

Chapter 1: The Economic Way of Thinking

- The Economic Problem
- Production Possibilities
- Economic Analysis

Got stuff?

- Who made it?
- How was it made?
- How did you get it?

I. The Economic Problem

- the basic economic problem is **scarcity**:
 - wants are unlimited, but resources are limited
- so with scarcity, we must make choices,
- and with choices, come costs

- **Cost is the opportunity cost**
 - what you give up when you make a choice
- -- “there’s no such thing as a free lunch”

- Cost of going to college
 - what you can buy with tuition & fees
 - what you could earn by working
 - what you could do with the free time

- you are willing to give up
 - tuition
 - wages
 - leisure timeto go to college
- -- b/c you expect higher income or more rewarding career

economics is the study of choices

- of how to allocate scarce resources
- choices made by
 - consumers
 - businesses
 - governments

What are resources?

- use resources to produce goods and services
- factors of production
 - land
 - labor
 - capital
 - entrepreneurship

Land

- all natural resources
 - land
 - minerals
 - water
 - wildlife



Labor

- size of labor force (quantity)
- skills of labor force (quality)
 - human capital
- the value of time



Capital

- *physical* capital
 - goods used to make other goods
 - factories
 - machines
 - infrastructure



- NOT *financial* capital
 - stocks, bonds, bank loans
- financial capital facilitates building of physical capital

entrepreneurship

- human resource
- ideas
 - doing things better
 - e-commerce
 - new products



Three Questions to answer:

1. What to produce?
2. How to produce the stuff in #1?
3. For whom to produce?
(who gets the stuff in #1?)

Example: A Lexus



1. What to produce?

- Toyota designs a luxury car with buyers in mind
- Toyota decides how much to produce give the price and their costs
- Buyers decide how many to buy, based on price, their income, tastes, etc.

2. How to produce?

- Toyota designs factory, uses machinery, & trains workers to minimize cost BUT retain a certain quality
- U.S. government restricts this decision:
 - Pollution laws
 - safety laws
 - labor laws

3. Who gets the Lexus?

- Those who are willing and able to pay \$50,000 for one.
- (this is why I drive a Seat)
- With markets, price rations a scarce resource

Who answers #1-3?

- **pure capitalism**
 - when buyers and sellers interact to answer these questions
 - markets unrestricted
 - private property
 - prices coordinate #1-3

- Turkey is a **mixed market** economy, since government plays a role
 - **enforces property rights**
 - **regulates markets**
 - **taxes to provide goods & services**

- **command system**
 - **the government answers questions 1-3**
 - **former U.S.S.R., N. Korea**
 - **reduced incentives for efficiency**
 - **coordination failures**



Specialization

- How do we get the most out of our resources?
- We specialize in what we do best and trade that for what we need

- I teach.
- I get paid for it.
- I use the money to buy
 - **food**
 - **oil changes**
 - **clothes**

- If I
 - **grew my own food**
 - **made my own clothes**
 - **fixed my own car**
- I would not consume as much
- **Specialization produces gains!**
 - **I can consume more**
 - **than what I could make**
 - **on my own**

Who specializes in what?

- Comparative advantage
 - if you produce a good at a lower opportunity cost then you should specialize in it

with specialization,

- division of labor
 - different people specialize in different things
 - people become very good at their task
 - efficiency gains
 - get more out of same resources

specialization is everywhere

- doctors
 - neurosurgeon, obstetrics, pediatrics,...
- lawyers
 - divorce, real estate, patent law, personal injury...

The bottom line:

- Scarcity & opportunity cost are unavoidable.
BUT
- efficiency & specialization
make the most of scarce resources

II. Production Possibilities Frontier (PPF)

- model of scarcity, choice, & opportunity cost
- choice between 2 goods
- PPF shows maximum possible output combos of 2 goods, given current resources

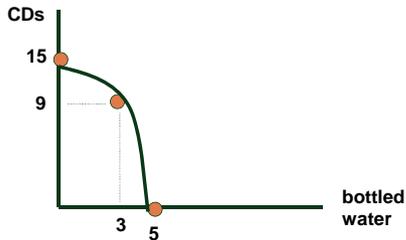
PPF example

- 2 goods:
 - CDs
 - bottled water
- use land, labor, capital to make these goods

Suppose these are 6 possible pairs:

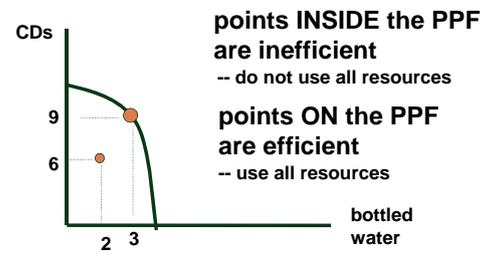
	CDs (millions per yr.)	Bottled Water (millions per yr.)
A	15	0
B	14	1
C	12	2
D	9	3
E	5	4
F	0	5

We can graph the table & get the PPF:



Using the PPF

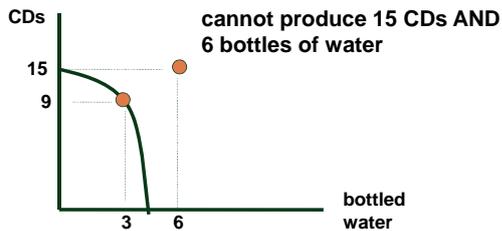
- points on or inside the PPF are possible



- **points INSIDE the PPF are inefficient**
-- do not use all resources
- **points ON the PPF are efficient**
-- use all resources

Using the PPF

- points outside the PPF are NOT possible at this time



cannot produce 15 CDs AND 6 bottles of water

scarcity & tradeoffs

- the PPF shows limits to production
- so must choose between bottled water & CD combinations
 - give up water to get more CDs
 - give up CDs to get more water
 - TRADEOFF

Opportunity Cost

- on PPF there are tradeoffs
 - how much is given up?
 - = opportunity cost

opportunity cost

- A to B = 1 CD
- B to C = 2 CDs
- C to D = 3 CDs

	CDs (millions per yr.)	Bottled Water (millions per yr.)
A	15	0
B	14	1
C	12	2
D	9	3
E	5	4
F	0	5

	CDs (millions per yr.)	Bottled Water (millions per yr.)	Opp. cost of 1 bottle of water (in terms of CDs)
A	15	0	
B	14	1	1
C	12	2	2
D	9	3	3
E	5	4	4
F	0	5	5

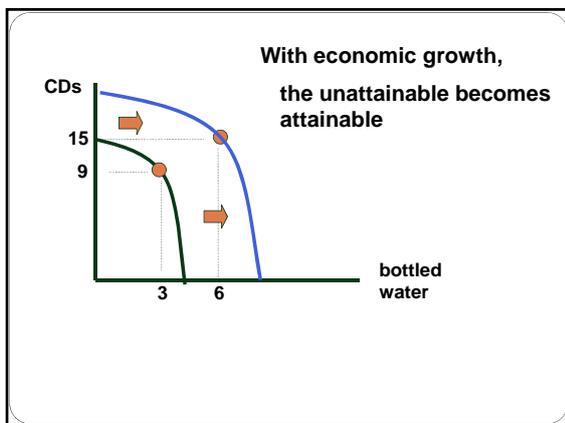
opportunity costs are increasing

- cost (in CDs) increases as water production increases
- PPF is concave (bowed out)
- why?
 - harder to switch resources between CDs and water

- At first when making more water
- switch the best resources from CD production
- But as we make more water
- resources switched are less and less suitable for water production

Shifts in the PPF

- if we get more resources OR
- if technology improves
- then the PPF will shift out
 - produce more CDs and more water
 - economic growth!



II. Economic analysis

- models
- positive vs. normative
- fallacies

Microeconomics

- studies choices of consumers, firms, and how government affects these choices
- studies parts of the economy or a particular market

Macroeconomics

- studies whole economy
- -- inflation
- -- unemployment
- -- recessions

Building economic models

- ask a question
- simplify reality
- make assumptions
- make prediction
- test the prediction

- Models may be described with
 - -- words
 - -- math
 - -- pictures (graphs)

example

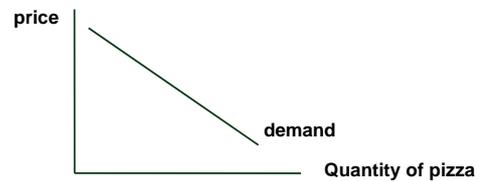
Model consumer behavior in buying pizza

- how does a change in price of pizza impact the amount of pizza bought?

- assume only price changes, and other factors remain constant
 - -- “ceteris paribus”
 - “other things being equal”

- make a prediction:
 - **Words:**
 - “when the price of pizza rises, people buy less pizza”
 - **Math:**
 - quantity of pizza = $10 - .2(\text{price of pizza})$

- graph



Testing models

- Do model predictions match the data?
- Do people buy less pizza when its price rises?
 - must distinguish cause and effect
 - in the real world other factors are not held constant

Positive statements

- statements about “what is”
- may be right or wrong
- testable

Normative statements

- statements about “what ought to be”
- based on opinions and values
- not testable

Example 1

“Employer-provided daycare reduces costs due to employee sick days and lost productivity”

- positive
 - statement of fact
(but it may be wrong)
 - testable

Example 2

"Firms should provide on-site daycare for their employees."

- normative
 - opinion
 - cannot test what firms "should" do, only the result of what they do

Economists

- discover, collect positive statements about how economy works.
 - predict AVERAGE behavior
- use positive statements as support for normative statements.

Faulty economic analysis

- correlation vs. causation
- *post hoc, ergo propter hoc*
- fallacy of composition
- ignoring secondary effects

correlation vs. causation

- if "a" rises when "b" rises,
 - positively correlated
- NOT necessarily true that "a" causes "b"
 - "b" could cause "a" OR
 - third factor causes both "a" and "b"

Example

- assault and ice cream sales are positively correlated
- Does ice cream make people want to hit someone?
- Do bullies go out for ice cream after a good fight?
- No, both increase due to warmer weather

post hoc, ergo propter hoc

- if A happened right before B, then A must have caused B.
- what about
 - coincidence?
 - a third unrelated causal factor?

fallacy of composition

- "what is true for one part is true for the whole"
- example: Paradox of thrift
 - should you save more \$?
 - what if everybody did?

secondary effects

- policies have unintended consequences
 - especially when they alter incentives
- example: rent control
 - intended to keep rents down
 - leads to shortage and run-down apts.