

EXTERNALITIES

Efficient Markets

Competitive markets...

- are efficient
- maximize total surplus
- "work" ... allocate resources efficiently

Assumptions...

...perfect information

...no market failure

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Efficient Markets

- market failure**, when the market fails to allocate society's resources efficiently. Causes (e.g.):

- market power**, a single buyer or seller has substantial influence on market price

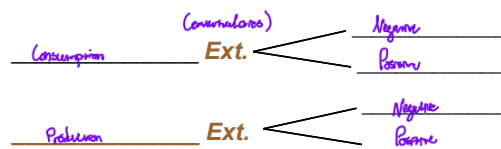
externalities, the unintended consequences of a market exchange on the well-being of a bystander; (aka "spillover" or "third party" effects)

Governments can sometimes improve market outcomes.

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Externality

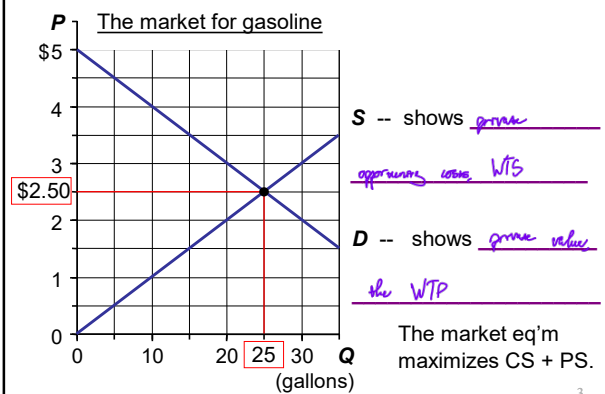
Externalities can be **negative** or **positive**: self-interested buyers and sellers neglect the external costs or benefits of their actions....



.....so the market outcome is not efficient.

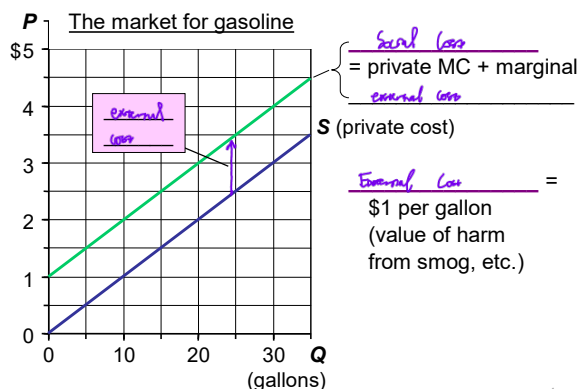
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Recall...Welfare Economics



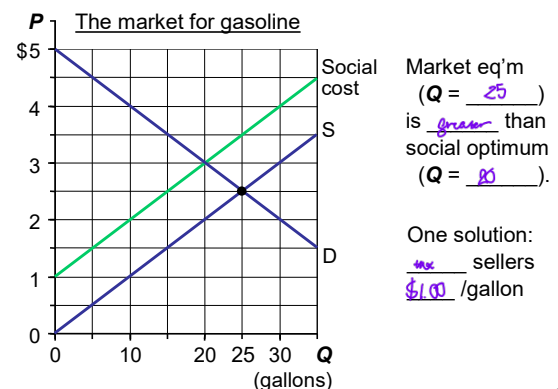
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Analysis of a Negative Externality



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Analysis of a Negative Externality



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Positive Externalities

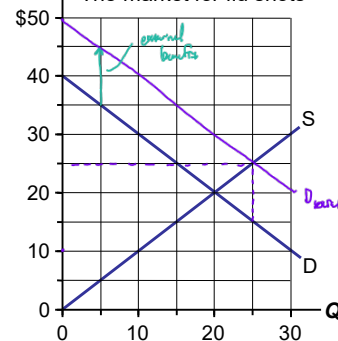
With a positive externality, the **social value** of a good includes

- private value – WTP (benefit)
- external benefit – the value of the positive impact on bystanders

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Analysis of a positive externality...

The market for flu shots



External benefit
= \$10/shot

- Draw the social value curve. social
- Find the socially optimal Q. 20
- What policy would internalize this externality? subsidy of \$10 per shot
- What happens to total surplus? It increases

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Effects of Externalities:

If negative externality

- market quantity larger than socially desirable

If positive externality

- market quantity smaller than socially desirable

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"Internalizing the Externality"

Internalizing the externality: charging resources ...
so people consider the external effects of their actions

When market participants must consider social costs or benefits, the market eq'm equals social optimum.

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Public Policies Toward Externalities

1) Government - based - command policies -- regulate behavior directly, e.g...

- limits on quantity of pollution emitted
- technology requirements
- require immunizations

2) Market-based policies -- provide incentives to private decision-makers to change behavior, e.g...

- corrective taxes and subsidies
- tradable pollution permits

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Corrective Taxes & Subsidies

Corrective tax/sub:

- aligns private and social interests (incentives)
- ideal corrective tax = external cost
- ideal corrective subsidy = external benefit
- different from "other" taxes/subs which distort incentives/market
- results in more efficient market: No DWL

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Tradable Pollution Permits

Pollution permit system:

- Permits are issued with a face "pollution" value
- A market for permits is established
- Fixed amount of permits (inelastic **S**)
- Firms with higher abatement costs buy
- Firms with lower costs (abate) as all

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Compare and Contrast Policies

Goals:

- 1) Reduce negative externality ... pollution.
- 2) Efficient outcome: Firms with lowest abatement costs reduce the most.
 - Lowest cost solution
 - Role of incentives

↑ Command
↓ Control

CC : * Regulation; * technology requirement;

MM : * corrective tax; * tradable pollution permit

↳ Market

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Private Solutions to Externalities

- Moral codes and social sanctions, e.g., the "Golden Rule"
- Charities, e.g., the Sierra Club
- Commerce between market participants and the affected bystanders

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Private Solutions to Externalities

The Coase theorem:

If private parties can costlessly bargain over the allocation of resources, they can solve the externalities problem on their own.

↳ "workable bargain" - low transaction costs
↳ Property rights play a key role.

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Why Private Solutions Do Not Always Work

1. Transaction Costs :
The costs incurred in the process of agreeing to and following through on a bargain.
2. Small numbers :
Even if a beneficial agreement is possible, each party may hold out for a better deal.
3. Coordination Problems :
If # of parties is very large, coordinating them may be costly, difficult, or impossible.

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