to accomplish
- Yet, there are many propositions about which most economists agree



## Propositions about which Most Economists Agree

- A ceiling on rents reduces the quantity and quality of housing available. (93%)
- Tariffs and import quotas usually reduce general economic welfare. (93%)
- The United States should not restrict employers from outsourcing work to foreign countries. (90%)
- The United States should eliminate agricultural subsidies. (85%)
- Local and state governments should eliminate subsidies to professional sports franchises (85%)

## Propositions about which Most Economists Agree

- Cash payments increase the welfare of recipients to a greater degree than do transfers-in kind of equal cash value. (84%)
- A large federal budget deficit has an adverse effect on the economy. (83%)
- The United States should not ban genetically modified crops. (82%)
- A minimum wage increases unemployment among young and unskilled workers. (79%)
- Government subsidies on ethanol in the United States should be reduced or eliminated. (78%)

# We we learned so far

- Economists are scientists
  - Make appropriate assumptions and build simplified models
  - The circular-flow diagram and the production possibilities frontier
- Microeconomists study decision making by households and firms and their interactions in the marketplace
- Macroeconomists study the forces and trends that affect the economy as a whole

## We we learned so far

- A positive statement is an assertion about how the world is
- A normative statement is an assertion about how the world ought to be
- As policy advisers, economists make normative statements
- Economists sometimes offer conflicting advice
  - Differences in scientific judgments
  - Differences in values