

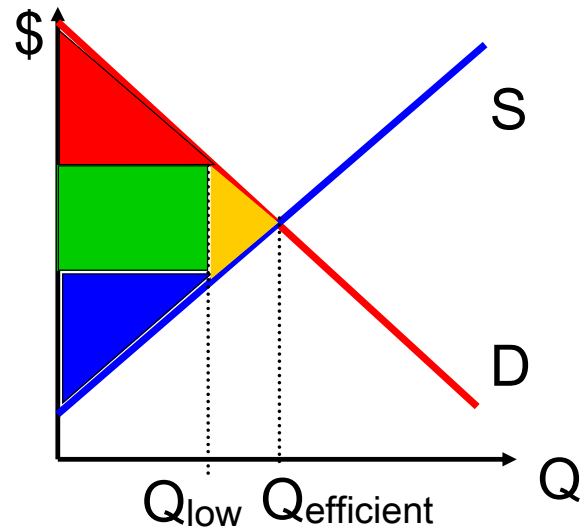
Lecture 14 Friday, Oct. 9

Next week:

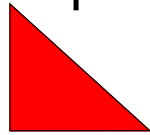
1. Monday: Midterm :(**Bring #2 pencils!**
2. Tues: No homework due. :)
3. Wed: No class. :)
4. No sections next week. :)
5. Fri: Regular Lecture :)

Lecture

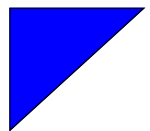
- 1 Handy summary of effects of policies
2. Positive and Negative Externalities
3. A negative externality in Econland and Government Policy.



For all policies on next page:




Goes to consumers



Goes to producers



Is loss in total surplus from output being too low (Q_{low} instead of $Q_{\text{efficient}}$)

Where  goes depends upon policy

Policy	Where green box goes
Tax	Government
Quota	Quota Owners
Price Ceiling optimistic case (unrealistically)	Consumers
Price Ceiling (real world)	Partly destroyed by misallocation and waiting lines
Price Floor optimistic case (unrealistically)	Producers
Price Floor (real world)	Partly destroyed by misallocation and waiting lines

Other good questions:

1. Where does subsidy fit in table?

It doesn't fit in.

Subsidies make quantity too high.

2. What we figured out for the price of a quota is what it would be worth for only one day. I'm confused because quota could be used every day. .

Good point. We did it this way, because in Econland people only live for one day. If we grant the S and D people the privilege of living every day, then we need to make a distinction between the rental value of a quota unit and the asset value.

The \$4 we calculated in class is the rental value. The asset value is calculated by adding up the rents (putting less weight on payments very far in the future.)

If we give the people in Econland a year to live, then the asset value of a unit of quota at the beginning of the year equals $\$4 \times 365 = \$1,460$

3. Is there a difference between "efficiency" and "Pareto efficiency?"

No. I use terms interchangeably. The textbook cheats a bit and is not as careful in defining it as we are. Use lecture definition.

Externalities

“An externality arises when a person engages in an activity that influences the well-being of a bystander and yet neither pays nor receives any compensation for that effect.”

Negative:

cigarette smoking (second hand smoke)

driving cars:

- global warming from carbon
- congestion (Drive on highway. Suppose make 1,000 other drivers go .6 seconds slower, so total external cost is 600 seconds or ten minutes)

noise

- cell phones
- planes

Positive

Maintenance of exterior of one's home (landscaping,...)

Research: (others can potentially imitate).

Studying hard in Econ 1101?

- Most of benefit is private
- Maybe a little external social benefit if some of your knowledge spills over to your roommate

With externalities, the First Welfare Theorem does not apply.
Free market not Pareto Efficient

With no externalities...

Social Marginal Cost (SMC)
= Private Marginal Cost (PMC)
(just the supply curve)

Social Marginal Benefit (SMB)
= Private Marginal Benefit (PMB)
(just the demand curve
also known as the marginal reservation price)

With externalities...

Social Marginal Cost (SMC)
= Private Marginal Cost (PMC)
+ External Marginal Cost (EMC)
(negative externalities)

Social Marginal Benefit (SMB)
= Private Marginal Benefit (PMB)
+ External Marginal Benefit (EMB)
(positive externalities)

Free Market: quantity is where

Private Marginal Benefit
= Private Marginal Cost

Socially Efficient quantity is where

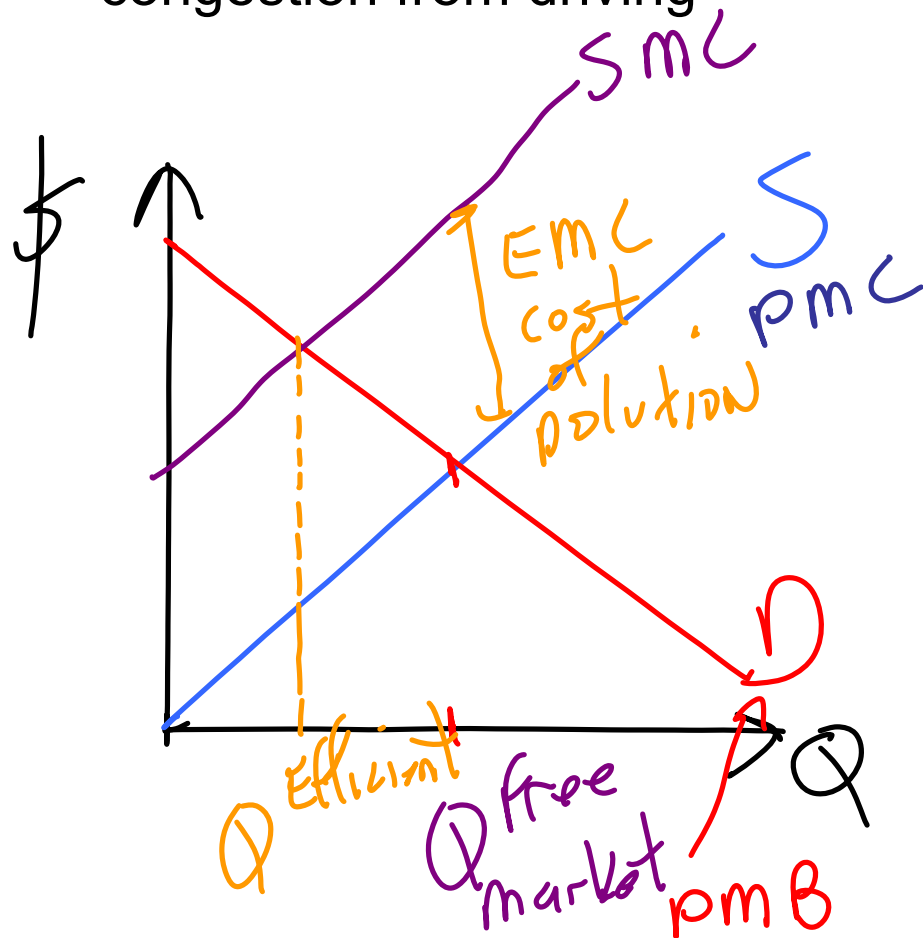
Social Marginal Benefit
= Social Marginal Cost

When $EMB=0$ and $EMC=0$ these
are the same thing.
(First Welfare Theorem, invisible
hand...)

With externalities, invisible hand
doesn't do the job.

Negative Externalities: $EMC > 0$

- global warming from gasoline consumption (carbon use)
- congestion from driving



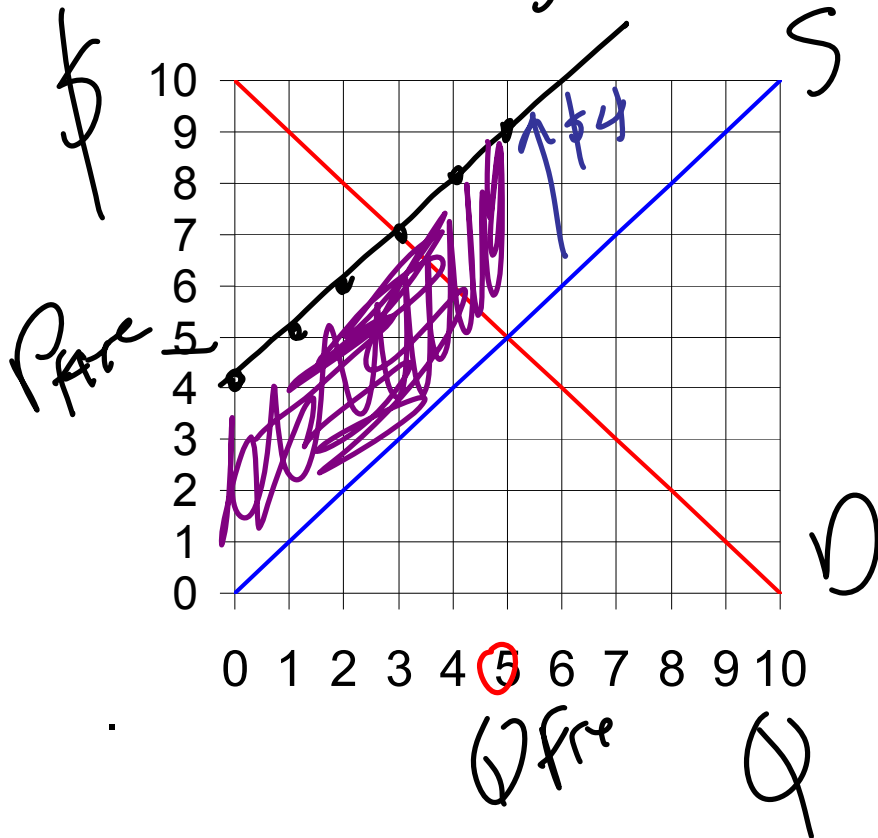
Positive Externalities: $EMB > 0$

- New development in blighted areas
- Research

Negative Externality in Econland

Production of 1 widget imposes an external marginal cost of \$4 on others

$$SMC = PMC + \$4$$



	Free Market		
Q	5		
P ^D	5		
P ^S	5		
CS	✓ 12.5		
PS	↓ 12.5		
GS	0		
External Cost	→ 20		
TS	5		

Efficient Quantity

$$SMB = SMC (=PMC + EMC)$$

→ Q=3

Try tax = \$4

$$\text{External Cost} = \$4 \times 5 = 20$$