

Understanding how [demand and supply](#) work, we now can have a look at how effective markets are when we let the demand and supply lead the market. However, the free market may not always result in the most effective outcome. Today, we will be discussing the concept of allocative efficiency, and how allocative inefficiency causes market failure.

## Allocative Efficiency

Market failure occurs when the free market fails to allocate resources efficiently. Free markets are markets that are not under the intervention of the government – they are left on their own, and consumers and producers can pursue self-interest.

Allocative efficiency occurs when both the goods and services produced maximises the society's total economic welfare. This occurs when the marginal social benefit (MSB) is equivalent to the marginal social cost (MSC), and when the consumer and producer surpluses are maximised.

The free market achieves allocative efficiency under several assumptions – no externalities, perfectly competitive markets, and the good or service must be private. However, if these assumptions do not hold, then there is allocative inefficiency. This results in the free market not maximising society's welfare. Market failure always occurs due to the production of the wrong quantities of the good or service.

## Positive Externalities

Positive externalities are beneficial impacts on a third party that are not involved in the production or consumption of the good or service. They give rise to a marginal external benefit (MEB) – the additional benefit gained from the production or consumption from an additional unit of the good or service. The MSB is equal to the marginal private benefit (MPB) + MEB.

There are two kinds of positive externalities – positive externality from production and positive externality from consumption. Positive externalities from production include research and development (R&D) and the training of workers. On the other hand, positive externalities from consumption include education, healthcare, and [vaccination](#).



Positive externalities cause the MSB to be greater than the MPB. When left to the market forces, the equilibrium output is where the demand equals the supply. However, the socially optimal output is where the MSB = MSC. The under-consumption of the good or service causes a deadweight loss, which results in market failure.

## Negative Externalities

Negative externalities are adverse impacts on a third party that are not involved in the production or consumption of the good or service. They give rise to a marginal external cost (MEC) – the additional cost gained from the production or consumption from an additional unit of the good or service. The MSC is equal to the marginal private cost (MPC) + MEC.

There are two kinds of negative externalities – negative externality from production and negative externality from consumption. Negative externalities from production include pollution from transportation and industrial waste. On the other hand, negative externalities from consumption include alcohol consumption, cigarette consumption, and driving cars.



Negative externalities cause the MSC to be greater than the MPC. When left to the market forces, the equilibrium output is where the demand equals the supply. However, the socially optimal output is where the  $MSC = MSC$ . The over-consumption of the good or service causes a deadweight loss, which results in market failure.

## Merit Goods

Merit goods are goods or services deemed socially desirable by the government. They are under-consumed when left to the price mechanism as consumers fail to recognise the true benefits to themselves when they consume the good. At the same time, they also disregard the external benefits that third parties not involved in the economic transaction could enjoy.

Merit goods cause market failure due to consumer ignorance and positive externalities generated. Some examples of merit goods include education and healthcare.

## Demerit Goods

Demerit goods are goods or services deemed socially undesirable by the government. They are over-consumed when left to the price mechanism as consumers fail to recognise the expected costs to themselves when they consume the good. At the same time, they also disregard the external costs that third parties not involved in the economic transaction could incur.

Demerit goods cause market failure due to consumer ignorance and negative externalities generated. Some examples of demerit goods include the consumption of alcohol and cigarettes.

## Imperfect Information

There are two types of imperfect information - consumer ignorance and asymmetric information. As we have already discussed consumer ignorance earlier, we shall now talk about asymmetric information.

Asymmetric information occurs when either the producer or the consumer has better information than the other party. As such, incentives are distorted and the market outcomes are inefficient. Asymmetric information can cause adverse selection, moral hazard, and supplier-induced demand.

### Adverse Selection

Adverse selection is the unfavourable selection of products or buyers in a market that occurs before the economic transaction. Sellers can be more knowledgeable than buyers and vice versa. This causes the potential net benefit that society can gain to be lost, resulting in allocative inefficiency.

### Moral Hazard

Moral hazard occurs when economic agents take more risks or are more careless as they do not have to bear responsibility for their actions. This occurs after the economic transaction. Trades are no longer mutually advantageous, causing a missing market. This causes a loss of the potential net benefit to society and results in allocative inefficiency.

## Supplier-Induced Demand

When producers have better information than consumers, they may induce the consumers to consume more goods and services than optimal. This results in supplier-induced demand. Needless to say, this causes market failure.

## Factor Immobility

There are two types of factor immobility – geographical immobility and occupational immobility. Geographical immobility occurs when [factors of production](#) (FOPs) are unable or unwilling to move between geographical regions. On the other hand, occupational immobility occurs when FOPs are unable or unwilling to move between jobs or industries.

Factor immobility causes [unemployment](#). As such, resources are wasted and allocative efficiency is not achieved. This causes the free market to fail.

## Market Dominance

Market dominance refers to firms having significant market shares because of strong barriers to entry or imperfect information. It exists in monopolies, oligopolies, and monopolistic competition. This allows firms to monopolise and decide on the market output. As such, the firms can decide on the price for the goods and services they produce.

However, firms will not be able to achieve allocative efficiency while producing at that level. Therefore, the free market will fail in the event of market dominance.

## Public Goods

Public goods are non-excludable and non-rivalrous. This means that it is impossible or very expensive to prevent a person who has not paid for the good or service from consuming it. On top of that, when a person consumes the good or service, its availability for another person does not diminish. The marginal cost of providing for an additional user is thus zero.

However, as public goods are non-excludable, consumers can freeloader the good or service without paying. As such, there is no effective demand as no consumer would be willing to pay for public goods. Producers cannot sell the goods or services and will stop producing them, as they do not earn revenue to cover the cost of production. This causes total market failure.



At the same time, as public goods are non-excludable, the marginal cost of providing for an additional user is zero. As the marginal benefit should be equal to the marginal cost, the marginal benefit is zero. We can only achieve this when the price is zero. As such, no profit-motivated producers will be willing and able to produce the good, thus the free market fails.