MARKET CHALLENGES AND SOLUTIONS

Perfect Competition

Markets that are **perfectly competitive** have a large number of buyers and sellers with a similar product. Buyers and sellers are able to freely enter and exit the market and possess perfect information.

Price-taker: Producers in a perfectly competitive market are bound to sell their goods at the prevailing market price.

Break-even point: The point at which the marginal cost (MC) curve and average total cost (ATC) curve intersect.

Break-even price: When the market price is exactly equal to the minimum ATC. At this price, a producer makes zero profit. Any time market price > break-even price, a producer will turn a profit.

Shutdown price: When the min. AVC ≥ market price. At this price, a producer should stop producing.

Shutdown point: When min. AVC = market price.

Sunk costs: Unrecoverable costs. These costs should not be factored into a decision as to whether or not to continue producing. In the short-run, fixed costs are sunk.

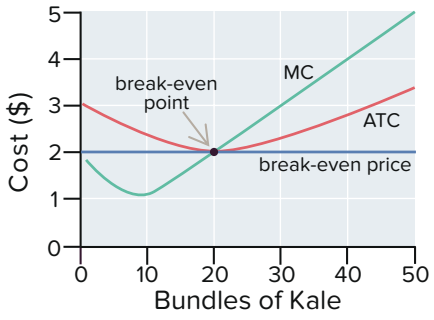
Total revenue (TR): Price per unit times quantity sold.

Constant marginal cost: The cost of producing the next unit of a good is always the same.

Marginal cost (MC): The cost of producing one additional unit of a product.

Average total cost (ATC): Total cost to produce a certain number of units of a product divided by the number of units produced.

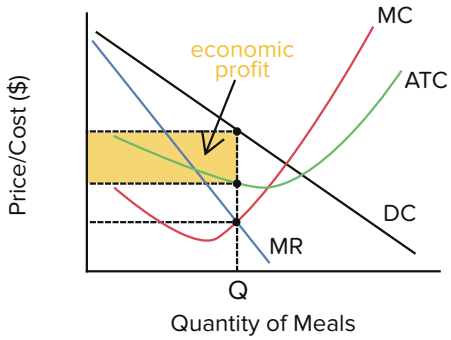
Average variable cost (AVC): Variable cost divided by the quantity being produced.



The Short and the Long Run

In a perfectly competitive market, the market has reached **long run equilibrium** when the market price is exactly equal to break-even price, the supply curve is perfectly elastic, and firms make zero economic profit.

Economic profit, which factors in opportunity costs, is generally lower than accounting profit, which is concerned with dollars in versus dollars out.



Externalities

Externality: When a private transaction affects a third party who is otherwise uninvolved.

Positive externality: An externality that benefits a third party.

External benefits: The benefits received by the community at large.

Marginal social benefit curve (MSB): The sum of the MB curve and external benefits. This represents the total value of the activity.

Negative externality: An externality that results in extra costs for a third party. These externalities impose **external costs**, graphed with the **marginal social costs curve (MSC)**.

Network externality: When a vast majority of consumers already use a product, everyone else has to buy it.

Marginal benefit: The benefit of consuming one additional unit of a product.

Solutions to Externalities

Public solution: The use of laws or regulations to influence the behavior of private parties. There are two main types:

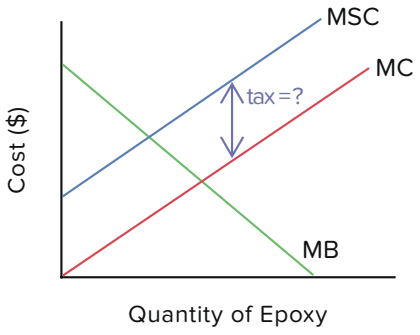
1. **Command and control**, whereby a government passes regulatory legislation that mandates behavior intended to correct the externality.
2. **Market-based solutions**, whereby a government creates incentives or penalties to correct the externality.

Public solutions are ineffective when a private party has **property rights** that enable it to do as it pleases.

Private solution: The use of private negotiation between parties to reach a socially optimal resolution**.**

The **Coase Theorem** states that private negotiations can work if:

1. Property rights are clearly defined.
2. The **transaction costs**—the costs incurred during the negotiation process—are low.



Types of Competition

In a **monopoly**, there is only one seller of a product, the monopolist determines the price and quantity produced, and barriers to market entry exist. These barriers include high set-up costs, technological superiority, and network externalities.

Natural monopoly: When consumers actually benefit from a monopoly, such as with public utilities, which are regulated by the government to avoid exploitation.

Oligopoly: A handful of select companies dominate a particular market and are able to collude to maximize individual profits.

Cartel: A group of producers with a formal agreement to collude.

Monopolistic competition: When a group of producers compete with similar—but distinct—products. Because of this **product differentiation**, each producer is free to charge her own price for a good or service.

Types of Goods

There are four types of goods—**private, common, club,** and **public** (see image)—that feature combinations of the following traits:

Rival goods: Individual goods that can be consumed by only one person at a time (a hamburger, a pair of shoes, timber).

Non-rival goods: Can be consumed by more than one person at once (cable TV, public radio).

Excludable goods: People that don't pay can be excluded from using them (clothing, cars, country clubs).

Non-excludable goods: People cannot be prevented from using them once they're made available (public parks).

Free rider problem: When people who enjoy public goods don't contribute to their upkeep.

Tragedy of the commons: The invisible hand of the market cannot prevent individual exploitation of common goods.

	Excludable	Non-excludable
Rival	Private Goods housing, cars, clothes	Common Goods timber, fisheries
Non-rival	Club Goods cable TV, country clubs	Public Goods public radio, lighthouses

Private goods are **market goods;** that is, they're subject to market forces like the laws of supply and demand.

Economics and the Environment

The global challenge of climate change is a negative externality combined with a free rider problem. To combat the free rider problem, countries should negotiate optimized pollution quotas.

Marginal abatement cost (MAC): The cost of reducing each additional metric ton of CO_2.

Once the **marginal damage (MD)** curve is added, we can determine the optimal production point, MAC = MD.

A **carbon tax**, equal to the cost at Q*, can be used to encourage producers to emit CO_2 at the socially optimal level.

Cap-and-trade: The government issues a permit for each ton of CO_2 emissions, up to the overall optimal amount. Firms can then buy and sell these permits as needed.