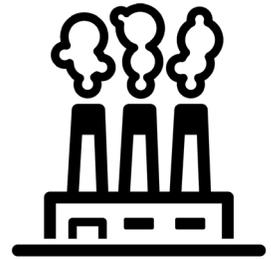


Topic 9 – Market Failure

Big Question – When do markets fail?

I. What is the Socially Optimal Level of Pollution?



II. External Costs and Benefits

An externality exists when the _____ of a product imposes a _____ on people without their permission.

Examples:

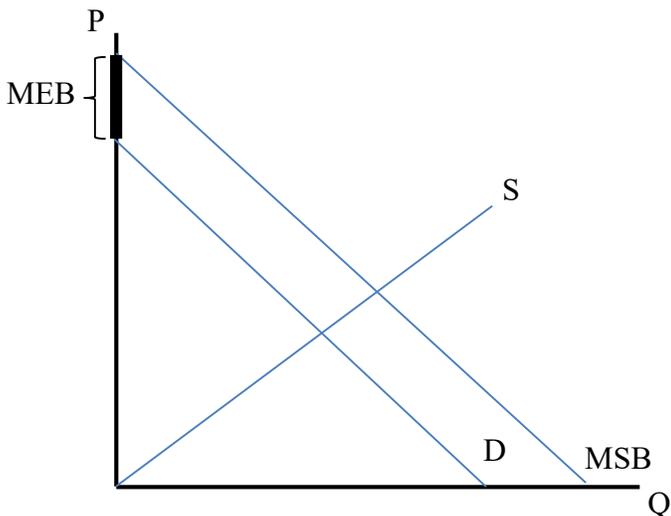
Originating from:	Consumption	Production
Negative Externality		
Positive Externality		

III. Market Failure with Externalities

When externalities exist, a free market will not result in the _____ because consumers and producers don't account for the full cost (or benefit) of their actions.

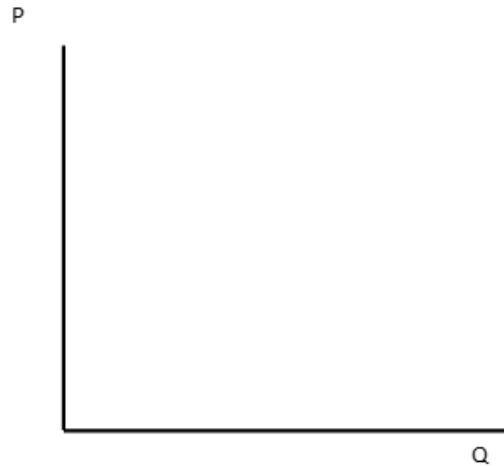
1. Positive Externality

Marginal Social Benefit = _____ + _____



Example: Suppose that supply and demand for flower gardens are given by the following equations. Suppose there is an external benefit of \$6 per unit.

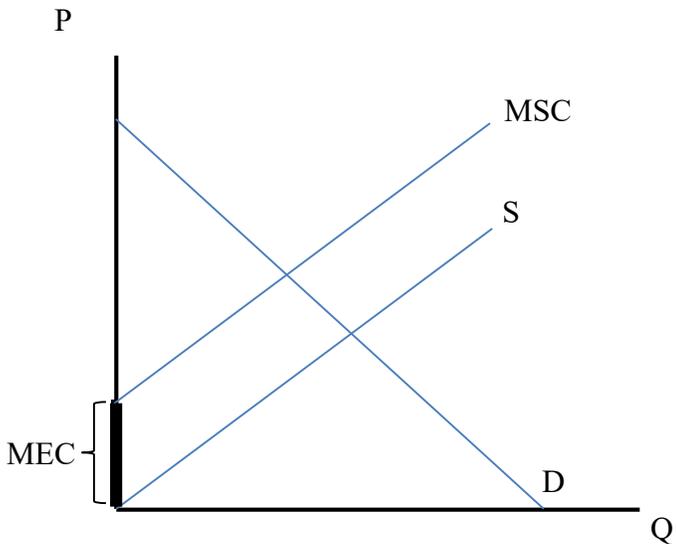
Demand: $P = 30 - 0.5Q$ MEB: \$6
 Supply: $P = Q$



- a. What is the market equilibrium quantity?
- b. Write down the equation for the MSB curve?
- c. What is the socially optimal quantity?
- d. How much deadweight loss will exist at the market equilibrium?

2. Negative Externality

Marginal Social Cost = _____ + _____

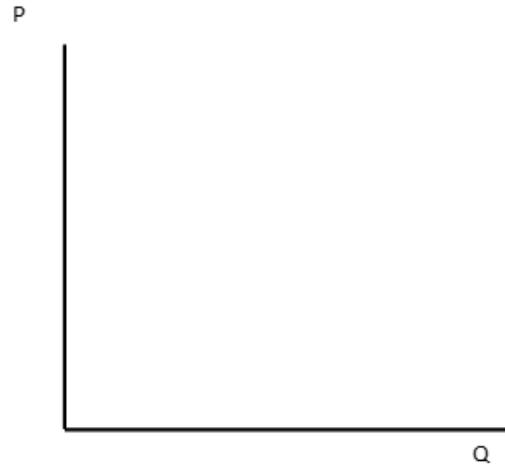


Example: Suppose that supply and demand for paper are given by the following equations. However, the production of paper results pollution. The marginal external cost of producing paper is \$2 per unit.

Demand: $P = 8 - 0.4Q$

MEC: \$2

Supply: $P = 0.4Q$



a. What is the market equilibrium quantity?

b. Write down the equation for the MSC curve?

c. What is the socially optimal quantity?

d. How much deadweight loss will exist at the market equilibrium?

IV. Solutions to Market Failure Resulting from an Externality

Coase Theorem:
 If transaction costs are low and property rights are well defined, then the socially optimal outcome can be reached through bargaining.

Negative Externalities

1. Command and Control

Positive Externalities

1. Command and Control

2. Quotas

2. Subsidies

3. Taxes

3. Government Provision

4. Tradable Permits

V. Rivalry and Excludability

Rival: One person’s consumption prevents others from consuming the good or diminishes the overall resource.

Excludable: It is possible to prevent people (non-payers) from consuming the good.

	Excludable	Non-Excludable
Rival		
Non-Rival		

VI. Public Goods

Discussion: Public Goods Game

Everyone has 3 pennies. I’ll pass around a cup and you can decide how many of your pennies to put in (0, 1, 2, or 3). I’ll collect the pennies, multiply that number by 2 and redistribute the money evenly to all of you.

Problem:

Solutions:

VII. Common Property Goods

Watch the TED-Ed video “What is the tragedy of the commons?” and write down some examples of the tragedy of the commons.

Examples:

Problem:

Solutions:

VIII. Assignments

- a. Video Assignments due on Brightspace at 11pm on 2/28/20.
- b. Problem Set 9 due on Brightspace at 11pm on 3/3/20.