

Unit I: Basic Economic Concepts

What is Economics in General?

- Economics is the science of **scarcity**.
- **Scarcity** is the condition in which our wants are greater than our limited resources.
- Since we are unable to have everything we desire, we must make **choices** on how we will use our resources.
- In economics we will study the **choices** of individuals, firms, and governments.

Economics is the study of choices.

Examples:

You must **choose** between buying jeans or buying shoes.

Businesses must **choose** how many people to hire

Governments must **choose** how much to spend on welfare.

Economics Defined

Economics-Social science concerned with the efficient use of limited resources to achieve maximum satisfaction of economic wants.

(Study of how individuals and societies deal with scarcity)

Micro vs. Macro

MICROeconomics-

Study of **small economic units** such as individuals, firms, and industries (competitive markets, labor markets, personal decision making, etc.)

MACROeconomics-

Study of the large **economy as a whole** or in its basic subdivisions (National Economic Growth, Government Spending, Inflation, Unemployment, etc.)

How is Economics used?

- Economists use the scientific method to make generalizations and abstractions to develop theories. This is called **theoretical economics**.
- These theories are then applied to fix problems or meet economic goals. This is called **policy economics**.

Positive vs. Normative

Positive Statements- Based on facts. Avoids value judgements (**what is**).

Normative Statements- Includes value judgements (**what ought to be**).

Thinking at the Margin

# Times Watching Movie	Benefit	Cost
1st	\$30	\$10
2nd	\$15	\$10
3rd	\$5	\$10
Total	\$50	\$30

Would you see the movie three times?

Notice that the total benefit is more than the total cost but you would NOT watch the movie the 3rd time.

Marginal Analysis

In economics the term marginal = additional

“Thinking on the margin”, or MARGINAL ANALYSIS involves making decisions based on the additional benefit vs. the additional cost.

For Example:

You have been shopping at the mall for a half hour, the additional benefit of shopping for an additional half-hour might outweigh the additional cost (the opportunity cost).

After three hours, the additional benefit from staying an additional half-hour would likely be less than the additional cost.

5 Key Economic Assumptions

1. Society's wants are unlimited, but ALL resources are limited (**scarcity**).
2. Due to scarcity, choices must be made. Every choice has a cost (a **trade-off**).
3. Everyone's goal is to make choices that maximize their satisfaction. Everyone acts in their own "self-interest."
4. Everyone acts rationally by comparing the **marginal costs** and **marginal benefits** of every choice
5. Real-life situations can be explained and analyzed through simplified models and graphs.

Given the following assumptions, make a rational choice in your own self-interest (hold everything else constant)...

- 1. You want to visit your friend for the weekend**
- 2. You work every weekday earning \$100 per day**
- 3. You have three flights to choose from:**

Thursday Night Flight = \$300

Friday Early Morning Flight = \$345

Friday Night Flight = \$380

Which flight should you choose? Why?

Trade-offs

ALL decisions involve trade-offs.

Trade-offs are all the alternatives that we give up whenever we choose one course of action over others.

(Examples: going to the movies)

The most desirable alternative given up as a result of a decision is known as **opportunity cost**.

**What are trade-offs of deciding to go to college?
What is the opportunity cost of going to college?**

The Factors of Production

The Factors of Production



Land includes the “gifts of nature,” or natural resources not created by human effort.



Capital includes the tools, equipment, and factories used in production.



Labor includes people with all their efforts and abilities.



Entrepreneurs are individuals who start a new business or bring a product to market.

The Production Possibilities Curve (PPC)

Using Economic Models...

Step 1: Explain concept in words

Step 2: Use numbers as examples

Step 3: Generate graphs from numbers

Step 4: Make generalizations using graph

What is the Production Possibilities Curve?

- **A production possibilities graph (PPG) is a model that shows alternative ways that an economy can use its scarce resources**
- **This model graphically demonstrates scarcity, trade-offs, opportunity costs, and efficiency.**

4 Key Assumptions

- **Only two goods can be produced**
- **Full employment of resources**
- **Fixed Resources (*Ceteris Paribus*)**
- **Fixed Technology**

Production “Possibilities” Table

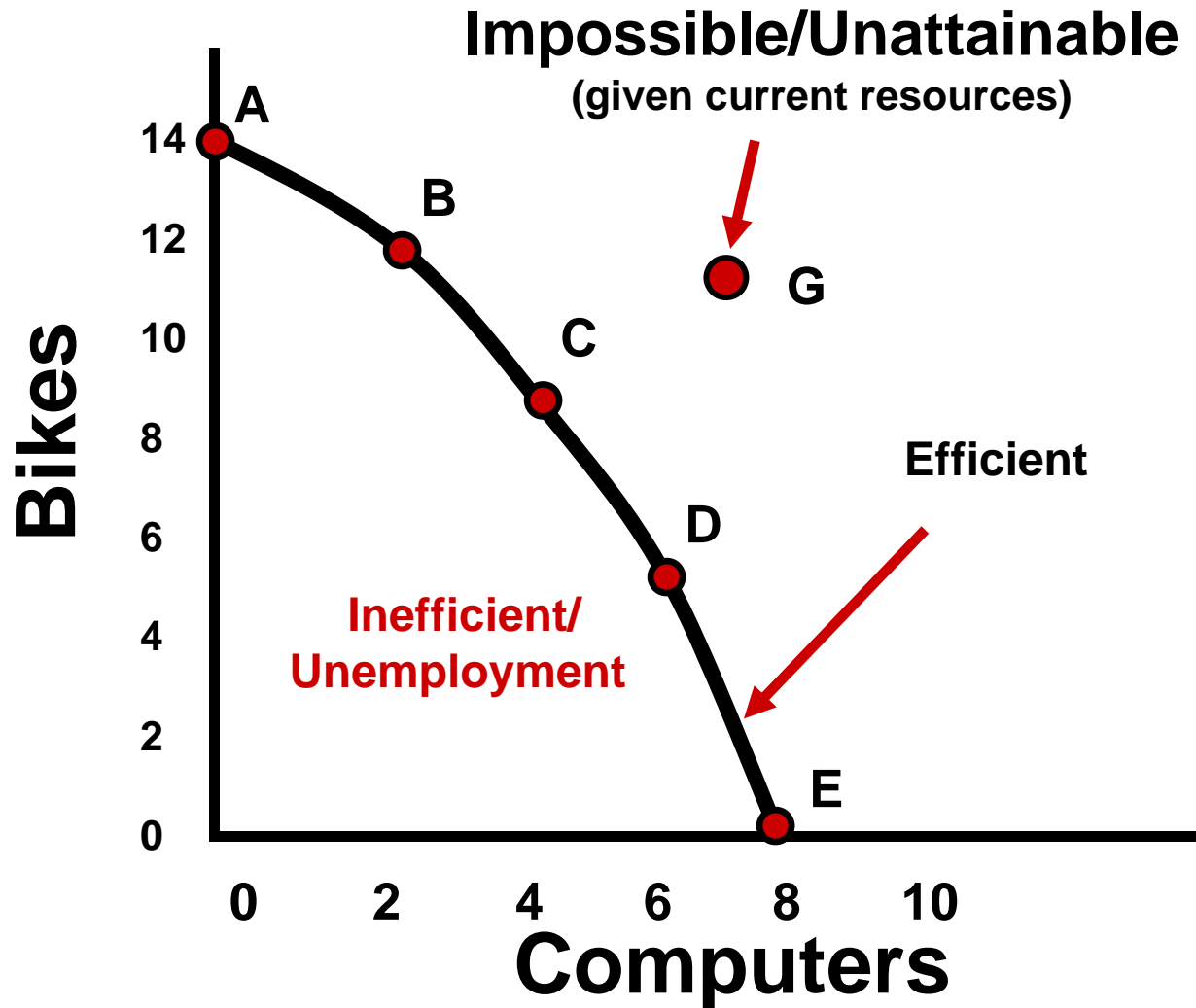
	a	b	c	d	e
Bikes	14	12	9	5	0
Computers	0	2	4	6	8

Each point represents a specific combination of goods that can be produced given full employment of resources.

NOW GRAPH IT: Put bikes on y-axis and computers on x-axis

PRODUCTION POSSIBILITIES

How does the PPG graphically demonstrate scarcity, trade-offs, opportunity costs, and efficiency?

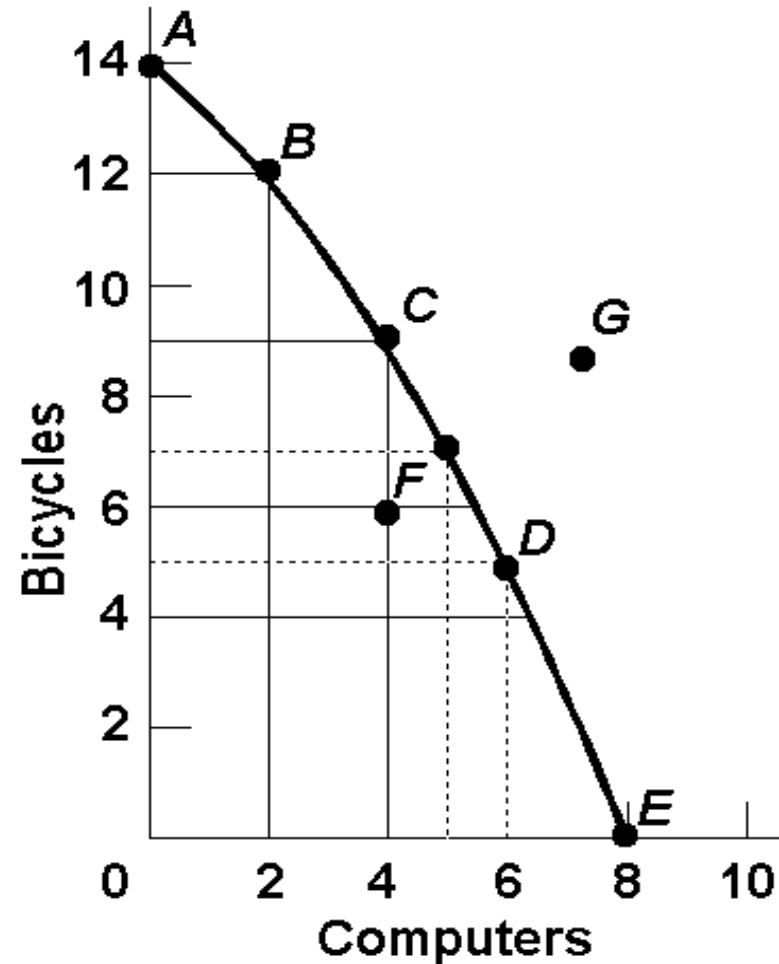


Opportunity Cost

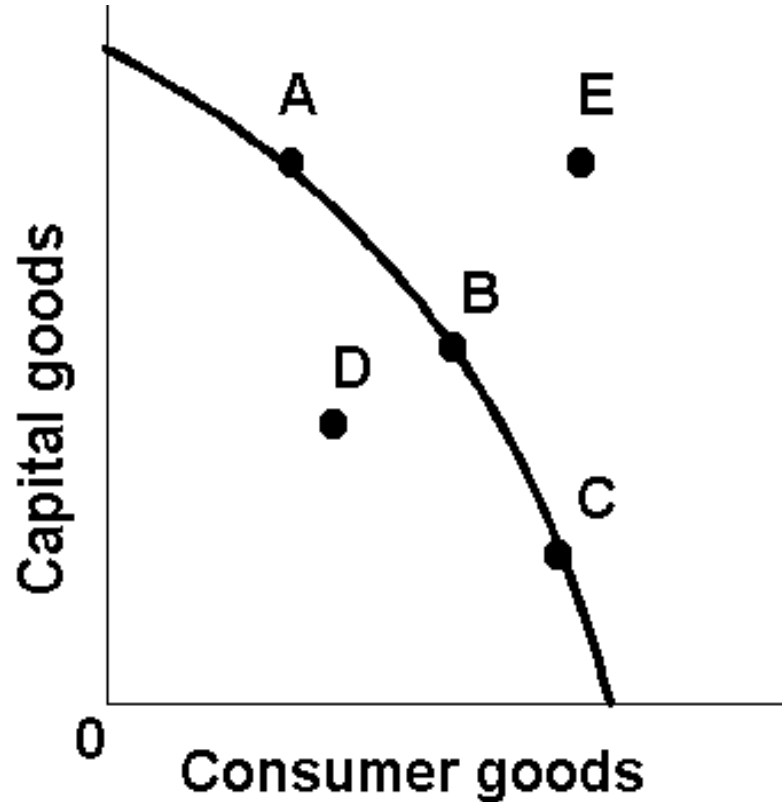


Example:

1. The opportunity cost of moving from a to b is... **2 Bikes**
2. The opportunity cost of moving from b to d is... **7 Bikes**
3. The opportunity cost of moving from d to b is... **4 Computer**
4. The opportunity cost of moving from f to c is... **0 Computers**
5. What can you say about point G?
Unattainable



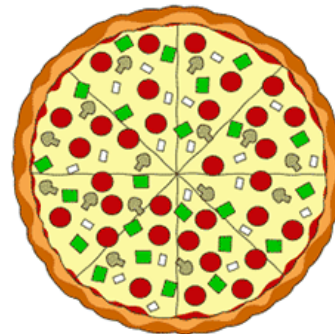
The Production Possibilities Curve (or Frontier)



PRODUCTION POSSIBILITIES

	A	B	C	D	E
CALZONES	4	3	2	1	0
PIZZA	0	1	2	3	4

- List the Opportunity Cost of moving from a-b, b-c, c-d, and d-e.
- **Constant Opportunity Cost**- Resources are easily adaptable for producing either good.
- Result is a straight line PPC (not common)



PRODUCTION POSSIBILITIES



	A	B	C	D	E
PIZZA	18	17	15	10	0
ROBOTS	0	1	2	3	4

- List the Opportunity Cost of moving from a-b, b-c, c-d, and d-e.
- **Law of Increasing Opportunity Cost-**
 - As you produce more of any good, the opportunity cost (forgone production of another good) will increase.
 - Why? Resources are NOT easily adaptable to producing both goods.
- Result is a bowed out (Concave) PPC

PER UNIT Opportunity Cost

How much each marginal unit costs = $\frac{\text{Opportunity Cost}}{\text{Units Gained}}$

Example:

1. The PER UNIT opportunity cost of moving from a to b is...

1 Bike

2. The PER UNIT opportunity cost of moving from b to c is...

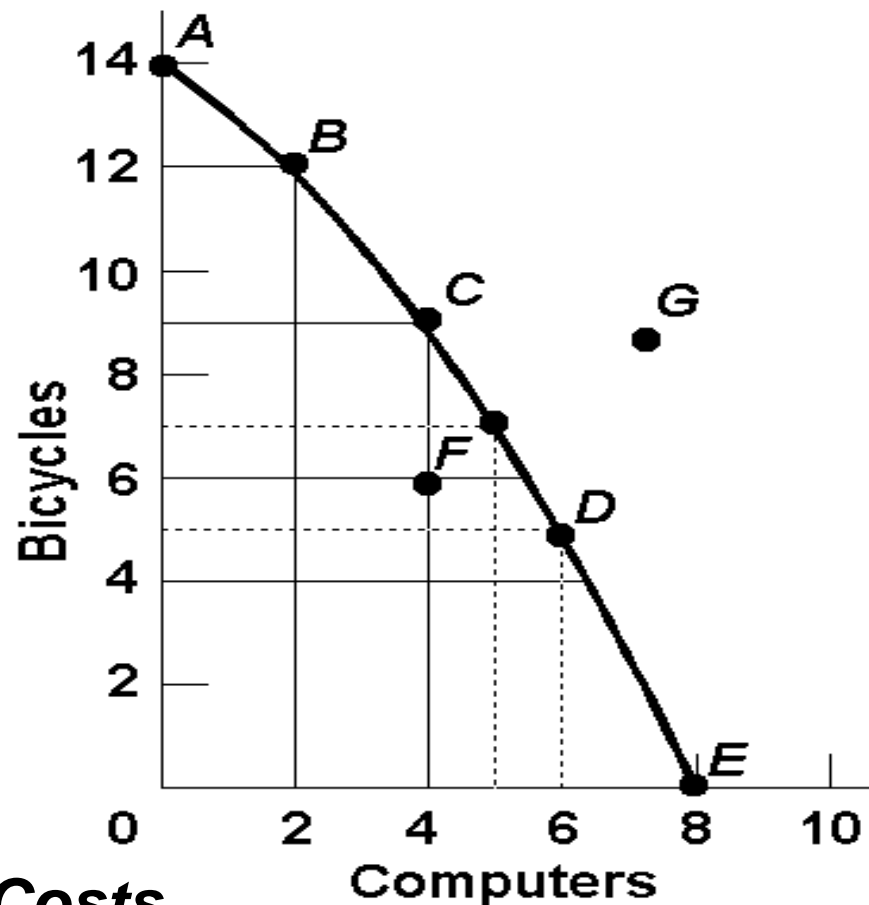
1.5 (3/2) Bikes

3. The PER UNIT opportunity cost of moving from c to d is...

2 Bikes

4. The PER UNIT opportunity cost of moving from d to e is...

2.5 (5/2) Bikes



NOTICE: Increasing Opportunity Costs

Shifting the Production Possibilities Curve

PRODUCTION POSSIBILITIES

4 Key Assumptions Revisited

- Only two goods can be produced
- Full employment of resources
- Fixed Resources (4 Factors)
- Fixed Technology

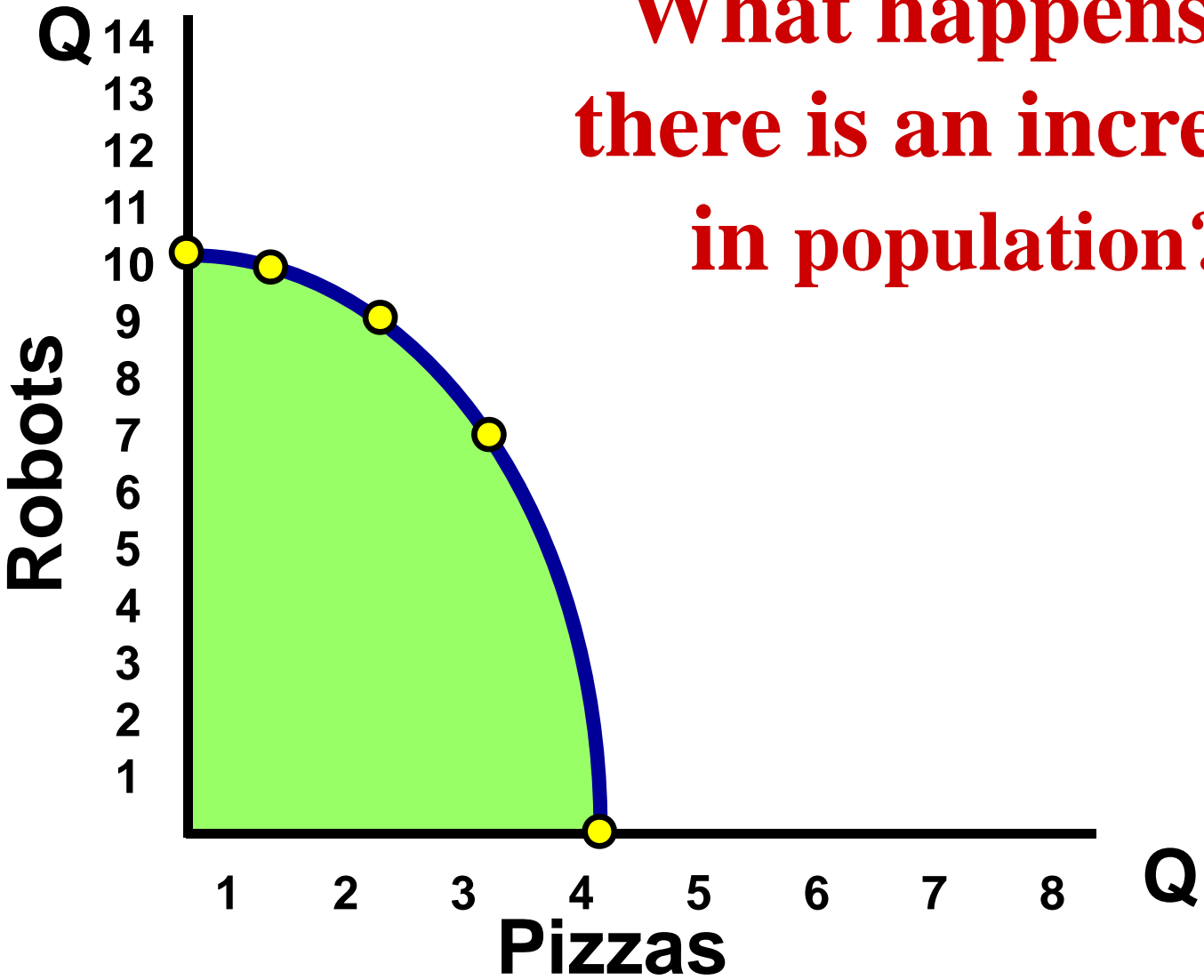
What if there is a change?

3 Shifters of the PPC

1. Change in resource quantity or quality
2. Change in Technology
3. Change in Trade

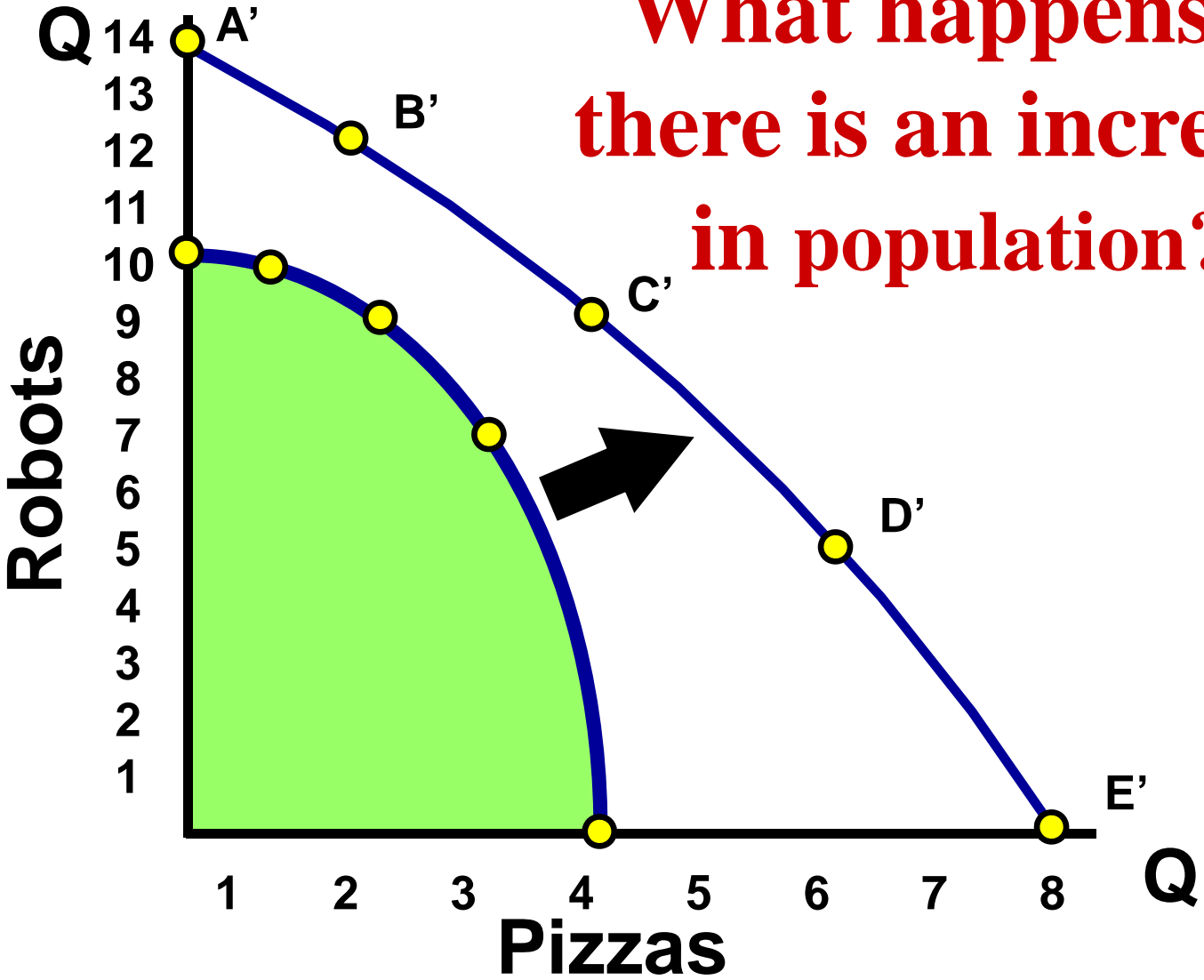
PRODUCTION POSSIBILITIES

What happens if there is an increase in population?

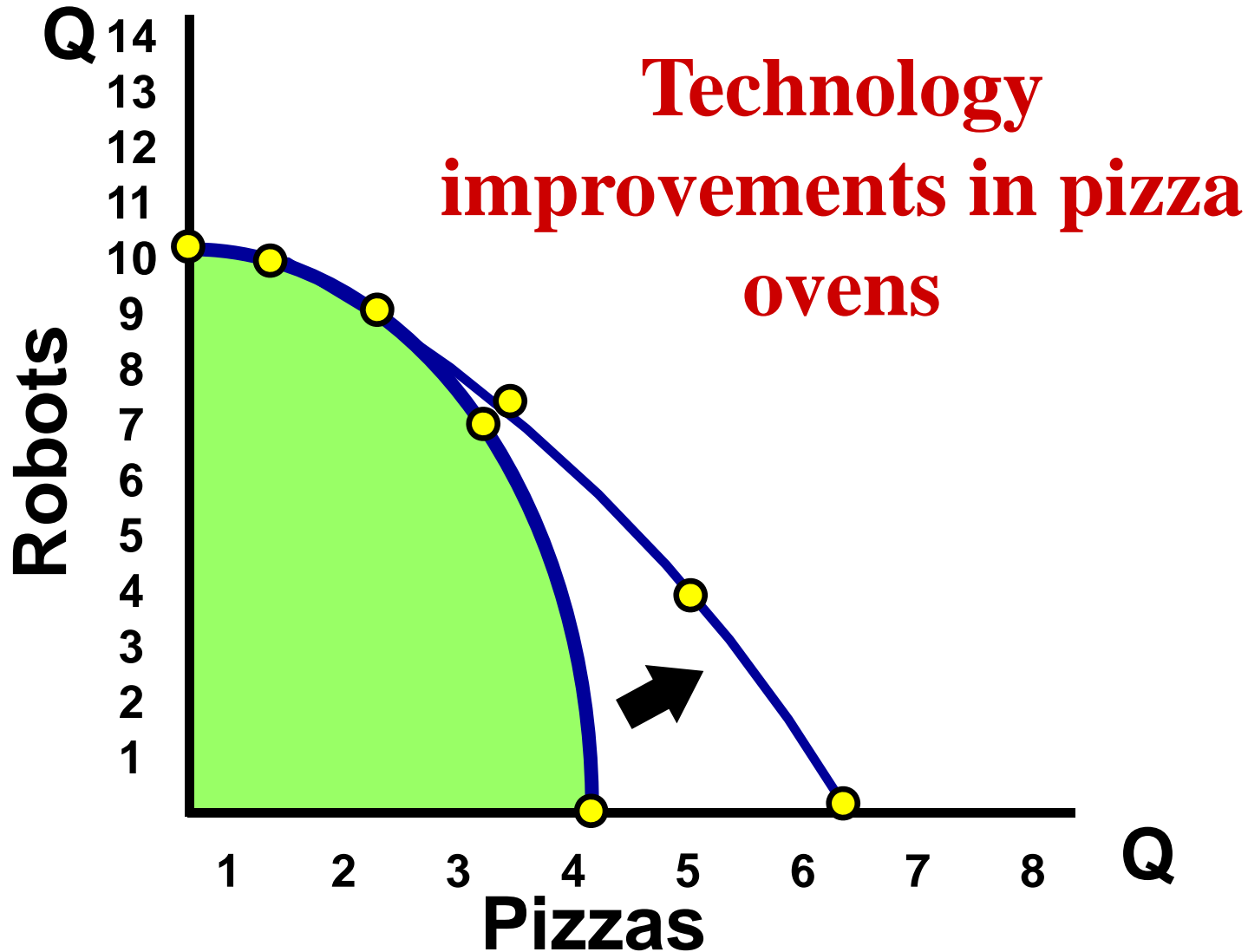


PRODUCTION POSSIBILITIES

What happens if there is an increase in population?



PRODUCTION POSSIBILITIES



The Production Possibilities Curve and Efficiency

Two Types of Efficiency

Productive Efficiency-

- Products are being produced in the least costly way.
- This is any point **ON** the Production Possibilities Curve

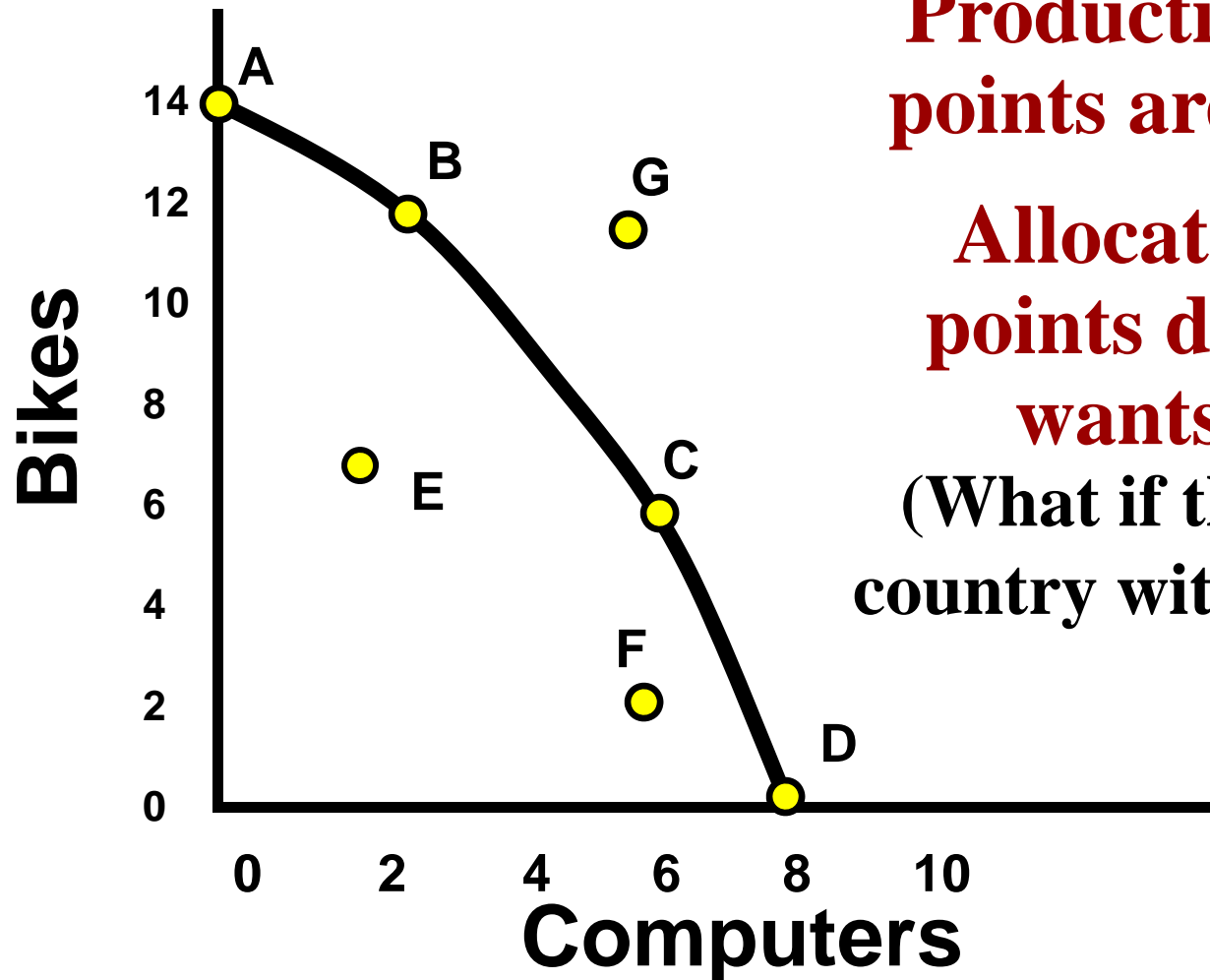
Allocative Efficiency-

- The products being produced are the ones most desired by society.
- This *optimal* point on the PPC depends on the desires of society.

Productive and Allocative Efficiency

Which points are productively efficient?

Which are allocatively efficient?



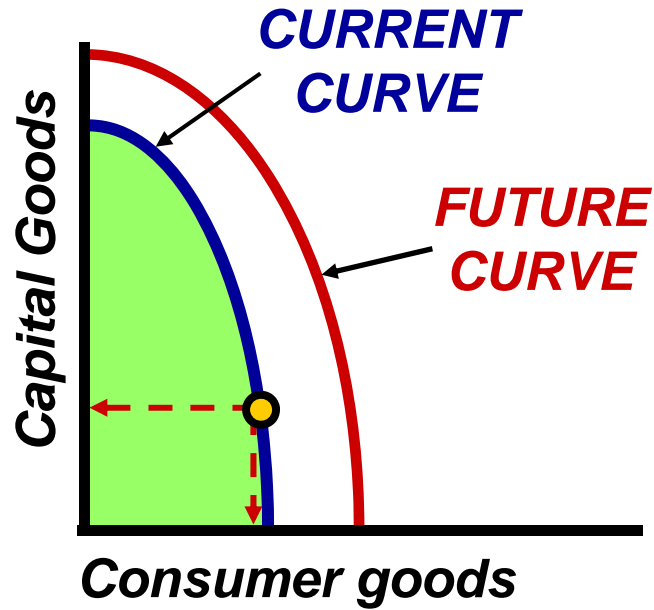
Productively Efficient points are A through D

Allocative Efficient points depend on the wants of society

(What if this represents a country with no electricity?)

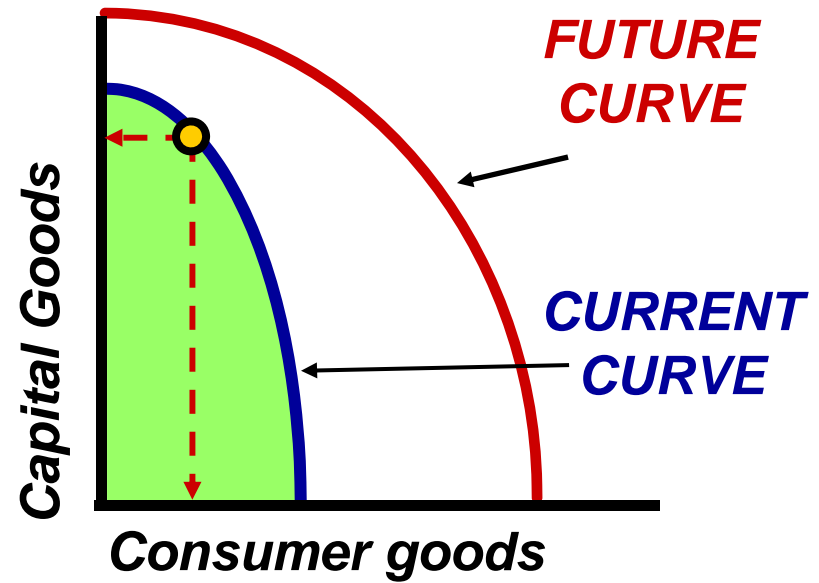
Capital Goods and Future Growth

**Panama - FAVORS
CONSUMER GOODS**



Panama

**Mexico - FAVORS
CAPITAL GOODS**



Mexico

PPC Practice

Draw a PPC showing changes for each of the following:

Pizza and Robots (3)

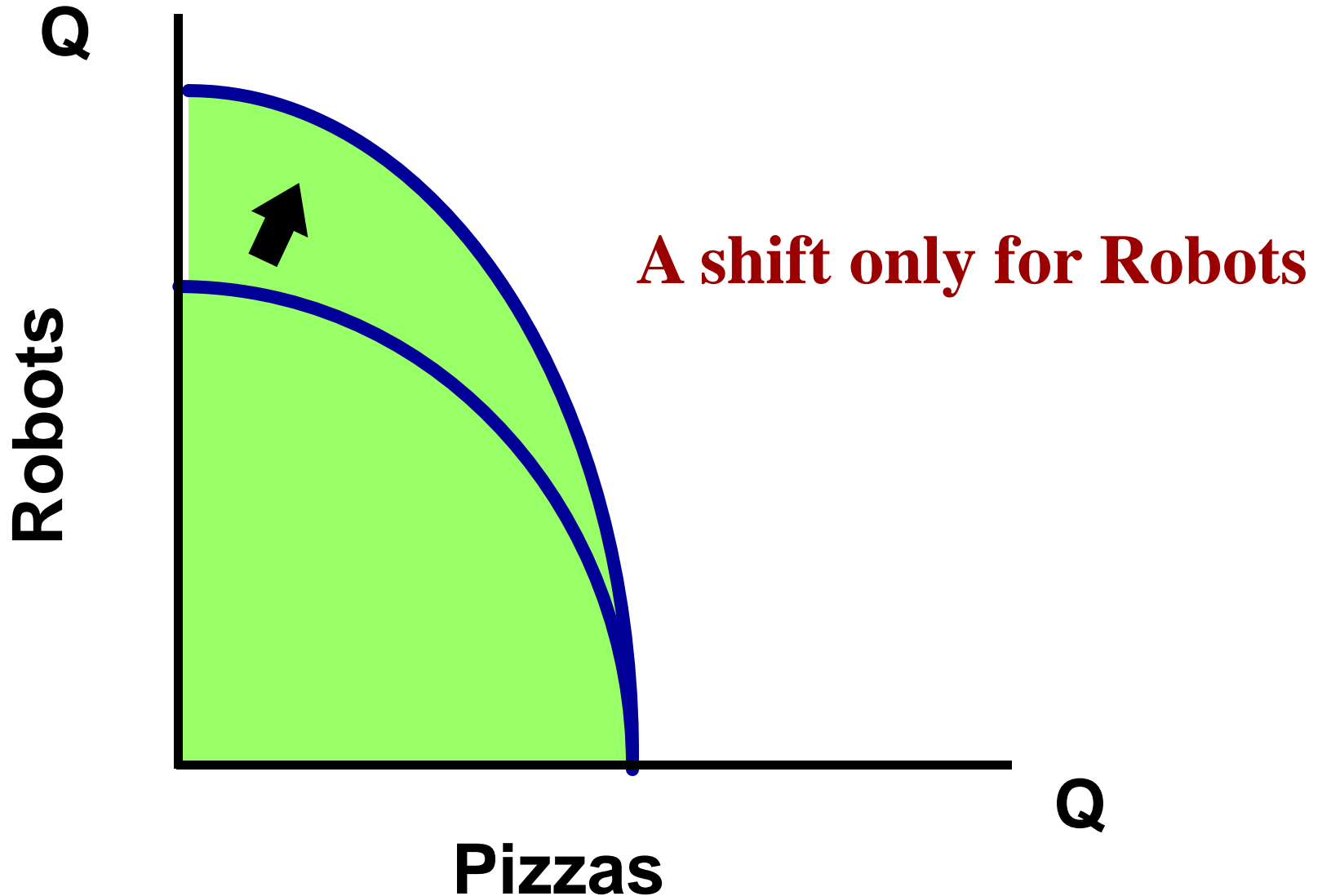
- 1. New robot making technology**
- 2. Decrease in the demand for pizza**
- 3. Mad cow disease kills 85% of cows**

Consumer goods and Capital Goods (4)

- 4. BP Oil Spill in the Gulf**
- 5. Faster computer hardware**
- 6. Many workers unemployed**
- 7. Significant increases in education**

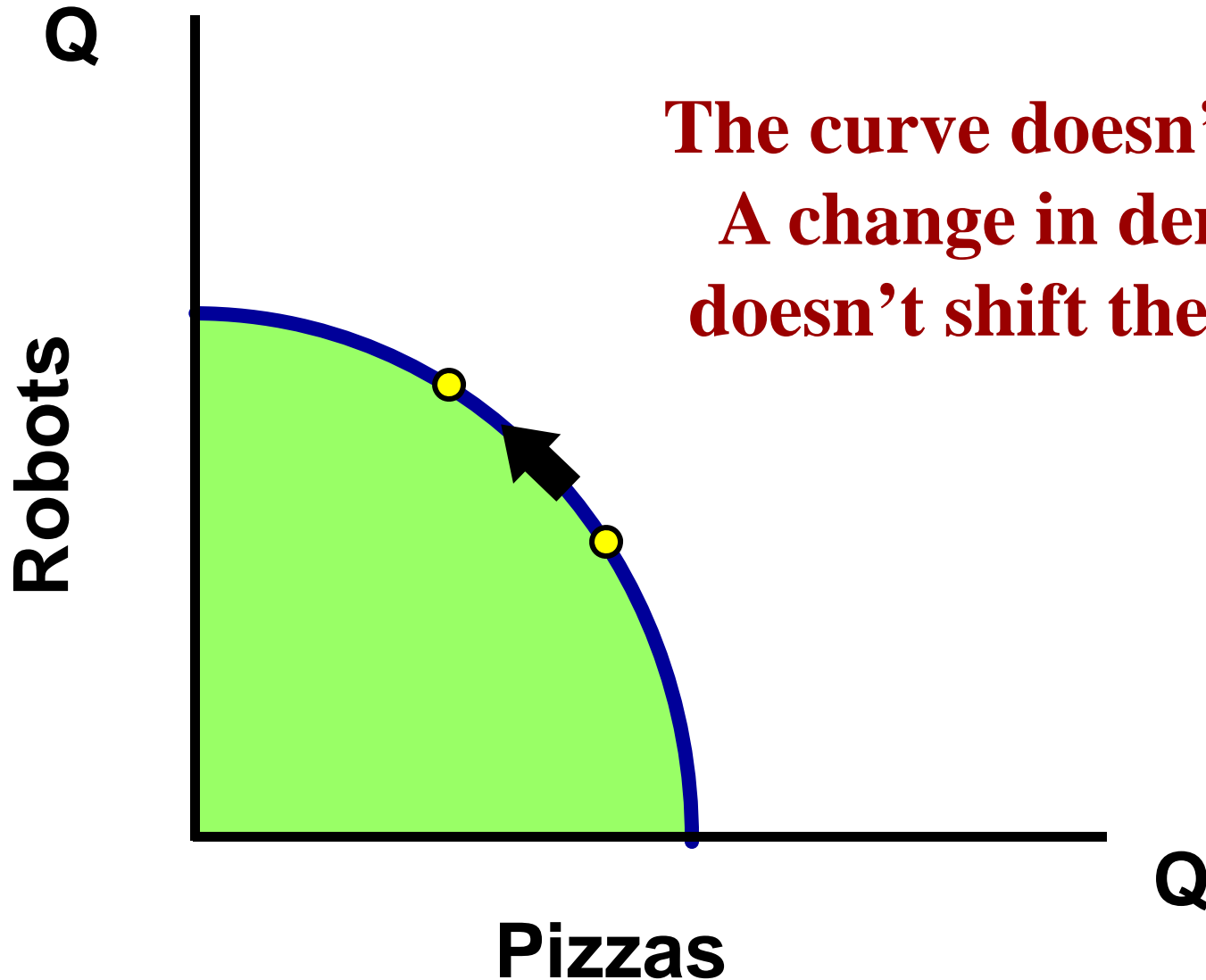
Question #1

New robot making technology



Question #2

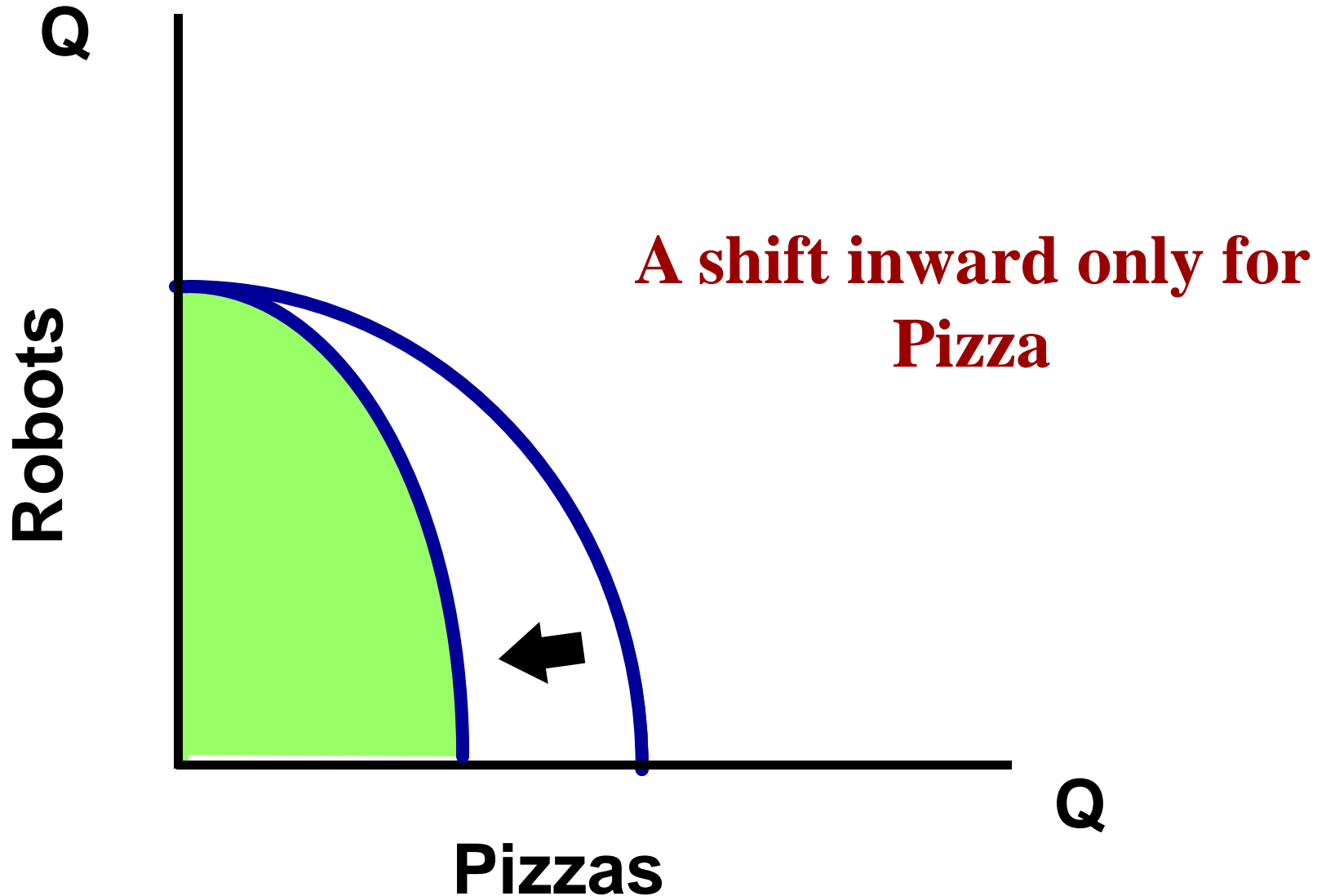
Decrease in the demand for pizza



The curve doesn't shift!
A change in demand
doesn't shift the curve

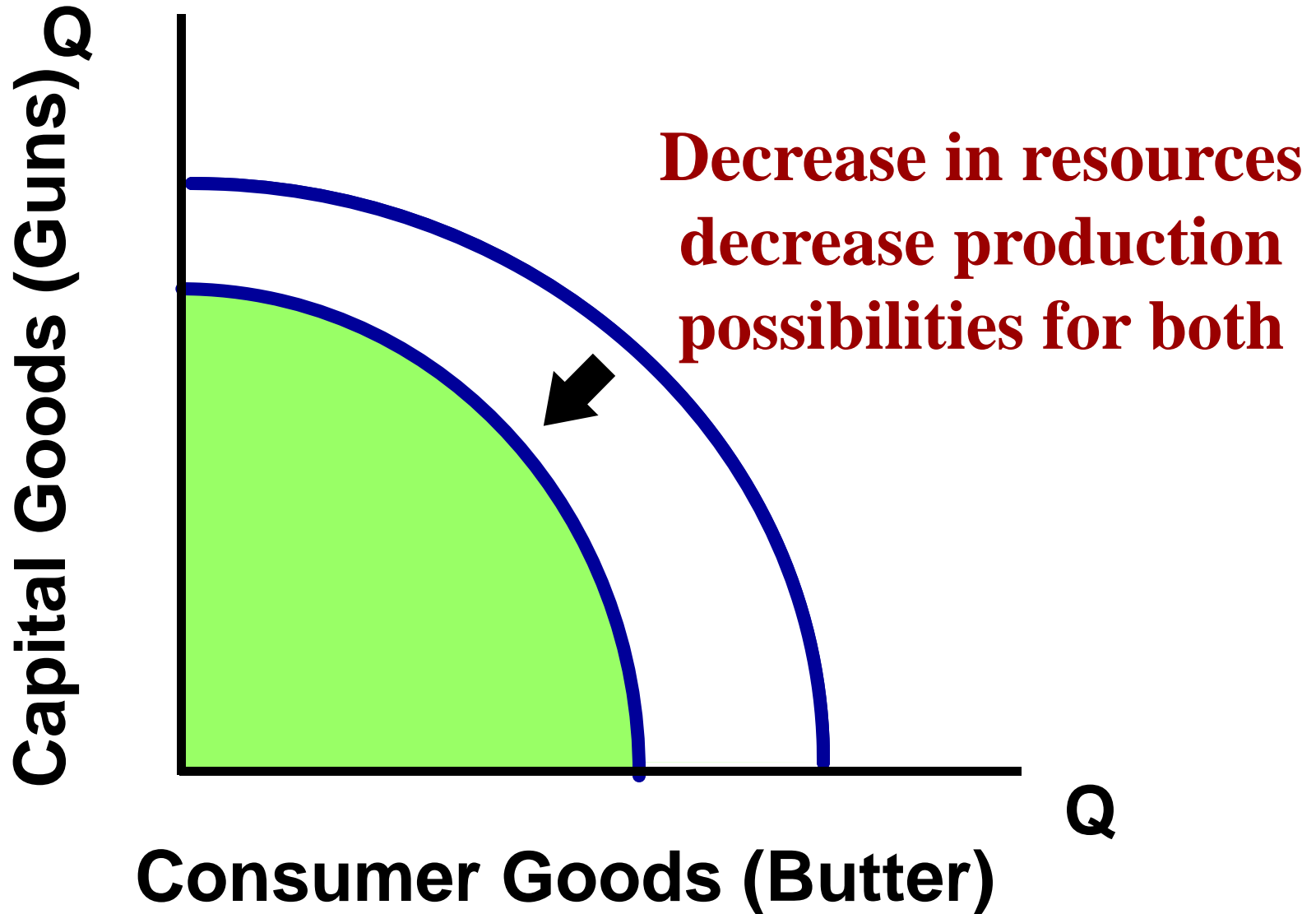
Question #3

Mad cow disease kills 85% of cows



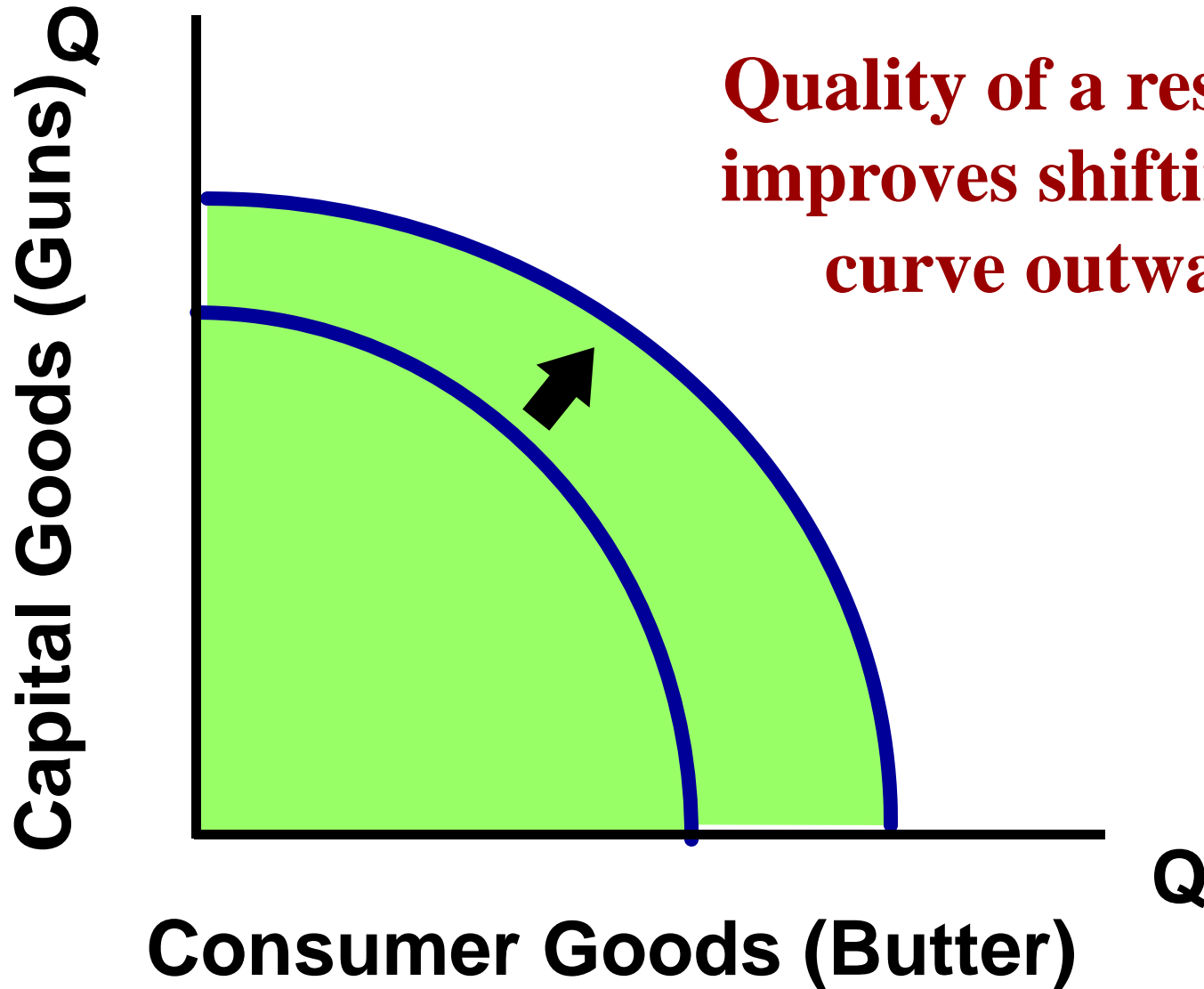
Question #4

BP Oil Spill in the Gulf



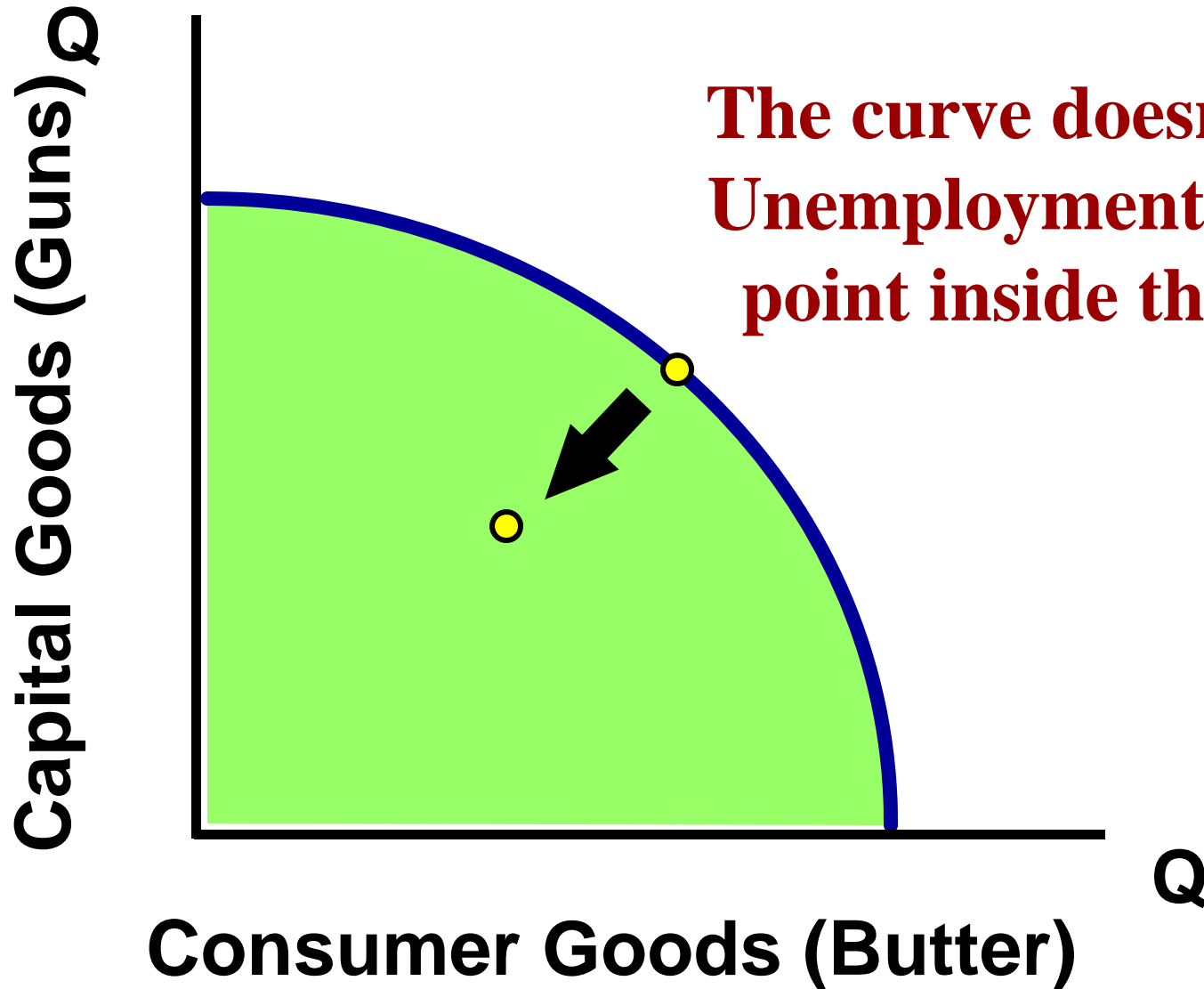
Question #5

Faster computer hardware



Question #6

Many workers unemployed



Question #7

Significant increases in education



International Trade

**Why do countries trade and
what is specialization?**

Per Unit Opportunity Cost Review

$$\text{Per Unit Opportunity Cost} = \frac{\text{Opportunity Cost}}{\text{Units Gained}}$$

Assume it costs you \$50 to produce 5 t-shirts. What is your PER UNIT cost for each shirt?

\$10 per shirt

Now, take money out of the equation. Instead of producing 5 shirts you could have made 10 hats.

1. What is your PER UNIT OPPORTUNITY COST for each shirt in terms of hats given up?

1 shirt costs 2 hats

2. What is your PER UNIT OPPORTUNITY COST for each hat in terms of shirts given up?

1 hat costs a half of a shirt

Per Unit Opportunity Cost Review

Ronald McDonald can produce 20 pizzas or 200 burgers

Papa John can produce 100 pizzas or 200 burgers

- 1. What is Ronald's opportunity cost for one pizza in terms of burgers given up? 1 pizza cost 10 burgers**
- 2. What is Ronald's opportunity cost for one burger in terms of pizza given up? 1 burger costs 1/10 pizza**
- 3. What is Papa John's opportunity cost for one pizza in terms of burgers given up? 1 pizza costs 2 burgers**
- 4. What is Papa John's opportunity cost for one burger in terms of pizza given up? 1 burger costs 1/2 pizza**

Ronald has a COMPARATIVE ADVANTAGE in the production of burgers

Papa John has a COMPARATIVE ADVANTAGE in the production of pizza

Absolute and Comparative Advantage

Absolute Advantage

- The producer that can produce the most output OR requires the least amount of inputs (resources)
- Ex: Papa John has an absolute advantage in pizzas because he can produce 100 and Ronald can only make 20.

Comparative Advantage

- The producer with the lowest opportunity cost.
- Ex: Ronald has a comparative advantage in burgers because he has a lowest PER UNIT opportunity cost.

Countries should trade if they have a relatively lower opportunity cost.

They should specialize in the good that is “cheaper” for them to produce.

Benefits of Specialize and Trade

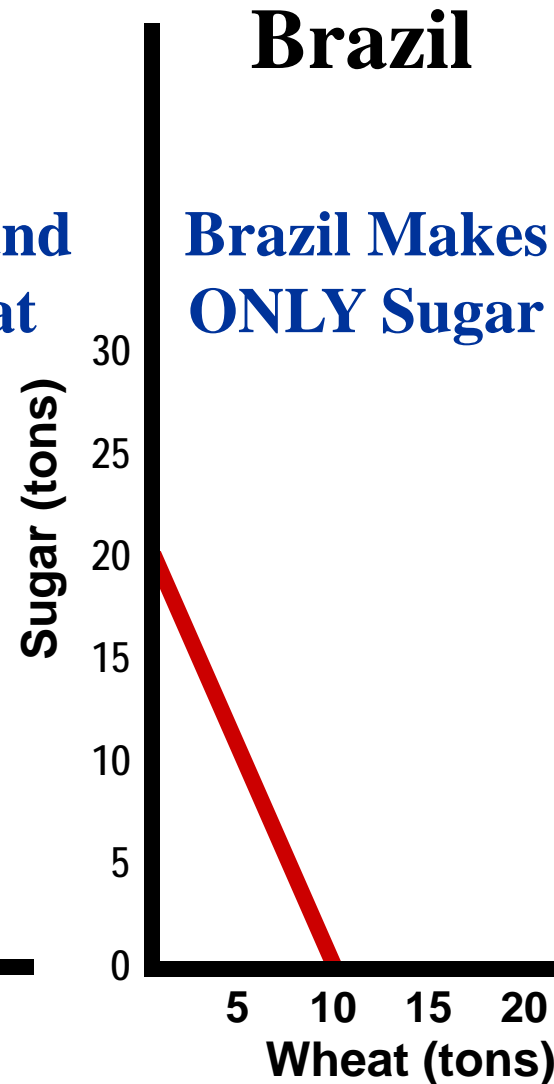
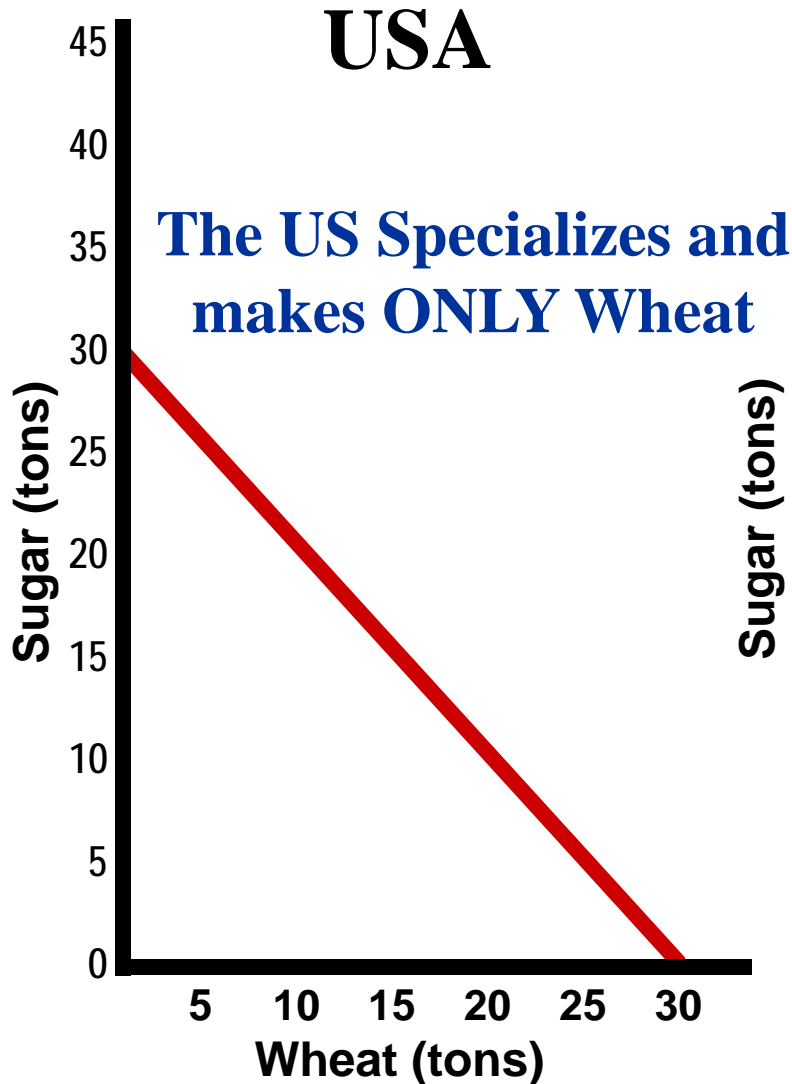


International Trade



Trade: 1 Wheat for 1.5 Sugar

S	W
0	30
1.5	29
3	28
4.5	27
6	26
7.5	25
9	24
10.5	23
12	22
13.5	21
15	20
16.5	19
18	18
19.5	17



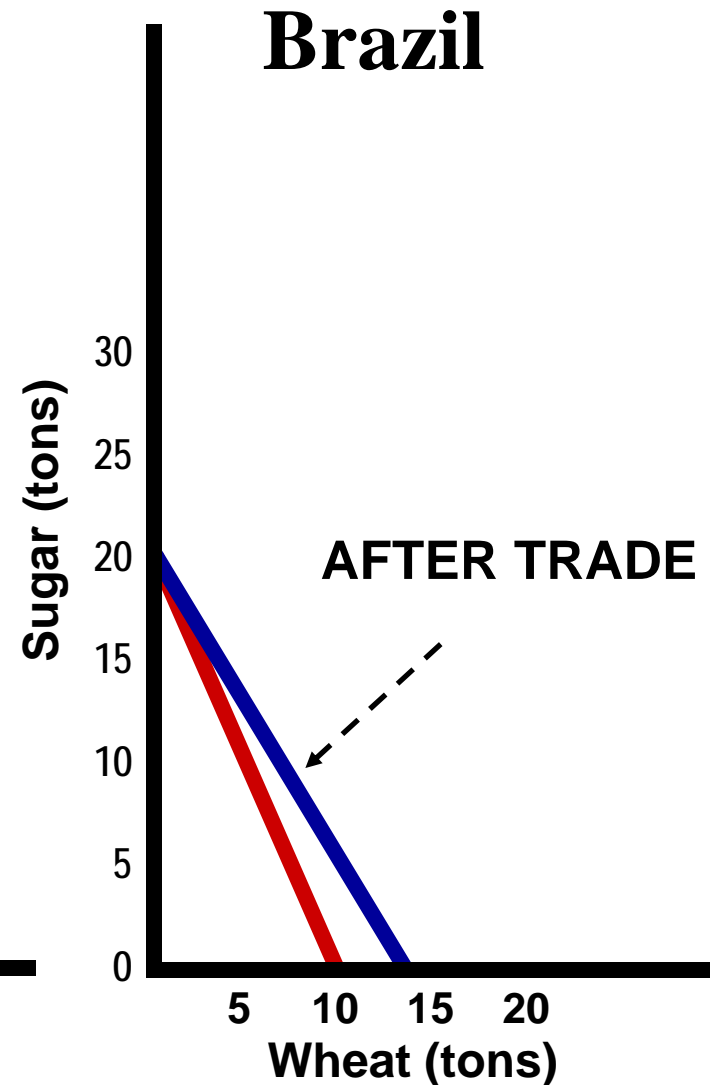
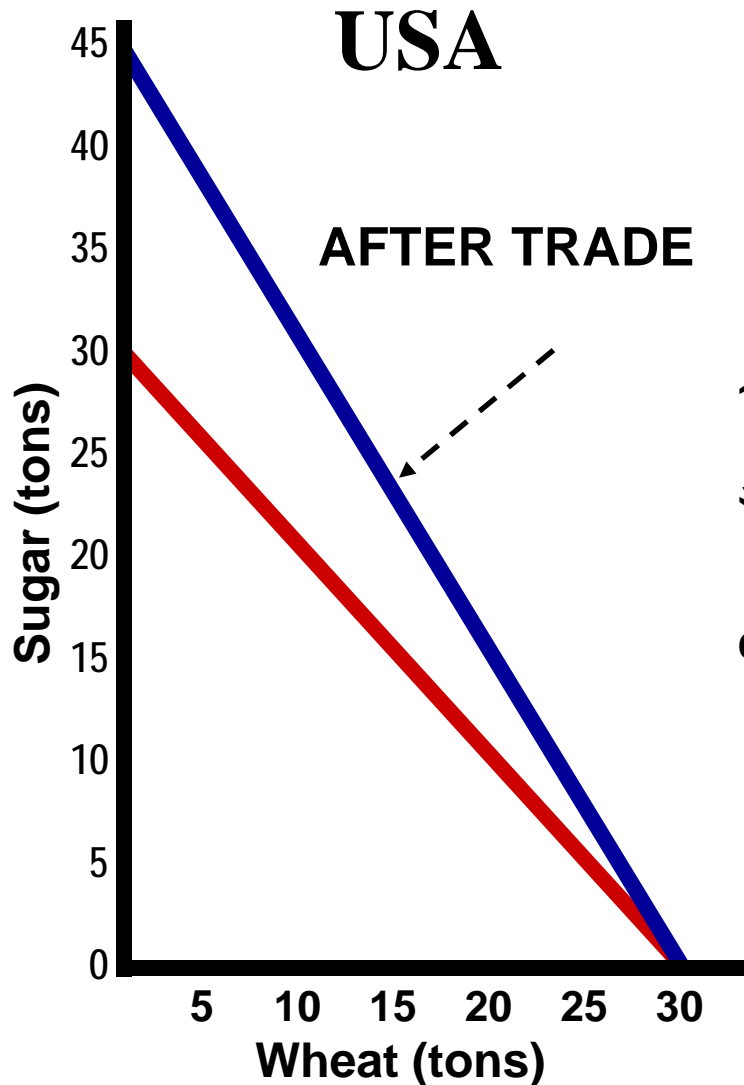
S	W
20	0
18.5	1
17	2
15.5	3
14	4
12.5	5
11	6
9.5	7
8	8
6.5	9
5	10
3.5	11



International Trade



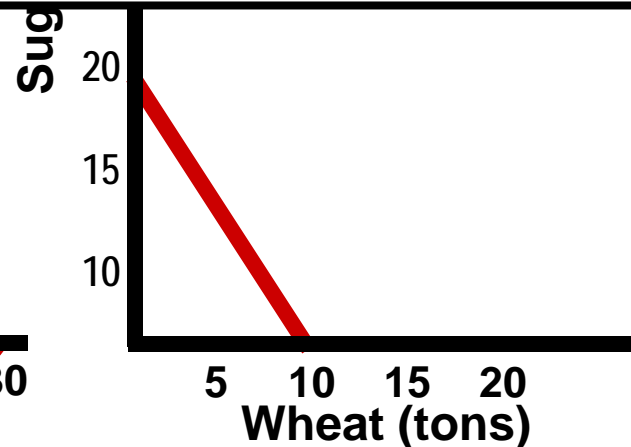
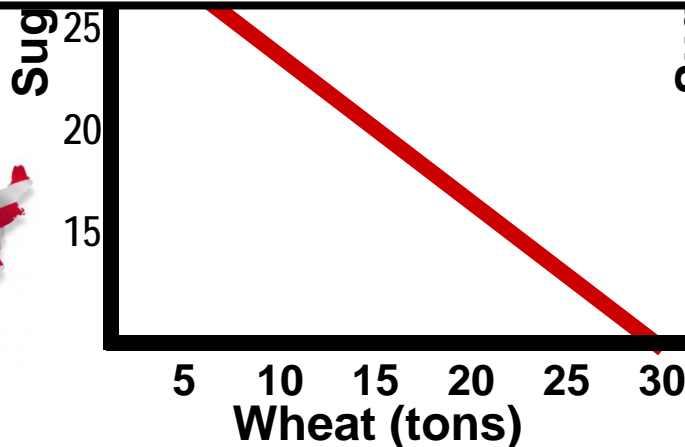
TRADE SHIFTS THE PPC!



	Wheat	Sugar
USA	30 (1W costs 1S)	30 (1S costs 1W)
Brazil	10 (1W costs 2S)	20 (1S costs 1/2W)

Which country has a comparative advantage in wheat?

- 1. Which country should EXPORT Sugar?**
- 2. Which country should EXPORT Wheat?**
- 3. Which country should IMPORT Wheat?**





Determining Comparative Advantage (Output Method)

The following chart illustrates the number of CDs and pounds of beef that can be produced in one hour.

	<u>CDs</u>	<u>Beef</u>
Japan	4	2
Canada	4	6

Output Questions:

OOO=

Output: Other goes Over

1. Which nation has an *absolute advantage* in producing CDs?
2. Which nation has an *absolute advantage* in producing beef?
3. Which has a *comparative advantage* in producing CDs?
4. Which has a *comparative advantage* in producing beef?
5. Should Japan specialize in CDs or beef?
6. Should Canada specialize in CDs or beef?



Determining Comparative Advantage (Input Method)

The following chart illustrates the number of hours it takes to produce one loaf of bread and one bushel of corn.

	<u>Bread</u>	<u>Corn</u>
United States	4	2
France	4	6

Input Questions:

IOU=

Input: Other goes Under

1. Which nation has an *absolute advantage* in producing bread?
2. Which nation has an *absolute advantage* in producing corn?
3. Which has a *comparative advantage* in producing bread?
4. Which has a *comparative advantage* in producing corn?



Comparative Advantage Practice

Create a chart for each of the following problems.

- **First- Identify if it is a output or input question**
- **Second-Identify who has the ABSOLUTE ADVANTAGE**
- **Third-Identify who has a COMPARATIVE ADVANTAGE**
- **Fourth- Identify how they should specialize**

1. Sara gives 2 haircuts or 1 perm and hour. Megan gives 3 haircuts or 2 perms per hour.

2. Justin fixes 16 flats or 8 brakes per day. Tim fixes 14 flats or 8 brakes per day.

3. Hannah takes 30 minutes to wash dishes and 1 hour to vacuum the house. Kevin takes 15 minutes to wash dishes and 45 minutes to vacuum.

4. Americans produce 50 computers or 50 TVs per hour. Chinese produce 30 computers or 40 TVs per hour.

Unit 1: Basic Economic Concepts

Scarcity Means There Is Not Enough For Everyone



Government must step in to help **allocate**
(distribute) resources

Every society must answer three questions:

The Three Economic Questions

- 1. What goods and services should be produced?**
- 2. How should these goods and services be produced?**
- 3. Who consumes these goods and services?**

The way these questions are answered determines the economic system

An economic system is the method used by a society to produce and distribute goods and services.

Economic Systems

- 1. Centrally-Planned
(Command) Economy**
- 2. Free Market Economy**
- 3. Mixed Economy**

Centrally-Planned Economies (aka Communism)

Centrally Planned Economies

In a centrally planned economy (communism) the government...

1. owns all the resources.
2. decides what to produce, how much to produce, and who will receive it.

Examples:

- Cuba, China, North Korea, former Soviet Union

Why do centrally planned economies face problems of poor-quality goods, shortages, and unhappy citizens?

NO PROFIT MEANS NO INCENTIVES!!

Advantages and Disadvantages

What is GOOD about Communism?

1. **Low unemployment- everyone has a job**
2. **Great Job Security- the government doesn't go out of business**
3. **Equal incomes means no extremely poor people**
4. **Free Health Care**

What is BAD about Communism?

1. **No incentive to work harder**
2. **No incentive to innovate or come up with good ideas**
3. **No Competition keeps quality of goods poor.**
4. **Corrupt leaders**
5. **Few individual freedoms**

Free Market System **(aka Capitalism)**

Characteristics of Free Market

1. Little government involvement in the economy.
(Laissez Faire = Let it be)
2. Individuals OWN resources and answer the three economic questions.
3. The opportunity to make PROFIT gives people INCENTIVE to produce quality items efficiently.
4. Wide variety of goods available to consumers.
5. Competition and Self-Interest work together to regulate the economy (keep prices down and quality up).

Example of Free Market

Example of how the free market regulates itself:

If consumers want computers and only one company is making them...

Other businesses have the INCENTIVE to start making computers to earn PROFIT.

This leads to more COMPETITION....

Which means lower prices, better quality, and more product variety.

We produce the goods and services that society wants because “resources follow profits”.

The End Result: Most efficient production of the goods that consumers want, produced at the lowest prices and the highest quality.

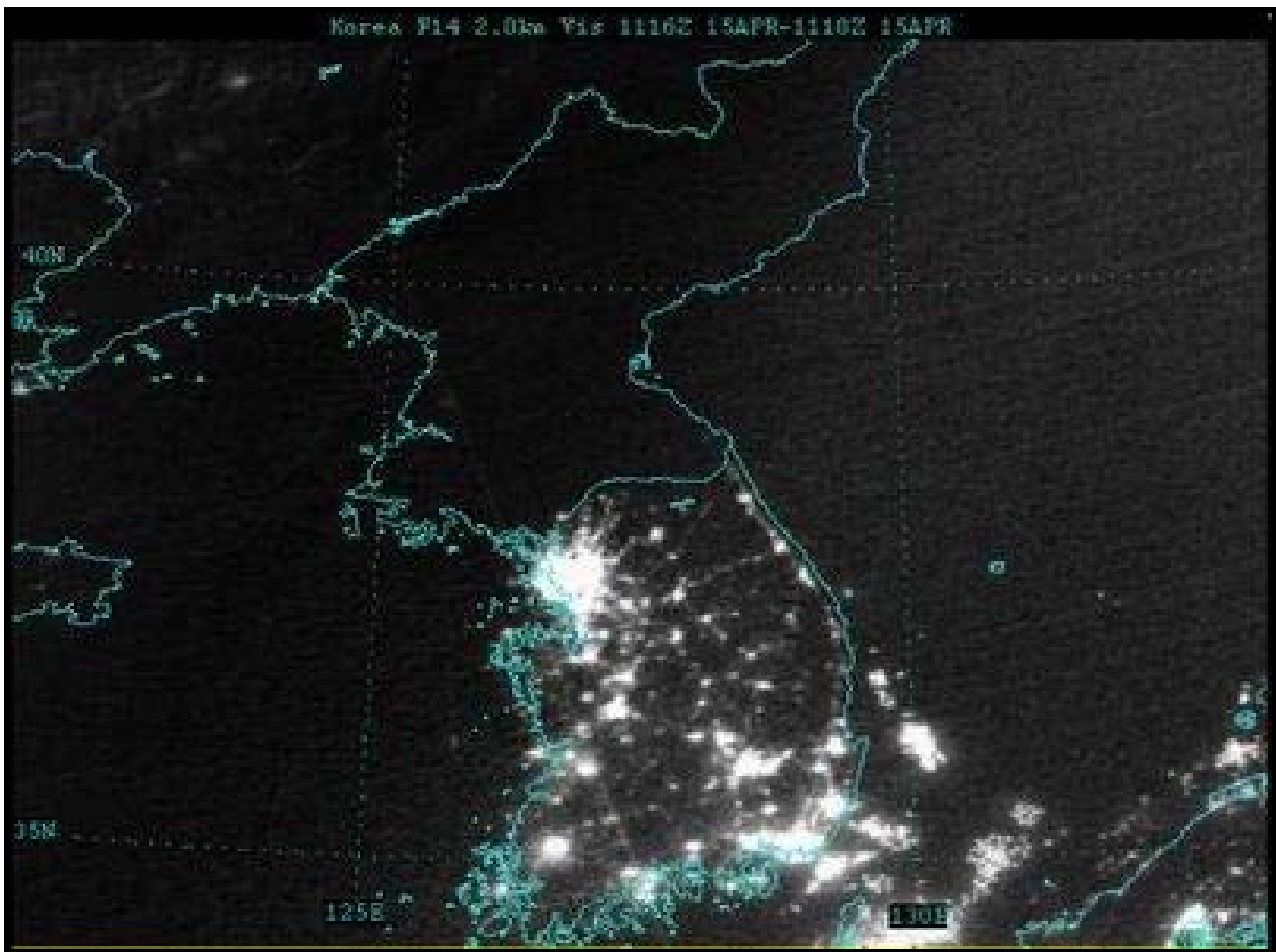
The Invisible Hand

The concept that society's goals will be met as individuals seek their own self-interest.

Example: Society wants fuel efficient cars...

- Profit seeking producers will make more.**
- Competition between firms results in low prices, high quality, and greater efficiency.**
- The government doesn't need to get involved since the needs of society are automatically met.**

Competition and self-interest act as an invisible hand that regulates the free market.



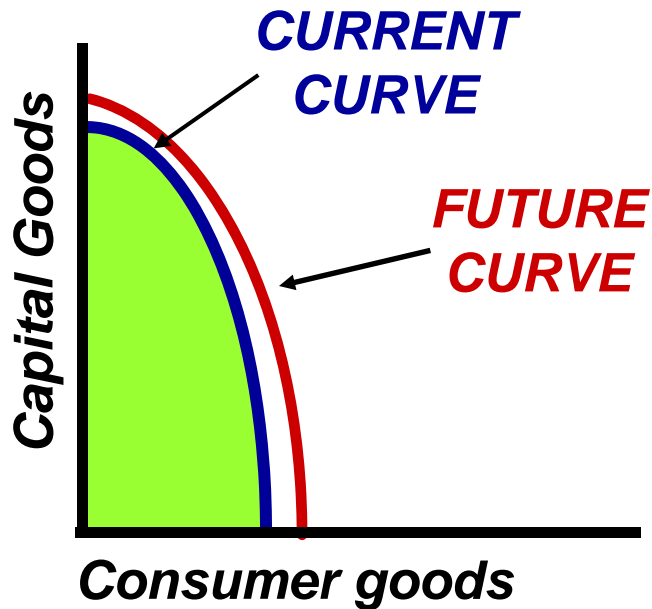
The difference between North and South Korea at night.

North Korea's GDP is \$40 Billion

South Korea's GDP is \$1.3 Trillion (32 times greater).

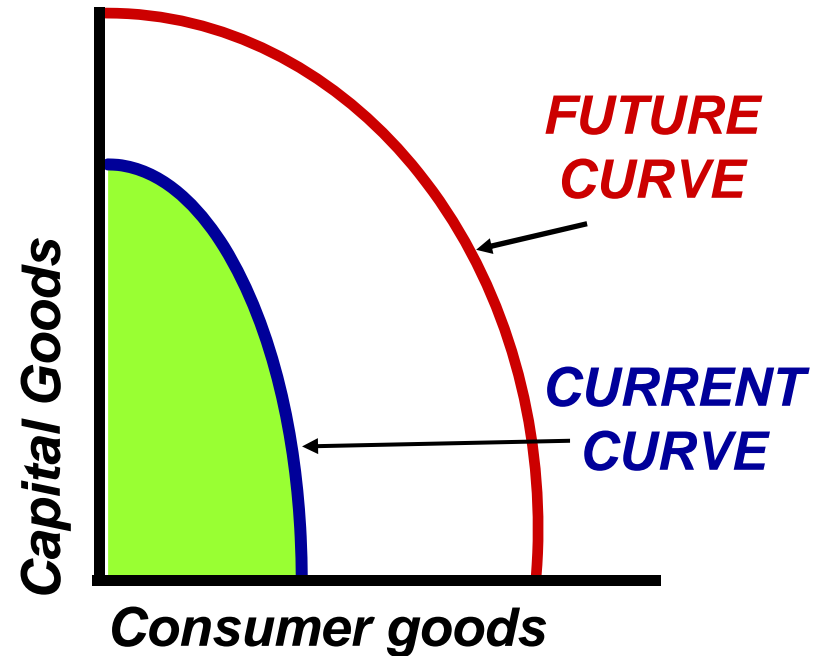
Connection to the PPC

Communism in the Long Run



Cuba

Free Markets in the Long Run



Puerto Rico

The Circular Flow Model

Circular Flow Diagram of a Market Economy

Households pay firms for goods and services.

Product market

monetary flow

physical flow

Firms supply households with goods and services.



Households



Firms

Households supply firms with land, labor, and capital.

physical flow

monetary flow

Firms pay households for land, labor, and capital.

Factor market