

What Is Microeconomics and What Does It Study?

What Are the Decisions that Individuals and the Economy Must Answer?

Who Are the Consumers and the Suppliers in an Economy?

What Is the Law of Demand and What Does the Demand Curve Look Like?

Both individuals and the economy as a whole face economic problems, which are:

- 1) **Individuals** must decide how they will spend their **limited income** to maximize their individual satisfaction, and
- 2) **The economy** deals with the **allocation of the fixed (limited) resources** (land, labor, capital and entrepreneurial ability) that are within the economy in order to achieve the maximum social benefit.

Demand is the quantity of a good or service that the consumers of an economy are **willing and able** to purchase during a certain period of time at the different possible sales prices. Individually, each consumer's choice about the quantity of a good he/she is willing and able to buy is determined by the consumer's attempt to realize the greatest amount of utility (e.g., satisfaction).

The **law of demand** states that the price of a product and the quantity demanded of that same product are **inversely (negatively) related**. Therefore, as the price of the product is reduced, the quantity demanded for that same product will increase, and vice versa.

The **demand schedule**, commonly referred to as the **demand curve**, is a graphical representation of the relationship between prices of commodities and the quantities demanded at various prices, holding all other determinants of demand (other than the good's price) constant. The demand curve has negative slope (downward and to the right) due to **law of demand**.

Economics is a social science that **addresses the allocation of scarce (limited) resources within an economy** in order to best fulfill the unlimited number of needs and desires of the individuals in the economy. Economics is based on the facts that:

- 1) Human nature has **unlimited desires**, and
- 2) There is a **scarcity of resources** available to use to satisfy those desires.

There are two main branches of economics – microeconomics and macroeconomics. **Microeconomics focuses** on the **two smallest functional units in an economy**, the consumer and the firm. Macroeconomics addresses questions about the economy as a whole.

Microeconomics analyzes the operation of markets as a **result of the interactions between consumers and firms**.

Consumers are the buyers of finished goods, and to buy them, they must sell their labor, entrepreneurial services and capital. On the other hand, **firms are the sellers, or suppliers**, of finished goods, and to produce these goods, they must buy labor, entrepreneurial services and capital.

Every market can be studied from two different perspectives. One side looks at the buyer's demand for goods and services. The other side looks at a firm's supply of goods and services.

What Is the Difference Between a Movement *Along* the Demand Curve and Movement *Of* the Demand Curve?

What Are the Determinants of Demand?

What Are Normal and Inferior Goods?

What Are Substitute and Complimentary Goods?

Other factors, besides price, can influence the demand for a good. Changes in these other factors will also change the amount of the good that consumers are willing and able to buy, and therefore cause a shift of the entire demand curve. These factors are known as the **determinants of demand** and they are:

- 1) Consumer income,
- 2) Prices of related goods,
- 3) Consumer expectations,
- 4) Consumer tastes and preferences, and
- 5) Number of consumers.

The influence that the price of one product has on the demand for another different product depends upon whether the two goods are substitutes or complements.

- **Substitute Goods** - Intuitively speaking, substitute goods are goods that can be used instead of each other. If two products are substitutes for one another, then **a price increase in one will generate an increase in the demand for the other**.
- **Complementary Goods** - Intuitively, complementary goods are goods that are used together. If two products are complements (complementary products), then **a price increase in one will result in a decrease in the demand for the other**.

A **movement along** the demand curve occurs **only when the price** changes and the other determinants of demand remain unchanged.

A change in **any of the other determinants of demand other than price** will cause the **entire demand curve to shift**. The direction of the movement (inward or outward) will be determined by the particular change in the determinant of demand.

The following events will cause an increase in demand, causing the **demand curve to shift to the right**:

- An increase in consumer income, if it is a **normal good**.
- A decrease in consumer income, if it is an **inferior good**.
- An increase in the price of another good, if it is a **substitute**.
- A decrease in the price of another good, if it is a **complement**.
- A **favorable change in the tastes and preferences** of consumers toward a product.

The effect of increased income is different for normal and inferior goods.

- **Normal Goods** (Purchases increase as income increases.) - Normal goods are goods for which demand is directly related to income. This means that as income increases, demand for these goods also increases. **Most goods are normal**.
- **Inferior Goods** (Purchases decrease as income increases.) - Inferior goods are goods for which demand is inversely related to income. This means that as income increases, demand for these products will decrease. When income falls, **people buy these goods because they cannot afford to buy more expensive products**. However, as income increases, people will buy fewer of these goods because they are able to buy higher quality and more expensive products.

What Is the Elasticity of Demand?

What Are the Different Levels of Elasticity?

How Are Elasticity and Total Revenue Related?

What Is the Cross Elasticity of Demand and What Does It Tell Us?

Perfectly Inelastic ($E_d = 0$) means that no matter what happens to the price, the quantity that is demanded will remain the same. Example: a diabetic's demand for insulin (given the importance of insulin to the user's health, and the fact that there are no reasonable substitutes for insulin). This is a vertical demand curve.

Inelastic ($E_d < 1$) means that any given percentage change in price will result in a *smaller* percentage change in the quantity demanded. Example: a 9% decrease in price will cause the quantity demanded to rise by less than 9%.

Unitary Elasticity ($E_d = 1$) means that any given percentage change in price will cause the quantity demanded to change by the *same* percent. Example: a 12% increase in price will cause the quantity demanded to fall by exactly 12%.

Elastic ($E_d > 1$) means that any given percentage change in price will result in a *larger* percentage change in the quantity demanded. Example: a 2.5% decrease in price will cause quantity demanded to rise more than 2.5%. This is a horizontal demand curve.

The **cross-elasticity of demand** measures the percentage change in the quantity demanded of a particular good with a given percentage **change in the price of another good**. This means that we are looking at the relationship between two products and what effect the change in price of one product will have on the other product.

If the two goods are substitutes, the cross elasticity of demand will be positive. If the two goods are complements, the cross-elasticity will be negative.

The **elasticity of demand** measures **how much the demand for the product changes with a change in the price of the product**. If demand is elastic, a small change in price will result in a larger change in the demand. If the demand is inelastic, a large change in the price will result in only a small change in demand.

There are two ways in which the price elasticity can be calculated.

Under the **percentage method** we simply take the % change in quantity and divide it by the % change in the price of the product. This method is used if percentages are given.

The **midpoint method** is used when we are given different numerical and dollar figures for different points on the demand curve. This method also eliminates the fact that the percentage method will give different elasticities, depending upon the direction of the movement along the curve that is used in the calculation.

The change in total revenue as the result of a change in price is dependent upon the elasticity of the item in question. The **change in revenue will be determined by whether or not the change in quantity is larger than the change in price**. Total revenue is calculated as price * quantity, which by law of demand move in opposite directions from each other.

For goods that are elastic, an increase in price will reduce quantity demanded. This is because a small increase in price will cause a larger decrease in quantity demanded. Since the decrease in quantity demanded is larger than the increase in price, total revenue falls. Hence, for elastic goods a decrease in price will cause an increase in total revenue.

For goods that are inelastic, an increase in price will cause total revenue to increase because the increase in price causes a smaller decrease in quantity demanded.

It is the **relative size of changes** in price and quantity, dictated by elasticities, that determines the effect on total revenue.

What Is the Income Elasticity of Demand and What Does It Tell Us?

What Is Utility and What Is the Principle of Diminishing Marginal Utility?

How Is the Point of Maximum Utility Found?

What Is an Indifference Curve and What Characteristics Does It Have?

The term **utility** can be thought of as the **benefit derived by an individual from a product or service**.

A rational individual's objective is to maximize total utility from his or her income. Utility maximization occurs when the extra utility obtained from the last dollar spent on each individual commodity purchased is the same across all products.

The **principle of diminishing marginal utility** states that equal increments of additional consumption of a good will result in successive reductions in the incremental (e.g., "marginal") utility received by the consumer. For example, the marginal utility derived from the first slice of pizza consumed at dinner is expected to be higher than the marginal utility from the second slice, and so on.

Diminishing marginal utility, therefore, is consistent with the idea that consumers prefer a "variety" of goods, rather than very large quantities of any one good.

An **indifference curve** represents all combinations of two commodities that give equal utility to a consumer. The greater the distance between an indifference curve and the origin of the graph, the more utility that is received. This is because indifference curves that are farther from the origin contain bundles that will have greater amounts of both goods compared to indifference curves that are closer to the origin. Consumers prefer more consumption to less and will, therefore, strive to be on indifference curves farthest from the origin.

- The slope of an indifference curve is called the consumer's **Marginal Rate of Substitution (MRS)**.
- Indifference curves have a negative slope.
- Indifference curves are "strictly convex."
- Two indifference curves cannot cross.

As with the other elasticity measurements, the income elasticity measures the sensitivity of demand to the change in the level of income.

Since income and demand for normal goods are positively related, when income increases, a normal good will experience an increase in demand. In a situation of falling income, the same normal good will experience a decrease in demand. The opposite occurs with an inferior good.

The sign of the **income elasticity of demand** thus reveals whether a good is normal or inferior.

Conceptually, an individual's **point of maximum utility** is understood to be the point at which, given a fixed income, the individual chooses the combination of Good A and Good B that maximizes his or her utility.

If a person can consume to this point, where the **marginal utility from the last dollar spent on each good is the same**, he or she has achieved the greatest possible amount of total utility.

A graph combining a person's budget constraints and indifference curves together allows the point of maximum utility to be determined. It shows the combination of quantities of pizza and soda that make the individual happiest given his/her fixed level of income. (It assumes that the individual spends all of his/her income on only these two goods.) The point of maximum utility is where **the budget line is tangent to the highest possible indifference curve**.

What Is the Budget Constraint Line and What Are Its Characteristics?

What Are Two Ways of Measuring Utility?

What Is the Law of Supply and What Does the Supply Curve Look Like?

What Are the Determinants of Supply?

Utility can be measured in two different manners.

The first is a **cardinal** measure using numerically assigned values of arbitrary worth, known as “utils.” It is assumed that each individual receives a specific number of utils from the ownership of any good.

The second is an **ordinal** measure based on the preferences of an individual. Unlike the cardinal measure, the ordinal method does not assign specific units of worth, but rather establishes a ranking among goods. For example, it assumes that given a choice of five items (shoes, jewelry, food, metro cards and CDs) an individual will rank them in order of most preferred to least preferred. Then each item will receive a number in the ranking, which will be used to measure its utility.

In general, economists assume that the quantity of a good offered for sale depends upon six major variables:

- 1) **Production prices**, or the cost of inputs,
- 2) **Number of firms** producing the good,
- 3) **Prices of competitive and substitute goods**,
- 4) **Price expectations** of producers concerning the future price of the good,
- 5) **Taxes and subsidies**, and
- 6) **Technology**.

A **budget constraint line** depicts all combinations of two goods that can be purchased given fixed prices and a fixed amount of income. This is the basic limitation due to the fact that consumer incomes are limited, and therefore, there is a limit on the total utility that an individual can achieve. In essence, the budget line shows the consumer’s real income, or purchasing power. It determines what bundles (so also what indifference curves) the consumer can actually reach.

The budget constraint line must be a **straight line** because the slope of the line is the constant ratio of the prices of the two goods.

A change in income, or a **proportional change in the relative prices of both goods**, will result in a **parallel shift** (to the left or to the right) of the budget constraint line.

A disproportional change **in the relative prices of both goods** will cause the **slope** of the budget constraint to change.

The **law of supply** states that in the short run, the price of the product and the quantity supplied are positively related. As the price of a good increases, producers are willing to supply more to the market, causing an increase in the total quantity supplied. Similarly, **as the price of the good decreases, producers are willing to supply less** to the market because of the lower selling price. This causes a decrease in the total quantity supplied to the market as prices fall.

Supply is the schedule of the amounts of a product that the producers of that product are **willing and able to offer** to the market, at **various prices**, during a **specified period of time**.

The supply schedule slopes upwards and to the right, following the **law of supply**.

What Events Will Cause the Supply Curve to Shift Outwards (or Inwards)?

What Is the Elasticity of Supply?

What Factors Affect the Elasticity of Supply?

How Is the Market Equilibrium Established?

Price elasticity of supply (E_s) is an instrument that measures the responsiveness of the quantity supplied of a good to a change in the price of that good. E_s is determined by % change in quantity supplied divided by the % change in price.

Market equilibrium is defined as the **point at which the demand and supply curves intersect**. This point determines the market price and quantity exchanged of a good because at this point of intersection, the market price (the “equilibrium price”) is such that the quantity demanded by consumers is equal to the quantity supplied by firms.

Any **price above the equilibrium price** in a market will be unstable and the quantity supplied to the market will exceed the quantity demanded. Such excess supply will exert considerable pressure for firms to reduce price, so the price will fall towards the equilibrium point.

Any **price below the equilibrium price** in a market will also be unstable and the quantity demanded in the market will exceed the quantity supplied. Such excess demand would exert considerable upward pressure on price, so price will rise towards the equilibrium point.

The following events will cause the **supply curve to shift outward**.

- A decrease in the price of a production input or process,
- An improvement in technology that allows production to be more efficient,
- A decrease in the demand for another good, which leads other firms to switch from the production of that good to another good,
- The expectation of a decrease in the price in the future, or
- A decrease in the taxation of a good, or an increase in the amount of subsidization received from the government.

The opposite of the above will cause the supply curve to shift inwards (to the left).

A change in price will cause a movement along the supply curve.

Following are the **factors that influence the price elasticity of supply**.

Cost of Storage - The more it costs the producer to store the product, the less it will build up in inventory. Therefore, without a high level of inventory the producer will be unable to release a large number of goods immediately if the price increases.

Production Process - The longer the production process of a good, the less elastic is the supply because the producers will not be able to react quickly to a change in the price of the good.

Time - The longer the time period, the more likely, and able, the producers are to supply the goods. This means that in the long run, supply is always more elastic than it is in the short run, because producers may not be able to quickly increase production as a result in the change in price, or bring in supplies from a remote location.

Factor Mobility - This indicates how quickly resources can be moved in and out of the industry. The faster the process, the more elastic the supply.

How Do Movements in Supply and Demand Affect Price and Quantity When They Move in the *Same Direction*?

How Do Movements in Supply and Demand Affect Price and Quantity When They Move in *Different Directions*?

What Are Price Ceilings and What Is Their Effect?

What Are Price Floors and What Is Their Effect?

When supply increases (decreases) and demand decreases (increases) the equilibrium price will decrease (increase), but the **change in quantity cannot be predicted**.

Again, if supply and demand **move in opposite directions**, the change in quantity cannot be determined, and the change in **price will move in the same manner as demand**.

Price floors are when the market price is set artificially above the equilibrium price.

Governments implement price floors in markets where it believes the equilibrium price is too low. Therefore, it intentionally sets prices above market equilibrium. In these cases an increase in the price of the good will cause a market **surplus**.

This is done when the government sets a minimum price for an item.

Surpluses occur in markets when there is excess supply. With an increase in price, producers are willing to supply greater quantities to the market.

When supply and demand both increase (decrease) the equilibrium quantity will increase (decrease), but the **change in price cannot be determined**.

In other words, if supply and demand **move in the same direction**, the new equilibrium **price cannot be predicted**. We know, however, that the quantity will change in the same direction as supply and demand.

Price ceilings are when the price is set artificially below the equilibrium price.

A government implements price ceilings in markets where it believes the equilibrium price to be too high. Therefore, it intentionally sets prices below market equilibrium. In these instances, a decrease in the price of the good causes a market **shortage**.

Shortages occur in markets when there is excess demand. A decrease in price allows more consumers to afford the good and the quantity demanded increases. However, with the decrease in price, producers are unwilling to supply the same quantity to the market. Thus, there is a greater quantity demanded for the good than the quantity that is supplied.

What Is Resource Planning?

What Is Derived Demand and What Can Cause Derived Demand to Change?

What Is the Law of Diminishing Returns?

How Do Production Costs in the Short Run and in the Long Run Differ?

The **derived demand** of an input is the demand that results from (is derived from) the firm's profit-maximizing decision to provide a good or service into the market. For example, when a company decides to produce a good, it uses as much labor and materials as necessary to produce the level of output that maximizes profit.

Or, another example, demand for tires is *derived* from the demand for the final product, the car, and is consequently called the derived demand for tires.

Changes to the derived demand of a resource input may come from a change in:

- 1) The overall demand for the final products,
- 2) The price of substitute resources,
- 3) The price of complement resources, or
- 4) The productivity or efficiency level of the resource.

In Economics, the long run is not some future date, but rather, it is defined as an extended period of time in which the firm is able to vary the amount of all inputs. **In the long run, all costs are variable costs.**

Economists treat long-run costs as a firm's planning horizon. Therefore, for a manager to make decisions on the size (scale) of operations for the firm, he or she must know the relevant level of output.

The long-run average cost curve may be U-shaped because of economies and diseconomies of scale. **Economies of scale** are the conditions that occur when average **costs of production tend to decline as firms expand their output.**

When the production output increases by less than the amount of the increase in inputs, the company experiences **decreasing returns to scale**. In this case the firm's costs increase by a larger percentage than its output, so its average cost of production rises.

Resource planning is the process of a company obtaining the maximum benefit from the limited resources that it has available.

Producing the product at the minimum cost is a major element of **profit maximization**. Resources, such as labor, machinery and capital, should be used in such a combination so as to minimize cost. This is part of the capital vs. labor question for a company – the determination if it is cheaper to hire many people or buy machines instead.

Once production is running at minimum cost, output should be planned so that the **Marginal Revenue = Marginal Cost**. This point of production and sales will maximize profit. Production beyond this point produces a loss on each additional (marginal) item and will decrease the total profit of the firm. For most firms, the marginal revenue from selling an additional unit is simply the price received for that unit. The marginal cost of production tends to increase as production increases. Therefore, a firm should expand production as long as the price (marginal revenue) exceeds the marginal cost, since this will cause total profit to increase.

The **Law of Diminishing Returns** is when the incremental benefit of adding one more unit of input is less than the incremental benefit of the previous additional unit of input.

When additional units are added, it is likely that at the beginning there is an increasing return. This means that the benefit of adding a second unit of input (for example, a third employee) increases production by more than adding the second employee increased production. However, at some point, these efficiencies will disappear and adding the 11th employee, for example, will increase production by less than the 10th employee.

What Is the Relationship Between Marginal Costs and Average Costs?

What Are the Four Forms of Market Structure?

What Are the Characteristics of Perfect Competition?

In the Short Run, How Does a Firm in Perfect Competition Act?

The four forms of market structure that you need to know are:

- 1) **Perfect Competition** (kiosks) – **0% control** of the market,
- 2) **Monopolistic Competition** (restaurants in a city),
- 3) **Oligopoly** (oil, car and steel industries), and
- 4) **Pure and Natural Monopoly** (Microsoft, government-regulated power monopolies) – **100% control** of the market.

All firms wish to obtain the highest-possible prices for their products. However, they are often restrained by competitors from raising their prices. The more market control it has, the smaller this constraint is for a company.

If the competition does not limit price increases, consumers will provide the final control by reducing demand as prices increase.

In a competitive market, the demand schedule for a particular firm is perfectly elastic (horizontal) because the firm is a price-taker. In other words, **the firm must sell at the market price**, and it is unable to influence the price by either increasing or decreasing production. In order to maximize profits in the short run, a firm should equate the **sale price of its product (as stated above this also represents the marginal revenue of selling an additional unit) with the marginal cost of producing it.**

As long as the cost of producing one more unit is less than the market price, the company should produce that one more unit.

If the price is less than the average cost, firms will have negative profit. However, they may elect to keep producing in the short run because if a firm *shuts down* it will still have to pay its fixed costs in the short run. As such, a firm will want to produce rather than shut down so long as the price received is at least as high as its *average variable cost*.

The **marginal cost** is the cost of producing one more unit. The **average cost** is the average cost of producing all of the units that have been produced.

Another way of examining a firm's cost structure is to analyze the behavior of marginal and average costs.

- When **average costs are rising**, the marginal cost curve will lie above the average cost curve. This is because each additional unit produced is more expensive than the previous one.
- When **average costs are falling**, the marginal cost curve will lie below the average cost curve. This is because each additional unit produced is less expensive than the previous one.
- **Average cost is equal to marginal cost, at the minimum point on the average cost curve.**

A **perfectly competitive market** (an example is kiosks) will exist if the following assumptions are true:

- There are **many** independent buyers and sellers,
- **Customers are indifferent** as to which supplier they buy from,
- The market is for a **standardized product** or products,
- There are **no barriers** restricting firms from entering or exiting the market,
- **Perfect information** exists in the market,
- There is **no non-price competition**, and
- The other assumptions above **imply that competitive firms are price-takers**, meaning that they cannot set prices higher or lower than the market equilibrium price.

In the Long Run, How Does a Firm in Perfect Competition Act?

What Is Economic Profit?

What Implicit Costs Are Included in Economic Profit?

What Are the Characteristics of a Natural Monopoly?

Economic profit is the amount by which **total revenue exceeds total economic costs**. Total economic cost is the total opportunity cost of all resources used by the firm, and includes both cash and noncash costs. This usually means that a **firm's economic profit will be less than its recorded accounting profit**.

To illustrate, suppose a firm is currently engaged in productive activity "A"; now, call "B" the *next best alternative* activity in which this firm could engage. The firm's economic profit is the difference between its accounting profit in "A" (what it is currently earning), and the accounting profit that could be earned in "B" (the firm's *next best alternative*). From this it should be clear that if economic profit is greater than zero, a firm is earning more than it could in its next best alternative. When economic profit is zero, the firm is earning no more or less than what can be earned in the next best alternative. If economic profit is less than zero, the firm is earning less than what could be earned in the next best alternative.

A natural monopoly (i.e., electric power suppliers) exists because economic and technical conditions are present in the industry or economy that permit **only one efficient supplier** in a location.

A natural monopoly exists when **economies of scale are very great**. This means that only large-scale operations can achieve a low enough unit cost to profitably produce the product.

The characteristics of a **pure monopoly** are:

- A **single firm** in a market is for a **unique product** that has no close substitutes,
- There are **barriers of entry** that restrict firms from entering or exiting the market, and
- The first two conditions suggest that the monopoly will have "control over price" in the sense that it will be able to select a price that maximizes profit, as opposed to competitive firms that have no control over price, but must sell their output at the "prevailing market price."

In a perfectly competitive market, prices are lower and output is higher than under any other market structure.

Each firm produces the ideal (e.g., "productively efficient") output because it corresponds to the lowest point on its average cost curves. And because price equals the firm's marginal costs, allocation of resources is also efficient.

Generally, it is assumed that all firms are equally efficient in their production. The logic of this is that if one firm has a process – either capital or managerial – whereby it can produce output at a lower cost than its competitors, the other firms would eventually copy this process so that all firms will produce at the same (low) average cost in the long run. This means that the minimum point on the average total cost curve is the same for all participants. As a result of this, **in the long run, none of these firms will earn economic profits in a perfectly competitive market**.

Economic profit is the amount by which total revenue exceeds total economic cost. The economic costs include all of the explicit (cash) costs that are paid by the firm as well as the relevant implicit (opportunity) costs. Implicit costs include:

- Interest lost on money that has been invested in the business instead of elsewhere,
- The level of accounting profit that could be earned by moving the firm's productive resources to its next best alternative use. This should include the wages that the individual gives up by not working at another job, and
- Economic depreciation – this is different from accounting depreciation, which is just a mathematical construct. Economic depreciation is the decrease in the market value of the equipment during the period.

How Are Marginal Revenue and Demand Related for a Monopoly?

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The monopolist firm will produce at the point **where marginal revenues are equal to their long-term marginal costs**.

However, the monopoly price does not equal the marginal revenue, as it does in competitive market. Graphically, the monopoly sets the **quantity** to produce where $MR=MC$, but the **price** is set directly above that intersection, where it hits the demand curve. Hence the monopoly price is higher than the price in the competitive market.

In the long term, a monopoly will be able to maintain an economic profit because barriers to entry prevent other firms from entering the market.

Generally speaking, **the objective of labor unions is to improve the welfare of the organized union members**. Most directly, unions will try to accomplish this by negotiating higher wages for their members than would otherwise be earned in a free, competitive labor market.

While unions bargain directly on behalf of their own members, union activities may indirectly have a negative effect on nonunion workers for at least two reasons:

- 1) Unions will create unemployment because they **force wage rates** up and firms are unwilling to buy as much labor at the higher price.
- 2) **Nonunion workers will receive lower wages** than union workers with identical skills. This happens because the people that had previously been employed in jobs that were cut through the unionization of their jobs are now in the nonunion labor market, increasing the supply of labor.

For a monopoly, **the marginal revenue curve (MR)** is below the demand curve because as production increases, a monopolist that charges the same price for all of its output will have to lower its price in order to get consumers to buy that additional output. Therefore, the additional (marginal) revenue received from producing an additional unit will be less than the price received for that unit.

In a monopoly, the firm **produces less than the ideal output level** as the price of the product exceeds the marginal cost of its production. Compared with a perfectly competitive market, **prices will be higher and output levels lower** in a monopolized market.

Due to the barriers to entry into the market, **the economic profit or loss that a monopoly company generates will not have any impact on the number of firms operating in the market**. There will always be a single firm in the market.

Options are limited to consumers as there is only one supplier of the product in the market.

Employee wages are lower than in competitive markets. This is a function of the fact that the monopoly does not produce at the maximum level of output. Therefore, there are more employable workers than the monopoly needs at its low production quantity.

What Are the Characteristics of Monopolist Competition?

How Does Monopolist Competition Operate?

What Are the Characteristics of an Oligopoly?

What Is a Kinked Demand Curve?

Just as with a monopoly, **firms operating under monopolistic competition** have marginal revenue curves that are below the demand curve. Also as with a monopoly, in order to maximize profit, the company should produce the quantity at which the **marginal revenue is equal to the marginal cost**. Again, if this point lies below the average variable cost curves, the firm should choose to shut down.

Under this structure, firms **produce less than the ideal output level** as the price of the product exceeds the marginal cost of its production.

Compared with a perfectly competitive market, prices will be higher and output levels lower in a monopolistic competitive structure. While the short-run equilibrium for a firm under monopolistic competition is similar to that under monopoly, the long-run equilibrium is more closely related to the equilibrium position under perfect competition. Because of unrestricted entry, competition rapidly increases, and all economic profit must be eliminated in the long run.

A **kinked demand curve** concerns oligopolies and arises because of the fact that the other members of the oligopoly do not need to respond to a price increase by a competitor. So, if one company raises its prices in attempt to gain revenue, it will suffer a decrease in demand due to lower prices of its competitors. However, if one company lowers its price in an attempt to gain revenue through greater market share, all other members of the oligopoly must also lower their prices.

When shown graphically, this leads to a demand curve that is kinked (or bent) at the market price.

The **assumptions for monopolistic competition** (example is restaurants in a city) are that:

- There are **several** non-collusive firms operating independently,
- The market is for a product or products that can be **differentiated** (a differentiated product is one that is similar to other products – it is a close substitute, but not a perfect substitute),
- There are only **minimal barriers** of entry and exit in the market,
- The firms only have “**limited**” **control over price**, because of the presence of so many other firms producing a similar product. They do have “some” control, because the product they produce is unique, so they can charge a different price from what other firms are charging.
- There is a considerable amount of **non-price competition**, such as advertising and emphasis on trademark quality, and
- There is a **highly elastic demand curve**.

The **oligopoly model** (examples are the car, steel or oil industries) is less specific than the other market structures, but generally it will exist if the following assumptions are true:

- There are only a **few firms operating** in the market, but each is affected by the decisions of the others,
- The market can be for either **standardized or differentiated** products,
- **Prices may be rigid** due to the firms’ mutual interdependence,
- **Significant natural or created barriers** to entry may exist, and
- **Demand is static in the short term**, or has **limited growth opportunities**. This means that a new firm is unable to obtain customers as a result of the market simply getting bigger.

What Are Factors that Facilitate Collusion?

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What Are the Most Common Methods of Collaboration?

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What Is the Sherman Act of 1890?

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What Is the Clayton Act of 1914?

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The most **common collaboration practices** are:

Price Leadership - Under price leadership, all participants match the prices of the dominant or leading firm in the industry.

Cartels – A cartel is a group of firms with the objective of limiting competitive forces within a market. It may take the form of open collusion, with the member firms entering into contracts about price, and other market variables.

Group Boycotts – Similar to a cartel, oligopolistic firms can also fix prices by banding together, and agreeing to avoid doing business with a particular supplier.

Divide the Market – The cartel can assign certain regions over which each firm will have exclusive operating control, thus giving each individual cartel firm monopoly power.

Fix Output Levels – In addition to fixing the price, the cartel can also agree to maintain specified levels of output.

The Clayton Act is enforced by the Federal Trade Commission and the Justice Department, and it prohibits all of the following:

- **Monopolistic mergers.** The acquisition of a company in order to reduce competition or create a monopoly.
- **Exclusive dealing.** These are sales contracts that prohibit a customer from purchasing from competitors of the seller.
- **Tie-in sales.** These sales force a buyer to purchase additional, unwanted items in order to receive the desired product.
- **Price discrimination.** This is when there are different prices for different customers not based on any business reason (long-standing relationship, quantity of order, etc.).
- **Interlocking directorates.** This is when a director of a firm acts as a director of another competing firm.

Collusion occurs when two or more companies work together to fix the price or limit quantity in a market.

The following situations increase the chance that individuals or firms will collude:

- 1) An **inelastic demand** curve for the product,
- 2) An environment in which it is **difficult to detect** those parties involved in collusion,
- 3) An environment in which there is a **low likelihood of punishment** even if someone is caught in collusion actions,
- 4) An environment where **firms can punish cheaters** who defect from the collusive agreement, and
- 5) Some sort of a significant **barrier to entry**, so very few others can join the industry.

The Sherman Act was the **first U.S. antitrust law**.

Section 1 of this act makes it illegal to have any contract, combination, or conspiracy in restraint of competition and free trade in interstate commerce. Interstate commerce is any commerce that takes place between two states or the residents of two states (this encompasses most trade). This act is supposed to act as a deterrent to monopolistic behavior.

Generally, only 'unreasonable' restraints of trade are not allowed under the Sherman Act.

Section 2 of the Sherman Act prohibits both attempting to become a monopoly and monopolistic behavior. This behavior is demonstrated when a company has extreme market power and somehow intentionally attempts to monopolize. However, if the company is in a monopolistic position because of its skill or other elements in the market beyond its control (such as the bankruptcy of competitors) the company will not be considered to be in violation of the Sherman Act.

What Is the Federal Trade Commission Act of 1914?

What Is the Robinson-Patman Act of 1936?

What Is the Antitrust Improvements Act of 1976?

This act amended the Clayton Act in relation to **price discrimination in interstate commerce**. Either a buyer or a seller can be found guilty of price discrimination. Different prices can be offered to different customers if it is done in order to meet a competitor's price or is based upon some other reasonable distinction (such as the quantity ordered or a long-standing relationship with the customer).

The Federal Trade Commission Act makes unfair methods of competition and deceptive (false or misleading) acts of commerce illegal. The **Federal Trade Commission (FTC)** was created under this act to enforce the act and also make judgments about what is and is not unfair and deceptive. This act was amended by The **Wheeler-Lea Amendment of 1938** to include false advertising. The purpose of the FTC is to protect the consumer public and begin antitrust actions that are brought together with the Justice Department.

This act requires **notifying the Justice Department prior to a merger in cases when the purchasing company has annual sales or assets exceeding \$100,000,000 and the company being purchased has annual sales or assets exceeding \$10,000,000.**