Unit 1:
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.

We do things when Marginal Benefit ≥ Marginal Cost

For Example:
You have decided you are hungry, but aren't sure how much you want to eat. You decide to consume double cheeseburgers (DCB) for $1. With your first DCB, the MB>MC so you consume it. Depending upon who you are, you may consume quite a few. At some point however, you don't purchase anymore DCBs. The reason for this is that the $1 costs more than the benefit you will get from another DCB or MB<MC so you don't consume.

Marginal Analysis

Notice the decision making process doesn't "should I ... ming?"

I... with ... Once yo... an a...

Remember, you will continue to do something until the marginal cost outweighs the marginal benefit.

The MARGINAL ANALYSIS approach to decision making is more commonly used than the "all or nothing" approach.

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.**

Analyzing Choices

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 a weekend
2. You work every weekday earning $100 per day
3. You have three flights to choose from:
   - Thursday Night Flight = $275
   - Friday Early Morning Flight = $300
   - Friday Night Flight = $325

Which flight should you choose? Why?

Trade-offs and Opportunity Cost

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?

Economic Terminology

Utility = Satisfaction!

Marginal = Additional!

Allocate = Distribute!

13

Scarcity vs. Shortages

- Scarcity occurs at all times for all goods.
- **Shortages** occur when producers will not or cannot offer goods or services at current prices. Shortages are temporary.

Price vs. Cost

What's the price? vs. How much does that cost?

Price= Amount buyer (or consumer) pays

Cost= Amount seller pays to produce a good

Investment

Investment= the money spent by BUSINESSES to improve their production

Ex: $1,000 new computer, $1 Million new factory

14

Goods vs. Services

Give examples…

Goods= physical objects that satisfy needs and wants

- **Consumer Goods**- created for direct consumption (example: pizza)
- **Capital Goods**- created for indirect consumption (oven, blenders, knives, etc.)
  - Goods used to make consumer goods

Services= actions or activities that one person performs for another (teaching, cleaning, cooking)

15

The 4 Factors of Production

16

The Four Factors of Production

•Producing goods and services requires the use of resources

•ALL resources can be classified as one of the following four factors of production:

Land

Labor

Capital

Entrepreneurship

The Four Factors of Production

Land = All natural resources that are used to produce goods and services. Anything that comes from "mother nature." (Water, Sun, Plants, Oil, Trees, Stone, Animals, etc.)

Labor = Any effort a person devotes to a task for which that person is paid. (manual laborers, lawyers, doctors, teachers, waiters, etc.)

18

The Four Factors of Production

Two Types of Capital:
1. Physical Capital- Any human-made resource that is used to create other goods and services (tools, tractors, machinery, buildings, factories, etc.)
2. Human Capital- Any skills or knowledge gained by a worker through education and experience (college degrees, vocational training, etc.)

19

The Four Factors of Production

- Entrepreneurship= ambitious leaders that combine the other factors of production to create goods and services.
- Examples-Henry Ford, Bill Gates, Inventors, Store Owners, etc.

Entrepreneurs:
1. Take The Initiative
2. Innovate
3. Act as the Risk Bearers

20

Accountants vs. Economists

Accountants look at only EXPLICIT COSTS.
•Explicit costs are the traditional "out-of pocket costs" of decision making.
•Ex: Going to Disneyland

Economists look at the EXPLICIT COSTS and the IMPLICIT COSTS.
•Implicit costs are the opportunity costs such as forgone time and forgone income.
•Ex: Payton Manning leaves the NFL to open a taco shop.

21

The Production Possibilities Curve (PPC)

22

What is the Production Possibilities Curve?

- A production possibilities curve (PPC) 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

23

Production "Possibilities" Table

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

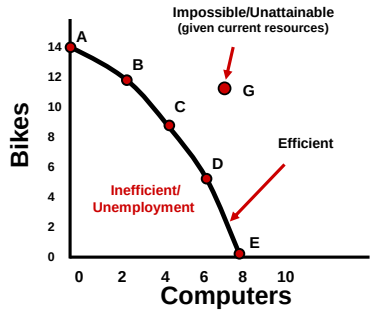
Each point represents a specific combination of goods that can be produced given full employment of resources.

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

24

Production Possibilities

How does the PPC graphically demonstrates scarcity, trade-offs, opportunity costs, and efficiency?



25

Opportunity Cost

Example:

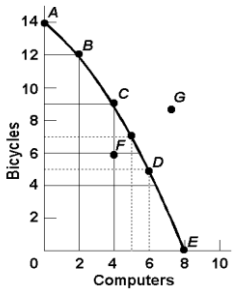
1. The opportunity cost of moving from a to b is…

2.The opportunity cost of moving from b to d is…

3.The opportunity cost of moving from d to b is…

4.The opportunity cost of moving from f to c is…

5.What can you say about point G?



26

The Production Possibilities Curve (or Frontier)

27

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)


28

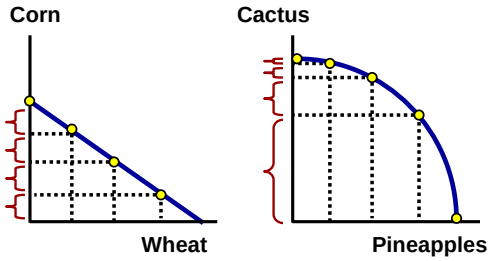
Production Possibilities

	A	B	C	D	E
DCB	20	19	16	10	0
Computers	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

Constant vs. Increasing Opportunity Cost

Identify which product would have a straight line PPC and which would be bowed out?



PER UNIT Opportunity Cost

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

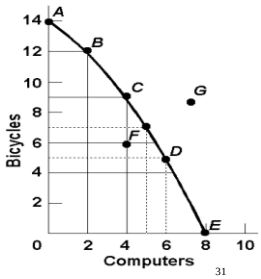
Example:

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

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

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

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



NOTICE: Increasing Opportunity Costs

31

The Production Possibilities Curve and Efficiency

32

Two Types of Efficiency

Productive Efficiency-

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

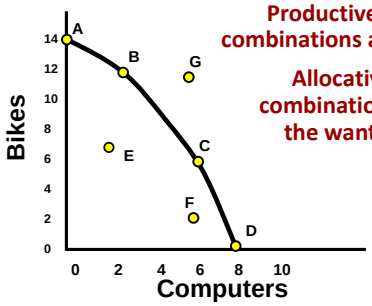
Allocative Efficiency-

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

33

Productive and Allocative Efficiency

Which points are productively efficient?
Which are allocatively efficient?



Productively Efficient combinations are A through D

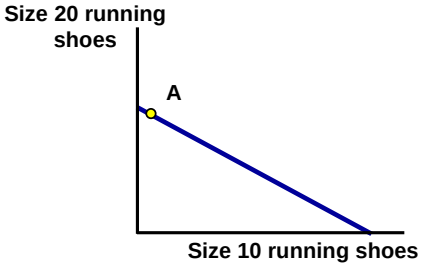
Allocative Efficient combinations depend on the wants of society

34

Why two types of efficiency?

Is combination "A" efficient?

Yes and No. It is productively efficient but it may not be the combination society wants



Shifting the Production Possibilities Curve

36

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?

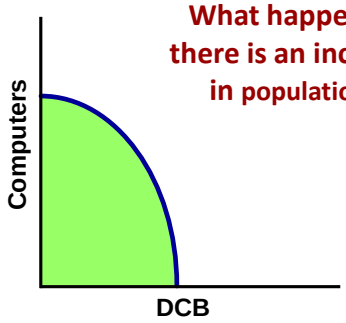
4 Shifters of the PPC

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

37

Production Possibilities

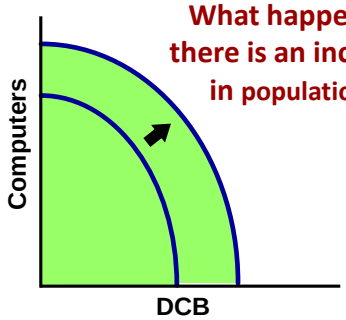
What happens if there is an increase in population?



38

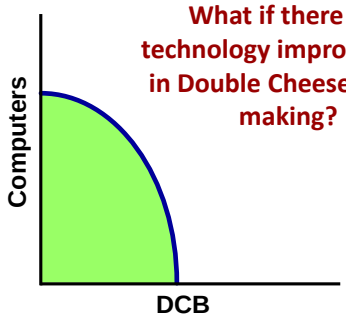
Production Possibilities

What happens if there is an increase in population?



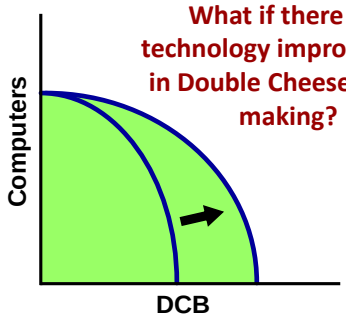
39

Production Possibilities



40

Production Possibilities

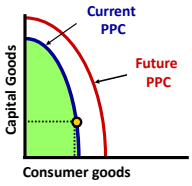


41

Capital Goods and Future Growth

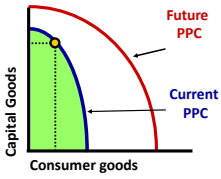
Countries that produce more capital goods will have more growth in the future.

Panama – Favors Consumer Goods



Panama

Mexico – Favors Capital Goods



Mexico

42

PPC Practice

Draw a PPC showing changes for each of the following:

DCB and Computers (3)

1. New Computer making technology
2. Decrease in the demand for DCB
3. Mad cow disease kills 85% of cows

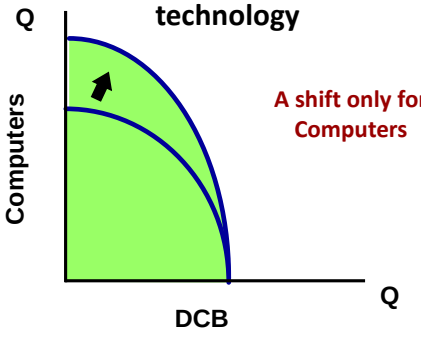
Consumer goods and Capital Goods (4)

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

43

Question #1

New Computer making technology

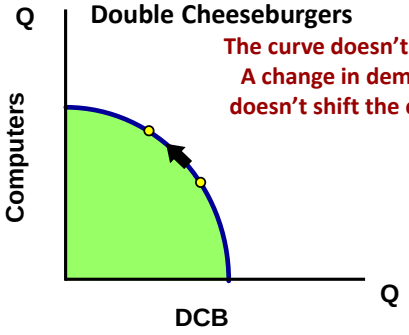


A shift only for Computers

44

Question #2

Decrease in the demand for Double Cheeseburgers

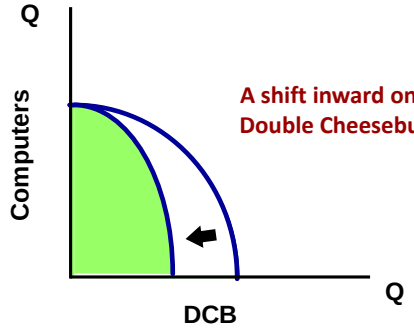


The curve doesn't shift! A change in demand doesn't shift the curve

45

Question #3

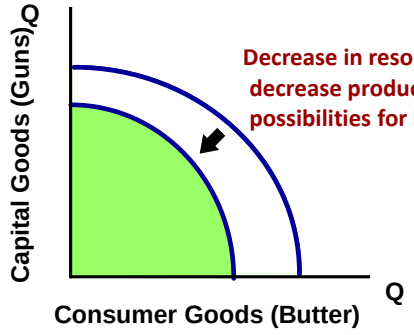
Mad cow disease kills 85% of cows



46

Question #4

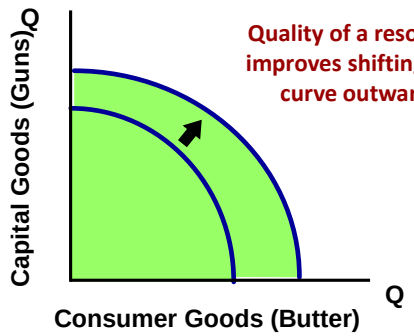
BP Oil Spill in the Gulf



47

Question #5

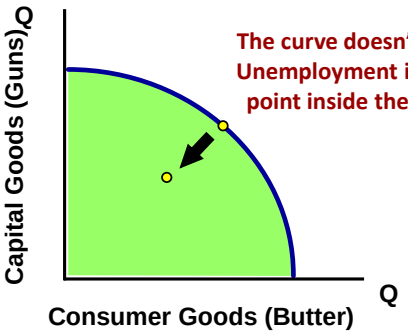
Faster computer hardware



48

Question #6

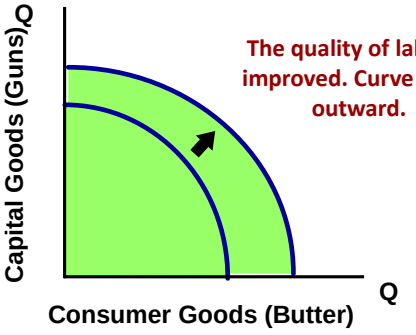
Many workers unemployed



49

Question #7

Significant increases in education



50

International Trade

Why do people trade?

51

Why do people trade?

1. Assume people didn't trade. What things would you have to go without?
   Everything you don't produce yourself!
   (Clothes, car, cell phone, bananas, health care, etc)
   The Point: Everyone specializes in the production of goods and services and trades it with others
2. What would life be like if cities couldn't trade with cities or states couldn't trade with states?
   Limiting trade would reduce people's choices and makes the worse off.
   The Point: More access to trade means more choices and a higher standard of living.

52

Absolute and Comparative Advantage

53

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 our 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

54

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

Ronald has a COMPARATIVE ADVANTGE in the production of burgers
Papa John has a COMPARATIVE ADVANTAGE in the production of pizza

55

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.

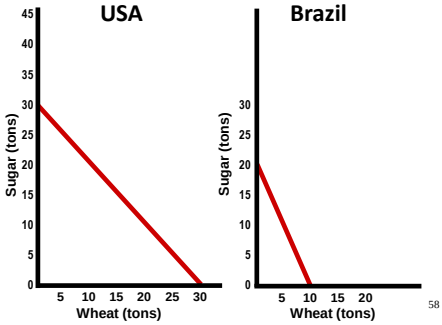
They should specialize in the good that is "cheaper" for them to produce.

56

Benefits of Specialization and Trade

57

International Trade



58

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

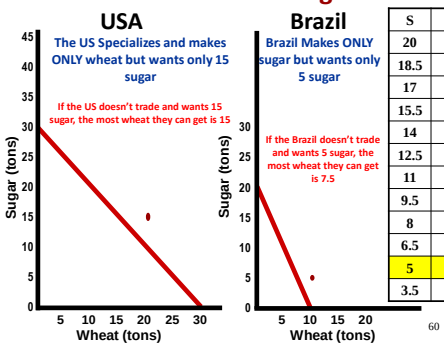
Which country has a comparative advantage in wheat? Sugar?

59

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

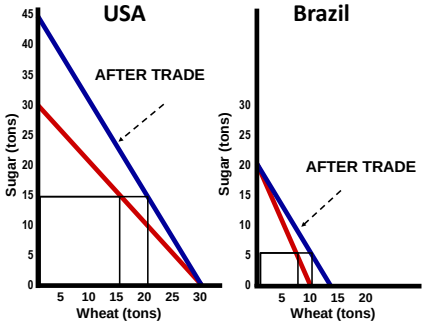


S	W
20	0
18.5	1
17	2
15.5	3
14	4
12.5	5
11	6
9.5	7
8	8
6.5	9
5	10
3.5	11

60

International Trade

TRADE SHIFTS THE PPC!



61

Determining Comparative Advantage (Output Method)

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

	CDs	Beef
Japan	4	2
Canada	4	6

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?

Output Questions:

L/G

or

GF/G

or

Cost/Benefit

62

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.

	Bread	Corn
United States	4	2
France	4	6

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?

Input Questions:

G/L

or

G/GF

or

Benefit/Cost

63

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 an 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 the house.

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

64

More Practice

65

Input or Output Question?

Number caught per day		
	Deer	Antelope
Henry	4	6
John	24	12

Months to produce one		
	Car	Plane
Canada	8	10
Japan	15	12

Acres to produce 100 bushels		
	Corn	Rice
Henry	9	3
John	8	2

66

Absolute Advantage?

Number caught per day		
	Deer	Antelope
Henry	4	6
John	24	12

Months to produce one		
	Car	Plane
Canada	8	10
Japan	15	12

Acres to produce 100 bushels		
	Corn	Rice
Henry	9	3
John	8	2

67

Comparative Advantage?

Number caught per day		
	Deer	Antelope
Henry	4	6
John	24	12

Months to produce one		
	Car	Plane
Canada	8	10
Japan	15	12

Acres to produce 100 bushels		
	Corn	Rice
Henry	9	3
John	8	2

68

Comparative Advantage?

Number caught per day		
	Deer	Antelope
Henry	4 (1D=3/2A)	6 (1A =2/3D
John	24 (1D=1/2A)	12(1A=2D)

Months to produce one		
	Car	Plane
Canada	8	10
Japan	15	12

Acres to produce 100 bushels		
	Corn	Rice
Henry	9	3
John	8	2

69

Comparative Advantage?

Number caught per day		
	Deer	Antelope
Henry	4 (1D=3/2A)	6
John	24 (1D=1/2A)	12

Months to produce one		
	Car	Plane
Canada	8 (1C=4/5P)	10 (1P=5/4C)
Japan	15(1C=5/4P)	12 (P=4/5C)

Acres to produce 100 bushels		
	Corn	Rice
Henry	9	3
John	8	2

70

Comparative Advantage?

Number caught per day		
	Deer	Antelope
Henry	4 (1D=3/2A)	6
John	24 (1D=1/2A)	12

Months to produce one		
	Car	Plane
Canada	8 (1C=4/5P)	10
Japan	15(1C=5/4P)	12

Acres to produce 100 bushels		
	Corn	Rice
Henry	9 (1C=3R)	3
John	8 (1C=4R)	2

71

Term of Trade

72

	Pineapples	Radios
Kenya	30 (1P costs 1/3R)	10 (1R costs 3 P)
India	40 (1P costs 1R)	40 (1R costs 1P)

Kenya wants Radios
If the terms of trade for 1 radio is greater than 3 pineapples then Kenya is worse off and should make radios on their own.
India wants Pineapples
If the terms of trade for 1 radio is less than 1 pineapple then India is worse off and should make pineapples on their own.

What terms of trade benefit both countries?

	Pineapples	Radios
Kenya	30 (1P costs 1/3R)	10 (1R costs 3 P)
India	40 (1P costs 1R)	40 (1R costs 1P)

Trading 1 radio for 2 pineapples will benefit both
If Kenya produces radios by themselves, they give up 3 Pineapples for each radio. If they can trade 2 pineapples for each radio they are better off.
If India produces pineapples by themselves, they give up 1 pineapple for one radio. If they can get 2 pineapples for one radio they are better off.
The countries trade at a lower opportunity cost than if they made the products themselves!

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.

75

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, North Korea, former Soviet Union, and China?

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

NO PROFIT MEANS NO INCENTIVE!!

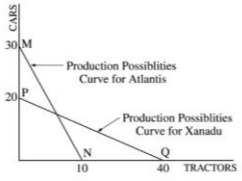
76

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. ***Private Property***
4. **The opportunity to make PROFIT gives people INCENTIVE to produce quality items efficiently.**
5. **Wide variety of goods available to consumers.**
6. **Competition and Self-Interest work together to <u>regulate the economy</u> (keep prices down and quality up).**

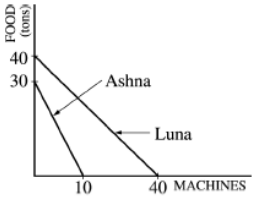
77

AP Macroeconomics Exam 2003, #3



3. Assume that two countries, Atlantis and Xanadu, have equal amounts of resources. Atlantis can produce 30 cars or 10 tractors or any combination, as shown by the line MN in the figure above. Xanadu can produce 20 cars or 40 tractors or any combination, as shown by the line PQ in the figure above.
   (a) Which country has an absolute advantage in the production of tractors? Explain how you determined your answer.
   (b) Which country has a comparative advantage in the production of cars? Using the concept of opportunity cost, explain how you determined your answer.
   (c) If the two countries specialize and trade with each other, which country will import cars? Explain why.

78



(a) Which country has an absolute advantage in the production of machines? Explain.
(b) Which country has an absolute advantage in the production of food? Explain.
(c) Which country has a comparative advantage in the production of machines? Explain.
(d) With trade between these two countries, which country will import food? Explain.

79

The Circular Flow Model

The Product Market-
•The "place" where goods and services produced by businesses are sold to households for money.

The Resource (Factor) Market-
•The "place" where resources (land, labor, capital, and entrepreneurs) are sold to businesses for wages, rent, income, and profit.

80