

Externalities

Externality

- When the actions of consumers or producers give rise to negative or positive side-effects on other people who are not part of these actions, and whose interests are not taken into consideration
- “Spill-over” effect

Externality

- ▣ **Positive Externality** – when there is a positive side-effect (benefits)
- ▣ **Negative Externality** - when there is a negative side-effect (cost)

Marginal private benefits and costs

Marginal social benefits and costs

- Marginal private costs (MPC) – refer to costs to **producers** of producing one more unit of a good.
- Marginal social costs (MSC) – refer to costs to **society** of producing one more unit of a good.
 - $MSC = MPC + \text{any Externalities}$
- Marginal private benefits (MPB) – refer to benefits to **consumers** of consuming one more unit of a good.
- Marginal social benefits (MSB) – refer to benefits to **society** of consuming one more unit of a good.
 - $MSB = MPB + \text{any Externalities}$

The Important Part to Understand

Free Market

1. Gets us to where $S=D$.
2. $S=MPC$, $D=MPB$, so free market get us to where $MPC=MPB$

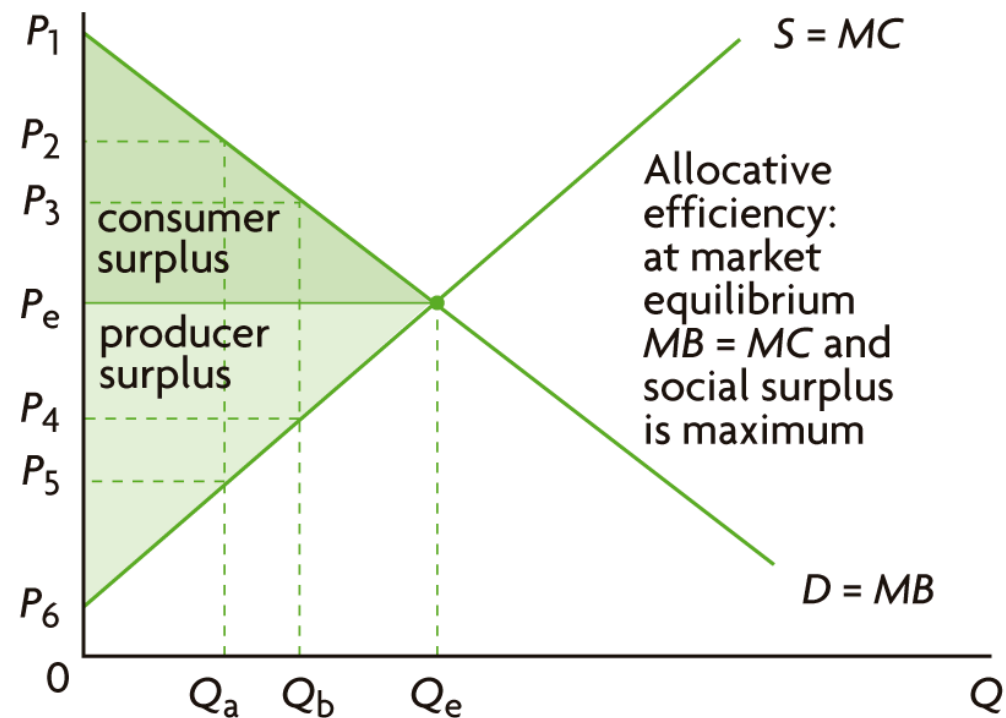
Allocative efficiency

1. Is achieved when $MSC=MSB$ WHERE WE WANT TO BE

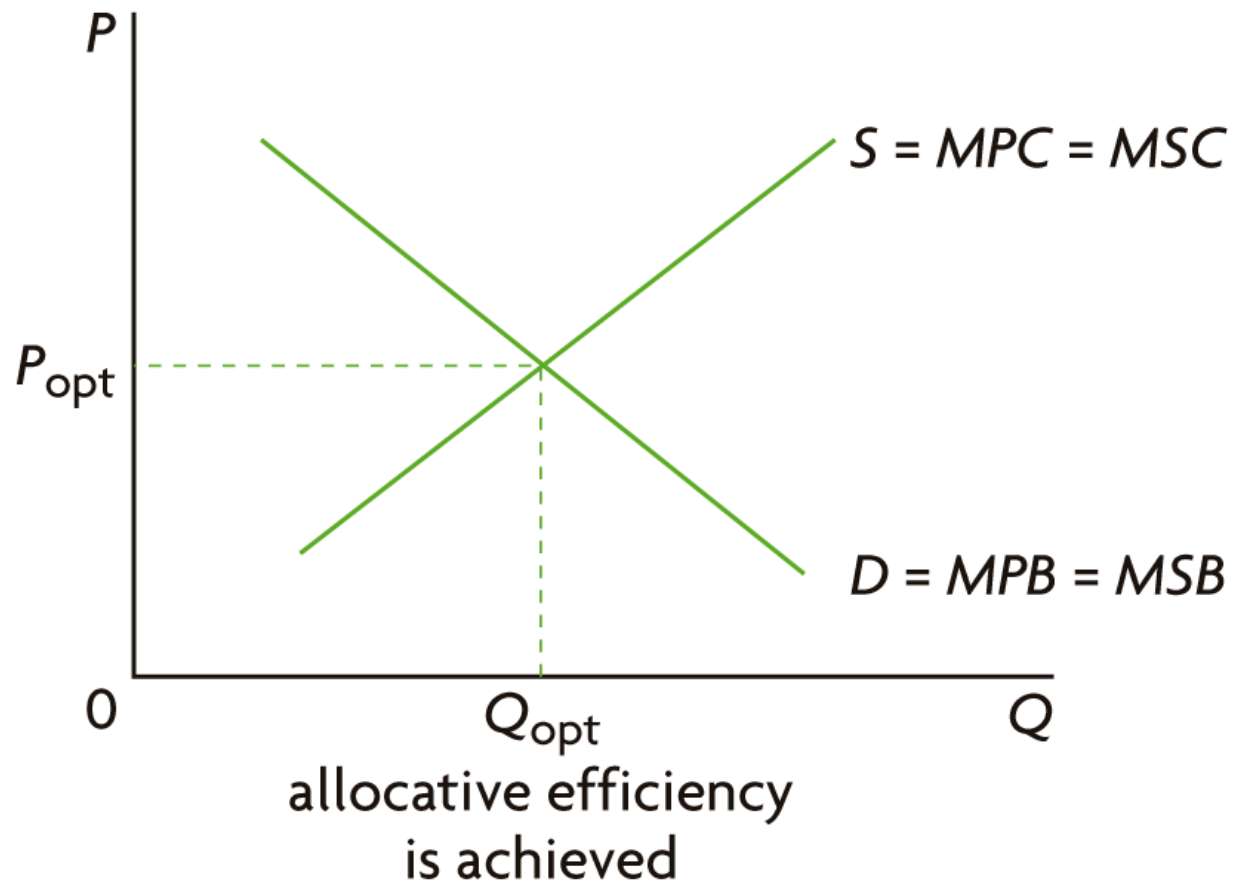
Why externalities are a problem

1. When there is no externality, $MPC=MSC$ and $MPB=MSB$, so the market get us to where $S=D=MPC=MSC=MPB=MSB$, where there is allocative efficiency
2. If there is an externality, then $MPC \neq MSC$ **or** $MPB \neq MSB$, so the place where $S=D=MPC=MPB$ is not where $MSC=MSB$, so we do not get allocative efficiency and the market fails

Welfare with Market Equilibrium



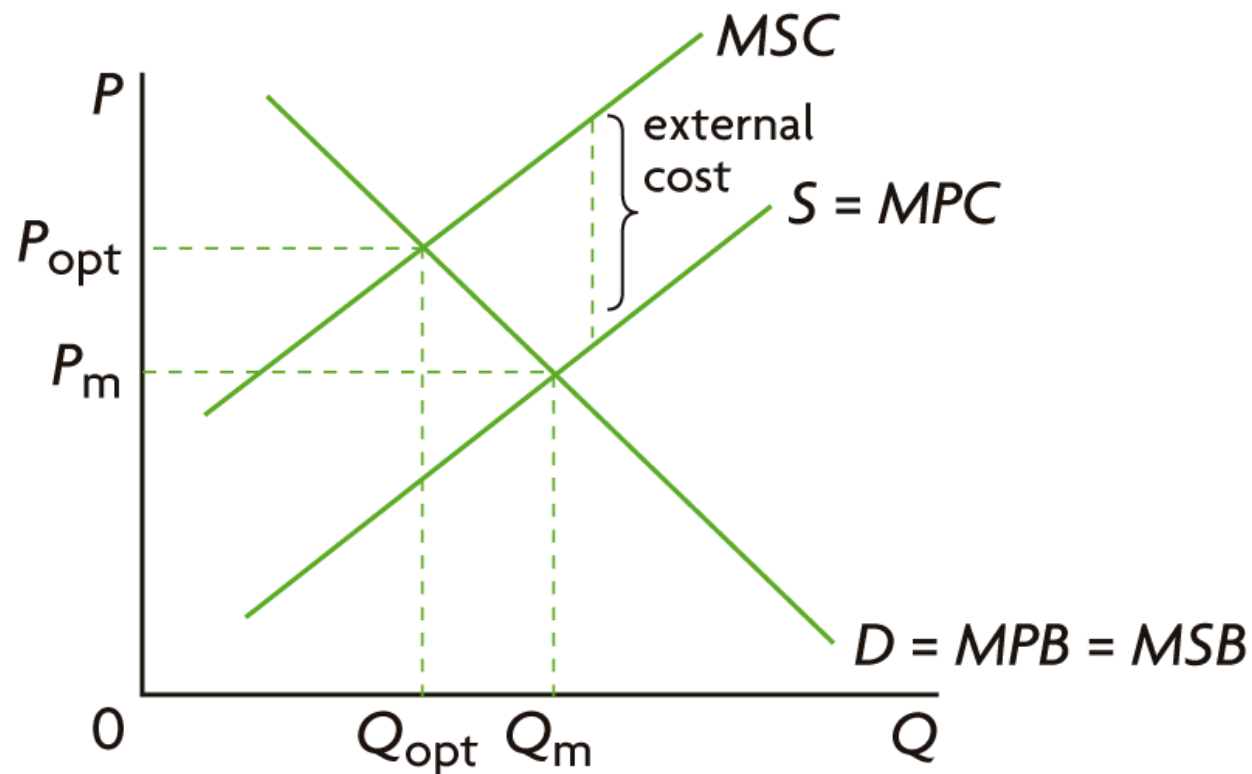
No Externalities



1. Negative Production Externalities

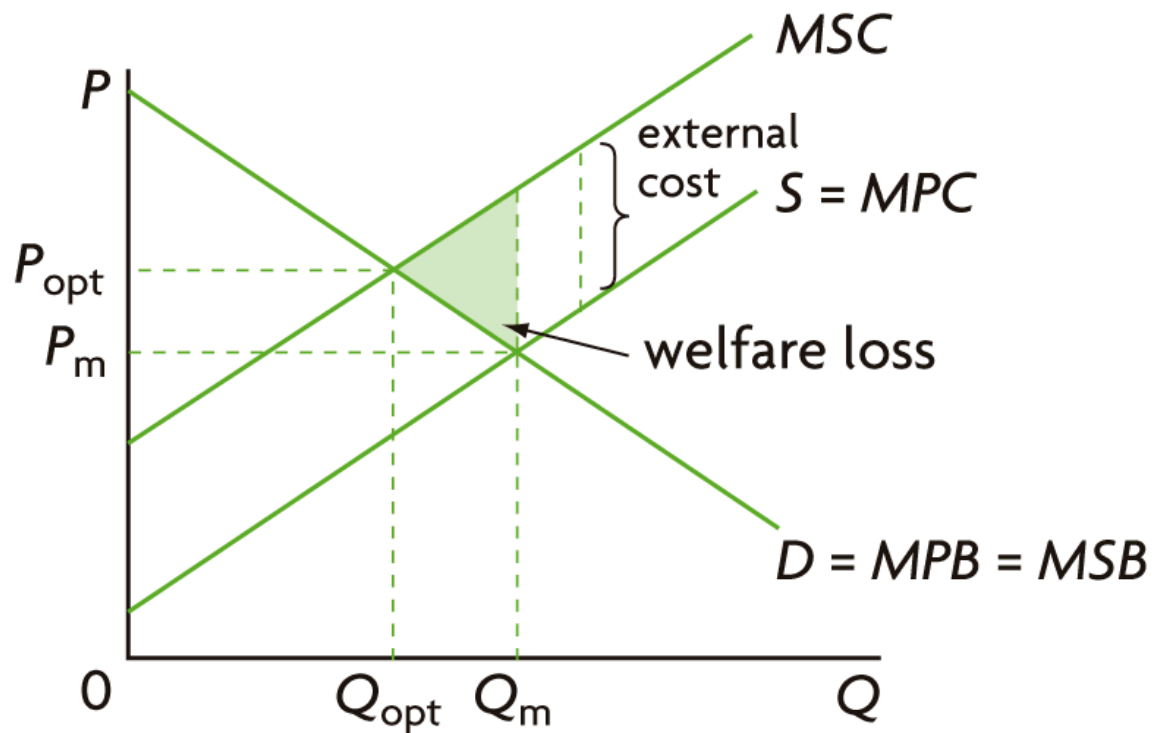
- ▣ **Negative Production Externalities** – when producers create negative side-effects
- ▣ $MPC < MSC$
- ▣ Example: Pollution

Negative Externality



Negative Externality

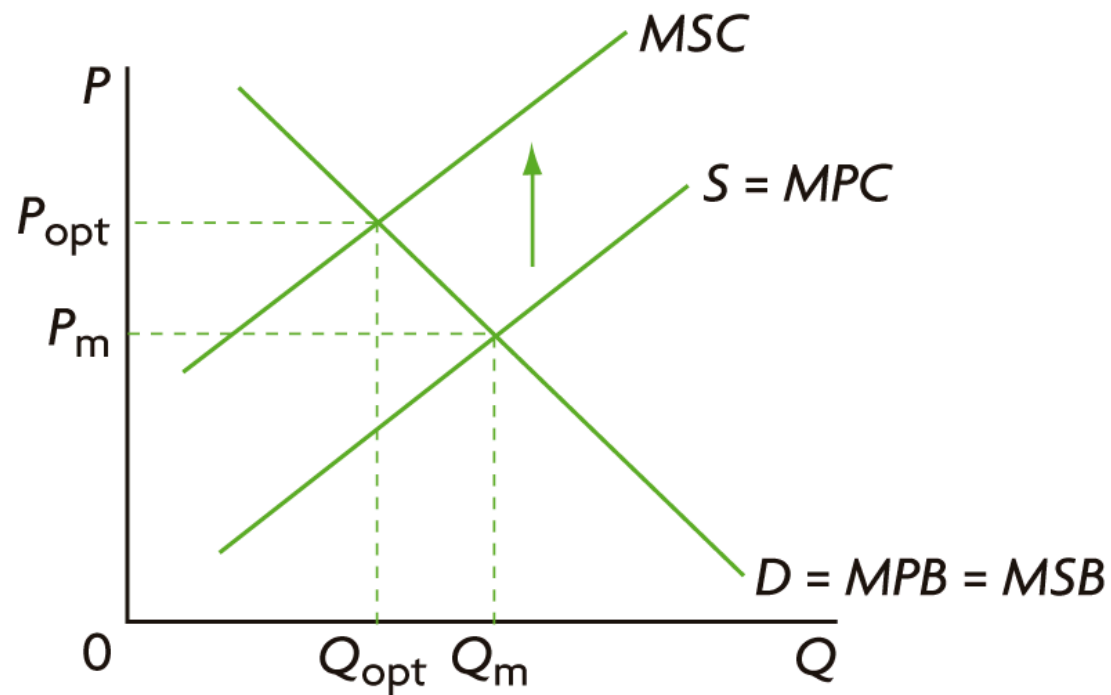
(a) Welfare loss



Fixing Negative Production Externalities

1. Government Regulations
 - ▣ Governments create laws to help stop the negative externality
 - ▣ Example: Laws that limit pollution
 - ▣ This lowers the quantity produced and moves it towards to optimal amount

Fixing Negative Production Externalities



Fixing Negative Production Externalities

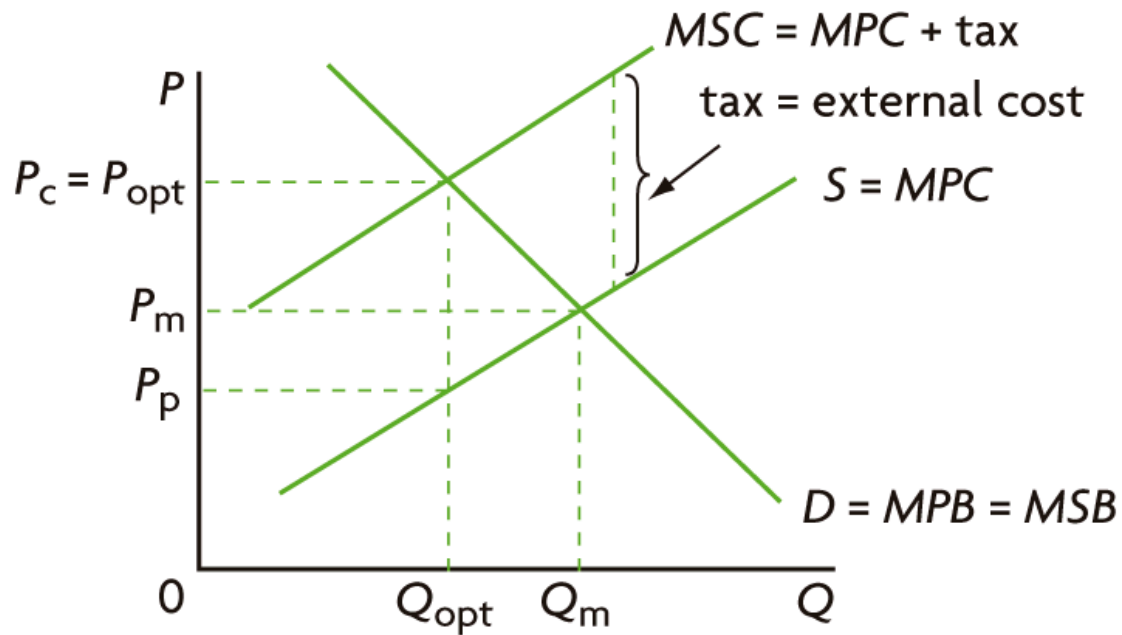
2. Market-based policies

A. Taxes

- ▣ Taxes push the MPC curve up to the MSC curve.

Taxes

- (a) Imposing an indirect tax on output or on pollutants



Fixing Negative Production Externalities

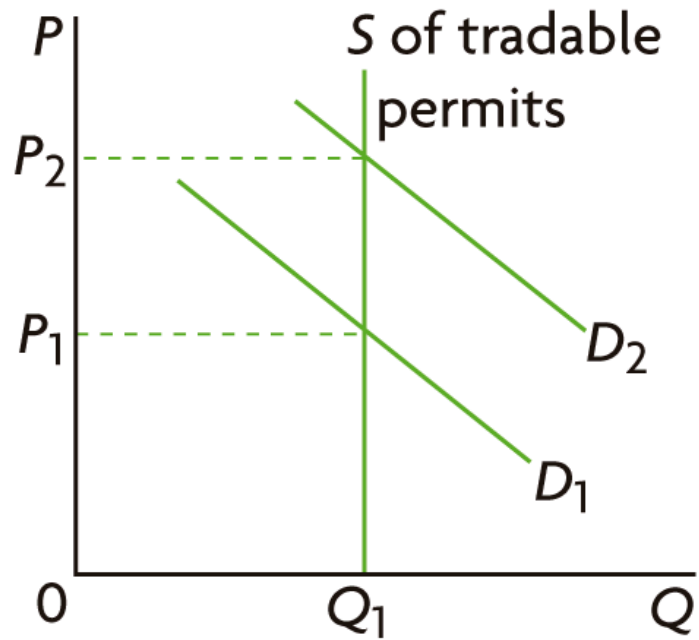
2. Market-based policies

B. Tradable permits (cap and trade)

- ▣ The government creates pollution permits
- ▣ These are bought and sold by companies

Cap and Trade

(c) Tradable permits



Negative Consumption Externality

▣ **Negative Consumption Externality** -
when consuming a good creates
negative side-effects.

▣ $MSB < MPB$

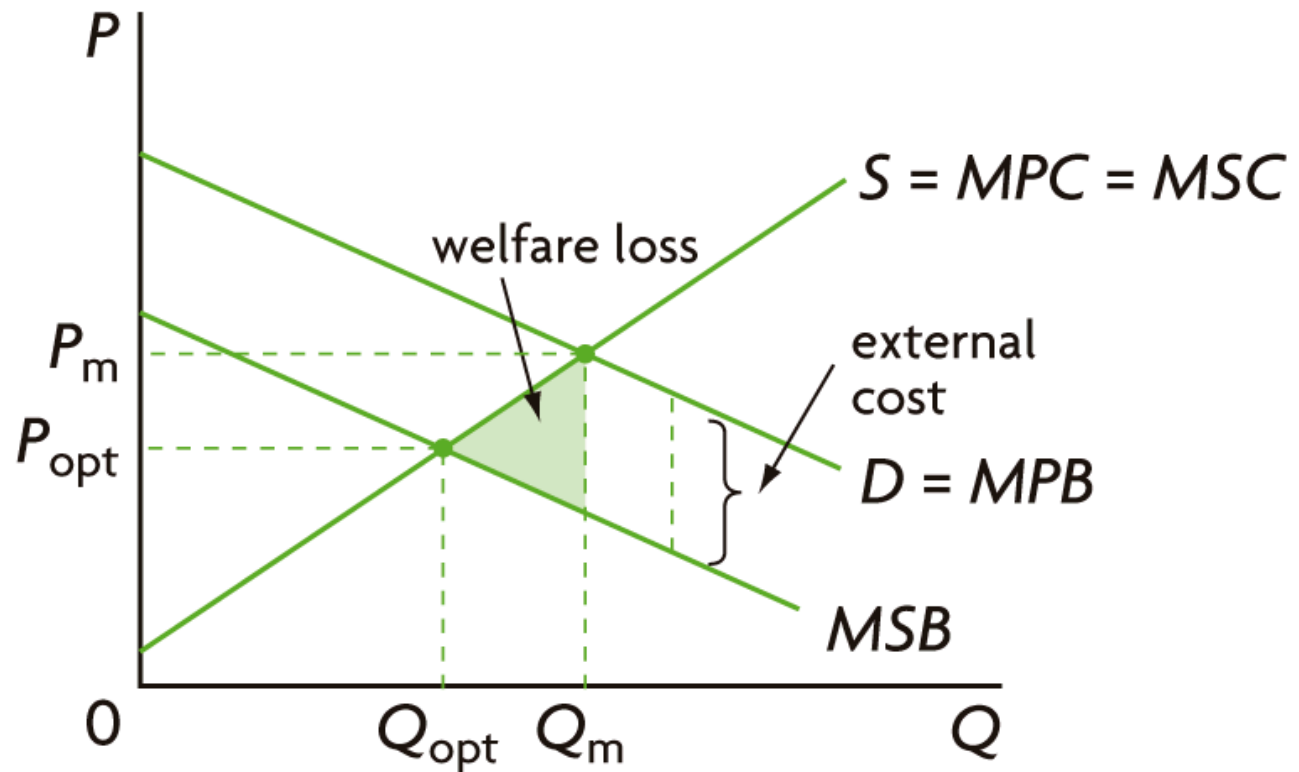
▣ **Demerit Goods**

▣ Cigarettes, Gambling, Alcohol



Negative Consumption Externality

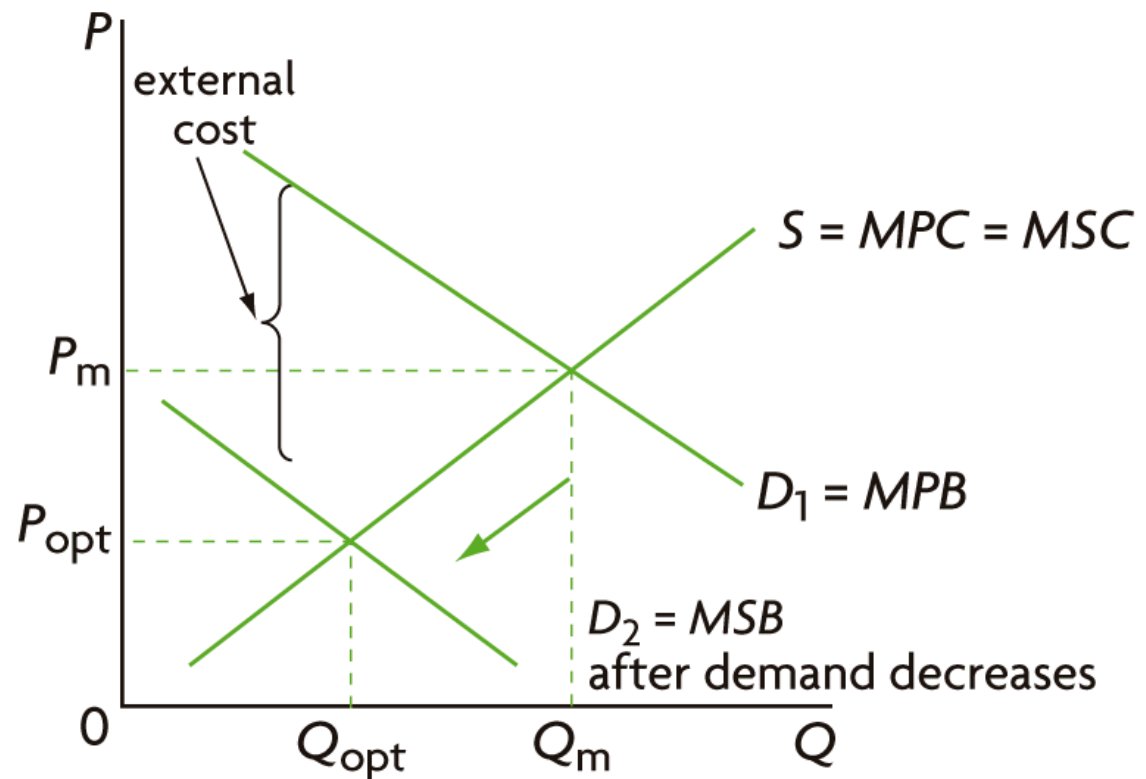
(a) Welfare loss



How to Fix a Negative Consumption Externality

1. Government Regulations
2. Advertising

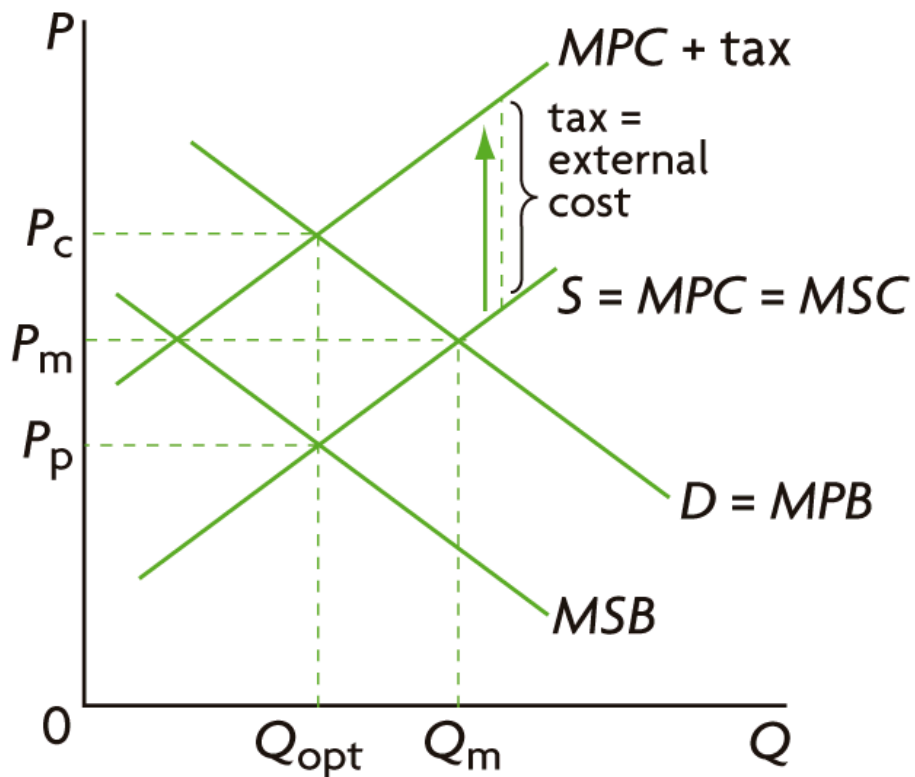
(a) Government regulations and advertising



How to Fix a Negative Consumption Externality

(b) Market-based: imposing an indirect tax

3. Tax

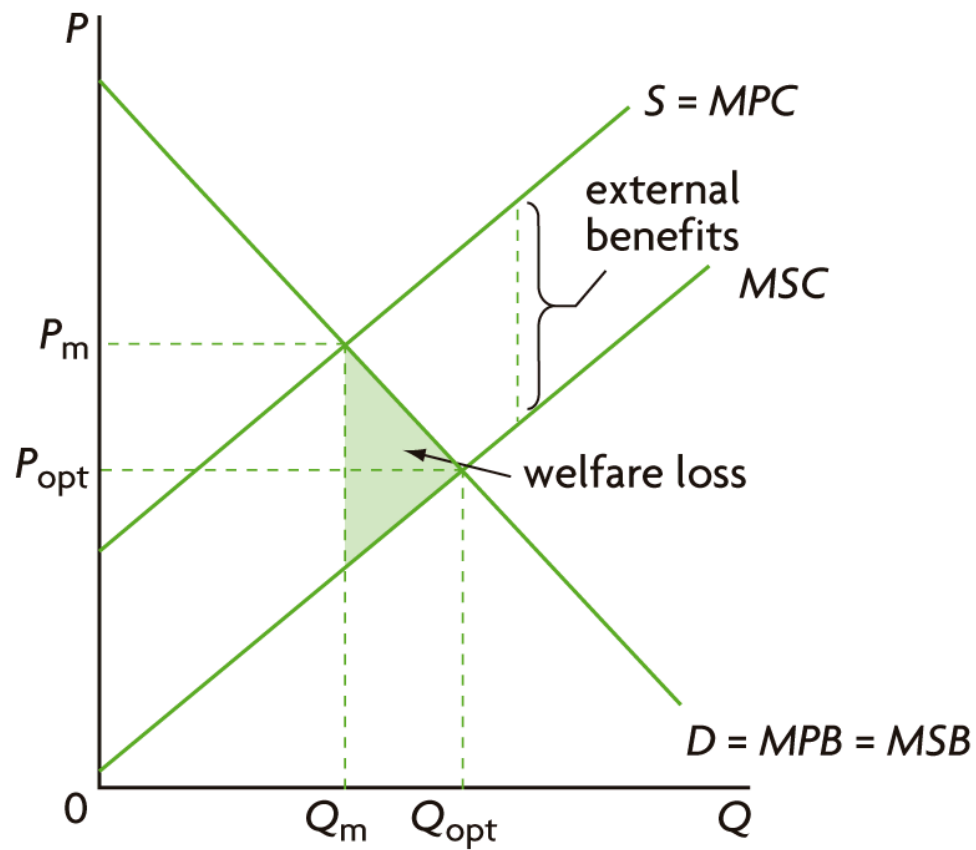


Positive Production Externality

- ▣ **Positive Production Externality** - when producing a good creates positive side-effects.
- ▣ $MPC > MSC$
- ▣ **Examples**
 - ▣ Bees, New technologies

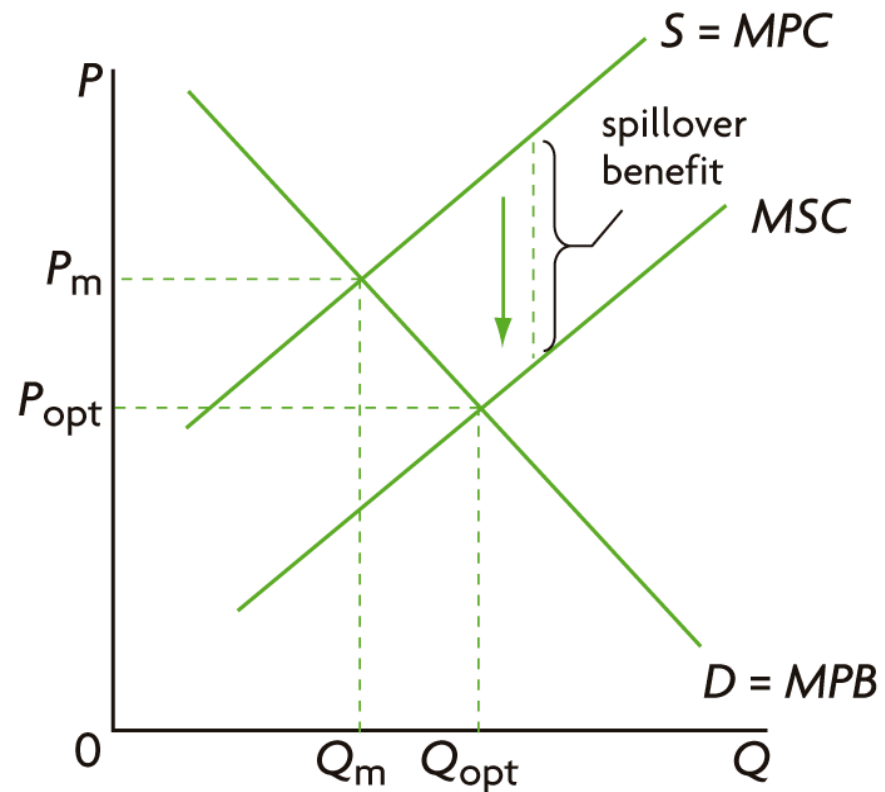


Positive Production Externality



How to Fix a Positive Production Externality

1. Direct Government Provision (the government makes it)
2. Subsidies

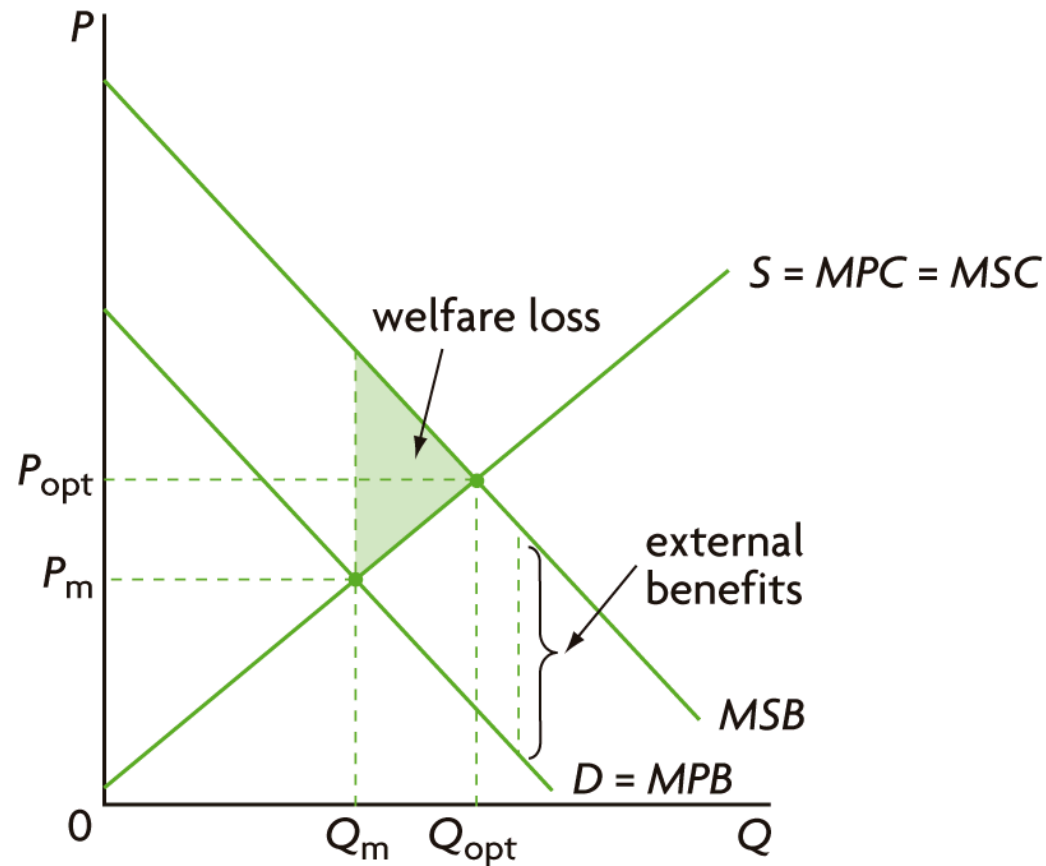


Positive Consumption Externality

- ▣ **Positive Consumption Externality** - when consuming a good creates positive side-effects.
- ▣ $MSB > MPB$
- ▣ **Merit Goods**
 - ▣ Education, Health Services

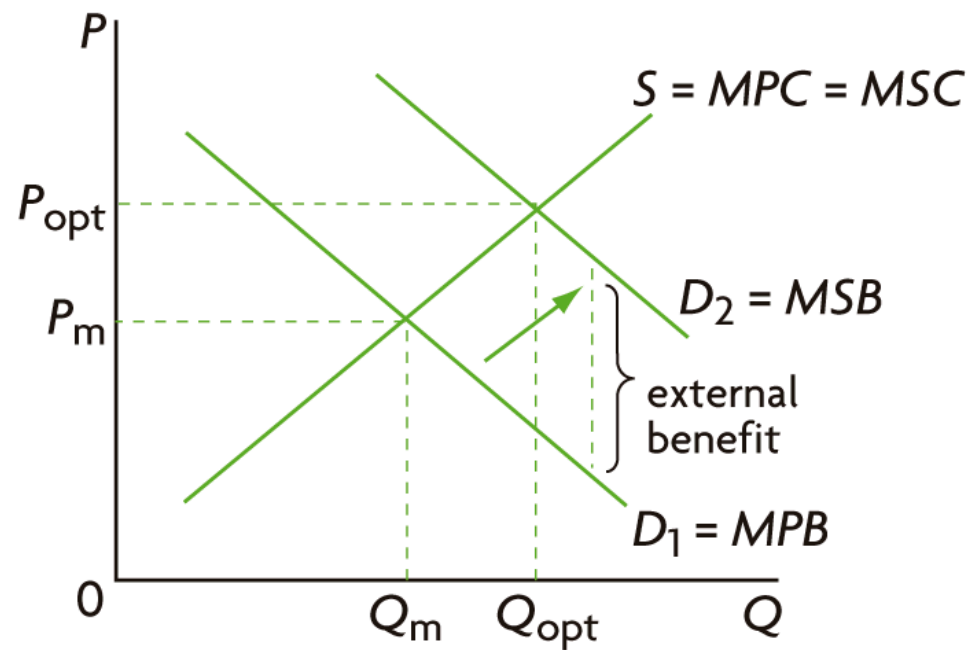


Positive Consumption Externality



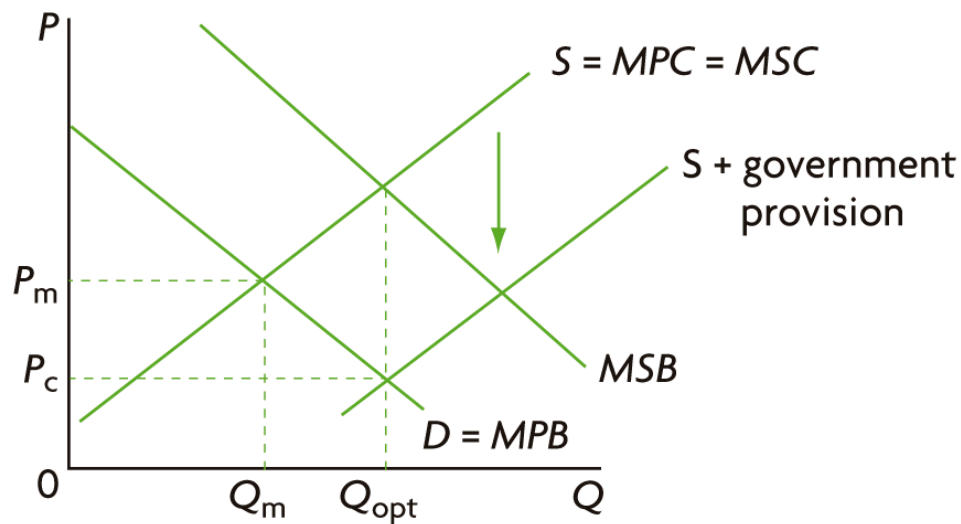
How to Fix a Positive Consumption Externality

1. Government Regulations
2. Advertising



How to Fix a Positive Consumption Externality

3. Government Provision (the government makes it)



4. Subsidies

