

Econ 101 – Section 5

Lecture 2
Opportunity Cost, Scarcity, Production
Possibilities, Trade, Specialization, and
Economic Systems

January 15, 2004



The Concept of Opportunity Cost

- **Opportunity Cost for Individuals**
- **Opportunity Cost and Society**
- **Production Possibilities Frontiers**
- **The Search for a Free Lunch**



Opportunity Cost for Individuals

The *opportunity cost* of any choice is all that we forego when we make that choice.

(This is not just the monetary costs)



Opportunity Cost and Society

All production carries an opportunity cost: to produce more of one thing, society must shift resources away from producing something else.



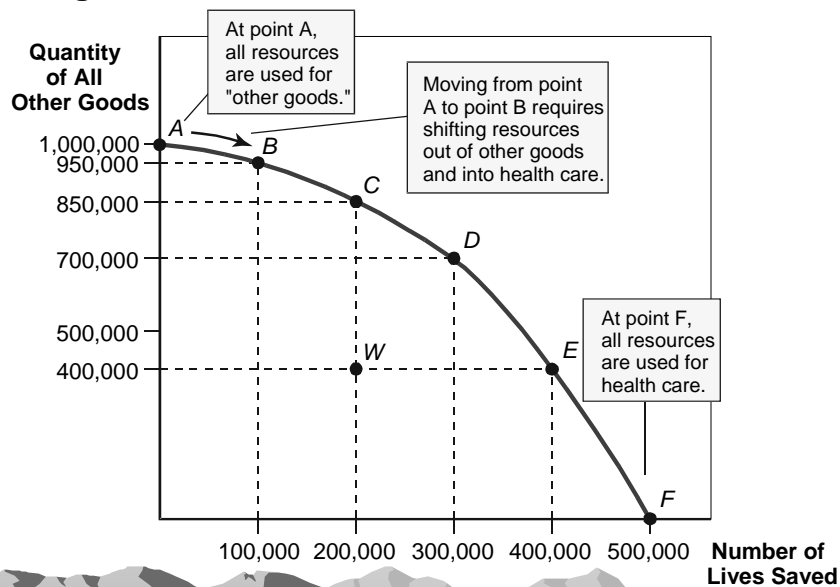
Production Possibilities Frontier

Production Possibilities Frontier (PPF)

A curve showing all combinations of two goods that can be produced with the resources and technology available.



Figure 1 The Production Possibilities Frontier



Method	Cost per Life-Year Saved
Brief physician antismoking intervention:	
Single personal warning from physician to stop smoking	\$150
Sickle cell screening and treatment for African-American newborns	\$236
Replacing ambulances with helicopters for medical emergencies	\$2,454
Intensive physician anti-smoking intervention:	
Physician identification of smokers among their patients; 3 physician counseling sessions; 2 further sessions with smoking-cessation specialists; and materials—nicotine patch or nicotine gum	\$2,587
Mammograms: Once every 3 years, for ages 50–64	\$2,700
Chlorination of water supply	\$4,000
Vaccination of all infants against strep infections	\$80,000
Mammograms: Annually, for ages 50–64	\$108,401
Exercise electrocardiograms as screening test: For 40-year-old males	\$124,374
Heart transplants	\$157,821
Mammograms: Annually, for age 40–49	\$186,635
Exercise electrocardiograms as screening test: For 40-year-old females	\$335,217
Seat belts on school buses	\$2,760,197
Asbestos ban in automatic transmissions	\$66,402,402

The Concept of Opportunity Cost

Law of increasing opportunity cost:
the more of something we produce,
the greater the opportunity cost of
producing even more of it.

Production Possibilities Frontier

- *PPF* curves are concave because the law of increasing opportunity cost holds.
 - If this law did not hold then the PPF would just be a straight line
 - Consider the PPF of an economy which is only interested in producing right shoes and left shoe
 - The PPF will be a 45 degree line
 - If the right shoe was an ankle high then we would still have a straight line but it would no longer be 45 degree



The Search for a Free Lunch

Productive Inefficiency

A situation in which more of at least one good can be produced without pulling resources from the production of any other good.



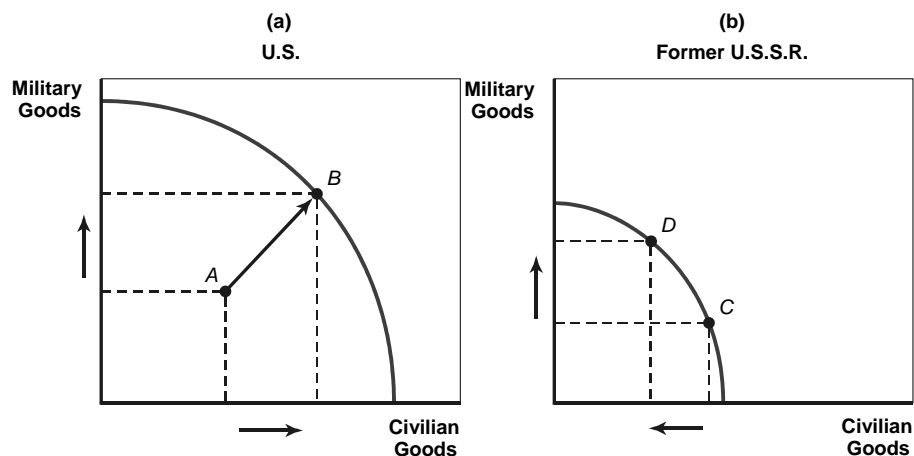
The Search for a Free Lunch

Recessions

A slowdown in overall economic activity when resources are idle:

- there is widespread unemployment
- factories shut down, so land and capital are not being used
- Resources are idle

Figure 2 Production and Unemployment



Economic Systems

- **Specialization and Exchange**
- **Resource Allocation**
- **Resource Ownership**
- **Types of Economic Systems**



Specialization and Exchange

Specialization

A method of production in which each person concentrates on a limited number of activities.



Specialization and Exchange

Exchange

Trading with others to obtain what we want.



Gains to Specialization

Absolute Advantage

The ability to produce a good or service using fewer resources than other producers use.



Absolute Advantage

	1 Quart of Berries	1 Fish
Maryanne	1 hour	1 hour
Gilligan	1½ hours	3 hours

- It takes Maryanne less time to gather 1 quart of berries or catch 1 fish than Gilligan
- Does that mean everyone on the Island would be better off if Maryanne did all the food gathering?
 - NO!

Gains to Specialization

Comparative Advantage

The ability to produce a good or service at a lower opportunity cost than other producers.

What is the opportunity cost?

Table 2 Opportunity Costs

	Opportunity Cost of:	
	1 Quart of Berries	1 Fish
For Maryanne	1 fish	1 quart of berries
For Gilligan	½ fish	2 quarts of berries



Comparative Advantage

- Total production of every good or service will be greatest when individuals specialize according to their comparative advantage.
- This is another reason why specialization and exchange lead to higher living standards than does self-sufficiency.



Resource Allocation

Three Methods of Resource Allocation

- Traditional Economy
- Command (Centrally-Planned) Economy
- Market Economy



Resource Allocation

The Nature of Markets

A market is a group of buyers and sellers with the potential to trade with each other.



Resource Allocation

The Importance of Prices

- A price is the amount of money that must be paid to a seller to obtain a good or service.
 - The price of a good is part, often a large portion, of the opportunity cost but is generally not the whole opportunity cost
- When people pay for resources allocated by the market, they must consider the opportunity cost to society of their individual actions.
- Thus, markets can create a sensible allocation of resources.



Resource Ownership

Types of Resource Ownership

- Communism - economic system in which most resources are owned in common
 - This just does not work since we all have different preferences and ideas how we should use scarce resources
 - "Marge, I agree with you -- in theory. In theory, communism works. In theory." - Homer Simpson
- Socialism - economic system in which most resources are owned by the state
- Capitalism - economic system in which most resources are owned privately



Economic Systems

Economic System

Composed of two features:

- resource allocation
- resource ownership



Figure 3 Types of Economic Systems

