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Positive and negative externalities

- **Externality :** positive and negative effects to the third party

- **Private sector concern only private cost and private benefits,** t*hey do not take into account of external cost and external benefits*. Some goods and services are under consumed such as health care and education. Some goods are over consumed and produced such as alcohol and pollution.

- **Private cost :**   cost of production to producers e.g. wage and raw material

    cost of consumption to consumers e.g. price of product paid

- **Private benefit :** benefit from production to producers e.g. revenue and profit

    benefit from consumption to consumers e.g. satisfaction.

- **External cost :**   negative effects to the third party e.g. pollution.

- **External benefit :** positive effects to the third party e.g. vaccine

- **Social cost :**   private coot + external cost

    cost to the whole society

- **Social benefit :** private benefit + external benefit

    benefit to the whole society.

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Free market and externality

- In the free market, price mechanism cannot work to achieve best resources allocation. They must be supported by government policies to correct market failure.

- Market failure can be seen through dead weight loss (DWL)

  ↳ **Welfare loss :** caused by market failure as there is underproduction or underconsumption in some goods and services.

- **Demand curve = Marginal private benefit** (additional benefit from one more unit of consumption)

- **Supply curve = Marginal private cost** (additional cost from one more unit of production)

Market equilibrium
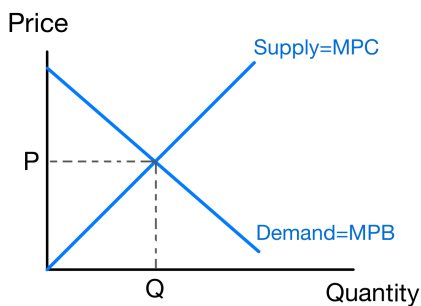
- The market equilibrium is where MPC = MPB at PQ.
- If there is externality, the equilibrium is allocative inefficiency and there is dead weight loss.

- In the free market, the optimal level of production/consumption is where MPC=MPB.
- In the socially optimal level of production/consumption is where MSC=MSB.

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Externality diagram

1. Positive externality production

- e.g. research on vaccine and medicine
- MPC > MSC, assumed MB = MPB = MSB
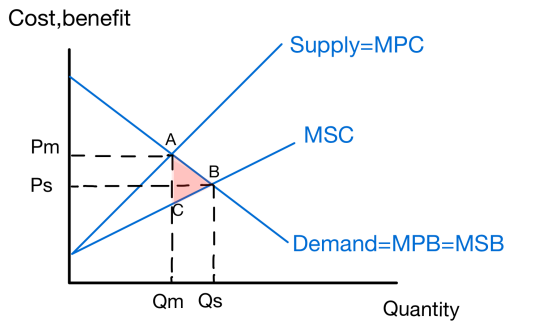
Cost,benefit

Supply=MPC

MSC

Pm — A
Ps — B
C

Demand=MPB=MSB

Qm Qs
Quantity

1. In the free market, private sector considers only private cost and private benefit will produce where MPC = MPB at Pm Qm

2. In the socially optimal level of production is where MSC = MSB at Ps Qs

3. Dead weight loss or welfare loss from under production of positive externality = ▲ ABC
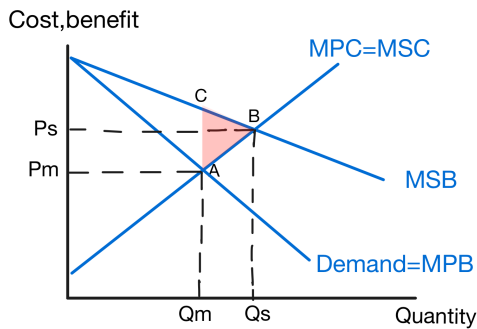
2. Negative externality production

- e.g. pollution from factory
- MSC > MPC, assumed MB = MPB = MSB
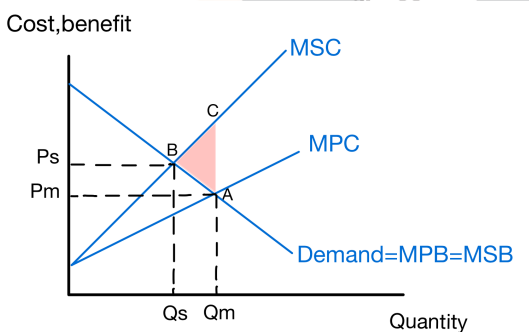
Cost,benefit

MSC

C

MPC

Ps — B
Pm — A

Demand=MPB=MSB

Qs Qm
Quantity

1. In the free market, private sector considers only private cost and private benefit will produce where MPC = MPB at Pm Qm

2. In the socially optimal level of production is where MSC = MSB at Ps Qs

3. Dead weight loss or welfare loss from over production of negative externality = ▲ ABC

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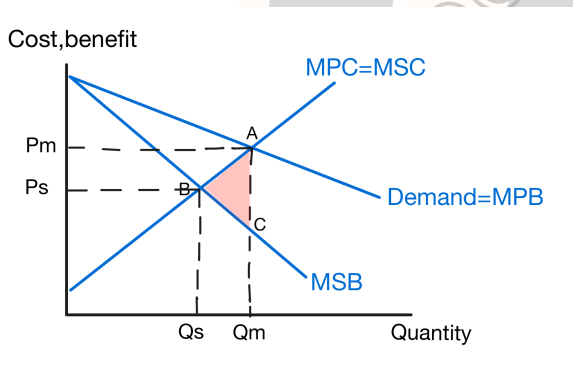
3. Positive externality consumption

- e.g. education and healthcare

- MSB > MPB, assumed MC = MPC = MSC

1. In the free market, consumers considers only private cost and private benefit. They consume where MPC = MPB at Pm Qm

2. In the socially optimal level of consumption is where MSC = MSB at Ps Qs

3. Dead weight loss or welfare loss from under consumption of positive externality = ▲ ABC

4. Negative externality consumption

- e.g. cigarette and alcohol

- MPB > MSB, assumed MC = MPC = MSC

1. In the free market, consumers considers only private cost and private benefit. They consume where MPC = MPB at Pm Qm

2. In the socially optimal level of consumption is where MSC = MSB at Ps Qs

3. Dead weight loss or welfare loss from over consumption of negative externality = ▲ ABC