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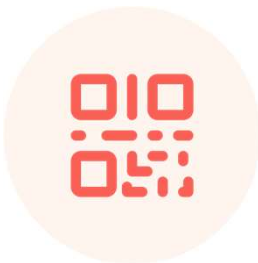
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Thinking Like an Economist

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Principles of Economics

Chapter 2:

Thinking Like an Economist



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Thinking Like an Economist

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In This Chapter

- ▶ 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?

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The Economist as a Scientist

- ▶ Economists play two roles:
 1. Scientists: try to explain the world
 2. Policy advisors: try to improve it
- ▶ As scientists, economists employ the **scientific method**.
 - ▶ Dispassionate development and testing of theories about how the world works
 - ▶ Devise theories, collect data, and analyze these data to verify or refute their theories

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The Economist as a Scientist

- ▶ Economists make assumptions.
 - ▶ Simplify the complex world and make it easier to understand.
 - ▶ For example, to study international trade, assume only **two** countries producing **two** goods
- ▶ Economists use **models** to study economic issues.
 - ▶ Simplified representation of a more complicated reality

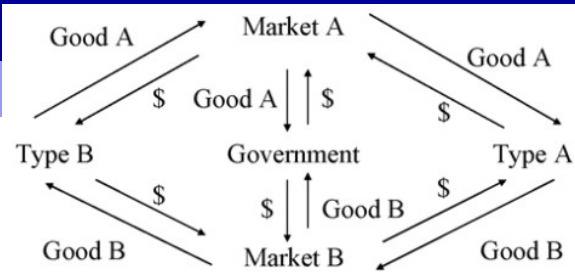
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Models

- ▶ Simplified representation of a more complicated reality



Experiments vs. Models

- ▶ Observation, Theory, and More Observation? Or,
- ▶ Observation, Theoretical Models, and **Experiments!**
 - ▶ Behavioral/Experimental Economics is Booming!
 - ▶ **Controlled Experiment:**
 - ▶ Highly simplified environment of a more complicated reality
 - ▶ Just as Models =
 - ▶ Highly simplified representation of a more complicated reality

Sveriges Riksbank (Nobel) Prize Winners

- ▶ Vernon Smith (2002): **The living Tversky tradition**
- ▶ Elinor Ostrom (2009)
 - ▶ **Manage common resource case study/experiment**
- ▶ Alvin E. Roth (2012)
 - ▶ **Bargaining Experiment/Matching Market Design**
- ▶ Richard Thaler (2017): **Behavioral Finance**
- ▶ Esther Duflo and Michael Kremer (2019)
 - ▶ **Field Experiments (in developing countries)**

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The 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)**

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The Circular-Flow Diagram

Households:

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

Firms

Households

Firms:

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

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The Circular-Flow Diagram

Markets for
Goods and
Services

- Goods and services are bought and sold.
- Sellers: firms
- Buyers: households

- Inputs are bought and sold.
- Sellers: households
- Buyers: firms

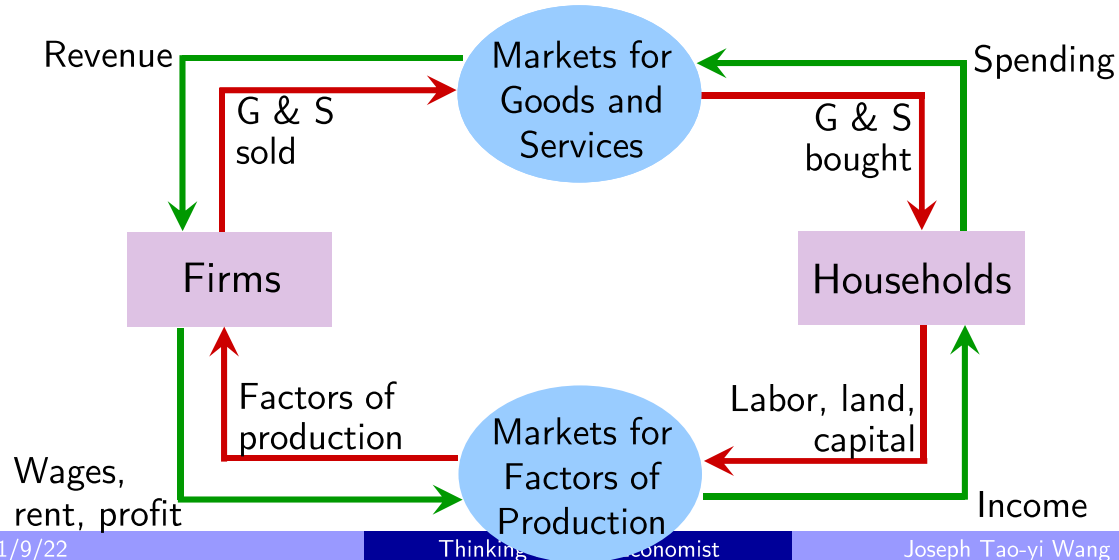
Markets for
Factors of
Production

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The Circular-Flow Diagram



The PPF

- ▶ Production Possibilities Frontier (PPF)
 - ▶ A graph that shows
 - ▶ various combinations of outputs that the economy can possibly produce,
 - ▶ given the available factors of production and the available production technology.

EXAMPLE 1: The PPF

- ▶ Assume a country produces only two goods:
 - ▶ airplanes and soybeans
 - ▶ It has a fixed amount of resources (labor).
 - ▶ It has a fixed amount and quality of technology.
- ▶ The available resources and technology can be used to produce:
 - ▶ Only soybeans (5,000 tons)
 - ▶ Only airplanes (100 airplanes)
 - ▶ Or a combination of soybeans and airplanes

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EXAMPLE 1: The PPF and Output Combinations

	Airplanes	Tons of Soybeans
A	0	5,000
B	20	4,000
C	50	2,500
D	80	1,000
E	100	0

- ▶ These are just a few of the possible production combinations.
- ▶ To increase the production of airplanes from 0 to 20, how many tons of soybeans do we have to give up?
 - ▶ Ans: 1,000 tons (drop from 5,000 to 4,000!)

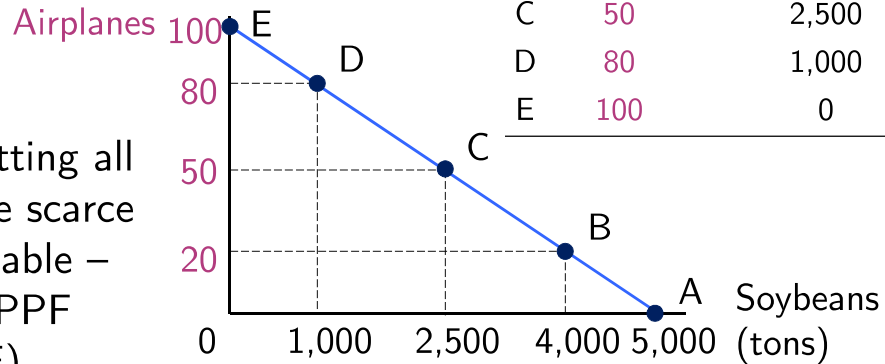
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EXAMPLE 1: Drawing the PPF

▶ **Efficient:** the economy is getting all it can from the scarce resources available – points on the PPF (A, B, C, D, E)



- ▶ **Inefficient Levels of Production:** points inside the PPF
- ▶ **Not Feasible:** points outside the PPF

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Active Learning 1: Points off the PPF

Use the graph from the previous example.

- ▶ Would it be possible for the economy to produce the following combinations of the two goods?
- ▶ Point F: 80 airplanes and 4,000 tons of soybeans
 - ▶ Point G: 30 airplanes and 2,500 tons of soybeans

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Would it be possible for the economy to produce the following combinations of the two goods?
Point F: 80 airplanes and 4,000 tons of soybeans

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Would it be possible for the economy to produce the following combinations of the two goods?
Point G: 30 airplanes and 2,500 tons of soybeans

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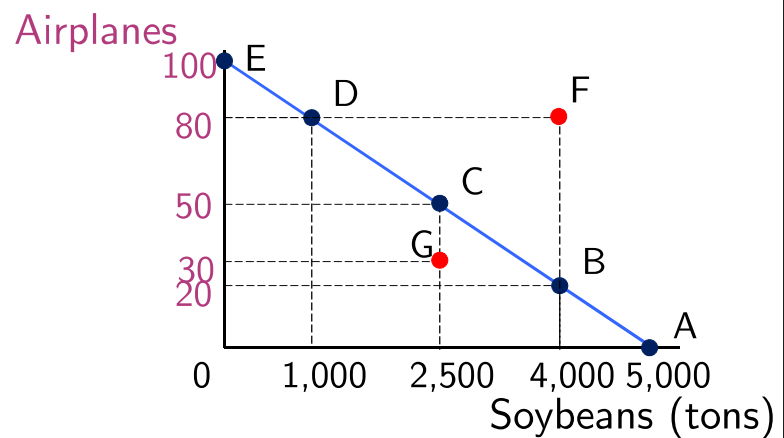
Active Learning 1: Answers

Point F
(airplanes, soybeans)
= (80, 4,000 tons):

Not Possible

Point G
(airplanes, soybeans)
= (30, 2,500 tons):

Possible But Not Efficient (can produce more)



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The PPF: What We Know So Far

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

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Moving Along the PPF

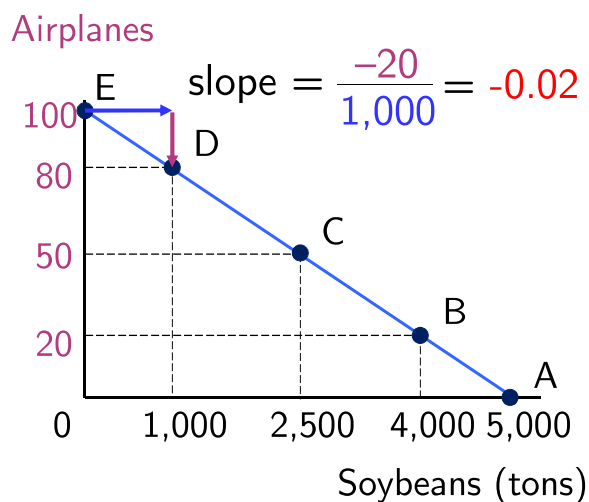
- ▶ Involves shifting resources from the production of one good to the other
- ▶ Society faces a tradeoff.
 - ▶ Getting more of one good requires sacrificing some of the other.
- ▶ The slope of the PPF
 - ▶ The opportunity cost of one good in terms of the other

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EXAMPLE 2: The PPF and Opportunity Cost



To produce the first 1,000 tons of soybeans: give up 20 airplanes

- ▶ Opportunity cost of 1 airplane = 50 tons of soybeans
- ▶ Opportunity cost of 1 ton of soybeans = 0.02 airplanes

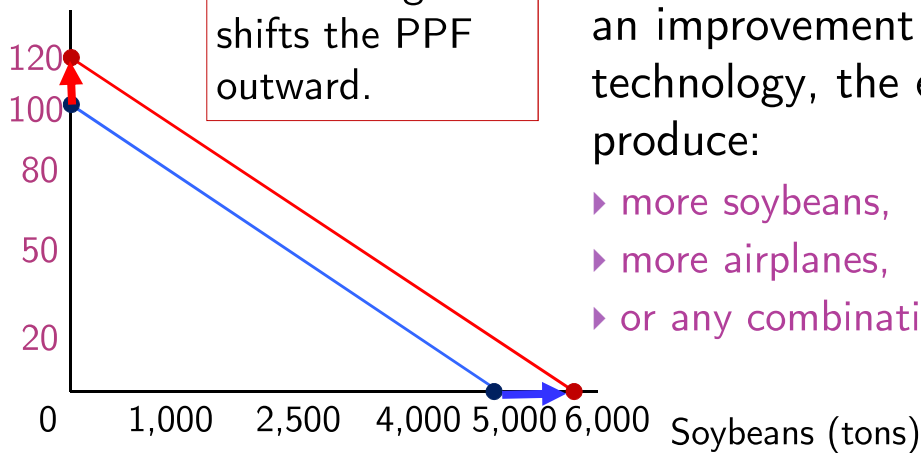
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Economic Growth and the PPF

Airplanes



▶ With additional resources or an improvement in technology, the economy can produce:

- ▶ more soybeans,
- ▶ more airplanes,
- ▶ or any combination in between.

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The Shape of the PPF

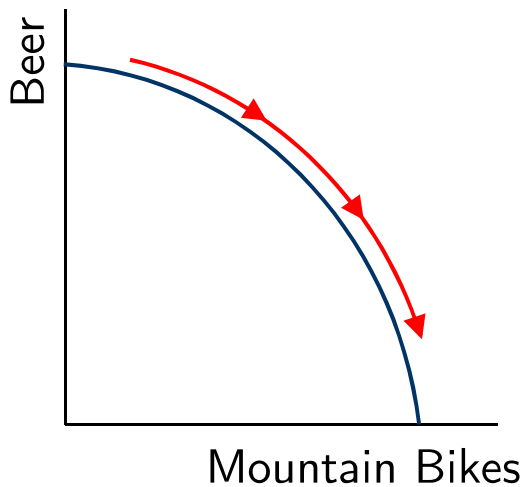
- ▶ Straight line: constant opportunity cost
 - ▶ Previous example: the opportunity cost of 1 airplane is 50 tons of soybeans
- ▶ Bowed outward: increasing opportunity cost
 - ▶ As more units of a good are produced, we need to give up increasing amounts of the other good produced.

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Why the PPF Might Be Bowed Outward



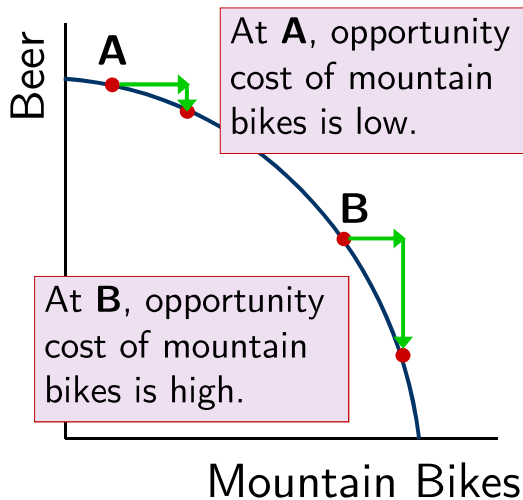
- ▶ As the economy shifts resources from beer to mountain bikes:
 - ▶ PPF becomes steeper
 - ▶ and the opportunity cost of mountain bikes increases.

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Why the PPF Might Be Bowed Outward



- ▶ At point A, most workers are producing beer,
 - ▶ even those who are better suited to building bikes.
- ▶ At point B, most workers are producing bikes.
 - ▶ The few left in beer production are the best brewers.

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Why the PPF Might Be Bowed Outward

- ▶ The PPF is bowed outward when:
 - ▶ Different workers have different skills
 - ▶ There are 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

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Principles of Economics

Ch.2: Circular Flow Diagram and PPF

Questions about this part?

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Audience Q&A Session

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Micro- and Macroeconomics

▶ 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
 - ▶ But the two theories are united with recent progress providing **micro-foundation** to macro

The Economist as Policy Adviser

- ▶ **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.”

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Active Learning 2: Positive or 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 movie streaming.

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“Positive” or “Normative”?
Prices rise when the government increases the quantity
of money.

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“Positive” or “Normative”?
The government should print less money.

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Active Learning 2: Answers

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

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“Positive” or “Normative”?
A tax cut is needed to stimulate the economy.

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“Positive” or “Normative”?

An increase in the price of burritos will cause an increase in consumer demand for movie streaming.

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Active Learning 2: Answers

- ▶ 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 movie streaming.
 - ▶ Positive—describes a relationship.
- ▶ Note: A statement need not be true to be positive.

Economists in Washington

- ▶ Council of Economic Advisers
 - ▶ Advises the president
 - ▶ Writes the annual Economic Report of the President
- ▶ Office of Management and Budget
 - ▶ Helps formulate spending plans and regulatory policies
- ▶ Department of the Treasury
 - ▶ Designs tax policy

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Economists in Washington

- ▶ Department of Labor
 - ▶ Analyzes data on workers and those looking for work
 - ▶ Formulates labor-market policies
- ▶ Economists at the Department of Justice
 - ▶ Enforce the nation's antitrust laws
- ▶ Congressional Budget Office
 - ▶ Helps the Congress
- ▶ The Federal Reserve
 - ▶ Sets monetary policy

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Why Economists' Advice Is Not Always Followed

- ▶ The president receives advice from:
 - ▶ Economists
 - ▶ Communication advisers
 - ▶ Press advisers
 - ▶ Legislative affairs advisers
 - ▶ Political advisers
- ▶ The president makes the decision.

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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.

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Ask The Experts

Ticket Resale

▶ “Laws that limit the resale of tickets for entertainment and sports events make potential audience members for those events worse off on average.”

▶ Do you Agree or Disagree?

▶ Do you think Economists Agree or Disagree?

Source: IGM Economic Experts Panel, April 16, 2012.

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Do you "Agree" or "Disagree"?

“Laws that limit the resale of tickets for entertainment and sports events make potential audience members for those events worse off on average.”

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Do Economists "Agree" or "Disagree"?
 "Laws that limit the resale of tickets for entertainment and sports events make potential audience members for those events worse off on average."

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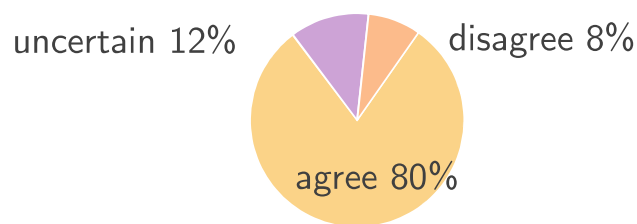
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Ask The Experts

Ticket Resale

- ▶ "Laws that limit the resale of tickets for entertainment and sports events make potential audience members for those events worse off on average."

What do economists say?



Source: IGM Economic Experts Panel, April 16, 2012.

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%)

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Propositions About Which Most Economists Agree

- ▶ Local and state governments should eliminate subsidies to professional sports franchises. (85%)
- ▶ 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%)

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Propositions About Which Most Economists Agree

- ▶ 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%)

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Think-Pair-Share

You are Watching PTS Talk (公視有話好說) at Home...

- ▶ The first focus segment is a discussion of the pros and cons of free trade.
- ▶ For balance, there are two economists present—one in support of free trade and one opposed.
- ▶ Your dad says, “Those economists have no idea what’s going on. They can’t agree on anything:
 - ▶ One says free trade makes us rich.
 - ▶ The other says it will drive us into poverty.

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Think-Pair-Share

You are Watching PTS Talk (公視有話好說) at Home...

- ▶ Your dad says, “Those economists have no idea what’s going on. They can’t agree on anything.”
 - ▶ One says free trade makes us rich.
 - ▶ The other says it will drive us into poverty.
- ▶ If the experts don’t know, how is the average person ever going to know whether free trade is best?”
- A. Can you give your dad any insight into why economists might disagree on this issue?

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Why Economists Might Disagree on Free Trade?

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Think-Pair-Share

You are Watching PTS Talk (公視有話好說) at Home...

- B. Suppose you discover that 93 percent of economists believe that free trade is generally best (which is the greatest agreement on any single issue).
- ▶ Could you now give a more precise answer as to why economists might disagree on this issue?
- C. What if you later discovered that the economist opposed to free trade worked for a labor union.
- ▶ Would that help you explain why there appears to be a difference of opinion on this issue?

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What if you later discovered that the economist opposed to free trade worked for a labor union.

Would that help you explain why there appears to be a difference of opinion on this issue?

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Chapter in a Nutshell

- ▶ Economists are scientists.
 - ▶ Make appropriate assumptions and build simplified models
 - ▶ Use 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.

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Chapter in a Nutshell

- ▶ 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

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Thinking Like an Economist

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Chapter 2: Thinking Like An Economist

- ▶ See how Economists think
- ▶ Key Idea:
 - ▶ Circular Flow Diagram
 - ▶ Production Possibility Frontier
- ▶ Suggested Homework:
 - ▶ Mankiw, Chap. 2, Problem 3, 4

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Ch.2: Thinking Like an Economist

Questions about chapter 2?

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Principles of Economics

Ch.2

The End