ECONOMICS ECS1500

DIFFERENCES BETWEEN MICROECONOMICS AND MACROECONOMICS

MICROECONOMICS	MACROECONOMICS
The price of a single product	The consumer price index
Changes in the price of a single product	Inflation
The production of a product	The total output of all goods and services
The decisions of individual consumers	The combined outcome of the decisions of all consumers in the country
The decisions of individual firms or businesses	The combined decisions of all firms in S.A

- Microeconomics – the focus is on individual parts of the economy. Decisions or functioning of decision makers such as individuals, households, firms or other orgs. Are considered in isolation from the rest of the economy.
- Macroeconomics – is concerned with the economy as a whole. An overall view of the economy and aggregate economic behavior is studied. Emphasis on topic such as total production, income and expenditure, economic growth, aggregate unemployment, inflation etc. is studied.
- The problem of economizing is essentially one of deciding how to make the best use of limited resources to satisfy unlimited wants
- Opportunity cost is best defined as the value of the best alternative sacrificed when a choice is made
- An unskilled labourer would be viewed by economists as a factor of production.
- A technological improvement in the production of a good or service will cause a rightward/outward shift of the PPC
- Interest is income from capital
- A capital intensive production system is dominated by capital goods
- Capital, wealth and natural resources are stock variables, whereas investment, profit and losses are flows.
- Firms are the purchasers of capital goods in a simple circular flow
- The bars above symbols in formula for law of demand implies that the ceteris paribus rule applies
- Under perfect competition the maximum loss a firm will make in the short run is equal to the total fixed cost.
- Under perfect competition information is complete and collusion is impossible
- Monopoly – the ability to influence the market price and the market output
- Oligopoly – the market is dominated by few large firms with market power ,the strategy can be to join forces and it is called cartel forming
- A change in the price of the other factors of production will shift labour demand curve

- A trade union that bargains only for an increase in wages will cause unemployment
- Minimum wages are propagated as a way to avoid exploitation of workers.
- An important similarity between the monopolistic competitor and oligopolist is that both have incomplete information about market condition
- Monopoly – has thorough knowledge of market conditions
- Law of demand implies that as prices fall quantity demanded increases
- Demand curve will shift right if there is an increase in the price of the substitute product
- Supply curve will shift left when there is an increase in the price of inputs
- An increase in supply and a decrease in demand will always cause a decrease in the equilibrium price.
- An increase in both demand and supply will increase an equilibrium price
- Under perfect competition market the participants(firms is a price taker
- If a firm under in a perfectly competitive market raises its price above the market price sales will drop to zero
- Demand curve under PC – the demand curve is indicated by a horizontal line at the given market price
- A firm can expand production in the short run by employing more units of the variable factor of production.
- Price elasticity measure the responsiveness or sensitivity of consumers to price changes
- Producers are interested in the price elasticity of demand for their product because it indicates what will happen to their total revenue when the price of the product changes
- The price elasticity of demand is different at each point along a linear demand curve
- Marginal utility is the extra or additional utility that a consumer derives from the consumption of one additional unit of good
- Marginal utility will decline if identical units of a good are consumed one after the other
- Nominal wage is the amount of money actually received by a worker per hour, week, day, month, or year
- A real wage is the quantity of goods and services that can be purchased with the nominal wage
- Equilibrium condition for the individual firms demand for labour - MRP=W or MPP x P=W
- Labour is a derived demand because labour is not demanded for its own sake, but rather for the value of the goods n services that can be produced when labour is combined with other factors of production.
- Excess supply – when the quantity supplied is greater than the quantity demanded
- When there is a market shortage the quantity produced will increase
- The price of a product will decrease when there is a market surplus
- Equilibrium in the market – Qd=Qs

- Consumer to be in equilibrium – the weighted marginal utilities of the condition of goods are of equal utility from the last rand spent on each product
- Primary sector – raw materials are produced
- Secondary sector – manufacturing part of the economy
- When all firms earn normal profit = industry in equilibrium in the long run
- The economic problem arises from the coexistence of unlimited wants and limited resources
- Normative statement – factual , unemployment is the most important economic problem worldwide
- Factor of production – a national road, labour of households, arable land used for sowing
- Economic systems are based on any or a combination of 3 coordinating systems;(i) tradition,(ii) command and (iii) market
- Market capitalism-most of the factors of production are privately owned with limited government intervention.
- The demand for labour is a flow variable
- Capital is s stock variable
- A decrease in demand together with an increase in supply = fall in equilibrium price
- Fixing a minimum price above the equilibrium price will result in an excess supply
- If producers are faced with a unit elastic demand curve , they cannot raise their total revenue by increasing or decreasing the price of product
- When the percentage change in quantity demanded is relatively small compared to the percentage change in price it can it can be said that the demand is relatively inelastic
- If the income elasticity of demand is negative the product is an inferior good
- The larger the number of substitutes and the closer the substitutes are and in the case of luxury goods and services the more elastic the price elasticity is
- In the analysis of consumer behavior the aim of the consumer is to obtain the highest attainable level of total utility
- Perfect competition exists if all the buyers and sellers have perfect knowledge of market conditions and all the factors of production must be perfectly mobile
- Monopoly – have the ability to control market output and the firm is a price setter.
- Demand refers to quantity of a product that potential buyers are willing and able to buy
- Demand is a flow variable
- A fall in the price of a product will not shift the demand curve for a product
- A market supply curve is a horizontal summation of the individual supply curves

- An increase in the price of the a substitute product will increase the demand for a product
- A decrease in the price of flour used to make bread is most likely to increase the supply of bread
- When the quantity demanded is greater than the quantity supplied the price will rise to the equilibrium price
- A change in the price of a product will not shift the supply curve, ceteris paribus (other things being equal).
- A decrease in demand together with an increase in supply will definitely result in an increase in equilibrium price
- Equilibrium occurs when quantity demanded equals quantity supplied
- When there is excess supply in the market the price will decrease
- Fixing the minimum price below the equilibrium price will not disturb the market
- Simultaneous increase in supply and demand will lead to an uncertain change in equilibrium price and equilibrium quantity will increase
- Price elasticity of demand is a proportionate change in quantity demanded divided by a proportionate change in price
- Demand is inelastic when the proportionate change in quantity demanded is less than a proportionate change in price
- If the price elasticity of demand coefficient is greater than one then an increase in price will cause a decrease in total revenue
- Total utility decreases when marginal utility is negative
- The aim of rational consumers is to maximize their utility given the available means and alternatives at their disposal
- A consumer is in equilibrium if the combination of goods are affordable
- According to the law of diminishing returns total product is reaching a maximum when MP=0
- The U shape of the marginal cost curve reflects the law of diminishing returns
- Marginal product reaches a maximum when a corresponding marginal cost is at a minimum
- Perfect competition occurs when none of the individual market participants can influence the price of a product
- No collusion means each seller must act independently
- Characteristic of perfect competition – identical goods are sold in the market, there is no government intervention, factors of production are perfectly mobile
- Shut down rule and the profit maximizing rule are the rules for profit maximization of any firm in the short run
- Monopolistic competitive market – firms produce similar but slightly different products
- Market participants under Perfect Competition are price takers
- Monopolistic competition is characterized by incomplete information
- The demand curve of a monopolist equals the market demand curve
- Under oligopoly there are only a few firms
- Uncertainty is one of the features of an oligopoly

- Monopolistic competition can exist when firms have some control over the price of the product
- Labour is rented and not homogeneous
- The functioning of the labour market is affected by non-economic considerations
- An increase in the market supply of labour is caused by an increase in population
- A decrease in the market demand for labour is caused by a decrease in the price of a substitute (factor of production)
- Opportunity cost is caused by limited resources
- Ceteris paribus means all other things equal
- Unskilled labour = factor of production
- Macroeconomics deals with total production of all goods and services
- A command economy is characterized by central planning
- A distinction between socialism and capitalism is to be found in the predominant type of resource ownership
- In market capitalism most of the factors of production are privately owned with limited government intervention
- Tertiary sector = trade between SA and the USA
- Market – must be at least one potential buyer and seller , seller must have something to sell, buyer must have the means to buy, market price must be determined
- Competition occurs on each side of the market
- Negotiation occurs between buyers and sellers
- The 3 major flows in an economy as a whole is total production, total income and total spending
- Final goods and services is an aspect of the goods market
- Annual gold production is a flow variable
- The prices and quantities traded in the goods market are determined by the interaction of demand and supply
- The law of demand states the lower the price the higher the quantity demanded
- An increase in the income of a consumer will lead to rightward shift of the demand curve
- A change in demand is the same as a shift of the demand curve
- An increase in the price of a product will lead to a decrease in quantity demanded and an increase in quantity supplied
- If the demand for a product increases ceteris paribus both equilibrium price and quantity will increase.
- An increase in productivity of workers will shift supply curve right
- Government set maximum prices to combat inflation
- Fixing a maximum price below equilibrium price will result in excess demand
- Black markets occur in any situation where market forces of demand and supply cannot eliminate excess demand
- In order for government price fixing to have an effect on the market the minimum price should be set above the equilibrium price , minimum

price and maximum price should be set at the same level as the equilibrium price

- Increase in supply of a product will lead to the supply curve shifting to the right and equilibrium quantity will fall , the supply curve will shift right and demand curve will not shift
- Price elasticity of demand varies from point to point along a linear demand curve
- A perfectly elastic demand curve is horizontal
- The aim of any consumer is to maximize utility
- The cardinal utility involves the idea that values can be assigned to the amount of satisfaction , utility can be measured or quantified
- The law of diminishing marginal utility states that the total utility increases at a decreasing rate as the consumer consumes more units of a good
- The marginal utilities of different goods must be equal and the combination of goods must be affordable for a consumer to be in equilibrium
- The marginal utility approach can be used to derive the individual demand curve for a good
- Negative utility is called disutility
- Total revenue is at maximum when marginal revenue is zero, if the firm sells all units of its product at the same price then its AR=P
- Economic cost is the difference between total revenue and economic profit and the difference between explicit costs and implicit costs
- The concept of economic costs of production is based on the principle of opportunity cost
- The law of diminishing return applies to a situation where at least one input is fixed
- Production and cost in the short run – the shape of the unit cost curves give rise to the unit product curves
- A perfectly competitive firm faces horizontal demand curve because the market price is given
- In Perfect Competition – the firms marginal revenue and average cost are equal to the price in the market
- Equilibrium condition – in the long run all costs of production are variable
- In Perfect Competition, if all firms are making normal profit then industry equilibrium will be established
- In a monopolistic market the shape of the firms demand curve satisfies the law of demand.
- Firms under Monopolistic competition are assumed to operate under conditions of uncertainty
- Features of monopolistic – many buyers and sellers in the market, free entry and exit, downward sloping demand curve
- Similarity between monopolistic competition and a monopoly is that the firms have some control over the price
- Oligopoly – advertising and product differentiation can be used as barriers to entry

- In Perfectly competitive labour market the wage rate is determined by the demand for and supply of labour
- When trade unions restrict the labour supply then an increase in unemployment occurs
- The imposition of an effective minimum wage above equilibrium wage could cause an excess supply of labour
- Marine /fish resources = land factor of production
- In a simple circular flow of economic activity consumer goods and services flow via the goods market from firms to households
- An increase in the demand of a product is caused by an increase in the price of a substitute
- Excess supply means that the quantity demanded is smaller than the quantity supplied
- An increase in demand together with an increase in supply = increase in equilibrium price
- Price ceilings – when the maximum price is set below the equilibrium price, there will be a market shortage. Therefore there will be excess demand. Qd>Qs
- Price floors – when the minimum price is set above the equilibrium price. There will be a surplus. Excess supply. Qs>Qd
- Non-wage determinants of supply of labour are – new workers enter the market, number of workers decrease,etc
- Economics is a social science that studies human behavior
- Scarcity and choice are central elements of economics
- The problem of scarcity arises because wants are unlimited and the resources limited
- An economic capacity to produce is limited by the quantity and quality of the available resources
- The opportunity cost of choice is the value of the best forgone alternative or opportunity
- Production possibility curve indicates the combination of goods and services which can be produced when the communities resources are fully and efficiently employed
- Points outside the PPC = unattainable
- Points on the PPC = attainable
- Points inside the PPC = not efficiently employed
- Movement of PPC = principle of opportunity cost
- Rates of changes is shown in percentages
- Resources 3 types , natural, human and man made
- Positive statement – is an objective statement of fact
- Normative statement – involves an opinion or value judgment
- Non-durable goods – used only one
- Durable goods – long lasting
- Semi-durable – can be used more than once
- Capital goods – used to produce other goods – factories
- Final goods - consumed by individuals – loaf of bread
- Intermediate goods – used to produce other goods – flour to bake bread
- Private goods – consumed by individuals – food ,clothes

- Public goods – used by community at large – traffic lights
- Scarce or economic goods – produced at a cost from scarce resources
- Free goods – not scarce – air , sea water
- Homogenous goods – identical
- Heterogeneous goods – different varieties , qualities
- Money is not a factor of production but rather a means of exchange
- 4 factors of production – natural resources(land) , labour, capital , entrepreneurship and technology is the 5^{th} factor
- Entrepreneur is the driving force in the production process
- Capital is tangible things – goods – services intangible
- Interest = income earned from capital
- Wages and salaries = income earned from labour
- Profit = income earned from entrepreneurship
- Capital intensive production – dominated by machines
- Labour intensive production – dominated by labour
- Primary Factors of production – natural resources and labour
- Secondary Factors of production – capital and entrepreneurship
- Human resources – labour
- Non-human resources – natural resources and capital
- Labour defined as the exercise of human and mental and physical effort in the production of goods and services
- Public sector – government sector
- Private sector – the rest of the economy
- Traditional system – prescribed by custom and tradition, slow to adapt to changing conditions , stubbornly resists innovation
- Command system – central authority instructs what, how and for whom
- Market - is any contact of communication between potential buyers and sellers of a goods or service, not a specific place. Communication by means of phone, fax, computer etc.
- Requirements for a market to exist – must be 1 potential buyer, 1 potential seller, buyer must have means to buy, seller must have something to sell, market price, and agreement must be guaranteed by law or tradition.
- Market prices – are signals or indices of scarcity which indicate to consumers what they have to sacrifice to obtain the goods or service concerned
- Socialist system – Factors of production owned by state
- Capitalist system – Factors of production owned privately
- Privatization – assets sold to private sector
- Nationalization – privately owned assets taken over by the state
- 3 central questions – what, how and for whom?
- Stock variable – measured at a particular point in time
- Flow variable – measured over a period of time
- Goods market – markets for goods and services
- Factor market – markets for 4 factors of production (land,labour,capital &enterprise)
- Stock – wealth , assets, liabilities, capital , population

- Flow – income , profit, loss, investment, savings
- C = total consumption
- Firms – defined as the unit that employs factors of production to produce goods and services that are sold in the goods market
- Profit = difference between revenue and cost
- Capital formation = I
- Government expenditure = G
- Taxes = T
- Exports = X
- Imports = Z
- 2 markets in the economy – goods and factor markets
- Determinants of quantity demand – price of product , price of related products, income of consumer, size of household, taste or preference of consumer (Qd = Px, Pg,Y, T, N, ……)
- Law of demand states the higher the price of a good the lower the quantity demanded
- Substitute – is a good that can be used in place of another.
- Market demand curve – shows the relationship between the quantity demanded and price in the market. Shows the inverse relationship between the price and quantity demanded
- Complements – are goods that tend to be used jointly to satisfy a want– fish and chips
- Change in consumer income = change in demand
- Decrease in consumer income = leftward curve – decrease in demand
- Increase in consumer income = rightward curve – increase in demand
- Individual market supply determinants – the price, the price of alternative products, prices of Factors of Production and other inputs, expected future prices, the state of technology
- Qs = f (Px,Pg,Pe,Py)
- Excess supply = Qs > Qd
- Equilibrium = Qs = Qd
- Prices plays 2 functions – rationing function (prices serve to ration scarce supplies to those who place the highest value on them) , allocative function (excess supply results in falling prices and losses, which drives Factors Of Production from the activities concerned)
- Source of increase in demand – increase in the price of substitute product, decrease in the price of complementary product, increase in consumers income, greater consumer preference for product, expected increase in the price of a product .
- decrease in demand – above determinants decrease
- Government intervention – examples, setting maximum prices, setting minimum prices, subsidizing certain products or activities, taxing certain products or activities.
- Formula for Elasticity = percentage change in the QD of the product divided by percentage change in the price of the product
- Determinants of price elasticity of demand – substitution possibilities, degree of complementary of the product, the type of want satisfied by the product, the time period under consideration, the proportion of income

spent on a product, advertising ,durability, addiction, number of uses of product, the definition of the product.

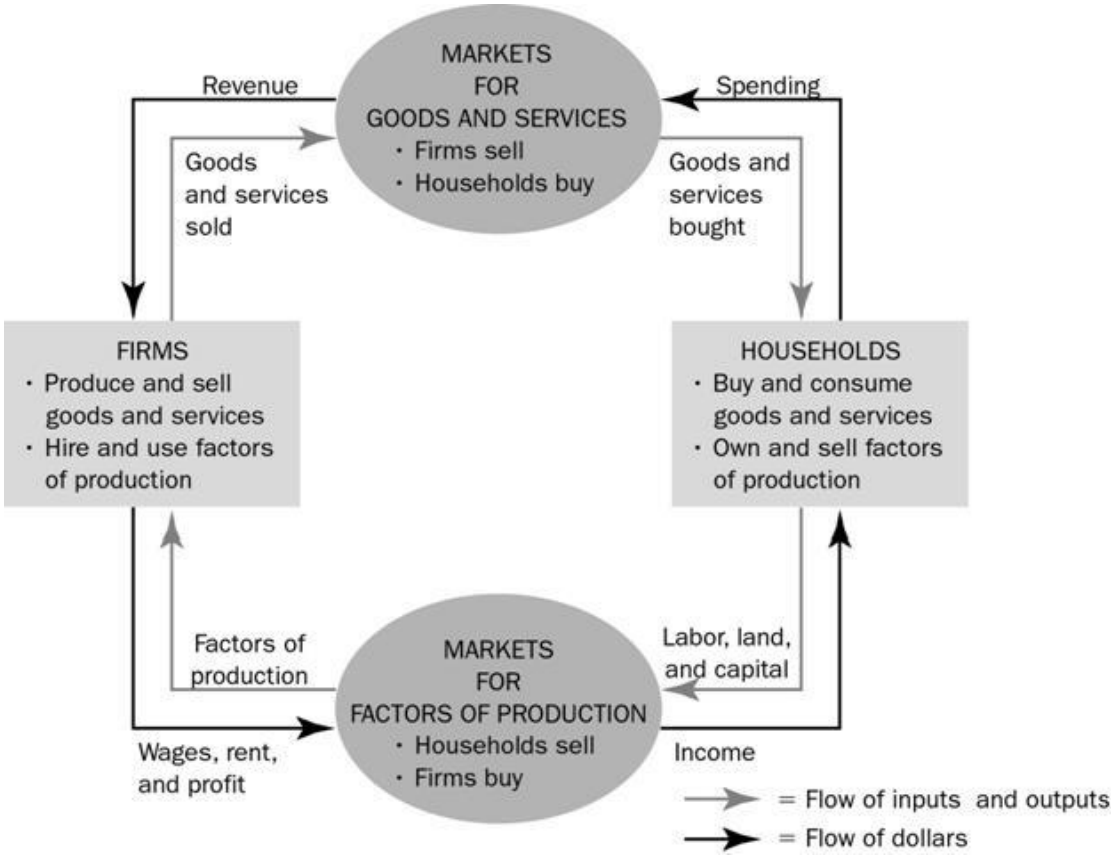
- Price elasticity of supply determinants – price expectations, stockpiling, excess capacity, availability of inputs
- Elasticity and a slope are not the same thing
- Utility – term used for consumer satisfaction
- Cardinal utility – involves the idea that utility can be measured in some way. Values can be assigned to the amount of satisfaction
- Ordinal utility – involves the ranking of different bundles of consumer goods and services in order of preference
- Indifference approach – size of utility differences cannot be established
- Law of marginal utility / Goosens first law – states that marginal utility of a good or services eventually declines as more of it is consumed during a given period.
- Opportunity cost – of a choice is the value to the decision maker of the best alternative that could have been chosen but was not chosen. In other words the opportunity cost of a choice is the value of the best forgone opportunity. Opportunity cost involves what we call a tradeoff between two goods. Opportunity cost captures the essence of the problems of scarcity and choice.
- Natural resources are a fixed supply ,cannot be increased ,quality and quantity are important
- Depreciation – provision made for replacement of existing capital goods
- Secondary sector = manufacturing part of economy, raw material and other inputs are used to produce other goods. Canning fruit and veggies, processing minerals , manufacturing goods
- Tertiary sector – services ,trade , transport, education, financial , personal
- Circular flow of goods and services – FIRM → GOODS MARKET → HOUSEHOLDS → FACTOR MARKET → FIRMS
- The household offer their Factors Of Production for sale on the factor market where these factors are purchased by the firms , firms combine these FOP and produce consumers goods n services , these goods and services are offered on sale to households in the goods market
- Consumers – members of the household
- Qd = (Px , Pg, Y, T, N …)
- Market demand – simply the sum of all the individual demands
- Demand curve – movement = slope , shift = position or intercept
- Fixing prices below the equilibrium = creates shortages, prevents the market mechanism from allocating the available quantity among consumers , stimulates black market activity
- Rent control – introduced to protect tenants from being exploited by the owners of rented accommodation
- Ep = price elasticity of demand – is the percentage change in the Qd if the price of the product changes by 1%
- Formula for Ep = % change in the Qd of a product ÷ % change in the price of the product = (change Q ÷ Q x 100) ÷ (change P ÷ P x 100) = (change Q ÷ Q) ÷ (change P ÷ P
- Utility – is simply a term of consumer satisfaction

- Scale of preferences – is a list of the tastes of the consumer in order of preference
- Demand curve – has a negative slope – as the price of a product falls Qd increases, and as the price increases , Qd decreases
- Possible exception to law of demand is the snob effect (example is the prices of expensive Rolex watches increases demand for these products will not necessarily decrease but rather increase.
- Indifference approach – does not require the measurement of marginal utility and allows us to distinguish between the income effect and the substitution effect of a price change
- The assumption of completeness or law of comparison – it is assumed that a consumer is able to rank all possible combinations/bundles of goods and services in order of preference.
- The assumption of consistency/transivity – consumers are assumed to act rationally
- The assumption of non-satiation/non-satiety – consumers are not yet fully satisfied and prefer more to less
- Indifference curve – is a curve which shows all the combinations of 2 products that will provide the consumer with equal satisfaction or utility. Properties are usually slope downwards from left to right, shows various combinations of 2 goods and services which yield the same level of consumer satisfaction level. cannot intersect. Used to analyze the choice between Factors Of production in the production process, choice between work and leisure, choice between consumption and saving.
- Law of substitution / law of diminishing marginal rate of substitution – the scarcer a good becomes the greater its substitution value will be
- Slope = vertical difference ÷ horizontal difference
- Profit = P – surplus of revenue over cost
- Total revenue = TR – total value of sales = P x Q
- Average revenue = AR = TR divided by Q sold
- Marginal revenue = MR – additional revenue earned by selling additional units
- Short run – as the period during which at least 1 of the inputs are fixed
- Long run – all the inputs are variable
- Explicit costs – the monetary payments for the Factors Of Production and other inputs bought or hired by the firm
- Implicit costs – opportunity costs which are not reflected in monetary payments
- Economic cost of production = explicit cost + implicit cost = opportunity costs
- Normal profit = the minimum return required by the firm to engage in a particular operation, forms part of firms cost of production.
- Total profit = TR – TEC (total explicit costs)
- Economic profit = TR – TC (explicit costs + implicit + normal profit)
- Average product – simply the average number of units of output produced per unit of the variable input – AP = TP (total product) ÷ N (number of variable input)

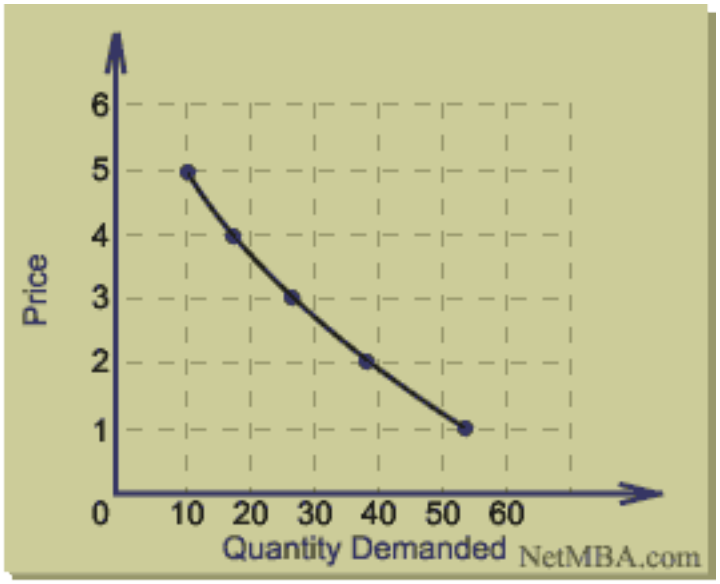
- Marginal product – is the number of additional units of output produced by adding 1 additional unit of the variable input
- Law of diminishing returns – as more of a variable input is combined with one or more fixed inputs in a production process , points will eventually be reached where first the marginal product , then the average product and finally the total product start to decline
- Average fixed cost = AFC = TFC ÷ TP
- AVC = TV C ÷ TP
- AC = TC ÷ TP or TC ÷ Q
- AFC = TFC ÷ TP or TFC ÷ Q
- AVC = TVC ÷ TP or TVC ÷ Q
- MC = d(TC) ÷ d(TP) or d(TC) ÷ Dq
- dTP = small change in TC & Dtp= small change in TP
- returns to scale – refers to the long run relationship between inputs and outputs
- constant returns of scale = % increase in inputs will give rise to the same % increase to outputs
- increasing returns of scale = % increase in inputs will lead to a larger % increase in outputs
- decreasing returns of scale = % increase in inputs will give rise to a smaller % increase in output
- Economies of scale – is experienced if cost per unit of output falls as the scale of production increases. Refers to a decline in unit costs as output expands. Economies of scale can be achieved by increasing the quantity or productivity of only one or a few of the inputs and where all the inputs are increased they do not necessarily have to increase by the same %
- Diseconomies of scale – occurs when unit costs rise as output increases. Can be classified into 2 broad groups internal and external economies of scale
- internal economies of scale – controlled by the firm inside
- external economies of scale– outside the firms control conditions if the industry
- examples of internal economies of scale – technical economies, indivisibilities, managerial organizational or administrative economies, market economies, financial economies,
- examples of internal diseconomies – managerial diseconomies, worker alienation, deteriorating industrial relations, other problems of mass production
- examples of external economies of scale – industry economies, general economies
- examples of external diseconomies – shortages, congestion
- economies of scope – cost saving is achieved by producing related goods in 1 firm rather than in 2 separate firms
- perfect competition curve – called demand curve for the product of the firm / firms sale curve/ firms demand curve/ demand curve facing the firm
- perfect competition represents clear and meaningful starting point for analyzing the determination of price and output

- Perfect Competition – no control over the price of the product , products must be homogenous, many buyers and sellers, perfect information and knowledge of market conditions,
- Monopolistic competition– consists of more than one firm , sale and price cannot be independent of each other, Demand Curve sloping downwards left to right, constrained by the demand for its product , economic profit is possible in both the long and short run , entry completely blocked
- Monopoly – many buyers and one seller, downward sloping curve left to right e.g. ESKOM
- Difference between monopolistic competition and monopoly – barriers to entry , entry not restricted in MC but completely blocked in M
- Difference between monopolistic competition and perfect competition – nature of product – MC – product is heterogeneous and PC product if homogenous
- Oligopoly – a few large firms dominate the market, duopoly – 2 firms in the industry, product may be homogenous but mostly heterogeneous, and most common market in modern economies, high degree of interdependence between firms, uncertainty, barriers to entry, acts strategically.
- Rates if changes usually indicated by %
- Factors Of Production – natural (land) , capital (machines , tools , buses, boats) , labour (people to construct building , people to render a service) , entrepreneurship (planning , organizing, decision making)
- Consumption – flow variable, investment – stock variable , capital – stock variable
- Supply curve – movements = changes in quantity supplied illustrated by movements along the supply curve
- Shifts on supply curve = changes in supply illustrated by shifts in the supply curve

Interaction between households & firms = Supply and Demand



Demand



Demand = the quantity of a good demanded by an individual (or household) in a particular period is a function of the price of the good, prices of related goods, the income of individual (or household), taste, the number of people in the household and any other possible influence.

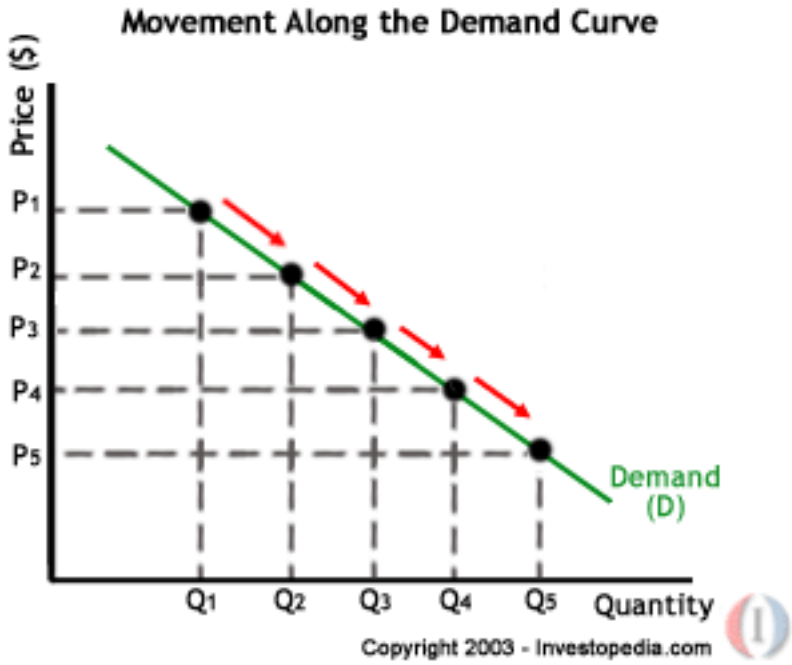
Demand Schedule and Demand Curve

Qd = f (Px, Pg, Y, T, N….)

- Qd = Quantity Demanded
- Px = Price of Good/Product
- Pg = Price of related goods
- Y = Household's income during period
- T = Taste of consumer
- N = Number of people in specific household
- …. = Allowance for other influences

Ceteris Paribus = All other things being equal
Demand curve illustrates the quantities demanded at different prices.
The inverse relationship is called the law of demand
Market demand is obtained by horizontal summation of individual demands.

Movement in Demand Curve

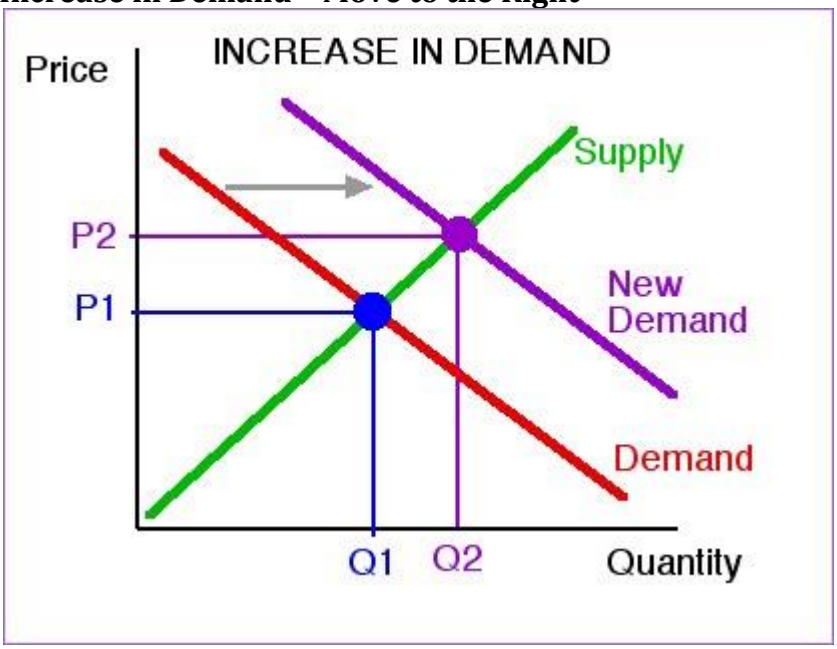


Movement along demand curve = Change in quantity demanded
If the price of the product changes there is a change in the quantity demanded which is called a change in the quantity demanded.

Shift in Demand Curve

Happens when a change in any of the determinants of demands change OTHER THAN PRICE.

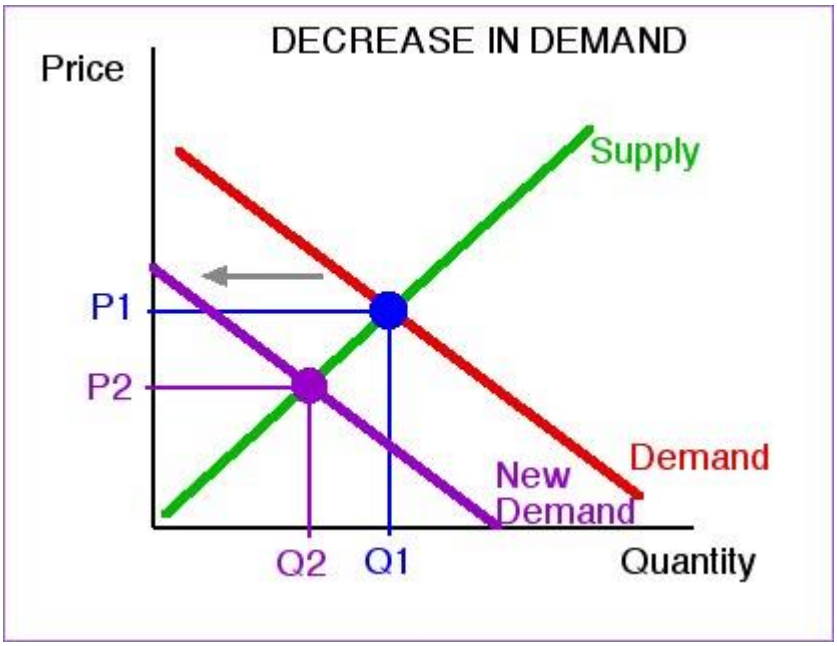
Increase in Demand – Move to the Right



Demand can increase (moving the demand curve to the right) if

- incomes of buyers are increased (normally, although this is not true for "inferior goods")
- substitutes become more expensive or less available
- complements become less expensive or more available
- number of consumers increases (due to population, demographics)
- fads, fashions, tastes and attitudes (emotion) make the good more popular
- information about the good (including advertising) increases desire for the good
- changes in the buyers' environment (weather, time of year, laws) makes the good more desirable to buyers
- buyers have an **expectation** of higher FUTURE price for the good

Decrease in Demand – Move to the Left

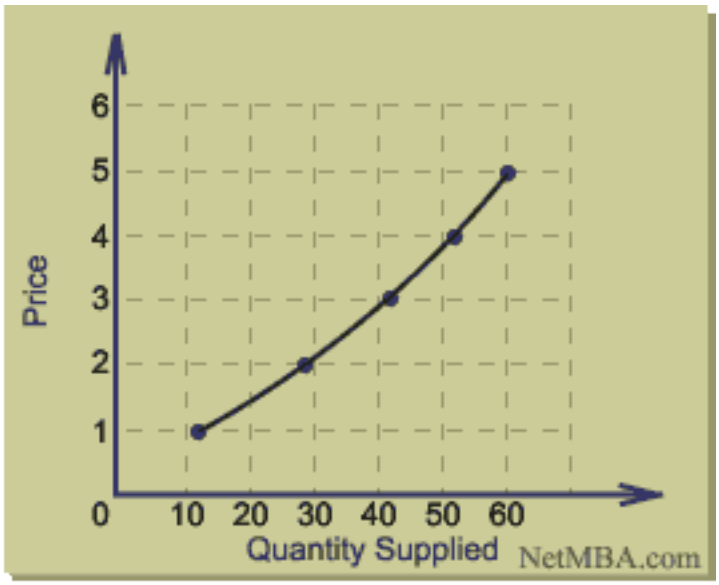


Demand can decrease (moving the demand curve to the left) if

- incomes of buyers are decreased (normally, although this is not true for "inferior goods")
- substitutes become less expensive or more available
- complements become more expensive or less available
- number of consumers decreases (due to population, demographics)
- fads, fashions, tastes and attitudes (emotion) make the good less popular
- information about the good (including advertising) decreases desire for the good
- changes in the buyers' environment (weather, time of year, laws) makes the good less desirable to buyers
- buyers have an expectation of lower FUTURE price for the good

Table 7-3 The Market Demand Curve – Summary

Supply



Supply = the quantities of a good or service that producers plan to sell at each possible price during a certain period.
Supply is determined by:

- Price of good – The higher the price, the more the producer wishes to sell
- Prices of alternatives – Producers must consider the prices of alternatives that they can produce with the same resources for more revenue.
- Prices of factors of production and other inputs – To make a profit costs need to be covered. If costs increase, fewer products will be supplied at the same cost as before. It will cost more to produce each quantity.
- Expected future prices – The higher the expected future price of the product, the more the producer will plan to produce.
- State of technology – New technologies that enable producers to produce at lower cost will increase the quantity supplied at each price.

Qs = f(Px, Pg, Pf, Pe, Ty)

- Qs = Quantity Supplied
- Px = Price of good
- Pig = Prices of alternative outputs
- Pf = Price of Factors of Production (FoP)
- Pe = Price of expected future prices
- Ty = Technology

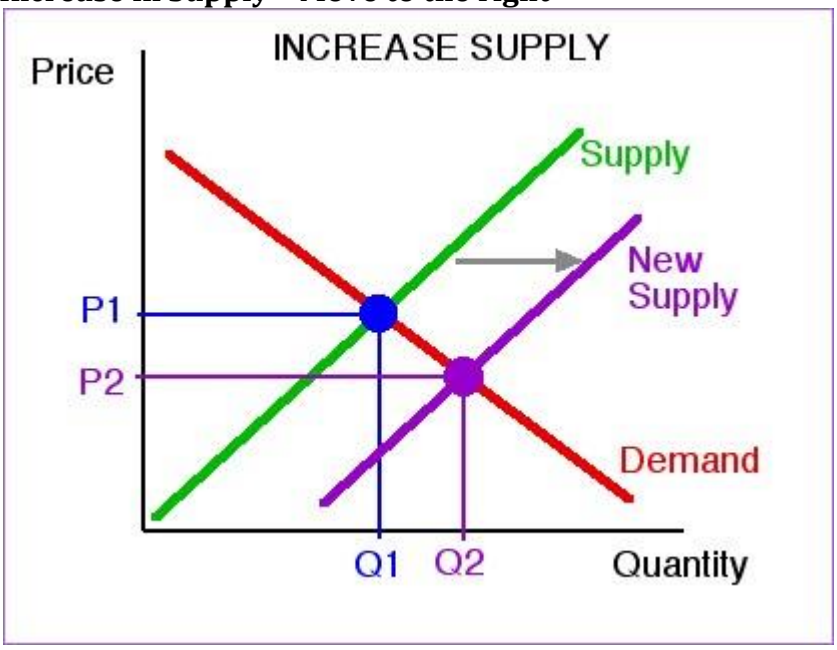
Movement in Supply Curve

Movement along supply curve = Change in quantity supplied
The Supply Curve shows that the quantity supplied will increase if the price increases, ceteris paribus.

Market Equilibrium
The market is in equilibrium when the quantity demanded is equal to the quantity supplied. When the plans of households (buyers, demanders) coincide with the plans of firms (sellers, suppliers).

Shift in Supply Curve

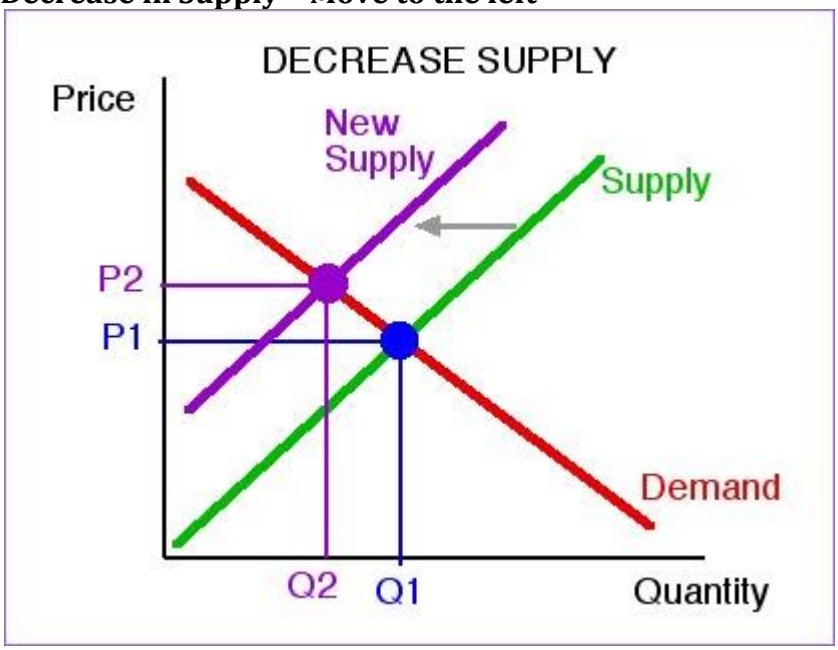
Increase in Supply – Move to the right



You may remember that supply can increase (moving the supply curve to the right) if

- COSTS ARE LOWER due to
- lower resource prices
- new technology for producing is used
- larger number of sellers
- favorable environment for producing or selling
- lower taxes

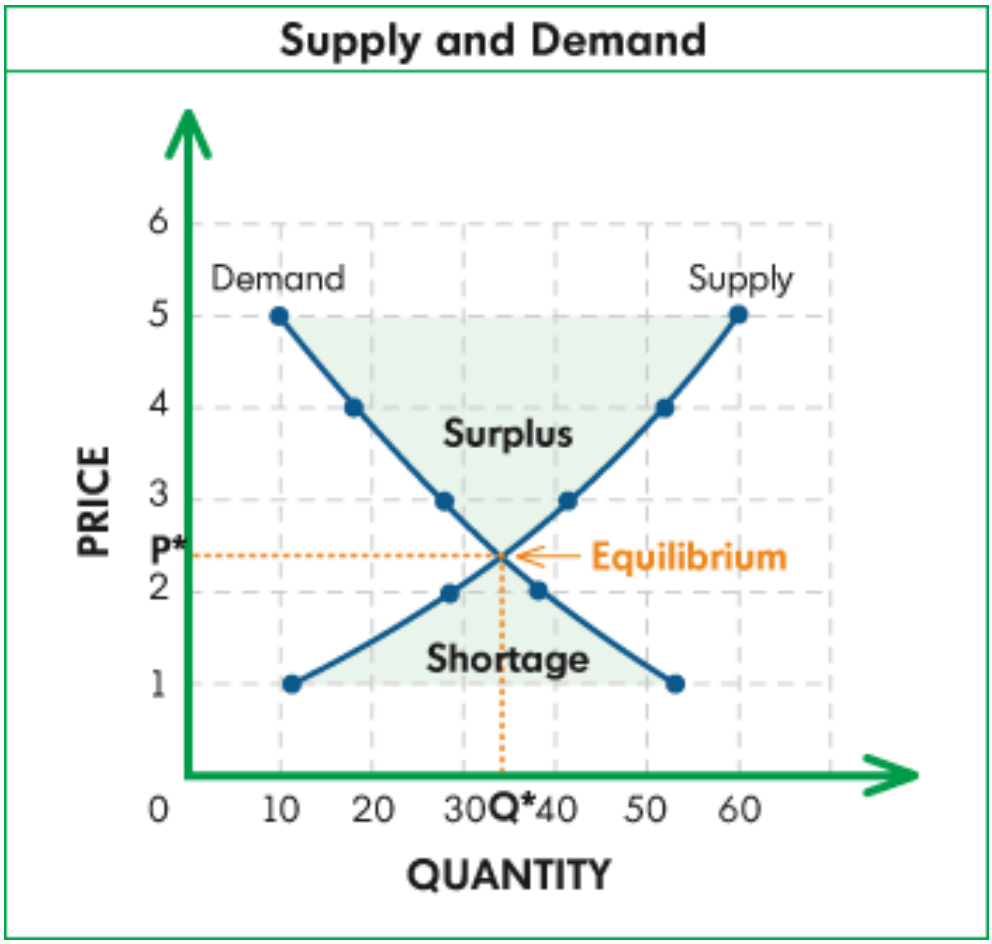
Decrease in Supply – Move to the left



Supply can decrease (moving the supply curve to the left) if

- COSTS ARE HIGHER due to
- higher resource prices
- smaller number of sellers
- unfavorable environment for producing or selling
- higher taxes

Demand, Supply and Market Equilibrium



The demand curve intersects the supply curve – This is equilibrium price. The equilibrium quantity is "Q".
At a price of 1, the quantity demanded is 53, and the quantity supplied is 10. The excess demand is the "Shortage" or in this instance 43.
At a price of 5, the quantity demanded is 10, and the quantity supplied is 60. The excess supply is the "Surplus" or in this instance 50.

1. Simultaneous Changes in Demand and Supply

When ONLY demand or ONLY supply changes, it is possible to predict what will happen to equilibrium prices and quantities in the market.
If demand AND supply change simultaneously, the precise outcome cannot be predicted.

Increase in demand = increase in equilibrium price
Decrease in supply = increase in equilibrium price
THEREFORE
An increase in demand AND decrease in supply = increase in equilibrium price
We CANNOT predict what will happen to the equilibrium quantity exchanged in the market.

2. Interaction between related markets

Fish and Meat - Substitutes

A decrease in the demand for fish is illustrated by a leftward (downward) shift of the demand curve. The equilibrium price and weekly traded quantity decreases. The increase in demand for meat is illustrated by a rightward (upward) shift of the demand curve. The equilibrium price and quantity traded increases.

Motorcars and tyres - Complements

An increase in the cost of a motorcar is illustrated by a leftward (upward) shift in the supply curve. The equilibrium price of motorcars will increase and the equilibrium quantity will decrease. With fewer motorcars being produced, the demand for new tyres (complimentary good) will decrease. This is illustrated by a leftward (downward) shift in the demand curve. As a result the equilibrium price and equilibrium quantity of tyres will decrease.

3. Government Intervention

When consumers, trade unions, farmers, businesses and politicians are not satisfied with prices and quantities determined by supply and demand, government may intervene through any of the following:

- Setting maximum prices (price ceilings)
- Setting minimum prices (price floors)
- Subsidizing certain products or activities
- Taxing certain products or activities

3.1. Maximum prices (price ceilings, price control)

Reasons for maximum prices:

- To keep prices of basic foodstuffs low to assist the poor
- To avoid exploitation of consumers by producers (“unfair” prices)

- To combat inflation
- To limit the production of certain goods or services in wartime

IF Maximum Price > Equilibrium (market-clearing) price, it will have no effect on price or quantity exchanged

IF Maximum Price < Equilibrium (market-clearing) price, quantity demanded will increase (higher than equilibrium), but suppliers will supply substantially less creating a market shortage (or excess demand). Managing this shortage is as follows:

- Consumers served on a "first come, first served" basis causing queues and waiting lists
- Suppliers may set up informal rationing systems (limits to each customer, or selling only to regular customers)
- Government may introduce an official rationing system (tickets, coupons etc.)

3.1.1. Black Markets

Consumers are willing to pay a certain price for a quantity of a good. If a consumer can purchase the good at a lower price there is a potential for a profit between the price willing to pay and actual purchase price by selling it to someone who wants the good (concert tickets is a good example).

Fixing prices below equilibrium price thus:

- Creates shortages (excess demand)
- Prevents market mechanism from allocating available quantity
- Stimulates black market activity by providing an incentive for people to obtain a good and resell it at a higher price to consumers who are willing to pay a higher price.

3.2. Agricultural prices

Agricultural prices fluctuate much more than prices of manufactured goods. Supply varies from season to season and is dependent on weather, alternative crops etc.

3.3. Minimum prices

Because demand for agricultural products is relatively stable and supply is subject to large fluctuations, prices tend to fluctuate causing unstable and uncertain income to farmers. Governments often introduce minimum prices (price floors), which serve as guarantees to producers.

IF Minimum Price < Equilibrium price, the operation of market forces in not disturbed.

IF Minimum Price > Equilibrium price, it creates a surplus (excess supply).

When government fixes prices above the equilibrium price, the following intervention is required:

- Government purchases the surplus and export it
- Government purchases the surplus and stores it (non-perishable)
- Government introduces production quotas to limit quantity supplied
- Government purchases and destroys the surplus
- Producers destroy the surplus

Elasticity

Elasticity is the measure of responsiveness or sensitivity. When variables are related, we often want to know how sensitive or responsive the dependent variable is to changes in the independent variable.

4 types of elasticity:

- Price elasticity of demand
- Income elasticity of demand
- Cross elasticity of demand
- Price elasticity of supply

1. Price Elasticity of Demand

Price elasticity of demand = the percentage change in the quantity demanded if the price of the product changes by 1%.

$$\text{Price Elasticity of Demand} = \frac{\text{Percentage change in the quantity Demanded of a product}}{\text{Percentage change in the price Of the product}}$$

EXAMPLE: If the price of a product changes by 5% and this results in a 10% change in the quantity demanded, then Price Elasticity = 10% / 5% = 2. This implies that a 1% change in the price of the product will lead to a 2% change in the quantity demanded.

Price elasticity is the ratio of the percentage change in the quantity to the percentage change in the price. This ratio is called elasticity coefficient. Elasticity coefficients enable us to compare how consumers react to changes in the prices of different goods and services.

Calculations

Calculate percentage change in quantity demanded

$$\text{Percentage change in the quantity demanded} = \frac{\text{Change in Quantity}}{\text{Quantity}} \times 100$$

Calculate percentage change in price of product

$$\text{Percentage change in the price of the product} = \frac{\text{Change in Price}}{\text{price}} \text{ X } 100$$

Price elasticity of demand is calculated as follows:

$$\text{Price elasticity of demand} = \frac{\text{Change in Quantity}}{\text{Change in Price}} \text{ X } \frac{\text{Price}}{\text{Quantity}}$$

NB: Between two price points we can get two separate answers, it is thus important to use the average of the two points as the basis of the calculation, so if price moves from 36 to 48, we use the average as a calculation i.e. (36 +48) / 2 = 42. Same goes for quantity calculation.

Arc Elasticity of Demand between 2 points

$$\text{Arc elasticity of demand} = \frac{(Q2 - Q1) / (Q1 + Q2)}{(P2 - P1) / (P1 + P2)}$$

Categories of price elasticity of demand

Perfectly Inelastic Demand ($e_p = 0$)

Inelastic Demand (e_p lies between 0 and 1)

Unit Elastic Demand ($e_p = 1$)

Elastic Demand (e_p lies between 1 and infinity)

Perfectly Elastic Demand (e_p = infinity)

NB: Price Elasticity of Demand = Elasticity Coefficient

Table 9-2 (Page 163) Price Elasticity of Demand: a Summary

Inelastic demand ($e_p < 1$): Salt, matches, toothpicks, cigarettes, bread, milk, petrol, electricity, water, eggs, potatoes, meat, postage stamps, medical care, legal service, car tyres etc.

Elastic demand ($e_p > 1$): Motor vehicles, mutton, furniture, entertainment, restaurant meals, overseas holidays, butter, chicken, veal, apples, peaches etc.

2. <u>Income Elasticity of Demand</u>

Income elasticity of demand measures the responsiveness of the quantity demanded to changes in income.

$$\text{Income Elasticity of Demand} = \frac{\text{Percentage change in the quantity Demanded of a product}}{\text{Percentage change in consumer's Income}}$$

Goods with a positive income elasticity of demand are called normal goods
Goods with a negative income elasticity of demand are called inferior goods
Income elasticity of demand > 1 THEN good is Luxury Good
Income elasticity of demand >0 AND <1 good is essential good

3. Cross Elasticity of Demand

Cross elasticity of demand measures the responsiveness of the quantity demanded of a particular good to the changes in the price of a related good.

$$\text{Cross Elasticity of Demand} = \frac{\text{Percentage change in the quantity Demanded of product A}}{\text{Percentage change in the Price Of Product B}}$$

In the case of substitutes (butter vs margarine) the cross elasticity of demand is positive. A change in the price of the product (butter) will lead to a change in the same direction in the quantity demanded of the substitute product.

In the case of complements the cross elasticity of demand is negative. A change in the price of one product (motorcars) will lead to a change in the opposite direction in the quantity demanded of the complimentary product (tyres).

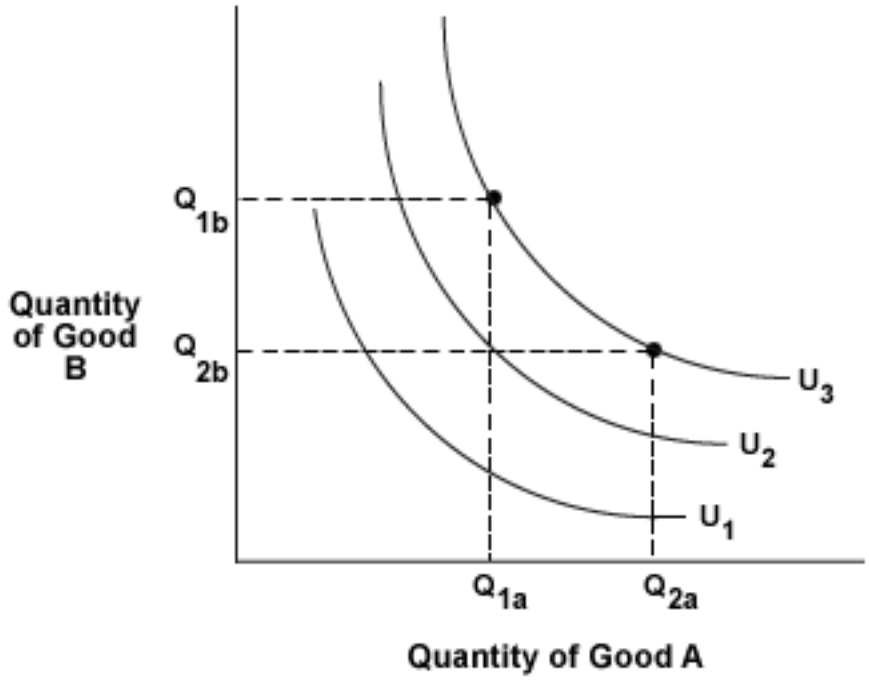
4. Price elasticity of supply

$$\text{Price Elasticity of Supply} = \frac{\text{Percentage change in the quantity Supplied of a product}}{\text{Percentage change in the Price Of the Product}}$$

The Indifference Approach

To explain indifference curves we assume a consumer consumes only two products, bread and meat. To the consumer it does not matter whether he gets one portion of meat and six loaves of bread per week or two portions of meat and three loaves of bread.

The combinations of satisfaction are drawn using an indifference curve.
This illustrates the law of substitution: The scarcer the good becomes, the greater its substitution value will be.

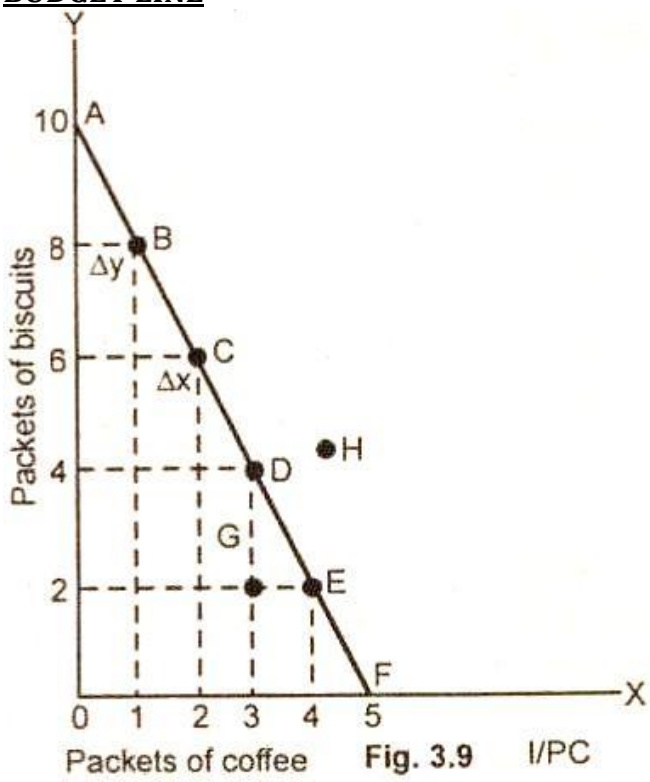


The slope of the indifference curve indicates the rate at which the consumer is prepared to sacrifice a small quantity of product A for a little more of product B. This rate is called **marginal rate of substitution (MRS)**

Perfect Complements = Goods that can only be used together eg. A two legged person with one left shoe will gain no additional satisfaction from more than 1 right shoe, and more than 1 left shoes will not increase his or her total utility.
Indifference curve will be L shaped

Perfect Substitutes = Consumer regards Sasol as a perfect substitute for Caltex.
Indifference curve is a straight line from left down to right.

BUDGET LINE

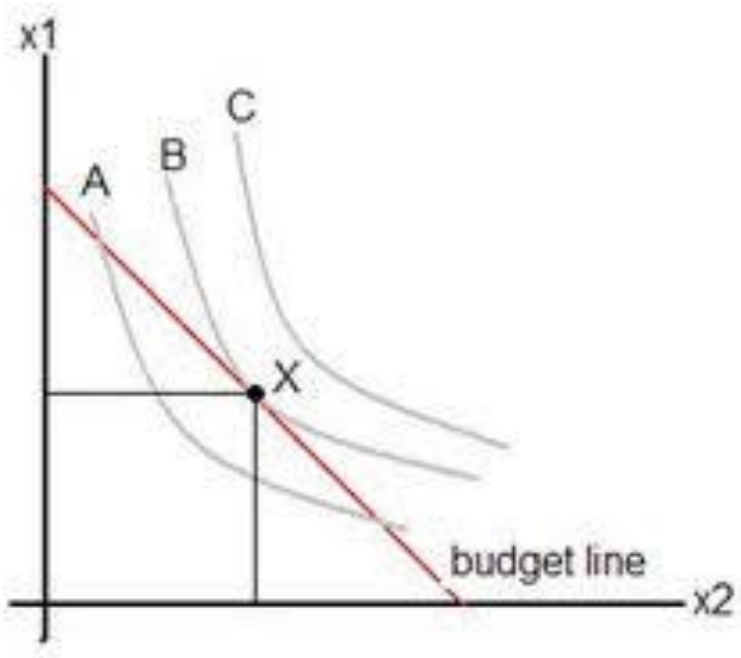


The budget line indicates all combinations of the two products that a consumer can afford to purchase with the income at his disposal.

Budget line = consumption possibilities curve = expenditure line = budget constraint.

When a consumer's income changes, the equilibrium quantities of the goods concerned do not always change in the same direction. In the case of a Normal good, an increase in income will result in an increase in the quantity demanded. When an increase in income causes a decrease in the quantity demanded, the good is called an inferior good.

Consumer equilibrium



The consumer is in equilibrium (ie obtains highest affordable level of satisfaction) where the highest indifference curve just touches the budget line

COSTS,PROFIT AND REVENUE

Total Revenue (TR) = Price (P) x Quantity (Q) or simply PQ
Average Revenue (AR) = PQ/Q
Marginal Revenue (MR) = Additional Revenue / Additional unit of product

Total (Accounting) Profit = Total Revenue – Total Explicit Costs

Economic Profit = Total Revenue – Total Costs (explicit and implicit), including normal profit

Production in the Short Run

Short run = A period in which at least one of the inputs is fixed. A fixed input is an input whose quantity cannot be altered in the short run.

In the short run, a firm can expand output only by increasing the quantity of its variable inputs.

There is a relationship between the quantity of the inputs and the maximum output that can be obtained from these inputs.

Costs in the Short Run

Fixed cost is formally defined as cost that remains constant irrespective of output produced.

Although the price of a unit if labour is given, the quantity of the labour is variable and therefore the cost of labour is also variable. Variable Cost is formally defined as cost that changes when total product changes.

Variable costs = direct costs = prime costs = avoidable costs

Cost Calculations

Marginal Cost

Marginal Cost is the cost a company incurs when producing one more good. Suppose we're producing two goods, and we would like to know how much costs would increase if we increase production to three goods. This difference is the marginal cost of going from two to three. It can be calculated by:

Marginal Cost (Unit 2 to 3) = Total Cost of Producing 3 – Total Cost of Producing 2.

MC = TC(3) – TC (2)

Total Cost

The total cost is simply all the costs incurred in producing a certain number of goods. If you're given marginal cost data instead of total cost data, you can compute the total by the example given in the marginal cost section.

TC(3) = TC(2) + MC(3)

Fixed Cost

Fixed costs are the costs that are independent of the number of goods you produce, or more simply the costs you incur when you do not produce any goods. Usually the value at 0 units.

FC = TC value @ 0 units

Total Variable Costs

These are just the opposite of fixed costs; these are the costs that do change when we produce more. We calculate the total variable cost of producing 4 units by:

Total Variable Cost of Producing 4 units = Total Cost of Producing 4 Units – Total Cost of Producing 0 units.

TVC(4) = TC(4) – FC

Average Total Costs
Our average total cost is our fixed costs over the number of units we produce. So if we produce five units our formula is:

Average Total Cost of Producing 5 = Total Cost of Producing 5 units / Number of Units

ATC = TC/Qty

Average Fixed Costs
Our average fixed cost is our fixed costs over the number of units we produce, given by the formula:

Average Fixed Cost = Fixed Costs / Number of Units

AFC = FC/Qty

Average Variable Costs
The formula for average variable costs is:

Average Variable Cost = Total Variable Costs / Number of Units

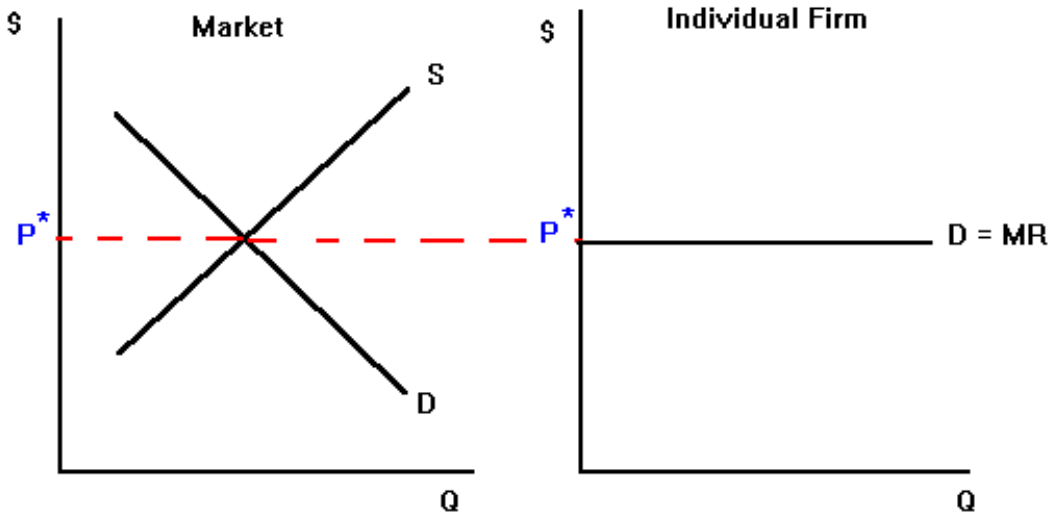
AVC = TVC/Qty

PERFECT COMPETITION

Perfect competition occurs when none of the individual market participants (buyers or sellers) can influence the price of the product.

Requirements for perfect competition:

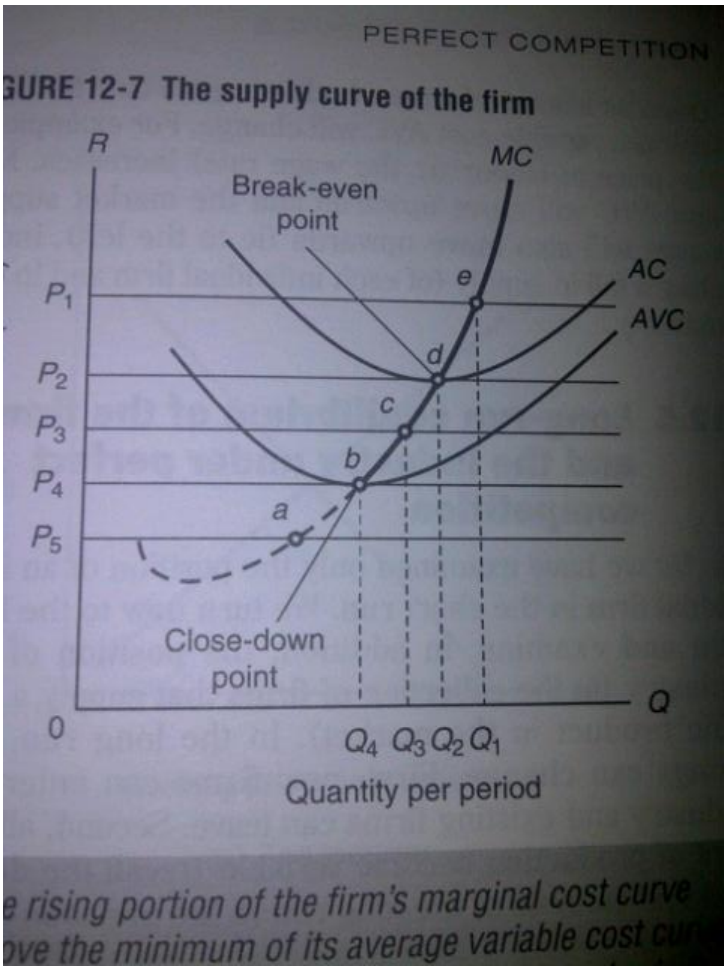
- Large number of buyers and sellers of the product
- No collusion between sellers – each must act independently
- All goods sold must be identical
- Buyers and sellers must be completely free to enter or leave the market
- All buyers and sellers must have perfect knowledge of market conditions
- There must be no government intervention
- All factors of production must be perfectly mobile



Graph on left shows that price of product is determined by demand and supply. The firm can sell its whole output at that price.

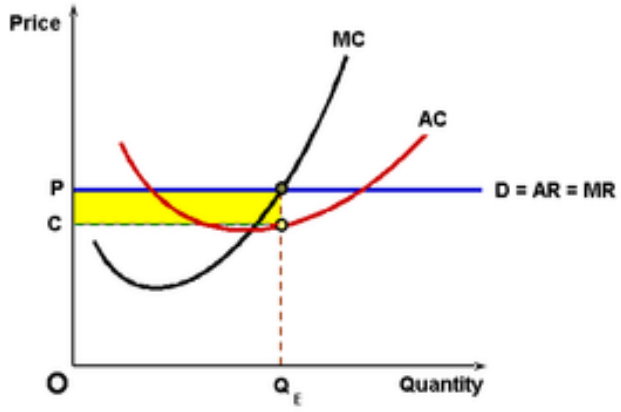
Graph on the right is the demand curve (which is perfectly elastic) for the product. Demand = Average Revenue = Marginal Revenue

SUPPLY CURVE OF THE FIRM

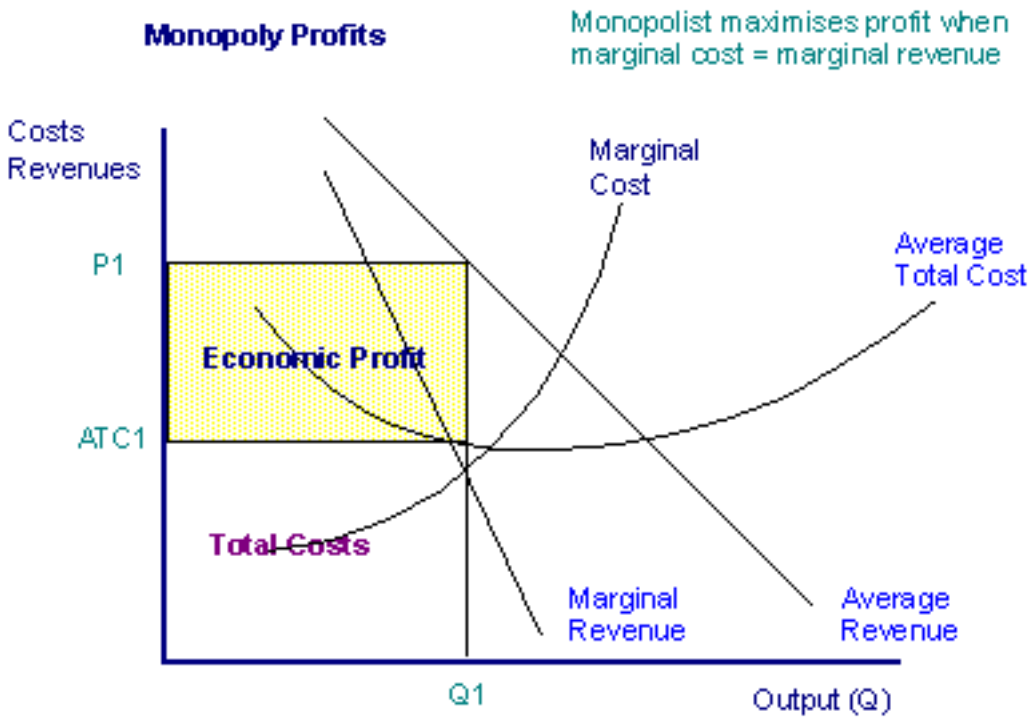


Close down point = MC curve below AVC intersection
Break-even point = MC curve intersection with AC (ATC)

Economic profit = Section between AC (ATC) and D=AR @ MR Intersection



MONOPOLY



To maximize profits, the monopolist has to produce where MR = MC

Features of monopolistic competition

- Each firm produces a distinctive, differentiated product
- Each firm faces a downward-sloping demand curve for its products

- Large numbers of firms operate in the industry
- There are no barriers for entry or exit.

Difference between monopolistic competition and monopoly lies in the barriers t entry. Entry is not restricted in monopolistic competition whereas it's blocked in the case of monopoly.

Difference between monopolistic competition and perfect competition is found in the nature of the product. Monopolistic competitors produce differentiated (heterogeneous) products. Perfectly competitive firms produce identical products.

LABOUR MARKET

Labour Market versus the goods market

Most important differences include:

- Workers have to be physically present when their services are used. Non-Monetary factors, such as location and working conditions, are more important in labour markets.
- Labour services are embodied in the person and are therefore not transferable
- Labour is always rented and not sold unlike goods market.
- Relationship between suppliers and demanders involves considerations such as humanity, loyalty, fairness etc.
- Labour markets are usually characterized by trade unions, associations, collective bargaining and government intervention.
- Labour is intrinsically heterogeneous and unlike goods cannot be classified or standardized
- There are a variety of labour markets/segments. There could therefore be a shortage of labour in a certain segment.
- Remuneration of labour does not only consist of price, but may include non-wage benefits such as housing, medical etc.
- Remuneration of labour is affected by many factors not directly related to labour market i.e. taxation.

Money wages = nominal wages = the amount of money ACTUALLY received by a worker per hour, day, week, month or year.

Real wages = The quantity of goods and services that can be purchased with the nominal or money wage. Real wages are the purchasing power of money wages.

Example: Money wage increase by 5%, consumer goods/services increase by 10% THEN the real wage actually declined by 5%.

Calculation of marginal revenue product of labour

# workers	Total Physical Product	Marginal Physical product	Price per product	Marginal revenue product
0	0	0	50	0
1	10	10	50	500
2	18	8	50	400

The market demand of labour

A shift in the market demand for labour could be as a result of:

- Number of firms (employers) change
- Price of a product changes – Change in price = change in demand
- Marginal Physical Product MPP (or productivity) of labour changes since this will change marginal revenue product (MRP)
- A new substitute for labour becomes available – Example automation
- Price of a substitute factor of production changes. Example price of machine decrease, employers may wish to replace labour workers with machines.
- Price of complimentary factors of production changes. Example price of trucks decrease which results in an increase in trucks and the requirement to increase the number of drivers.

GOOD LUCK 078 548 0303 jameszon31@gmail.com