Econ 21003 Coursepack

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Contents

Chapter 1

Ten Principles of Economics

1.1 Ten Principles of Economics

In this chapter, you will be able to answer the following questions:

- What kinds of questions does economics address?
- What are the principles of how people make decisions?
- What are the principles of how people interact?
- What are the principles of how the economy as a whole works?
- What is the difference between microeconomics & Macroeconomics?

1.2 What Economics Is All About

- **Scarcity:** the limited nature of society's resources (labor, land, physical capital)
- **Economics:** the study of how society manages its scarce resources.

1.3 The principles of *HOW PEOPLE MAKE DECISIONS*

1.4 Principle #1. Because Resources are scarce, People Face Trade-offs

All decisions involve tradeoffs. Examples:

- Students face trade-offs:
- Farmers face trade-offs: producing more of apple vs. more of oranges
- Governments face trade-offs: more butter versus guns
- Society faces an important trade-off between **efficiency vs. equity (equality)** :

- ***Efficiency***: when society gets the most from its scarce resources
- ***Equity***: when prosperity is distributed uniformly or *fairly* among society's members
- Tradeoff: To achieve greater equality, society could redistribute income from wealthy to poor. But this reduces incentive to work and produce, shrinks the size of the economic *pie.*

1.5 Principle 2: The Cost of Something Is What You Give Up to Get It

- Making decisions requires comparing the costs and benefits of alternative choices.
- The **opportunity cost** of any item is whatever must be given up to obtain it.
  - It is the relevant cost for decision making.

What is the opportunity cost of

- going to college?
- seeing a movie?

1.6 Principle 3: Rational People Think at the Margin

Variation: How much is the decision at the margin

- Economists assume that people are rational since they systematically and purposefully do the best they can to achieve their objectives.
- Or make decisions by evaluating marginal cost and marginal benefits;
  - ***Marginal Changes*** –incremental adjustments to an existing plan.
- Ignore ***Sunk Cost***– cost already incurred and cannot be recovered.

Examples:

- A student considering whether to go to college compares
- When a manager considers whether to increase output, she compares

1.7 Principle 4: People Respond to Incentives

- **Incentive:** something that induces a person to act, i.e. the prospect of a reward or punishment.

- Rational people respond to incentives.

1.8 ACTIVE LEARNING 1: APPLYING THE PRINCIPLES ◁

Example 1: You are selling your 1996 Mustang. You have already spent $1000 on repairs.
At the last minute, the transmission dies. You can pay $ 600 to have it repaired, or sell the car *as is.* In each of the following scenarios, should you have the transmission repaired? Explain.

a. Blue book value is $ 6500 if transmission works, $ 5700 if it doesn't

b. Blue book value is $ 6000 if transmission works, $ 5500 if it doesn't

1.9 ACTIVE LEARNING 2: APPLYING THE PRINCIPLES

Jim and Mike are roommates with the same taste for Jazz. Jim wins a ticket from a Radio station to see the jazz band perform at an outdoor concert. Mike has paid $20 for a ticket to the same concert. Both tickets are non-refundable. Due to a tremendous thunderstorm, they are reconsidering their attending the concert. Who do you think will be more likely to attend the concert, assuming that both are rational? Explain why.

1.10 ACTIVE LEARNING 3: APPLYING THE PRINCIPLES ◁

Suppose you won a ticket from a Radio station to see a jazz band perform at an outdoor concert. But while preparing to go to the concert today, it rains and you decide not to go. Suppose you had paid $500 for the ticket instead of getting it for free, what would be the rational decision for you to do now: go or not go to the concert?

1.11 The principles of HOW PEOPLE INTERACT

A doctor and a Barber

1.12 Principle 5: Trade Can Make Everyone Better Off

- Rather than being self-sufficient, people can specialize in producing one good or service and exchange it for other goods.
- Countries also benefit from trade & specialization:
  - Get a better price abroad for goods they produce
  - Buy other goods more cheaply from abroad than could be produced at home

1.13 Principle 6: Markets Are Usually A Good Way to Organize Economic Activity

- Market: a group of buyers and sellers (not necessarily a place)
- Organize economic activity means determining:
  - what (and how much) g & s to produce

  - how to produce them
  - For Whom to produce: who gets them

- These are the 3 economic problems every society must solve.
- A market economy, unlike command economy, allocates resources through the decentralized decisions of many households and firms as they interact in markets.
- Famous insight by Adam Smith in The Wealth of Nations (1776): "Each of these households and firms acts as if *led by an invisible hand* to promote general economic well- being."

The invisible hand works through the price system:

- The interaction of buyers and sellers determines prices.
- Each price reflects the good's value to buyers and the cost of producing the good.
- Prices guide self-interested households and firms to make decisions that, in many cases, maximize society's economic well-being (i.e., efficient).
- For the market mechanism to work, it needs the govt to **enforce property rights** (with police, courts, even the military)
- People are less inclined to work, produce, invest, or purchase if there is large risk of their property being stolen
- Even with proper enforcement of property rights, a market mechanism can sometimes lead to inefficient allocation of resources …

1.14 Principle 7 : Governments Can Sometimes Improve Market Outcomes

- **Market failure:** when the market fails to allocate society's resources efficiently.
- 3 Causes of market failure:
  1. Externalities, when the production or consumption of a good affects bystanders (e.g. pollution)
  2. Market power, a single buyer or seller has substantial influence on market price (e.g. monopoly)
  3. Public goods: defense services, parks, etc.
- In such cases, well designed public policies may promote efficiency
- Govt may alter market outcome to **promote equity**

- If the market's distribution of economic well-being is not desirable, tax or welfare policies can change how the economic *pie* is divided.

1.15 Discussion Questions ◁

In each of the following situations, what is the government's role? Does the government's intervention improve the outcome? a. Public schools for K-12 b. Public highways c. Patent laws, which allow drug companies to charge high prices for life-saving drugs

1.16 Two Broad Branches of Economics

- **Microeconomics:** branch of economics concerned with how people make decisions and how these decisions interact.
- e.g., determination of price, employment or output in a particular market or industry.
- **Macroeconomics:** branch of economics concerned with the overall economy.
- e.g., determination of national income, economic growth, recessions, inflation.

1.17 The principles of HOW THE ECONOMY AS A WHOLE WORKS

1.18 Principle 8: A Country's Standard of Living Depends on Its Ability to Produce Goods & Services

- The most important determinant of living standards: **productivity**, the amount of goods and services produced per unit of labor.
- Productivity depends on the equipment, skills, and technology available to workers.
- Other factors (e.g., labor unions, competition from abroad) have far less impact on living standards.

1.19 Principle 9: Prices Rise When the Government Prints Too Much Money

- Inflation: increase in the general level of prices.
- In the long run, inflation is almost always caused by excessive growth in the quantity of money, which causes the value of money to fall.
- The faster the govt creates money, the greater the inflation rate.

1.20 Principle 10: Society Faces a Short-run Tradeoff Between Inflation and Unemployment

- In the short-run (1–2 years), many economic policies push inflation and unemployment in opposite directions.
- Other factors can make this tradeoff more or less favorable, but the tradeoff is always present.

1.21 SUMMARY ◁

1. Because Resources are scarce, People Face Trade-offs
2. The Cost of Something Is What You Give Up to Get It
3. Rational People Think at the Margin
4. People Respond to Incentives
5. Trade Can Make Everyone Better Off
6. Markets Are Usually A Good Way to Organize Economic Activity
7. Governments Can Sometimes Improve Market Outcomes
8. A Country's Standard of Living Depends on Its Ability to Produce Goods & Services
9. Prices Rise When the Government Prints Too Much Money
10. Society Faces a Short-run Tradeo Between In ation and Unemployment

Chapter 2

Principles of Trade and interdependence: Absolute and Comparative advantage

2.1 Learning Objectives ◁

In this chapter, you will be able to answer the following:

- What are economists' two roles? How do they differ?
- What are models? How do economists use them?
- How is the **Production Possibilities Frontier (PPF)** related to opportunity cost? How does it help us understand gains from trade?
- What is the difference between absolute and comparative advantage
- What is the difference between positive and normative statement?

2.2 What do Economist Do?

- The two main roles of Economists:
- Scientists: they try to explain the world
- Policy advisers: try to improve the world
- As scientists, economists employ the scientific method, objective development and testing of theories about how the world works.

- Unlike the natural sciences, economists use mainly historical or survey data and less on lab experiments, which is difficult if not impossible in economics– especially for the macroeconomy
- As policy advisers, economists fight poverty, inflation, unemployment, etc.

2.3 Economists as Scientists: Assumptions & Models

- As scientists, economists build ***models*** to understand the world
- ***Model***: a highly simplified representation of a reality.
- we use ***assumptions*** to simplify the complex world, make it easier to understand.
- Example 1: To study int'l trade, we will assume two countries and two goods. Unrealistic, but simple to learn and gives useful insights about the real world.
- Example 2: To understand relationship between two variables, it is often assumed that all other relevant factors remain unchanged, or "other things equal" or ceteris paribus in latin.

2.4 Example Model: 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 week available for production.

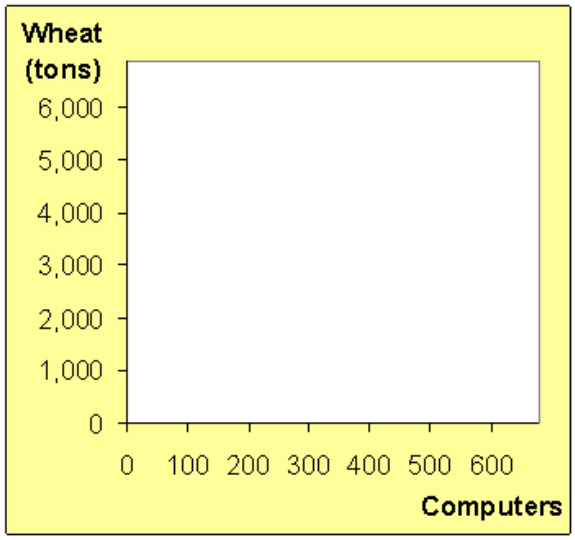
2.5 PPF Example: Complete the table $\lhd$

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

	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		

2.6 PPF Example: Translate to graph ◁

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



2.7 Exercise: Points on 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?

2.8 The PPF and Opportunity Cost

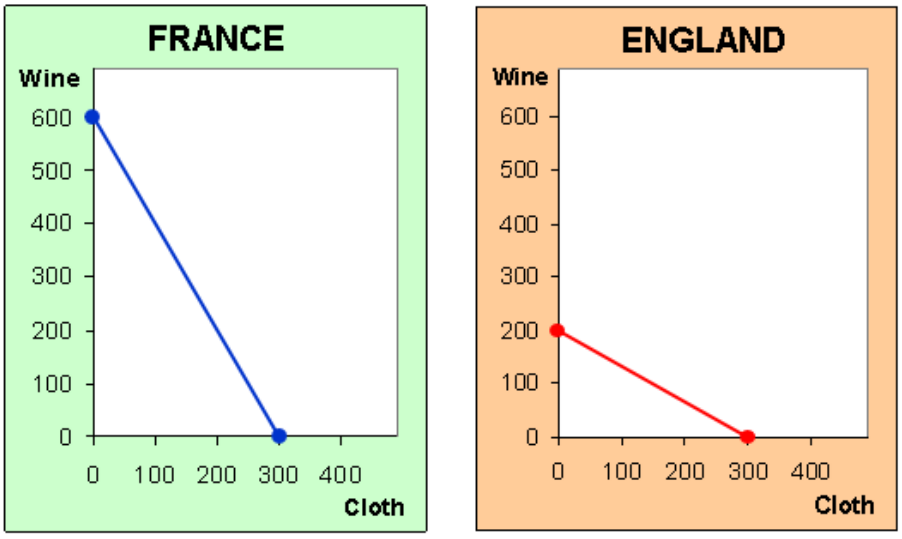
- The Opportunity Cost of good X

$$= \frac{Additional\ amount\ of\ Y\ given\ up}{Additional\ amount\ of\ X\ Obtained} = |\frac{\Delta Y}{\Delta X}| = |slope|$$

- Exercise: What is the Opportunity cost of producing Wheat for the previous PPF? and of Computer?

2.9 Active Learning 2: PPF and Opprtunity Cost ◁

In which country is the opportunity cost of cloth lower?

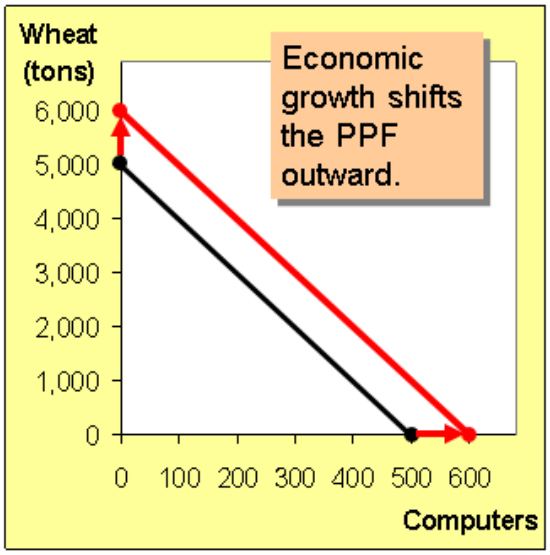


2.10 Economic Growth and the PPF

With additional resources or an improvement in technology, the economy can produce more computers,

more wheat,

or any combination in between.



2.11 Absolute and Comparative Advantage:

2.11.1 First Example

- Assumptions:
- Two countries: the U.S. and the Rest of the World (RoW)
- Two goods: computers and wheat
- One resource: labor, measured in hours
- We will look at how much of both goods each country produces and consumes
- if the country chooses to be self-sufficient
- if it trades with the other country
- In U.S., Producing 1 computer requires 100 labor hours and Producing 1 ton of wheat requires 10 hours labor.
- In the ROW, Producing 1 computer requires 90 labor hours and Producing 1 ton of wheat requires 15 hours labor.
- Then:
    a. Which country is more efficient in the production of computers?
    b. Which country is more efficient in the production of wheat?

c. So can U.S. gain from trade with ROW?

Absolute advantage:

2.12 Absolute Advantage

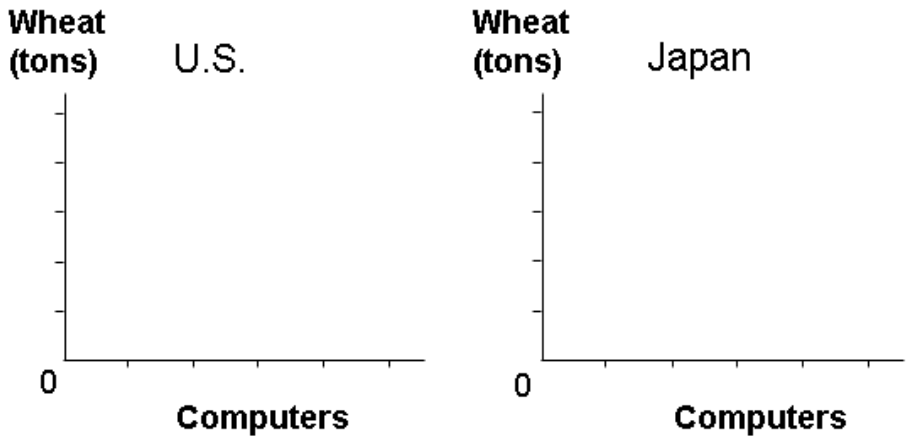
- **Absolute advantage:** the ability to produce a good using fewer inputs than another producer
- Which country has an absolute advantage in computers?
- Which country has an absolute advantage in wheat?

2.13 Another Example: U.S. & Japan ◁

- U.S. again has 50,000 hours of labor per month available for production.
- Producing 1 computer requires 100 hours of labor. Producing 1 ton of wheat requires 10 hours of labor.
- Japan has also 50,000 hours of labor available for production, per month.
- Producing 1 computer requires 125 hours of labor. Producing 1 ton of wheat requires 25 hours of labor.
- Which country has absolute adv. in the production of wheat? in the production of computers? Can U.S. benefit in trade with Japan?

2.14 U.S and Japan without Trade ◁

- Suppose U.S. allocates its resources 50-50 to each good, while Japan allocates 1/4 on computers and 3/4 on wheat. Locate this in each country's PPF. (Without trade each country consumes what it produces, no more no less!)



2.15 *Active Learning:* ◁

- If U.S. specializes only in computers, what is the maximum number of computers it can produce? locate this point on the U.S. PPF.
- Suppose Japan produces only 400 computers. How many tons of wheat would Japan be able to produce with its remaining labor? Draw this point on Japan's PPF.

2.16 Basic International Trade Terms

- **Exports:** goods produced domestically and sold abroad
- **To export** means to sell domestically produced goods abroad.
- **Imports:** goods produced abroad and sold domestically
- **To import** means to purchase goods produced in other countries.

2.17 Activity: Consumption With Trade ◁

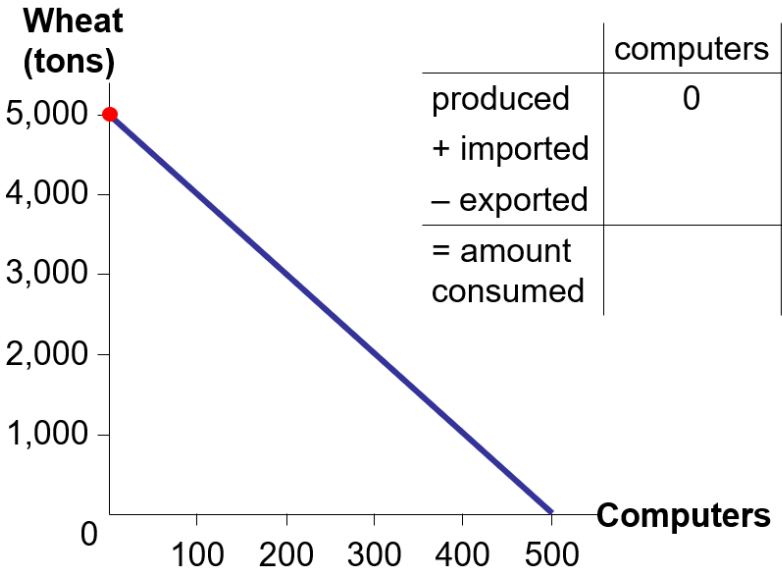
Suppose the U.S. exports 2000 tons of wheat to Japan, and imports 280 computers from Japan.

(So, Japan imports 2000 tons wheat and exports 280 computers. The rate of exchange is called terms of trade)

- How much of each good is consumed in the U.S.? Plot this combination on the U.S. PPF.
- How much of each good is consumed in Japan?

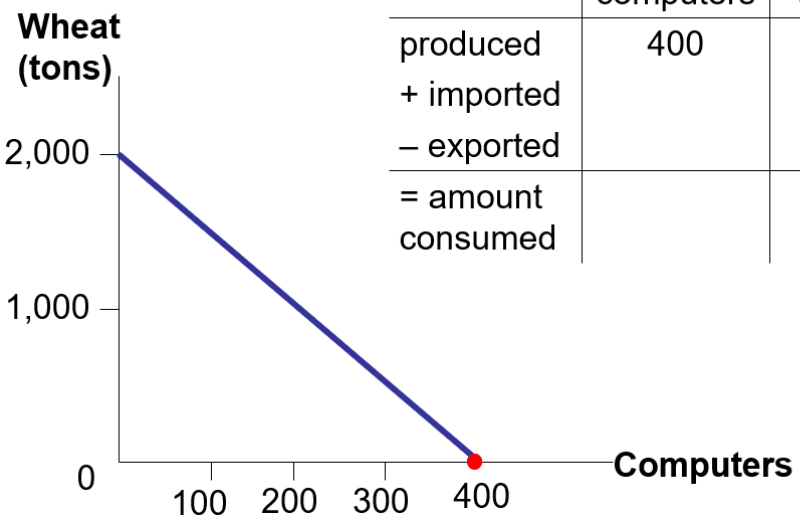
Plot this combination on Japan's PPF.

2.18 U.S. Production and Consumption With Trade ◁



	computers	wheat
produced	0	5000
+ imported		
– exported		
= amount consumed		

2.19 Japan's production and Consumption With Trade ◁



	computers	wheat
produced	400	0
+ imported		
– exported		
= amount consumed		

2.20 Trade Makes Both Countries Better Off ◁

U.S.			
	consumption without trade	consumption with trade	gains from trade
computers	250	280	**30**
wheat	2500	3000	**500**
Japan			
	consumption without trade	consumption with trade	gains from trade
computers	100	120	**20**
wheat	1500	2000	**500**

Comparative Advantage:

2.21 Where Do These Gains Come From?

- So, the U.S. has an absolute advantage in both goods but can again from trade with Japan!
- why does Japan specialize in computers? Why do both countries gain from trade?
- Or can absolute advantage explain the possibility of trade between the countries?

2.22 Opportunity Cost and Comparative Advantage

- Recall: Another measure of cost is opportunity cost.
- ***Comparative advantage:*** the ability to produce

  a good at a lower opportunity cost than another producer
- Which country has the comparative advantage in computers?
- Which country has the comparative advantage in wheat?

Lesson: Absolute advantage is not necessary for comparative advantage or for trade! Comparative advantage is!

2.23 Comparative Advantage and Trade

- Gains from trade arise from comparative advantage (differences in opportunity costs).
- Specialization and trading according to comparative advantage increases world production and consumption. (each country still produce on its PPF but can consume combinations outside its PPF)
- The same applies to individual producers (like the farmer and the rancher) specializing in different goods and trading with each other.

2.24 *Active Learning 1: Absolute & comparative advantage*

- Argentina and Brazil each have 10,000 hours of labor per month.
- In Argentina:
  - producing one pound coffee requires 2 hours
  - producing one bottle wine requires 4 hours

- In Brazil:
  - producing one pound coffee requires 1 hour
  - producing one bottle wine requires 5 hours

a. Which country has an absolute advantage in the production of coffee ?

b. Which country has a comparative advantage in the production of wine?

2.25 *Active Learning 2: Absolute & comparative advantage* ◁

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Assuming each worker has only 8 hours daily for production:

a. Who has absolute advantage in the production of jackets? ties?

b. Who has comp. advantage in the production of jackets? ties?

c. Suppose the terms of trade were 1 jacket to 2 ties, show how each person is made better off through specialization and trade

2.26 *Active Learning 3: Absolute & comparative advantage* ◁

- Germany can produce 2 computers per minute or 1 tractor per minute while the U.S. can produce 3 computers of 2 tractors per minute. Draw the implied PPF and show:
  a. Which country has absolute advantage in computers? in tractors?
  b. Which country has comp. advantage in computers? in tractors?
  c. what is the range in which trade can benefit both countries.

2.27 *Active Learning 4: Absolute & comparative advantage* ◇

Assume that England and Spain can switch between producing cheese and producing bread at a constant rate.

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a. Which country has absolute advantage in Cheese? in bread?

b. Which country has comp. advantage in Cheese? in bread?

2.28 Unanswered Questions ...

- We made a lot of assumptions about the quantities of each good that each country produces, trades, and consumes, and the price at which the countries trade wheat for computers.
- In the real world, these quantities and prices would be determined by the preferences of consumers and the technology and resources in both countries.
- We will begin to study this in the next chapter. For now, though, our goal was merely to see how trade can make everyone better off.

2.29 CHAPTER SUMMARY

- Interdependence and trade allow everyone to enjoy a greater quantity and variety of goods & services.
- Comparative advantage means being able to produce a good at a lower opportunity cost. Absolute advantage means being able to produce a good with fewer inputs.
- When people – or countries – specialize in the goods in which they have a comparative advantage, the economic "pie' ' grows and trade can make everyone better off.

2.30 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.

2.31 *ACTIVE LEARNING: 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 video rentals.

2.32 Why Economists Disagree

Economists sometimes give conflicting policy advice.

- They sometimes disagree about the validity of alternative positive theories about the world.
- They 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.

2.33 Propositions about Which Most Economists Agree (and % who 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 agriculture subsidies. (85%)

2.34 FYI: Who Studies Economics?

- Tiger Woods, Golfer
- Ronald Reagan, President of the United States
- Barbara Boxer, U.S. Senator
- Sandra Day-O'Connor, Former Supreme Court Justice
- Anthony Zinni, Former General, U.S. Marine Corps
- Kofi Annan, Former Secretary General, United Nations
- Meg Witman, Chief Executive Officer, eBay
- Steve Ballmer, Chief Executive Officer, Microsoft
- Arnold Schwarzenegger, Governor of California, Actor
- Ben Stein, Political Speechwriter, Actor, Game Show Host
- Mick Jagger, Singer for the Rolling Stones
- John Elway, NFL Quarterback
- Diane von Furstenburg, Fashion Designer

2.35 CHAPTER SUMMARY

- As scientists, economists try to explain the world using models with appropriate assumptions.
- Two simple models are the Circular Flow Diagram and Production Possibilities Frontier.
- As policy advisers, economists offer advice on how to improve the world.