

Part 6

Market Failures

Principles of Microeconomics
August 2019

Content

5.1 - Externalities

Many economic activities generate external effects. If they are not accounted for both cost and benefit, market price cannot signal the true cost and benefit which leads to inefficient society.

5.2 - Public Goods

Some of goods and services cannot be allocated through pure market because they will not generate any profit due to their attributes.

5.3 - Asymmetric Information

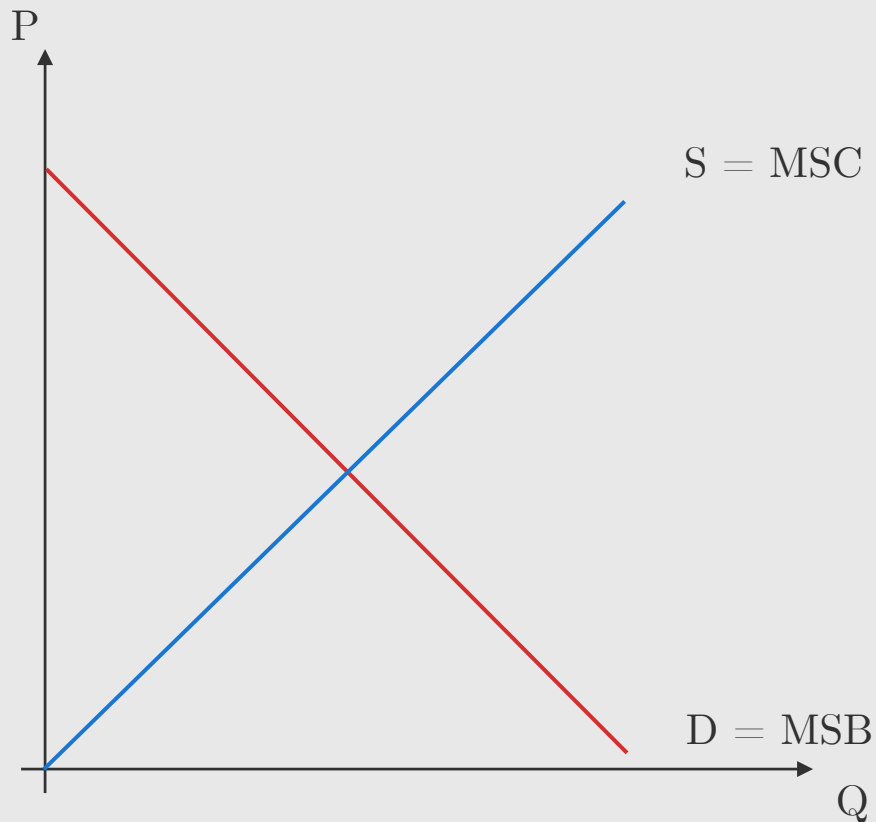
Information in the real world are limited for all agents. This may lead to inefficiency price set up and negotiation.

Definition 5-1: Externality

Externality is the cost or benefit that affects a party who did not choose to incur that cost or benefit. Externalities often occur when a product or service's price equilibrium cannot reflect the true costs and benefits of that product or service.

If a market is perfectly competitive, and there is no external effect, demand and supply and represent **marginal social benefit (MSB)** and **marginal social cost (MSC)** respectively.

A simple demand-supply to show marginal social benefit and cost.



$D = MSB$

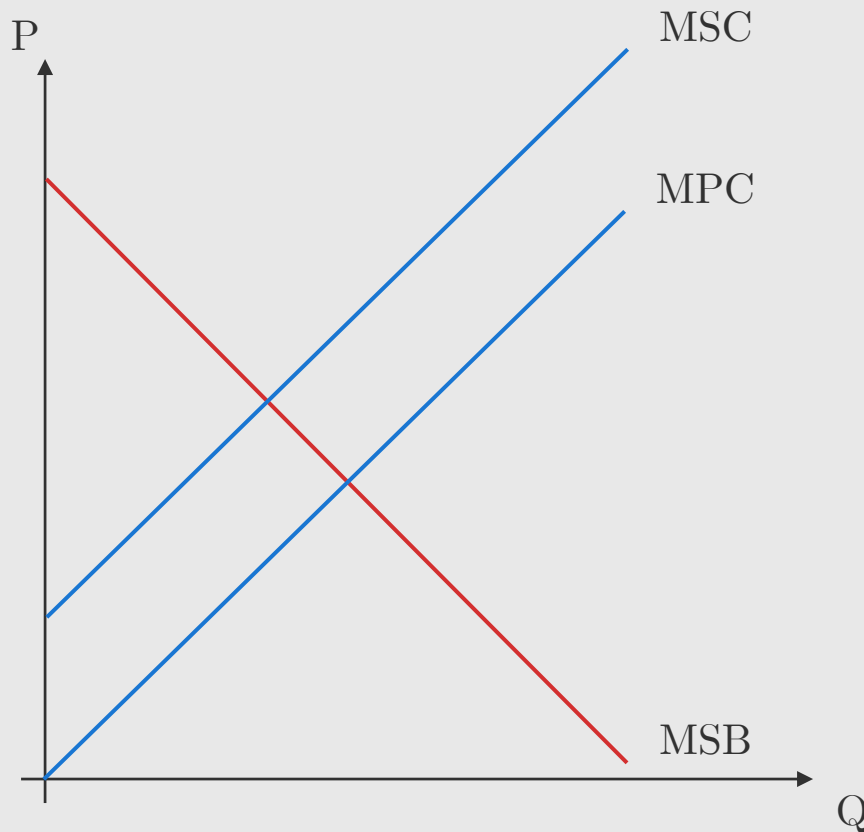
Demand for any good or service can represent marginal social benefit. MSB is decreasing to quantity due to the law of diminishing marginal utility.

$S = MSC$

Supply for any good or service can represent marginal social cost. MSC is increasing to quantity due to the law of diminishing marginal product, raising marginal cost of production in the short run.

Negative externalities

Marginal private cost < Marginal social cost



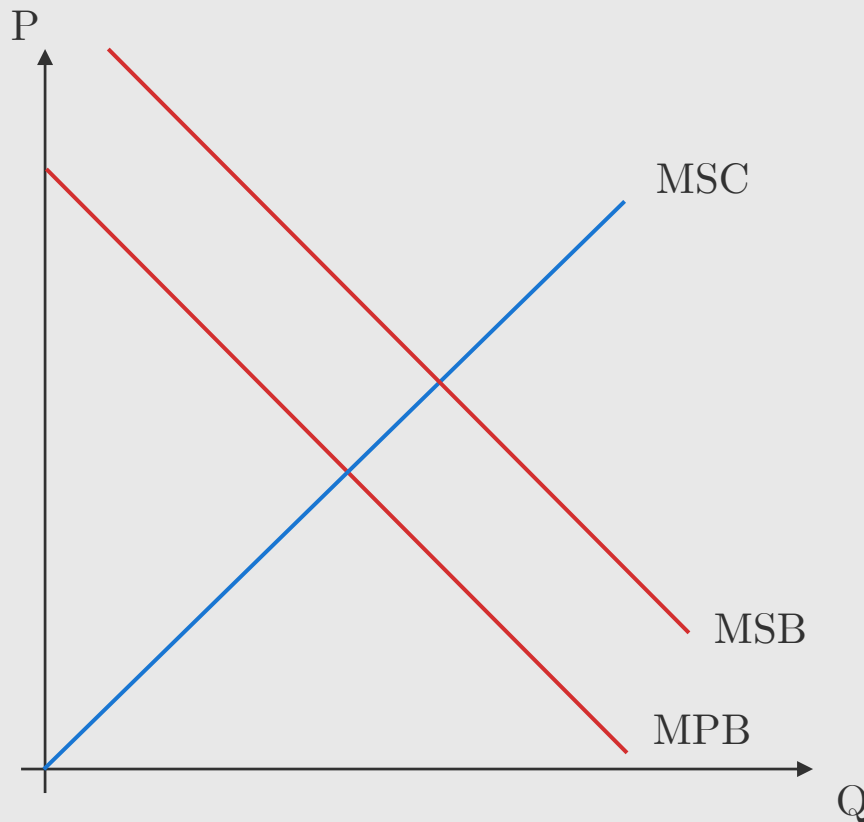
Marginal private cost

Cost incurred to private firms or individuals, without taking third-party agents into account.

Examples of negative externalities

Positive externalities

Marginal private benefit <
Marginal social benefit



Marginal private benefit

Benefit which private firms or individual receive, without taking third-party agents into account.

Examples of positive externalities

How can we solve externality issues?

Definition 5-2: Public goods

Public goods is a good that is both **non-excludable** and **non-rivalrous** in that individuals cannot be excluded from use or could be enjoyed without paying for it, and where use by one individual does not reduce availability to others or the goods can be effectively consumed simultaneously by more than one person

To depict a clearer picture, excludability and rivalry in consumption must be defined.

Excludability is a characteristic of a good or service whether it can be excluded for those who pay for it.

Rivalry in consumption is also another characteristic that defines if a good or service can be simultaneously consumed by more than one person.

Examples of different types of good or service.

Rivalry in consumption

YESNO

Excludability

YES

Private good

- Ice cream
- Clothes
- Congested toll

Club good

- Netflix
- Community service
- Congested road

NO

Natural resource

- Fishery
- Lumbering
- Non-congested toll

Public good

- National defense
- Lighthouse
- Non-congested road

Problems with public goods.

- (1) No private firm would invest in any public good since they cannot return any profit.
- (2) Consumers can enjoy utilizing public goods without paying a price, which we call them as '**Free Rider**' problem.

How can we deal with public goods?

Definition 5-3: Asymmetric information

Asymmetric information deals with a situation when making decisions in transactions where one party has more or better information than the other. This asymmetry creates an imbalance of power in transactions.

Two basic problems arise with asymmetric information which are **moral hazard** and **adverse selection**.

(1) **Moral hazard** occurs when someone increases their exposure to risk when insured, especially when a person takes more risks because someone else bears the cost of those risks.

Examples

(2) Adverse selection is when traders with better private information about the quality of a product selectively participate in trades which benefit them the most, at the expense of the other trader.

Examples

How can we deal with asymmetric information?