

POLI 359

Public Policy Making

Session 5-Economics of Policy Making

Lecturer: Dr. Kuyini Abdulai Mohammed, Dept. of Political Science
Contact Information: akmohammed@ug.edu.gh



UNIVERSITY OF GHANA

College of Education

School of Continuing and Distance Education

2016/2017

godsonug.wordpress.com/blog

What is Economics?

- Economics is a field of study that deals with the efficient allocation of scarce resources
- Economics is a social science that is concerned with the factors that determine the production, distribution and consumption of goods and services
- Economics focuses on the behaviour and interactions of economic agents and how economies work
- Aside its traditional focus, economic analysis may applied throughout society as in: Business, Finance, Law, Health, Government, Crime, Education, Politics and Family.

Diversity of Modern Definitions of Economics

- Economics is an inquiry into the causes and wealth of nations (Adam Smith, 1776).
- Economics is the study of man in the ordinary business of life (Alfred Marshal, 1890).
- Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses (Lionel Robins, 1932).

Key Concepts in Economics

The key concepts in economics include the following:

- Opportunity cost
- Marginality
- Law of supply
- Law of demand
- Equilibrium and disequilibrium
- Elasticity
- Utility
- Monopoly, oligopoly and perfect competition



Opportunity Cost

- Opportunity cost is used to: underscore the concept of scarcity.

how to efficiently allocate scarce resources among alternative uses.

- The opportunity cost of something is what you give up in order to have it.
- Opportunity cost compels decision makers to consider the relative desirability of alternatives
- Irrespective of which choice is made regrets and disappointments will be associated with the decision.

Opportunity Cost ;Do't'd:

- Nevertheless, good decision making can result in:
Choices that maximize well-being.
Choices that minimize shortages and disappointments.
- Opportunity cost assists us in making decisions about how much of which different types of resources are used to produce goods and services.
- An opportunity cost that does show up as monetary cost
is environmental cost of production processes.

Opportunity Cost ;ĐoŶt'd:

The idea of opportunity cost is relevant to many types of situations:

- The opportunity cost of spending resources on one public program is the forgone benefits of using them on another program.
- The opportunity for a student studying one final exam is a lower grade on another exam for which study time is reduced.
- The opportunity cost of huge environmental damage in mining is the reduced damage in using land for farming.

Marginal Analysis

- A margin is an edge. What is done in marginal analysis is push out the edge to see whether that is a good move.
- Marginal analysis is an examination of the additional benefits of an activity compared to the additional costs of that same activity.
- Companies use marginal analysis to help them maximize their potential projects.
- Individuals unconsciously use marginal analysis as well to make a host of everyday decisions.

Marginal Analysis ;ĐoŶt'd:

- Marginal analysis is also widely used in microeconomics when analyzing how a complex system is affected by marginal manipulation of its comprising variables.
- Marginal analysis focuses on examining the results of small changes as the effects cascade across the business as a whole.
- Marginal analysis is the examination of the associated costs and potential benefits of specific business activities or financial decisions.
- The goal is to see if the benefits are more than the costs.

Marginal Analysis ;Do't d:

- The impact of the cost of producing additional unit is most often used as a point of comparison.
- Marginal analysis is also used to explain the motivation for or against particular production and consumption behaviour.
- Such assessment is made on the basis of the benefits and costs of such behaviour.
- The margin of production and consumption behavior is critical to determining the impact of decisions.

Importance of Marginal Analysis

- Comparing multiple options.
- Observing the effects of small changes.
- Helps in government decisions.
- Applied to just about all economic decisions.
- In determining the number of traffic deaths.
- In determining the side effects of drugs.
- In studying for exams.
- Policy makers use it when making hard decisions.

Demand

Demand is one of the most fundamental concepts in economics.

- It refers to the quantity of a good or service that is desired by a buyer.
- It denotes the willingness and ability of an individual to pay for a product based on their income, tastes and preferences.
- An individual's wealth is a function of her willingness to sacrifice.
- The greater their wealth the greater their ability to pay. In other words, willingness to pay reflects the ability to pay.

DeŵaŶd ;ĐoŶt'd:

- Willingness to pay also depends on the state of one's knowledge and experience.
- There is difference between what a person is willing to pay and what he ends up actually paying.
- A person may be willing to pay GHC5 to park his car but may end up paying GHC2 because the parking fees have been subsidized by government.
- Willingness to pay is a reflection of tastes and preferences.
- The quantity demanded is the amount of a product a person is willing to pay at a certain price.

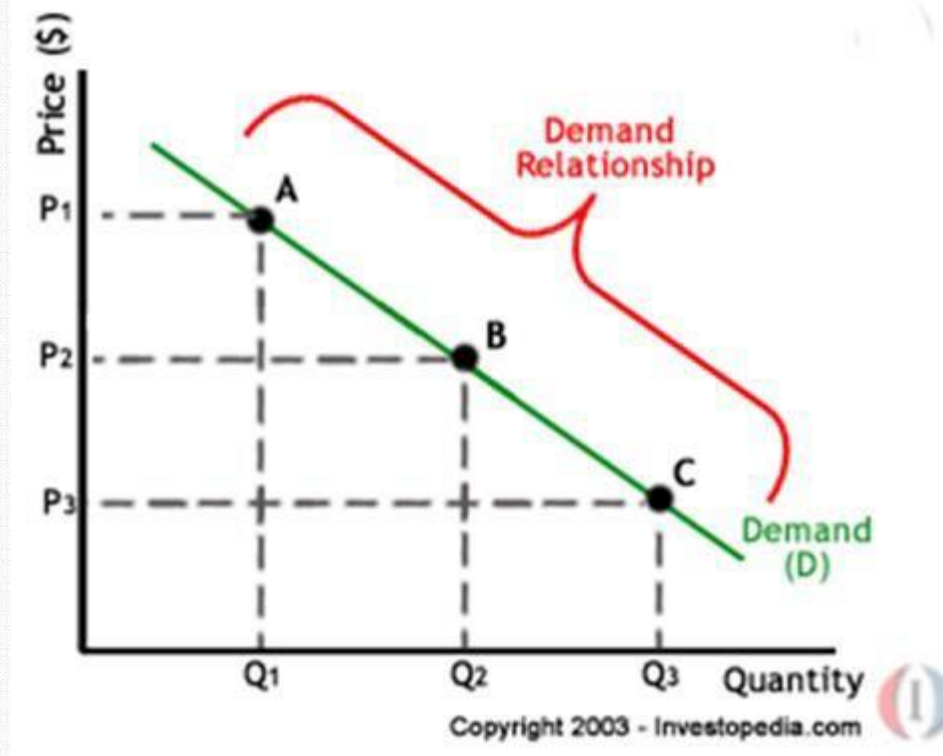
DeŵaŶd ;ĐoŶt'd:

- The relationship between price and quantity demanded is known as the demand relationship.
- The law states that the higher the price of a good the less people will demand that good.
- In other words, the higher the price the lower the quantity demanded.
- The higher the price of a good the higher the opportunity cost of buying that good.
- Thus, people avoid buying a product that will force them to forgo the consumption of something else more valued.

Demand

Definition

The chart below shows a downward sloping demand curve.



Demand ;ĐoŶt'd:

- From the chart, A, B, C are points on the demand curve.
- Each point on the curve reflects a direct correlation between quantities demanded (Q) and price (P).
- So at point A, the quantity demanded will be Q1 and the price will be P1.
- The demand relationship curve reflects a negative relationship between price and quantity demanded.
- The higher the price of a good (P1) the lower the quantity demanded (A).
- The lower the price (P3) the higher the quantity (C).

DeŵaŶd ;ĐoŶt'd:

- The concept of demand is based on opportunity cost.
- The more spent on one good the less money is available for other products.
- Understanding demand relationship helps in predicting how policy changes will affect communities or industries.
- For example, to encourage the use of public transport government may subsidize it.
- Alternatively the state may increase the price of petrol to make private car travel expensive.

Supply

- Supply is the quantity of a good producers are willing and able to bring to the market at a certain price.
- The relationship between opportunity cost and supply should be apparent.
- If the price a good is rising producers divert resources away from other products to the one witnessing a price hike.
- The relationship between quantity supplied and price is known as the supply relationship.
- Thus, price is a reflection of supply and demand.

Supply and Demand:

- The supply relationship is referred to as the law of supply.
- The demand relationship is denoted as the law of demand.

The use of the term *law of supply* is misleading due to:

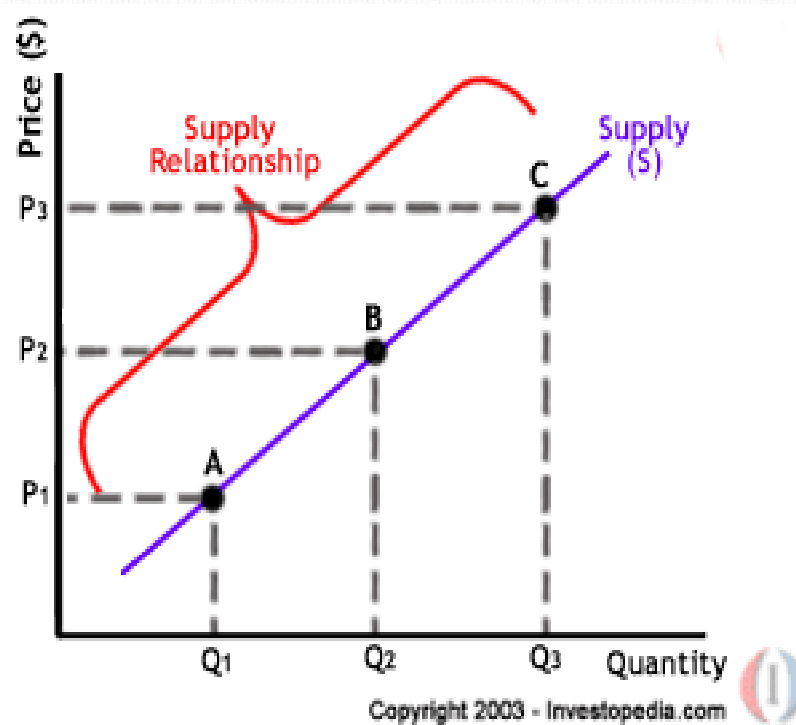
- Exceptions to this tendency exist
- The exception arises when price is associated with fashion or prestige

Unlike the law of demand, the supply relationship shows an upward slope. This means the higher the price the higher the quantity supplied. Selling bigger quantities at higher prices increases revenue.

Supply

Đồ thị

The figure bellows shows the quantity supplied.



Supply ;ĐoŶt'd:

In figure from the previous slide, A, B, C are points on the supply curve.

- Each point on the curve reflects a direct correlation between quantity supplied (Q) and price (P).
- At point B the quantity supplied is Q_2 and the price is P_2
- The law of supply is in reality more of a rule of thumb than a law.
- It indicates that the supply of a good will increase and price increases.
- This positive relationship reflect the fact that the marginal cost of production increases as production increases.

Time and Supply

- Unlike the demand relationship, the supply relationship is a factor of time.
- Time is important because suppliers must, but cannot always react quickly to a change in demand or price.
- So determining whether a price change caused by demand is temporal or permanent.
- The concepts of short term and long term supply has been coined to reflect temporal and permanent changes in demand.
- Suppliers cannot increase outputs in the short term.

Why a Short-Run Supply Curve is Upward Sloping:

- This is because firms are constrained by the size of their factories and machines.
- This means even if price rises significantly firms cannot produce a lot more.
- In the long run firms can expand their factories and new ones will enter the market.
- The result of this expansion is both to increase output and to decrease price.
- The long run is the amount of time it takes to build or expand factories, premises and machinery – fixed costs.

Time and Supply

Do You Know?

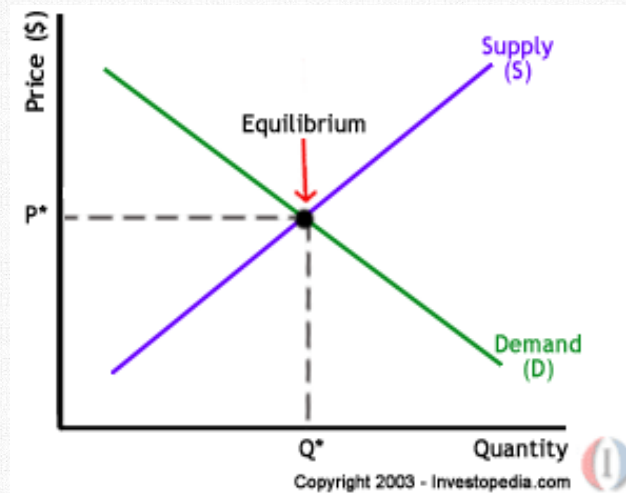
Figure 5.4 shows the short run and long run supply curves.

Supply and Demand Relationship

- When demand and supply are equal the economy is said to be in equilibrium.
- Equilibrium occurs at the intersection of demand & supply.
- At this point the allocation of goods is at its most efficient
- Thus, everyone is satisfied with the current economic condition.
- At the given price suppliers are selling all the goods they have produced.
- Consumers are also getting all the goods they are demanding.

Demand and Supply Equilibrium

Figure 5.5: Demand and Supply Equilibrium



At the equilibrium point, the price of the good P^* and the quantity is Q^* . These figures are referred to as equilibrium price and quantity.

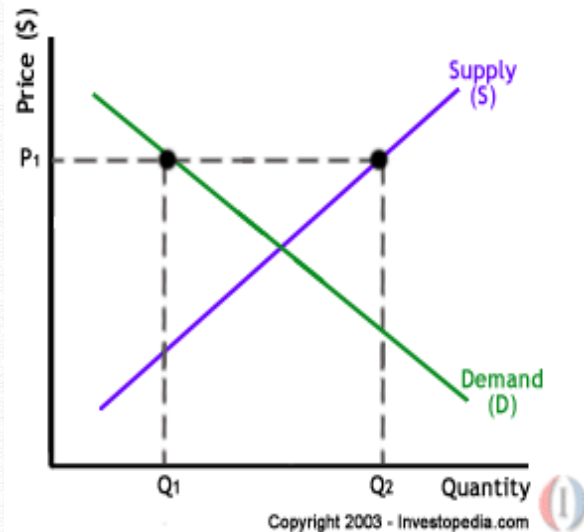
Disequilibrium, Excess Demand & Excess Supply

- Disequilibrium occurs whenever the price or quantity is not equal to P^* and Q^* .
- If the price is too high excess supply will be created in the economy.
- If there is excess supply the economy is allocatively inefficient.
- Excess demand is created when price is set below the equilibrium price.
- Because price is so low, too many consumers want the good, while producers are not making enough of it.

Excess Supply

Disequilibrium occurs whenever the price or quantity is.

Figure 5.6: Excess Supply



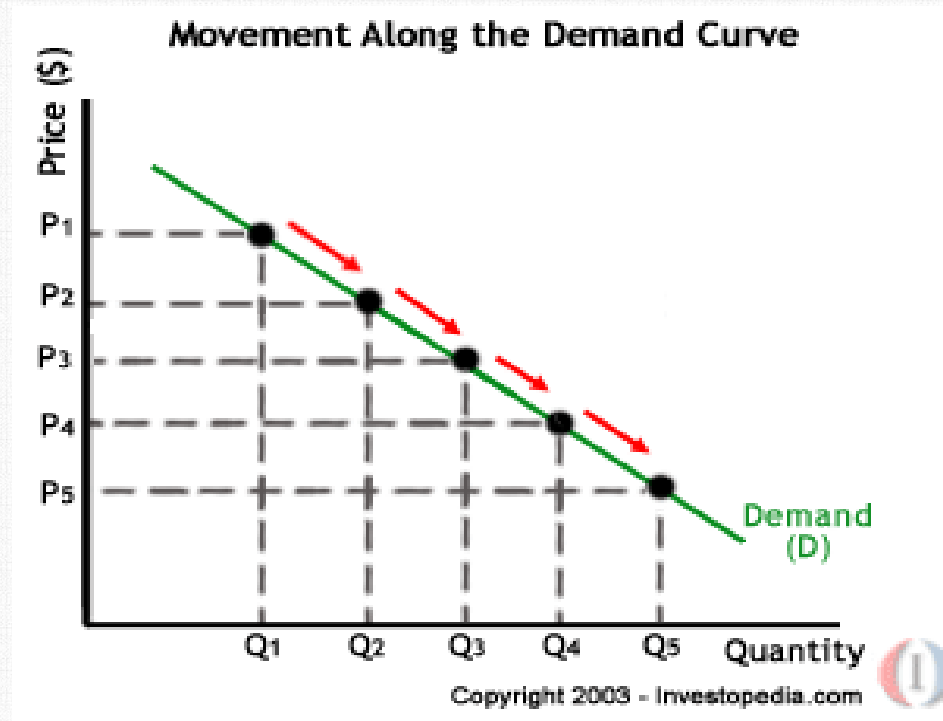
At price P_1 , the quantity of goods producers wish to supply is Q_2 .

EdžĐess DeŵaŶd ;ĐoŶt'd☐:

- Conversely, the quantity producers are willing to produce at that price is Q_1 .
- Thus, there are too few goods being produced to satisfy consumer wants.
- As competition between consumers for the good become it keen this pushes the price up.
- The rise in price entices suppliers to supply more.
- The increase in supply pushes the price closer to equilibrium.

Movement Along the Demand Curve

Figure 5.8: Movement along the Demand Curve.



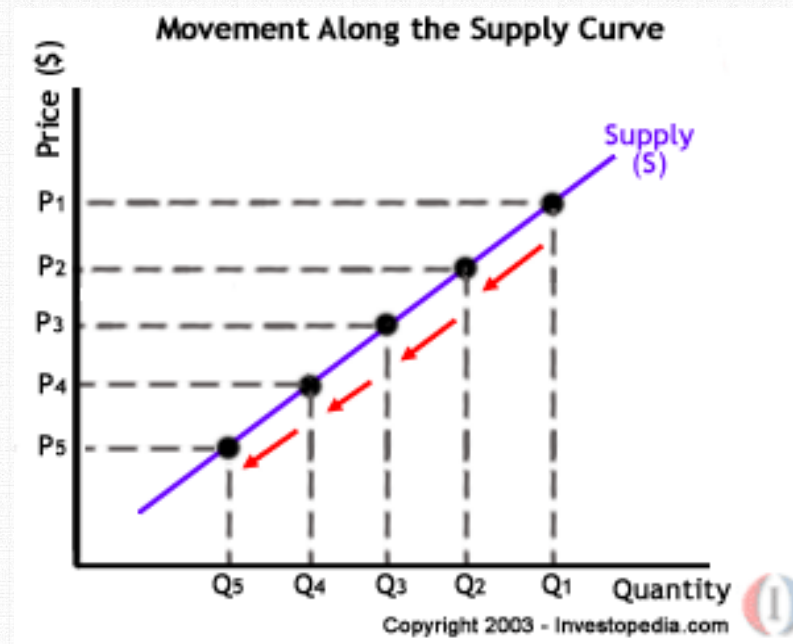
Movement Along the Demand Curve

;ĐoŶt'd[?]:

- On the demand curve, a movement denotes a change in both price and quantity demanded from one point to another on the curve.
- The movement implies that the demand relationship remains consistent.
- Thus, a movement along the demand curve occurs when the price of the good changes and quantity demanded changes accordingly.
- In other words, a movement occurs when a change in
quantity demanded is caused only by a price change.

Movement Along the Supply Curve

Movement along the supply curve means the supply relationship has remained consistent.



Movement Along a Supply Curve ;ĐoŶt'd:

- Thus, a movement along the supply curve occurs when the price of a good changes and quantity supplied changes accordingly
- In other words, a movement occurs when a change in quantity supplied is caused only by a change in price.

Shift in Demand

A shift in demand occurs when the quantity demanded of a good changes even though price remains the same.

Figure 5.10: Shift



Shift in Demand:

- For example, in Figure 5.10 the price for a bottle of beer is GHC2 but the quantity demanded of beer increased from Q1 to Q2.
- This means there is a shift in demand for beer. Shifts in the demand curve imply the original demand relationship has changes.
- This means that the quantity demanded is caused by factors other than price.
- A shift in the demand relationship will occur if suddenly beer became the only type of alcohol available for use.

Shift in Supply

Conversely if the price of a bottle beer is GHC2 and the quantity supplied decreased from Q_1 to Q_2 then there is a shift in supply.

Figure 5.11: Shift in supply



Shift in Supply; Don't:

- A shift in the supply curve implies the original supply curve has changed.
- This means the quantity supplied is caused by factors other than price.
- For example, a shift in the supply for beer may be caused by a mass shortage of hops.
- Beer manufacturers would be forced to supply less beer for the same price.

Elasticity of Demand and Supply

- The degree to which demand and supply respond to a change in price is known as the elasticity of DD and SS.
- Elasticity varies among products because some products may be more essential to the consumer.
- Products that are necessities are more insensitive to price changes.
- This is because consumers would continue buying these products despite price increases.
- Conversely the increase in the price of goods that are less of necessities would deter more consumers.

Elasticity of Demand and Supply

;ĐoŶt'd[?]:

- A good or service is said to be highly elastic if a slight change in price leads to a sharp change in quantity demanded or supplied.
- Usually elastic goods are readily available in the market.
- Inelastic goods are goods in which changes in price witness only modest changes in quantity demanded or supplied.
- These goods tend to be things that are more of necessity.
- The elasticity of a good is determined by the following equation.

Elasticity of Demand and Supply

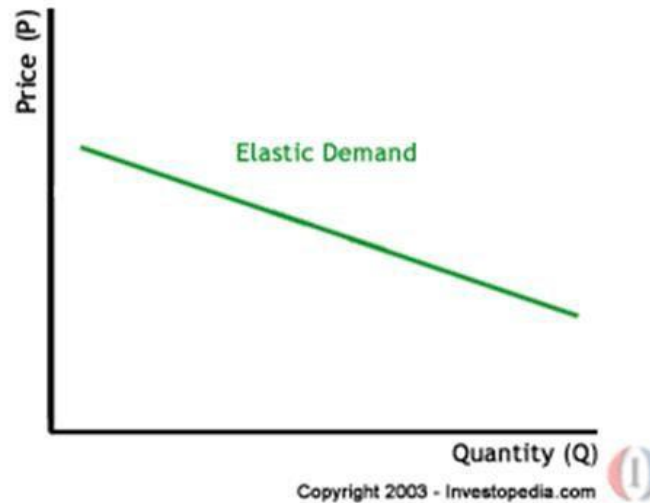
$;\frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$:

- Elasticity = (% change in quantity/ % change in price)
- If elasticity is greater than or equal to one, the curve is considered to be elastic
- If elasticity is less than one, the curve is said to be inelastic
- The demand curve is a negative slope
- If there is a large decrease in the quantity demanded with a small increase in price, the demand curve looks flatter or more horizontal
- The flatter curve means that the good or service in question is elastic

Elasticity of Demand and Supply

;ĐoŶt'd[?]:

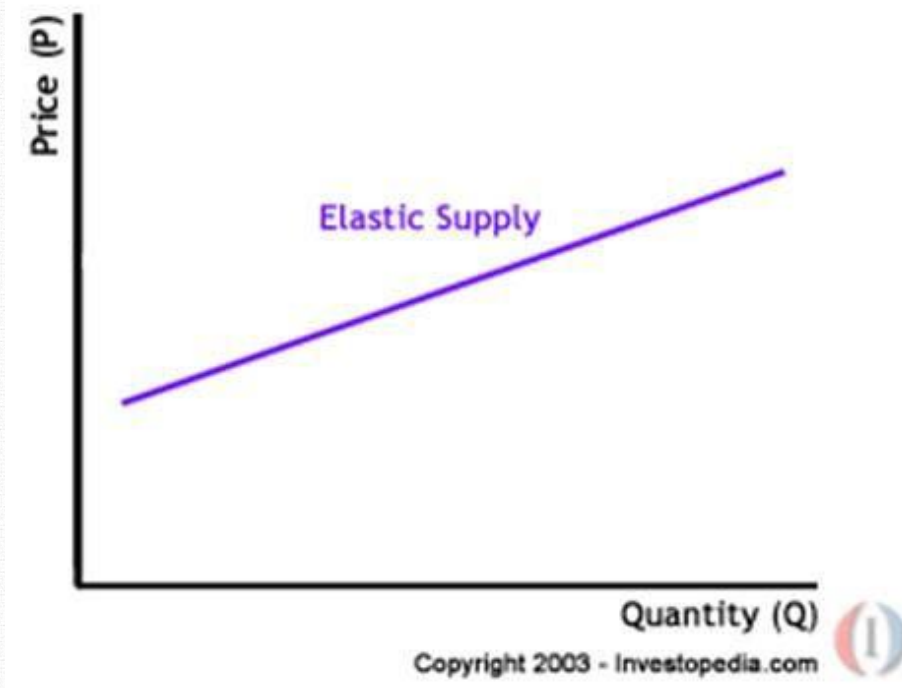
Elasticity = (% change in quantity/ % change in price)



- Elasticity of supply works similarly. If a change in price results in a big change in the amount supplied, the supply curve appears more flatter.

Elasticity of Demand and Supply

A flatter curve means supply is elastic. Elasticity in this case is greater than or equal to one.



Elasticity of Demand and Supply

$;\frac{\partial Q_s}{\partial P} < 1$:

- If a big change in price results in a minor change in quantity supplied, the supply would be steeper.
- In that case elasticity is less than one.



Factors Determining Demand Elasticity

- The availability of substitutes
 - Amount of income available to spend on the good
 - Time
 - Substitutes are probably the most important factor in influencing elasticity
- In general the more substitutes, the more elastic the demand will be
- For example, if the price of coffee went up by GHC0.25 consumers will replace it with tea
- This means that coffee is an elastic good.

Factors Determining Demand and Elasticity:

- It is elastic because a rise in price caused a large decrease in demand.
- Meaning consumer start buying more tea instead of coffee.
- Most people are willing to give up their cup of caffeine not matter the price.
- In this case caffeine is an inelastic product because of lack of substitutes.
- A product within an industry may be elastic due to substitute.
- However, the industry itself tends to be inelastic.

Factors Determining Demand and Elasticity:

- Usually, unique goods such as diamonds are inelastic because they have few if any substitutes
- In terms of the amount of income available for the good:
 - If a can of coke goes up from GHC1.50 to GHC3.00 and income stays the same, the income that is available to spend on coke, which is GHC3.00 is now enough for only two rather than four cans of coke
 - Thus, the consumer is forced to reduce his demand for coke
 - Thus, if there is an increase in price and no change in the amount of income there will be elastic demand reaction.

Factors Determining Demand and Elasticity:

The third influential factor is time:

- If the price of Voltic mineral water goes up GHC2 per bottle a consumer with very few available substitutes will continue buying his daily bottles.
- This means the Voltic mineral water is inelastic
- It is inelastic because the change in price did not have a significant influence on the quantity demanded.
- However, if the customer cannot afford the extra GHC2 stops drinking Voltic water over a period of time, the price elasticity of Voltic water becomes elastic in the long run.

Income Elasticity of Demand

- If there is an increase in income demand tends to increase
- The degree to which an increase in income will cause an increase in demand is known as income elasticity of demand
- This can be expressed as

$$ED_y = \frac{((Q_{\text{current}} - Q_{\text{previous}}) / (Q_{\text{previous}}))}{((Y_{\text{current}} - Y_{\text{previous}}) / Y_{\text{previous}})}$$

ED = Elasticity of Demand

Q = Quantity

Y = Income

ED_y = Income Elasticity of Demand

Income Elasticity of Demand

- If ED_y is greater than one, demand for the good is considered to have high income elasticity.
- If ED_y is less than one, demand is considered to be income inelastic.
- Luxury items usually have high income elasticity. This is because the people have higher incomes the don't have to forfeit as much to buy these luxury items.
- Let's look at an example of a luxury good-air travel: Suppose Michael has just received a GHC10,000 increase in his salary which puts his salary at GHC80,000 per year.

Income Elasticity of Demand

- With this increased income he decides that he can now afford air travel twice a year instead of his previous once a year
- With the following equation we can calculate income elasticity of demand:

$$ED_y = \frac{((2-1) / (1))}{((80000-70000) / (70000))} = 1 / 0.14 = 7$$

Income elasticity of demand for Michael is 7 which is highly elastic.

Inelastic Demand of Demerit Goods

Demerit Goods

- Some goods and services may actually witness decrease in demand as income rises.
- These are goods and services of inferior quality
- They are dropped or shunned as income rises.
- An example may be increase in demand for flat screen TV sets as opposed to protruding screen TV sets.
- The protruding screen TV sets are generally considered to be outdated and inferior.

Income Elasticity of Demand

Income Elasticity

- Products for which demand decreases as income rises have an income elasticity of less than zero.
- Products that witness no change in demand despite a change in income usually have an income elasticity of zero
- These goods and services are considered necessities.

Utility in Economics

- Underlying the laws of demand and supply is the concept of utility. Utility is the advantage or fulfillment a person receives for consuming a good or service
- Utility, then, explains how individuals and economies aim to gain optimum satisfaction in dealing with scarcity.
- Utility is an abstract concept, rather than a concrete observable quantity.
- The units to which utility is assigned are arbitrary, therefore, are arbitrary.

Utility and Total Utility:

- They represent relative values.
- Total utility is the aggregate sum of satisfaction or benefit that an individual gains from consuming a given amount of goods and services.
- The amount of a person's total utility corresponds to the person's level of consumption.
- Usually the more a person consumes, the larger his total utility will be.
- Marginal utility is the additional satisfaction, or amount of utility, gained from each extra unit of consumption.

Utility and Diminishing Marginal Utility:

- Total utility usually increases as more of a good is consumed
- In contrast, marginal utility decreases with each additional increase in the consumption of a good
- This decrease indicates the law of diminishing marginal utility
- Because there is a certain threshold of satisfaction, the consumer will no longer receive the same pleasure from consumption once that threshold is crossed.

Utility and Marginal Utility:

- Thus, total utility increases at a slower pace as the quantity consumed increases.
- Take for example, a chocolate bar. Let's say after eating one chocolate bar your sweet tooth has been satisfied
 - Your marginal utility (total utility) will be quite high.
 - But if you eat more chocolate bars, the pleasure of each additional chocolate bar will be less than the pleasure you received from eating the one before.
 - This is because you have started to feel full.

Utility and Marginal Utility:

Table 5.1 below shows marginal utility in consumption.

Chocolate Bars Eaten	Marginal Chocolate Utility	Total Chocolate Utility
0	0	0
1	70	70
2	10	80
3	5	85
4	3	88

The table shows that total utility increases at a much slower rate as marginal utility diminishes with each additional bar of chocolate. The first chocolate bar gives a utility of 70.

Utility and Diminishing Marginal Utility:

- But the next three chocolate bars together increase total utility by only 18 additional units.
- The law of diminishing marginal utility helps economists in understanding the law of demand and the negative sloping demand curve.
- The less of something an individual has the more satisfaction he gains from each additional he consumes.
- The marginal utility he gains from that product is therefore high.
- This gives him a higher willingness to pay more for it.

Utility Theory: Consumer Demand:

- Prices are lower at higher quantities demanded because of diminishing marginal utility as he demands more.
- To determine consumer marginal utility and total utility, economists turn to consumer demand theory.
- Economists assume that the consumer is rational. This means he will maximize his total utility by purchasing a combination of different products rather than more of a particular product.

Utility of combinations of goods:

- Thus, instead of spending all his money on three chocolate bars, which has a utility of 85, he should instead purchase one chocolate which a utility of 70.
- He can also purchase a glass of milk which has a utility of 50.
- This combination will give him a maximized utility of 120. These come at the same cost as three chocolate bars.

Monopoly

- A monopoly is a market structure in which there is only one producer/seller of a product. In other words, the single business is the industry.
- Entry into such a market is restricted due to high costs and other impediments.
- These impediments may be economic, social or political.
- For example, a government can create a monopoly over an industry it wants to control such electricity in Ghana.
- A monopoly can also arise because one entity has exclusive rights to a natural resource.

Monopoly ;ĐoŶt'd:

- For example, in Saudi Arabia the government has sole control over the oil industry.
- A monopoly may also form when a company has a copyright. The copyright or patent prevents others from entering the market. Pfizer for example, had a patent on Viagra.

Oligopoly

- In an oligopoly, there are only few firms that make up the industry. This select group of firms has control over price
- Oligopoly has high barriers to entry into the market. The products that oligopolistic markets produce are often nearly identical
- The companies that are competing for market share are independent are a result of market forces.

Perfectly Competitive Market

- When a firm is only one of many firms producing a small market share of a standardized product, the quality of which does not differ among firms, perfect competition is said to exist.
- A competitive firm is one that sells its output in a perfectly competitive market.
- The distinguishing feature of a perfect competition is that no one firm alone in an industry can influence the selling price of its product in any way.
- The competitive firm is said to be a price taker.



Perfectly Competitive Market

Definition

- It is a price taker because it takes the price of its product as given.
- The competitive firm will maximize profits by producing that output for which price is equal to marginal cost ($P = MC$).
- The demand curve facing a perfectly competitive firm is
a horizontal line, $D = MR$.
- The firm will add to its profits as long as the price at which it sells one more unit exceeds the marginal cost of producing that unit.

Perfectly Competitive Market

- When price is exactly equal to marginal cost, the last unit produced will bring in as much revenue as the cost involved in producing it. In that case, the net addition to profit will be zero.
- If the firm produces beyond that point, profits will decline. This is because the marginal cost of producing that extra unit will exceed the marginal revenue it brings in.
- It follows that firms maximize profit by producing that output which price is equal to the marginal cost of production.

Reasons for Well Functioning Markets

- There are a large number of buyers.
- There are many buyers and sellers of a product.
- Everyone has free and complete access about all products.
- The production or consumption of a product has no external or spillover costs that affect other citizens.
- There are no economies of scale (i.e. mass production produces no benefits).
- There are no barriers to entry into the market.

Reasons for Market Failure

Do You Know?

- Exercise of monopoly power in markets.
- Effects of market transactions on third parties.
- Lack of market for a good with marginal social benefits that exceeds its marginal cost—public goods.
- Incomplete information.
- Economic stabilization.