Subject Taught by: Prof Moonga

Book: Indian Author – Mehta
Foreign Author - Salvator

Economics Basics: What Is Economics?

Economics may appear to be the study of complicated tables and charts, statistics and numbers, but, more specifically, it is the study of what constitutes rational human behavior in the endeavor to fulfill needs and wants.

As an individual, for example, you face the problem of having only limited resources with which to fulfill your wants and needs, so, with your money, you must make certain choices. You'll probably spend part of your money on rent, electricity, and food. Then you might use the rest to go to the movies and/or buy a new pair of jeans. Economists, interested in the choices you make, inquire into why, for instance, you might chose to spend your money on a new DVD player instead of a replacing your old TV. They would want to know whether you would still buy a carton of cigarettes if prices increased by $2 per pack. The underlying essence of economics is trying to understand how both individuals and nations behave in response to certain material constraints.

We can say then that economics, often referred to as the "dismal science," is a study of certain aspects of society. Adam Smith (1723 - 1790), the "father of modern economics" and author of the famous book *An Inquiry into the Nature and Causes of the Wealth of Nations*, spawned the discipline of economics by trying to understand why some nations prospered while others lagged behind in poverty. Others after him also explored how a nation's allocation of resources affects its wealth.

To study these things, economics makes the assumption that human beings will aim to fulfill their self-interests. It also assumes that individuals are rational in their efforts to fulfill their unlimited wants and needs. Economics is thus a social science examining people behaving according to their self-interests. The definition set out at the turn of the twentieth century by Alfred Marshall, author of *The Principles of Economics*, reflects the complexity underlying economics': "Thus it is on one side the study of wealth; and on the other, and more important side, a part of the study of man."

In order to begin our discussion of economics, we need first to understand (1) the concept of scarcity and (2) the two branches of study within economics: microeconomics and macroeconomics.

1. Scarcity

Scarcity, a concept we already implicitly discussed in the introduction to this tutorial, refers to the tension between our limited resources and our unlimited wants and needs. For an individual, resources include time, money, and skill. For a country, limited resources include natural resources, capital, labor force, and technology.

Because all our resources are limited in comparison to all our wants and needs, individuals and nations have to make decisions regarding what goods and services

they can buy and which ones they must forgo. For example, if you chose to buy one DVD as opposed to two video tapes, you must give up owning a second movie of inferior technology in exchange for the better-quality of the one DVD. Of course, each individual's and nation's values are different, but people and nations, each having different levels of (scarce) resources, form some of their values only because they must deal with the problem of scarcity.

So because of scarcity, people and economies must make decisions over how to allocate their resources. Economics, in turn, aims to study why we make these decisions and how we allocate our resources most efficiently.

2. Macro and Microeconomics

Macro and microeconomics are the two vantage points from which the economy is observed. Macroeconomics looks at the total output of a nation and the way the nation allocates its limited resources of land, labor, and capital in an attempt to maximize production levels and promote trade and growth for future generations. After observing the society as a whole, Adam Smith noted that there was an "invisible hand" turning the wheels of the economy, a market force that keeps the economy functioning.

Microeconomics looks into similar issues but on the level of the individual people and firms within the economy. It tends to be more scientific in its approach, and studies the parts that make up the whole economy. Analyzing certain aspects of human behavior, microeconomics shows us how individuals and firms respond to changes in price and why they demand what they do at particular price levels.

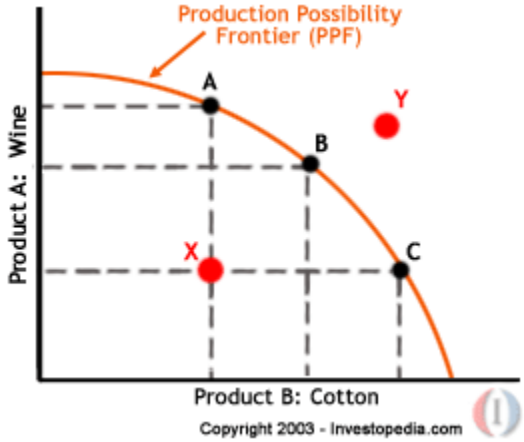
Micro and macroeconomics are intertwined, so as economists gain understanding of certain phenomena, they can help nations and individuals make more-informed decisions when allocating resources. The systems by which nations allocate their resources can be placed on a spectrum where the command economy is on the one end and market economy is on the other. The market economy advocates forces within a competitive market, which constitute the "invisible hand," to determine how resources should be allocated. The command economic system relies on the government to decide how the country's resources would best be allocated. In both systems, however, scarcity and unlimited wants force governments and individuals to decide how best to manage resources and allocate them in the most efficient way possible. However, there are always limits to what the economy and government can do.

A. Production Possibility Frontier (PPF)

Under the field of macroeconomics, the production possibility frontier (PPF) represents the point at which an economy is most efficiently producing its goods and services, and therefore allocating its resources in the best way possible. If the economy is not producing quantities indicated by the PPF, resources are being managed inefficiently, and the production of society will dwindle. The production possibility frontier shows there are limits to production, so an economy, to achieve efficiency, must decide what combination of goods and services can be produced.

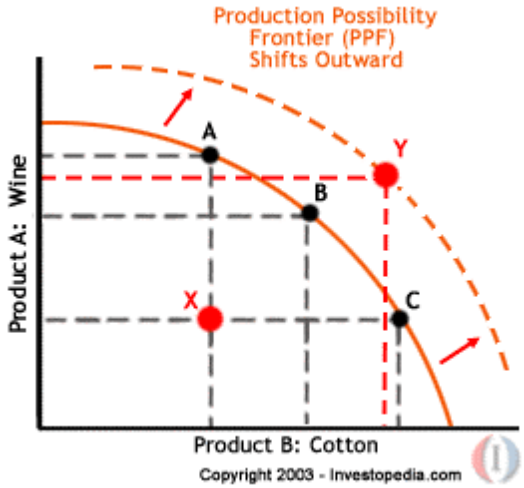
Let's turn to the chart below. Imagine an economy that can produce only wine and cotton. According to the PPF, points A, B and C—all appearing on the curve—

represent the most efficient use of resources by the economy. Point X represents an inefficient use of resources, while point Y represents goals that the economy cannot attain with its present levels of resources.



As we can see, in order for this economy to produce more wine, it must give up some of its resources used to produce cotton (point A). If the economy started producing more cotton (represented by points B and C), it would have to divert resources from making wine and consequently produce less wine than it is at point A. As you can see, by moving production from point A to B, the economy will have to decrease wine production a small amount in comparison to the increase in cotton output. However, if the economy moved from B to C, wine output would be significantly reduced while the increase in cotton would not be that much of a move. Keep in mind that A, B, and C all represent the most efficient uses of resources for the economy, and the nation must decide how to achieve the PPF and which combination to use. If more wine is in demand, the cost of increasing its output is proportional to the cost of decreasing cotton production.

Point X means that the country's resources are not being used efficiently, or, more specifically, given the potential of its resources, the country is not producing enough cotton or wine. Point Y, as we mentioned above, represents an output level that is currently unreachable by this economy. However, if there were a change in technology while the level of land, labor, and capital remained the same, the time required to pick cotton and grapes would be reduced. Output would increase, and the PPF would be pushed outwards. A new curve, on which Y would appear, would represent the new efficient allocation of resources:



When the PPF shifts out, we know there is growth in an economy. Alternatively, when the PPF shifts inwards, it indicates that the economy is shrinking as a result of a decline in its most efficient allocation of resources and optimal production capability. A shrinking economy could be a result of a decrease in supplies or a deficiency in technology.

An economy can be producing on the PPF curve only in theory. In reality economies constantly struggle to reach an optimal production capacity. And because scarcity forces an economy to forgo one choice for another, the slope of the PPF will always be negative: if production in product A increases, production in product B will have to decrease accordingly.

B. Opportunity Cost

Opportunity cost is the value of what is foregone in order to have something else. This value is personal to each individual. You may, for instance, forego ice cream in order to have an extra helping of mashed potatoes. For you, the mashed potatoes have a greater value than dessert. But you can always change your mind in the future since there may be some instances when the mashed potatoes are just not as attractive as the ice cream. The opportunity cost of an individual's decisions, therefore, is determined by his or her needs, wants, time, and resources (income).

This is important to the PPF because a country will decide how best to allocate its resources according to its opportunity cost. Thus, the previous wine/cotton example shows that if the country chooses to produce more wine than cotton, the opportunity cost is equivalent to the cost of giving up the required cotton production.

Let us look at another example, which will demonstrate how opportunity cost is the reason why an individual will buy the cheaper of two choices. Say an individual has a choice between two telephone services. If he or she were to buy the more expensive service, that person may have to reduce the number of times s/he goes to the movies each month. Giving up these opportunities to go to the movies may be a cost that is too high for this person, so he or she will then choose the cheaper service.

Remember that opportunity cost is different for each individual and nation. Thus, what is valued more than something else will vary among people and countries when decisions are made about how to allocate resources.

C. Trade, Comparative Advantage and Absolute Advantage

Specialization and Comparative Advantage
An economy can focus on producing all of the good and services it needs to function, but, this may lead to an inefficient allocation of resources and hinder future growth. By using specialization, a country, instead of dividing up its resources, could concentrate on the production of the one thing that, relative to itself, it can do best.

For example, let's look a hypothetical world that has only two countries (Country A and Country B) and two products (cars and cotton). Each country can make cars and/or cotton. Now, suppose that Country A has very little fertile land and an abundance of steel for car production. Country B, on the other hand, has an abundance of fertile land but very little steel. If Country A were to try to produce both cars and cotton, it would need to divide up its resources. Because it requires lots of effort to product cotton via the irrigation of land, Country A would have to sacrifice producing cars. The opportunity cost of producing both cars and cotton is high for Country A, who will have to give up a lot of capital in order to produce both. Similarly, for Country B, the opportunity cost of producing both products is high because the effort required to produce cars is greater than that of producing cotton.

So, each country can produce one of the products more efficiently (at less cost) than the other. Country A, who has an abundance of steel, would need to give up more cars than Country B would to produce the same amount of cotton. Country B would need to give up more cotton than Country A would to produce the same amount of cars. Thus, County A has a comparative advantage over Country B in the production of cars, and Country B has a comparative advantage over Country A in the production of cotton.

Now say the countries specialize in producing the goods with which they have a comparative advantage. If they trade the goods they produce for those goods in which they don't have a comparative advantage, both countries will be able to enjoy both products at a lower opportunity cost. Furthermore, each country will be exchanging the best product it can make for another good or service that is the best the other country can produce. Specialization and trade works also between many different countries. For example, if Country C specializes in the production of corn, it in turn can trade its corn for cars from Country A and cotton from Country B.

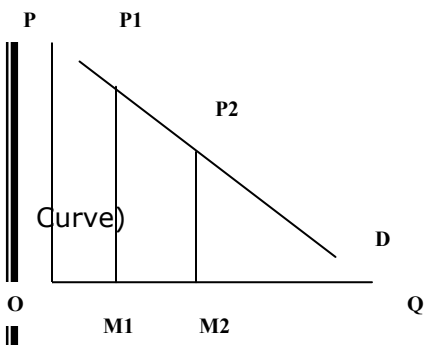
Determining how countries exchange goods produced by a comparative advantage ("the best for the best") is the backbone of international trade theory. This method of exchange is considered an optimal allocation of resources, whereby economies, in theory, would no longer be lacking any of their needs. Like opportunity cost, specialization and comparative advantage apply also to the way in which individuals interact within an economy.

Absolute ***Advantage***

Sometimes, a country or an individual can produce more than another country, even though both have the same amount of inputs. For example, Country A may have a technological advantage that, with the same amount of inputs (arable land, steel, labor), enables the country to manufacture more of both cars and cotton than Country B. A country that can produce more of both goods is said to have an absolute advantage. Better quality resources can give a country an absolute advantage as can a higher level of education and overall technological advancement. It is not possible, however, for a country to have a comparative advantage in everything that it produces, so it will always be able to benefit from trade.

In General as price increases the demand for that commodity falls & vice-versa, (in General-Ceteris Paribus)

Demand Rise – Price rice
Demand Falls – Price falls
Economics is a Social Science & they are all inexact science.



Explanation:

Price	**Demand**
P1M1	OM1
Price Falls	**Demand Falls**
P2M2	OM2

(both sliding on the same Demand Curve)

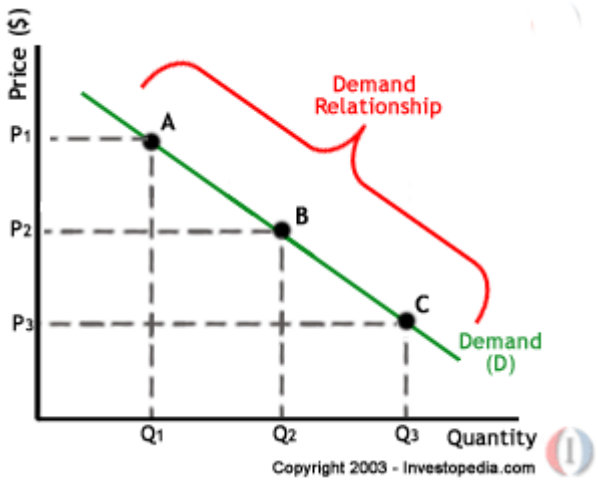
Economics Basics: Demand and Supply

Probably the most fundamental of concepts in economics, supply and demand make up the backbone of market economies. Demand refers to how much (quantity) of a product or service is desired by buyers. The quantity demanded is the amount of a certain product people are willing to buy at a certain price, and the relationship between price and quantity demanded is known as the demand relationship. Supply represents how much the market can offer. The quantity supplied refers to the amount of a certain good producers are willing to supply when receiving a certain price. The correlation between price and how much of a good or service is supplied into the market is known as the supply relationship. Price therefore, is a reflection of supply and demand.

The relationship between demand and supply underlie the forces behind the allocation of resources. In market-economy theories, demand and supply theory will allocate resources in the most efficient way possible. How? Let us take a closer look at the law of demand and the law of supply.

A. The Law of Demand

The law of demand states that, if all other factors remain equal, the higher the price, the less people will demand a good. In other words, the higher the price, the lower the quantity demanded. The amount buyers purchase at a higher price is less because, as the price of a good goes up, so does the opportunity cost of buying that good: people will naturally avoid buying a product that will force them to forgo the consumption of something else they value more. The chart below shows that the curve is a downward slope:



A, B and C are points upon the demand curve. Each point upon the curve reflects a direct correlation between quantity demanded (Q) and price (P). So, at point A, the quantity demanded will be Q1 and the price will be P1, and so on. The demand relationship curve illustrates the negative relationship between price and quantity demanded. The higher the price the less the quantity demanded (A), and the lower the price, the more quantity will be demanded (C).

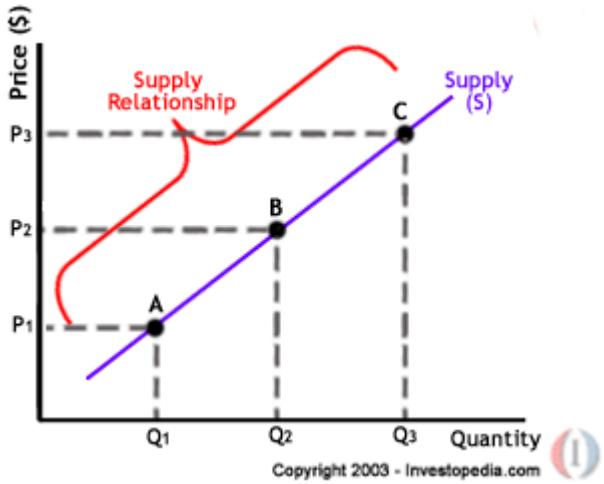
If the population rises, the quantity of goods purchased changes, but price will remain the same. If income rises than there is a structural change. Increase in Demand follows a shift in Demand curve. Whereas extension in Demand happens when it is on the same Demand curve.

As price rises Supply rise on the same Demand curve. Change in any variable other than price leads to increase and decrease in Demand.

Change in Price on the same Demand Curve will be extension or contraction of Demand.

B. The Law of Supply

Like the law of demand, the law of supply demonstrates the quantities that will be sold at a certain price. Opposite to the demand relationship, the supply relationship shows an upward slope. This means that the higher the price, the higher the quantity supplied. Producers supply more at a higher price because selling a higher quantity at a higher price offers greater revenues.



A, B and C are points upon the supply curve. Each point upon the curve reflects a direct correlation between quantity supplied (Q) and price (P). So, at point B, the quantity supplied will be Q2 and the price will be P2, and so on.

Time and Supply

Unlike the demand relationship, however, the supply relationship is a factor of time. Time is important to supply because suppliers must, but cannot always, react quickly to a change in demand or price. So it is important to try and determine whether a price change caused by demand will be temporary or more permanent.

Let's say there's a sudden increase in the demand and price for umbrellas in an unexpected rainy season; suppliers may simply accommodate demand by using their production equipment more intensively. If, however, there is a climate change, and the population will need umbrellas year-round, the change in demand and price will be expected to be more long term; suppliers will have to change their equipment and production facilities in order to meet the long-term levels of demand.

C. Supply and Demand Relationship

Now that we know the laws of supply and demand, let's turn to an example to show how supply and demand affect price.

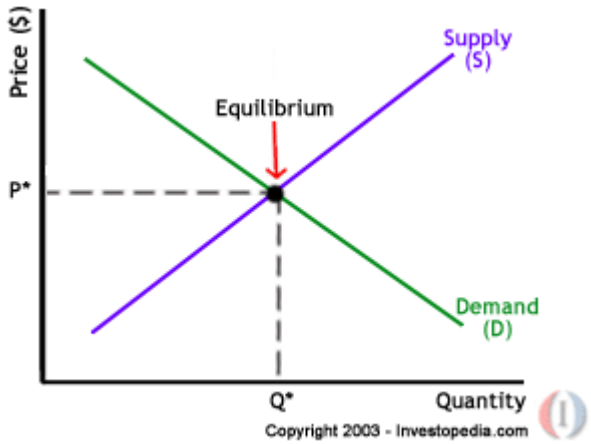
Imagine that a special edition CD of your favorite band is released for $20. Because the record company's previous analysis showed that consumers will not demand CDs at a price higher than $20, only ten CDs were released because the opportunity cost is too high for suppliers to produce more. If, however, the ten CDs are demanded by 20 people, the price will subsequently rise because, according to the demand relationship, as demand increases, so does the price. Consequently, the rise in price should prompt more CDs to be supplied as the supply relationship shows that the higher the price, the higher the quantity supplied.

If, however, there are 30 CDs produced and demand is still at 20, the price will not be pushed up because the supply more than accommodates demand. In fact after the 20 consumers have been satisfied with their CD purchases, the price of the

leftover CDs may drop as CD producers attempt to sell the remaining ten CDs. The lower price will then make the CD more available to people who had previously decided that the opportunity cost of buying the CD at $20 was too high.

D. Equilibrium

When supply and demand are equal (i.e. when the supply function and demand function intersect) the economy is said to be in equilibrium. At this point, the allocation of goods is at its most efficient because the amount of goods being supplied is exactly the same as the amount of goods being demanded. Thus, everyone (individuals, firms, or countries) is satisfied with the current economic condition. At the given price, suppliers are selling all the goods that they have produced and consumers are getting all the goods that they are demanding.



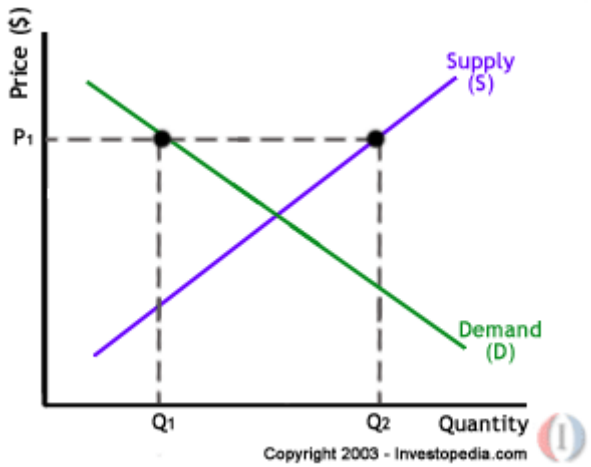
As you can see on the chart, equilibrium occurs at the intersection of the demand and supply curve, which indicates no allocative inefficiency. At this point, the price of the goods will be P* and the quantity will be Q*. These figures are referred to as equilibrium price and quantity.

In the real market place equilibrium can only ever be reached in theory, so the prices of goods and services are constantly changing in relation to fluctuations in demand and supply.

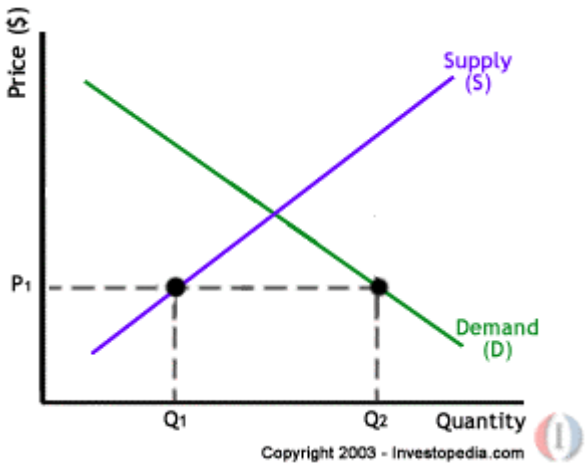
E. Disequilibrium

Disequilibrium occurs whenever the price or quantity is not equal to P* or Q*.

1. Excess Supply
   If price is set too high, excess supply will be created within the economy, and there will be allocative inefficiency.



2. At price P1 the quantity of goods that the producers wish to supply is indicated by Q2. At P1, however, the quantity that the consumers want to consume is at Q1, a quantity much less than Q2. Because Q2 is greater than Q1, too much is being produced and too little is being consumed. The suppliers are trying to produce more goods, which they hope to sell in hope of increasing profits, but those consuming the goods will purchase less because the price is too high, making the product less attractive.
3. Excess Demand
   Excess demand is created when price is set below the equilibrium price. Because the price is so low, too many consumers want the good while producers are not making enough of it.

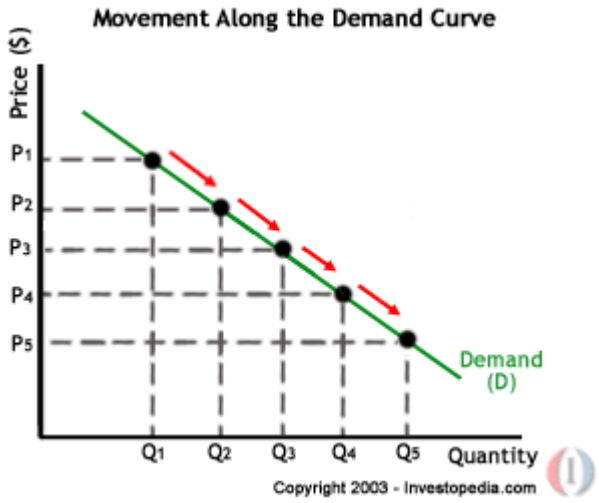


4. In this situation, at price P1, the quantity of goods demanded by consumers at this price is Q2. Conversely, the quantity of goods that producers are willing to produce at this price is Q1. Thus, there are too few goods being produced to satisfy the wants (demand) of the consumers. However, as consumers have to compete with one other to buy the good at this price, the demand will push the price up, making suppliers want to supply more, thereby bringing the price closer to its equilibrium.

F. Shifts vs. Movement

For economics, the "movements" and "shifts" in relation to the supply and demand curves represent very different market phenomena:

1. Movements – A movement refers to a change along a curve. On the demand curve, a movement denotes a change in both price and quantity demanded from one point on the demand curve to another point on the curve. The movement implies that the demand relationship remains consistent. Therefore, a movement along the demand curve will occur when the price of the good changes and the quantity demanded changes in accordance to the original demand relationship. In other words, a movement occurs when a change in quantity demanded is caused only by a change in price, and vice versa.



2. Like a movement along the demand curve, a movement along the supply curve means that the supply relationship remains consistent. Therefore, a movement along the supply curve will occur when the price of the good changes and the quantity supplied changes in accordance to the original supply relationship. In other words, a movement occurs when a change in quantity supply is caused only by a change in price, and vice versa.

3. Shifts – A shift in a demand or supply curve occurs when a good's quantity demanded or supplied changes even though price remains the same. For instance, if the price for a bottle of beer were $2 and the quantity of beer demanded increased from Q1 to Q2, then there would be a shift in the demand for beer. Shifts in the demand curve imply that the original demand relationship has changed, meaning that quantity demand is affected by a factor other than price. A shift in the demand relationship would occur if, for instance, beer were all of a sudden the only type of alcohol available for consumption.

Conversely, if the price for a bottle of beer were $2 and the quantity supplied decreased from Q2 to Q1, then there would be a shift in the supply of beer. Like a shift in the demand curve, a shift in the supply curve implies that the original supply relationship has changed, meaning that quantity supplied is affected by a factor other than price. A shift in the supply curve would occur, if, for instance, a natural disaster caused a mass shortage of hops: beer manufacturers would therefore be forced to supply less beer for the same price.

Economics Basics: Elasticity

The degree to which a demand or supply curve reacts to a change in price is the curve's elasticity. Elasticity varies among products because some may be more essential to the consumer. Products that are necessities are more insensitive to price changes because consumers would continue buying these products despite price increases. Conversely, a price increase of a good or service that is considered less of a necessity will deter more consumers because the opportunity cost of buying the product will become too high.

Elasticity means the power to come back to the Original Position. It is also known as responsiveness of demand for any commodity.

Foreg: Change in Price, changes demanding criteria.

Large Change means Demand Elastic
Small Change means Demand is Inelastic
No Change means Demand is Zero elasticity

A good or service is considered to be highly elastic if a slight change in price leads to a sharp change in the quantity demanded or supplied. Usually these kinds of products are readily available in the market and a person may not necessarily need them in his or her daily life. On the other hand, an inelastic good or service is one whose changes in price witness only modest changes in the quantity demanded or supplied, if any at all. These goods tend to be things that are more of a necessity to the consumer in his or her daily life. Demand for Diamond is highly inelastic.

To determine the elasticity of the supply or demand curves, we can use this simple equation:

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

e = Relative Change in Demand / Relative Change in Price

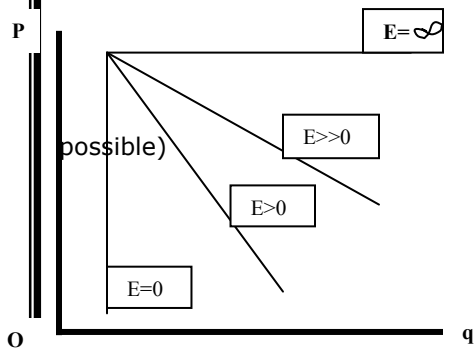
so,

$$e = \frac{dq/q}{dp/p} = \frac{dq}{dp} \times \frac{p}{q} \quad \text{---}$$

Note: Similarly, above formula can be applied for Elacticity of Supply, income, demand, etc.

Any two variable can be considered for calculation of elasticity.

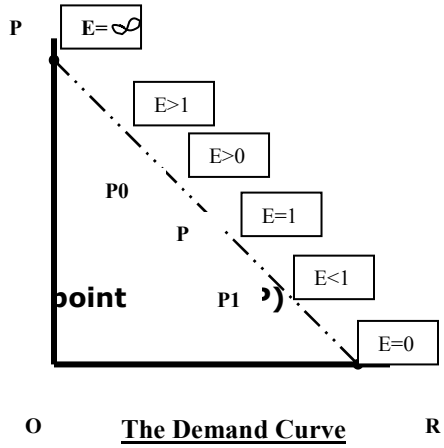
If elasticity is greater than or equal to 1, the curve is considered to be elastic. If it is less than 1, the curve is said to be inelastic.



∞ = slightest change the Demand changes significantly

m= constant e = 1 (elasticity is same on every point possible)

e=0 (for eg: food, salt, etc.)

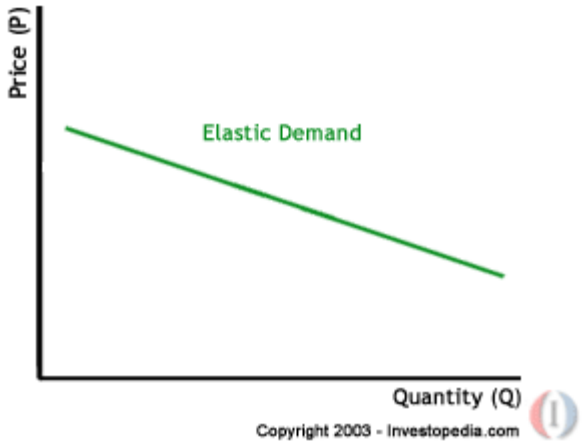


The Demand Curve

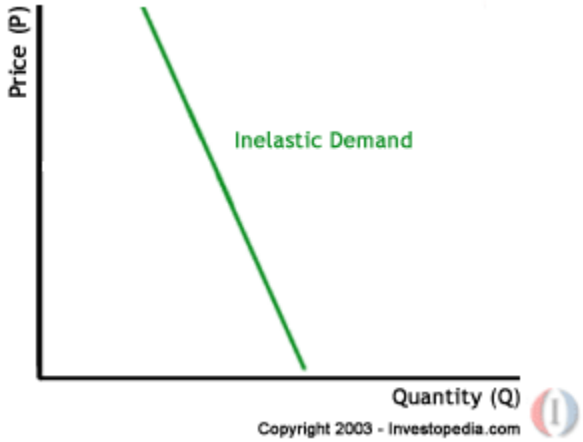
$$ep = \frac{PR}{PS} \quad \text{(formula for any point P)}$$

$$ep_1 = \frac{P_1R}{P_1S}$$

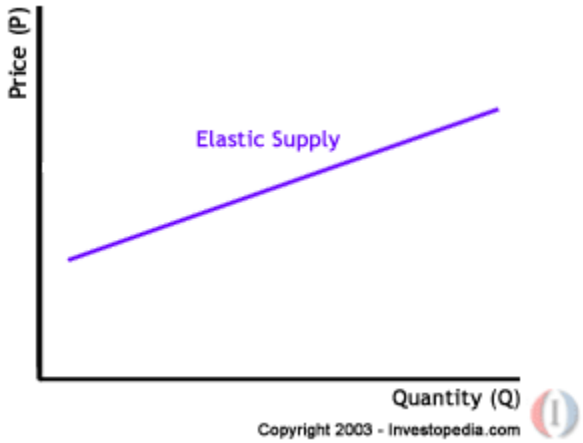
As we mentioned previously, the demand curve is a negative slope, and, if there is a large decrease in the quantity demanded with a small increase in price, the demand curve looks flatter, or more horizontal. This flatter curve means that the good or service in question is elastic.



Meanwhile, inelastic demand is represented with a much more upright curve as quantity changes little with a large movement 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 flatter and is considered elastic. Elasticity in this case would be greater than or equal to 1.



On the other hand, if a big change in price only results in a minor change in the quantity supplied, the supply curve is steeper, and its elasticity would be less than one.

A. Factors Affecting Demand Elasticity

There are three main factors that influence a demand's price elasticity:

1. The availability of substitutes - This is probably the most important factor influencing the elasticity of a good or service. In general, the more substitutes, the more elastic the demand will be. For example, if the price of a cup of coffee went up by $0.25, consumers could replace their morning caffeine with a cup of tea. This means that coffee is an elastic good because a raise in price will cause a large decrease in demand as consumers start buying more tea instead of coffee.

However if the price of caffeine were to go up as a whole, we would probably see little change in the consumption of coffee or tea because there are few substitutes for caffeine. Most people are not willing to give up their morning cup of caffeine no matter what the price. We would thus say that caffeine is an inelastic product because of its lack of substitutes. Thus, while a product within an industry is elastic due to the availability of substitutes, the industry itself tends to be inelastic. Usually, unique goods such as diamonds are inelastic because they have few if any substitutes.

2. Amount of income available to spend on the good - This factor affecting demand elasticity refers to the total a person can spend on a particular good or service. Thus, if the price of a can of coke goes up from $0.50 to $1.00 and income stays the same, the income that is available to spend on coke, which is $2.00, is now enough for only two rather than four cans of coke. In other words, the consumer is forced to reduce his or her demand of coke. Thus if there is an increase in price and no change in the amount of income available to spend on the good, there will be an elastic reaction in

demand: demand will be sensitive to a change in price if there is no change in income.

3. Time - The third influential factor is time. If the price of cigarettes goes up $2.00 per pack, a smoker, with very little available substitutes, will most likely continue buying his or her daily cigarettes. This means that tobacco is inelastic because the change in the quantity demand will have been minor with a change in price. However, if that smoker finds that he or she cannot afford to spend the extra $2 per day and begins to kick the habit over a period of time, the price elasticity of cigarettes for that consumer becomes elastic in the long run.

B. Income Elasticity of Demand

In the second factor outlined above, we saw that if price increases while income stays the same, demand will decrease. If follows then, that, if there is an increase in income, demand tends to increase as well. The degree to which an increase in income will cause an increase in demand is called income elasticity of demand, which can be expressed in the following equation:

$$EDy = \frac{((Q\ current - Q\ previous) / (Q\ previous))}{((Y\ current - Y\ previous) / Y\ previous))}$$

ED = Elasticity of Demand
Q = Quantity
Y = Income
EDy = Income Elasticity of Demand

If EDy is greater than 1, demand for the item is considered to have high a income elasticity. If however EDy is less than 1, demand is considered to be income inelastic. Luxury items usually have higher income elasticity because when people have a higher income, they don't have to forfeit as much to buy these luxury items. Let us look at an example of a luxury good: air travel.
Bob has just received a $10,000 increase in his salary, giving him a total of $80,000 per annum. With this higher purchasing power, he decides that he can now afford air travel twice a year instead of his previous once a year. Products for which the demand decreases as income increases have an income elasticity of less than 0. Products that witness no change in demand despite a change in income usually have an income elasticity of 0--these goods and services are considered necessities.

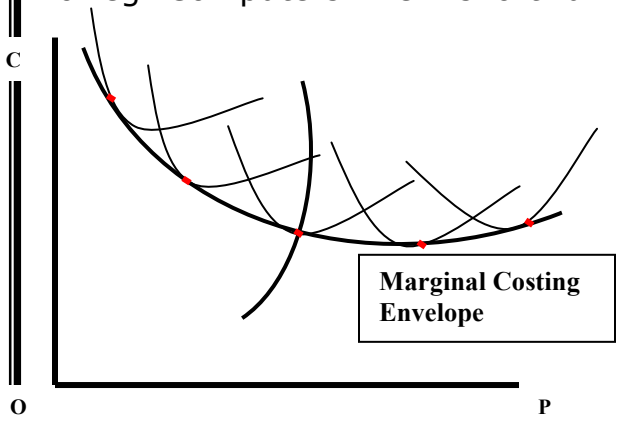
Economics Basics: Marginal Costing

Marginal Cost of Labour
_____= Partial Marginal Cost of LAbour
Total Marginal Cost

***Similarly for Capital, Machinery etc, can be calculated*

Economies of Scale – Labour, Managerial, Technical, Financial, Monetary

For eg: Computers hire – short run curve, and then go for new model



Economics Basics: Utility

We have already seen that the focus of economics is to understand the problem of scarcity: the problem of fulfilling the unlimited wants of humankind with limited and/or scarce resources. Because of scarcity, economies need to allocate their resources efficiently. Underlying the laws of demand and supply is the concept of utility, which represents the advantage or fulfillment a person receives from consuming a good or service. Utility, then, explains how individuals and economies aim to gain optimal satisfaction in dealing with scarcity.

Utility is an abstract concept rather than a concrete, observable quantity. The units to which we assign an "amount" of utility, therefore, are arbitrary, representing a relative value. Total utility is the aggregate sum of satisfaction or benefit an individual gains from consuming a given amount of goods or services in an economy. The amount of a person's total utility corresponds to the person's level of consumption, and usually the more the person consumes, the larger his or her total utility will be. Marginal utility is the additional satisfaction, or amount of utility, gained from each extra unit of consumption.

Although total utility usually increases as more of a good is consumed, marginal utility usually decreases with each additional increase in the consumption of a good. This decrease demonstrates 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. In other words, total utility will increase at a slower pace, as an individual increases the quantity consumed.

Take for example a chocolate bar. Let us say that after eating one chocolate bar your sweet tooth has been satisfied. So, your marginal utility (and total utility) after eating one chocolate bar 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—probably because you are starting to feel full or you have had too many sweets for one day.

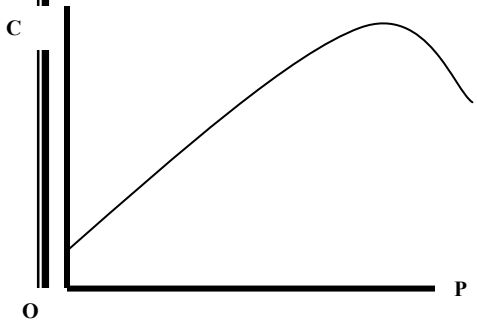
Chocolate Bars Eaten	Marginal Chocolate Utility	Total Chocolate Utility
0	0	0
1	70	70
2	10	80
3	5	85
4	3	88

This table shows that total utility will increase at a much slower rate as marginal utility diminishes with each additional bar. Notice how the first chocolate bar gives a total utility of 70 but the next three chocolate bars together increase total utility by only 18 additional units.

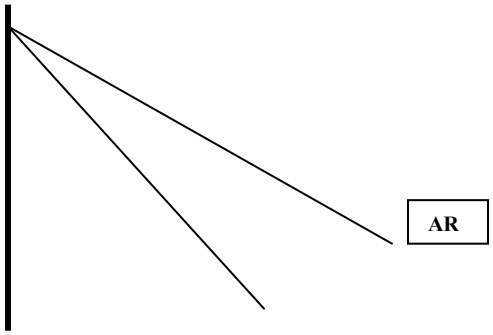
The law of diminishing marginal utility helps economists understand the law of demand and the negative sloping demand curve. The less of something you have, the more satisfaction you gain from each additional unit you consume; the marginal utility you gain from that product is therefore higher, giving you a higher willingness to pay more for it. This is why prices are lower at a higher quantity demanded: your additional satisfaction diminishes as you demand more.

In order to determine what a consumer's utility and total utility are, economists turn to consumer demand theory, which studies consumer behavior and satisfaction. Economists assume the consumer is rational and will thus maximize his or her total utility by purchasing a combination of different products rather than more of one particular product. Thus, instead of spending all of your money on three chocolate bars, which gives you a total utility of 85, you should rather, purchase the one chocolate bar, which has a utility of 70, and perhaps a glass of milk, which has a utility of 50. The combination would give you a maximized total utility of 120 but would cost the same as the three chocolate bars.

Revenue Curve (Price will start falling is called Price curve)



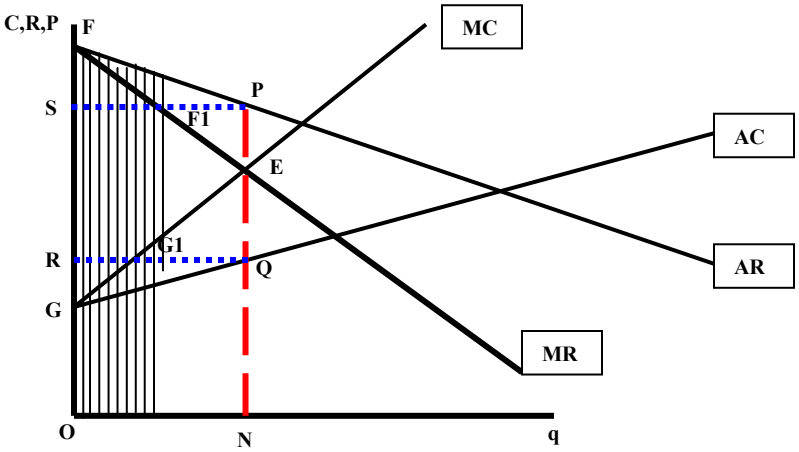
Demand Curve & Price Curve are Same



The curve can be drawn on the basis of the mathematical calculations and representation

RULE: When Average Revenue falls Marginal Revenue falls faster then cost

Revenue & Cost Curve combined



For equilibrium MC&MR = e

IImax = EFG

- Σ MRe
- Σ MCe

Conditions:

1. MR=MC
2. MC Curve cuts MR curve from below
3. PN = price
4. QN = Price } average
5. PQ = AR – AC (i.e. PQ = Average Revenue – Average Cost) at equilibrium point
6. PQ = PN – QN
7. (PQ) = (A1R1) – (A1C1)
8. ON is goods sold as against PN is price
9. Total Point at equilibrium PQ X ON = PQ X RQ
   ∴ **PQXON = PQXRQ = PQRS**

Conclusion:

IImax = EFG
= PQRS
= UV
= R = dR
----
dQ

Monopolies, Oligopolies and Perfect Competition

Economists assume there are a number of different buyers and sellers in the marketplace. This means that we have competition in the market, allowing for changes in price with changes in demand and supply. Furthermore, for almost every product, there are substitutes, so if one product becomes too expensive, a buyer can choose a cheaper substitute instead. In a market with many buyers and sellers, both the consumer and supplier have equal ability to influence price.

In some industries, there are no substitutes and there is no competition. In a market that has only one or few suppliers of a good or service, the producer(s) can control price, meaning that a consumer does not have choice, cannot maximize his or her total utility, and has have very little influence over price.

A monopoly is a market structure in which there is either only one producer/seller for a product. In other words, the single business IS the industry. Entry into such a market is restricted due to high costs or other impediments, which may be economic, social, or political—for instance, a government can create a monopoly over an industry that it wants to control, such as electricity. Another cause for barrier against entry into a monopolistic is an entity's exclusive rights over a natural resource. 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 or patent that prevents others from entering the market. Pfizer, for instance, had a patent over Viagra.

In a market structure of an oligopoly there are only a few firms that make up an industry. The few firms making up the industry have control over the price, and, like a monopoly, an oligopoly has high barriers to entry. The products are almost identical and thus the companies, competing for market share, are interdependent via market forces. If, for example, an economy needs only 100 widgets but Company X produces 50 and its competitor, Company Y, produces the other 50, the prices of the two brands will be interdependent upon one another and therefore similar. So, if Company X starts selling the widgets for cheaper, it will get a greater market share and force Company Y also to sell for cheaper.

The two extreme forms of market structure are a monopoly on one end, and perfect competition on the other. Perfect competition is characterized by many buyers and sellers, and many products that are similar in nature and hence many substitutes. Perfect competition means there are few if any barriers to entry for companies, and prices are determined by supply and demand. Thus, producers in a perfectly competitive market are subject to the prices determined by the market and do not have any leverage. For example, in a perfectly competitive market, should one single firm decide to increase its selling price of a good, the consumers

C

can just to turn to the nearest competitor for a better price, and the firm that increased its prices would be losing market share and profits.

CMC

n=1 Seller Monopoly

n=2 Sellers Duopoly

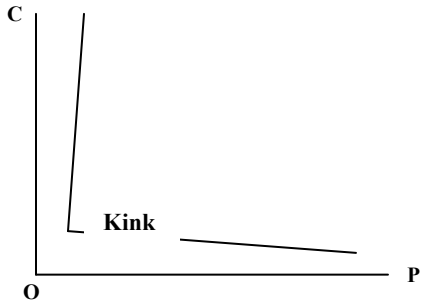
n=Several seelers Monopolistic Competition

n= ∞ many sellers Perfect Competition

Monopoly cannot exist in competitive world. This country consists 55% of black money

Duopoly – 2 prisoners, for eg: If one seller lowers the price than other has to lower the price. But if vice-versa then the other need not raise the price. (Wholle sale market) Kink collision. Duopoly also cannot exist in the competitive modern world.

Reaction Curve



Money is easy

- Collusion takes a variety of orms
- Sharing the market
- Fixing the prices
- Sharing the total sales with a limit
- Sharing profits
- Maximisation of profits

Monopolistic Competition

These companies have its Monopoly but at the same time it is also competing with other cos.

- Product Competition
- Advertising – incurs cost
- Product Differentiation (advertising, Sales Promotion, USP selling – for.eg. Colgate)

In any monopolistic competition market there are many sellers & many buyers

Perfect Competition

One single homogenous commodity. No transport cost and Prise is the same everywhere

But Perfect Competition is highly impossible, it never exists. But we need to consider, some inelastic situation for other competitions. Hence, all other are imperfect competitors

Oligopoly

No. Buyers are large, No. of sellers are large.

For e.g: FMCG Laptop

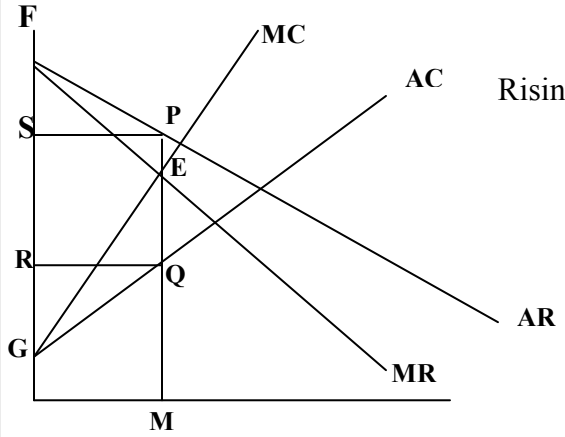
Marginal Cost (MC) $= \frac{dc}{dq}$

Marginal Revenue (MR) $= \frac{dc}{dq}$

It follows that for maximum profit a firm should have MR=MC of dr/dq = dc/dq.
Profit = R-C for IImax

Now all the major products have taken picture of Monopolistic Competition.

Can Monopolistic make profit cost is constant ? P,R,C



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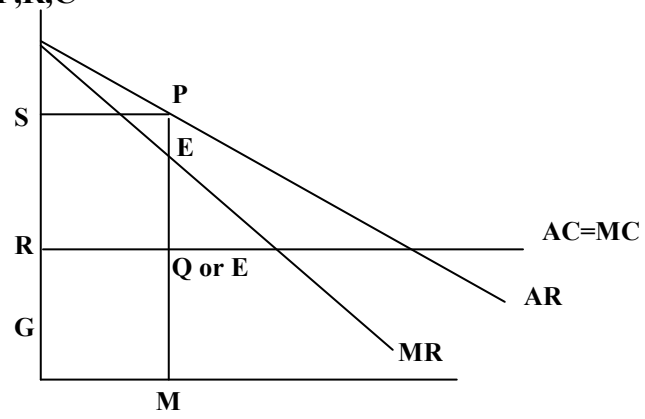
Normal profit is actually zero profit, but this is the profit were co. needs to survive. The Monopoly can make supernatural profit the AC increases when AC is constant or falling AC.

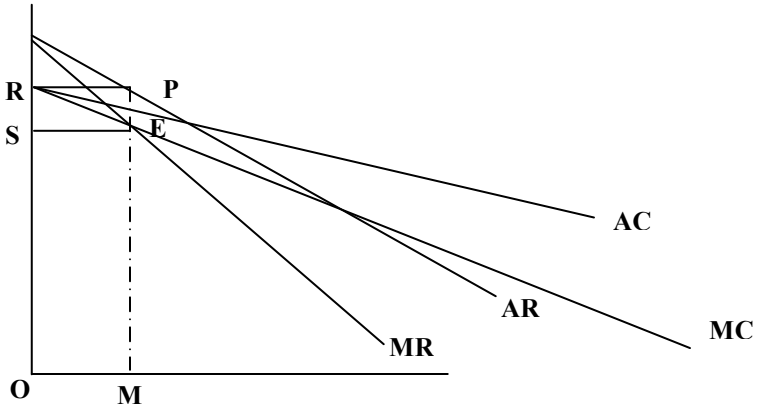
P,R,C



Constant AC when AC=MC

Monopoly can be supernatural profit the AC rising when AC is constant or falling AC

Rule No. 1 for drawing the diagram above is,
MR=MC
MC curve must cut the MR curve from below (left side)



In all the above cases the Monopolist will make his share of maximum profit

Monopolists are always special position, he can be of different types, he can charge incerse n price but not on the cost of consumers. Monopolistic marketers are always on the way of maximizing profit.

Monopolist canoot be perfect competition can decide to sell goods at lower price but very rarely.

Price Discrimination

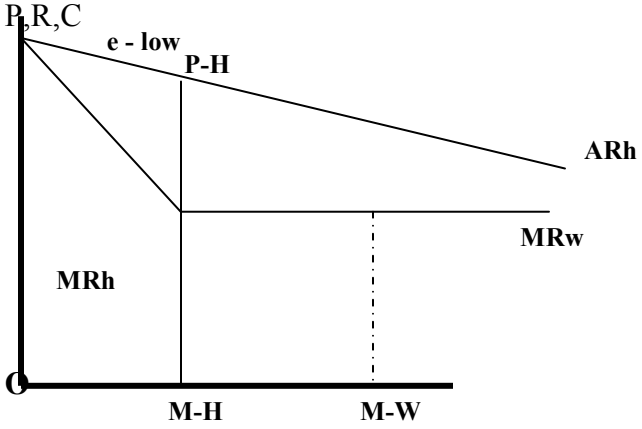
The more inelastic is the demand for a commodity, the higher is its demand,

e1 <e2 e2<……..en
p1>p2 p2>……..pn

for e.g:

- Ignorance can make the demand inelastic
- Inelastic are the market is away from the purchasing area, Warden Road, Peddar Road.
- Monopolist will charge different prce to different area.

Monopolists can manipulate the price depending upon the international & home market (internal market)



Internal – H & World - W Market

Conclusion

We hope that this has given you some insight to the market and, in turn, your investment strategies. Let's recap what we've learned in this tutorial:

- Economics is best described as the study of humans behaving in response to having only limited resources for fulfilling unlimited wants and needs.
- Scarcity refers to the limited resources in an economy. Macroeconomics is the study of the economy of the whole. Microeconomics analyzes the individual people and companies that together make up the greater economy.
- The Production Possibility Frontier (PPF) allows us to determine how an economy can allocate its resources in order to achieve optimal output.

Knowing this will lead countries to specializing and trading products instead of each country producing all needed products.

- Demand and supply refer to the relationship price has with the quantity consumers demand and the quantity supplied by producers. As price increases, quantity demanded decreases and quantity supplied increases.
- Elasticity tells us how much quantity demanded or supplied changes when there is a change in price. The more the quantity changes, the more elastic the good or service. Products whose quantity supplied or demanded does not change much with a change in price are considered inelastic.
- Utility is the amount of benefit a consumer receives from a given good or service. Economists use utility to determine how an individual can get the most satisfaction out of his or her available resources.
- Market economies are assumed to have many buyers and sellers, high competition, and many substitutes. Monopolies characterize industries in which the suppler determines prices and high barriers prevent any competitors from entering the market. Oligopolies are industries with few companies that are interdependent on each other, and perfect competition represents an economy with many businesses competing with one another for consumer interest and profits.

Lecture Date:
Subject:Managerial Economics
***Professor*:**

Meaning

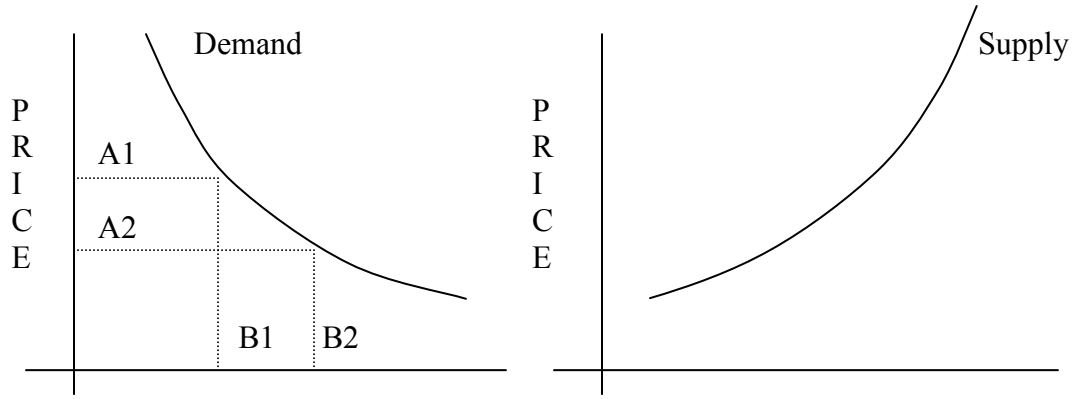
Definitions

Subject matter

Scope of the Subject

Relationship with other subjects

Micro Economics — Macro Economics



Elasticity of demand – Increase in consumption due to reduction of cost/price

Decision Making – Making Choice among different options

↓

Resources are scarce

↓

Alternative uses

Decision making through concepts. Principle prescriptions taken from economics. Managerial Economics is applied economics.

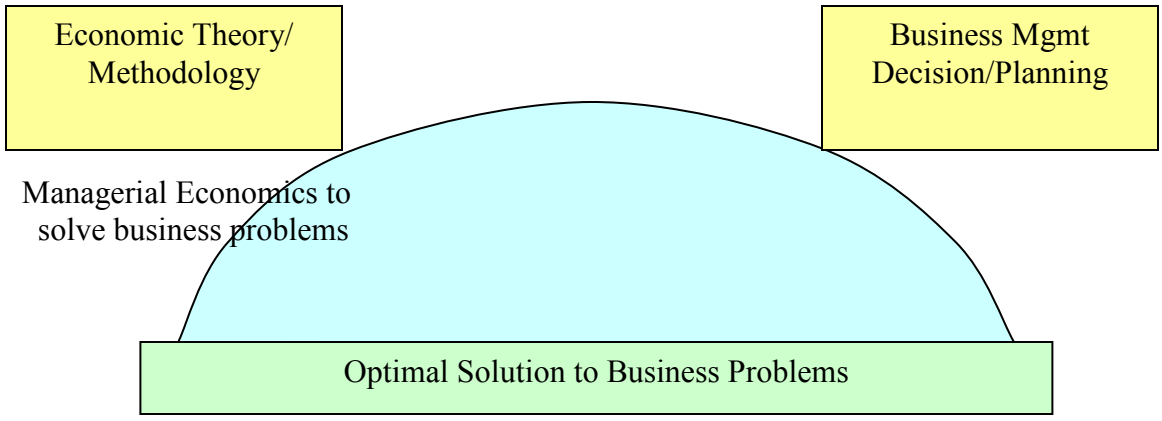
Definitions.

McNair & Mariam – Managerial Economics consists of use of Economic modes of thoughts to analyse business situations.

Spencer & Siegelman – Managerial Economics refers to integration of economics with business practice for purpose of facilitating decision making and forward planning by mgmt.

Economic Discipline dealing with application of economic theory to business mgmt.

Managerial Economics es a bridge between economic theory and business mgmt.



Micro Economics deals with individual units while Macro unit deals with aggregates like GDP, NI.

Managerial Economics is also called economics of firms. It is microeconomics.

Books:
1. Varshney and Maheshwari
2. H Craig Peterson/ W Cris Lewis

Scope of Managerial Economics:

1. Demand Analysis and forecasting
2. Cost and Production analysis
3. Pricing decision, policies and practices
4. Profit mgmt
5. Capital mgmt

Theory of Demand/Analysis of Demand – Revenue Maximisation is the objective. Above depends on maximization of sales.

Means promoting demand and expanding.

Demand is desire backed by purchasing power.

Factors Determining Demand. Income, price, related commodities prices, substitutes and complementary goods, advertising populations, taste, geographical location, expected future trends in prices etc.

$$Q_D \approx \frac{1}{\text{Price}}$$

When Q_D increases the price goes down and vice versa.

Demand schedule and other related variables:

Price	18	-0.83
	10	-0.57
10		-0.38
9	**Avg Rev**	-0.22
8		-0.10
7		
6		
5		
4		
3		
2		
1		
Qty		
1		
2	**MR**	
3		
4		
5	8	
6	6	
7	4	
8	2	
9	0	
10	2	
	4	
Tot Rev	6	
	8	
10		
18	**Var Price**	
24	**Elasticity**	
28	-10	
30	-4.5	
30	-2.67	
28	-1.75	
24	-1.20	

Tea and coffee are substitute products for each other.

Car and petrol are complimentary products.

$Q_D = f(P, I, P_0, T)$ P_o – Price of related commodity
I – Income
T – Taste and Preference

$Q_D = B + ap\ P + a\ I + a_0P_0 + at\ T$

Coefficient indicates that if there is one unit change in particular parameter, how much change in Q_D will take place.

What % of change in price will lead to what % change in demand?

Elasticity of Demand or Price or Demand Analysis:

Price Elasticity of Demand – Sensitivity or responsiveness of Q_D to change in price

$$P_E = \frac{\text{Proportionate change in } Q_D}{\text{Proportionate Change in Price}}$$

$$= \frac{\%Q_D}{\%P} = \frac{\Delta q_d}{\Delta P}$$

$$= \frac{\frac{Q_2 - Q_1}{Q_1}}{\frac{P_2 - P_1}{P_1}}$$

Suppose $Q_2 = 2500$ and $P_2 = 9$
$Q_1 = 2000$ and $P_1 = 10$

$$\Longrightarrow \frac{\frac{2500 - 2000}{2000}}{\frac{9 - 10}{10}}$$

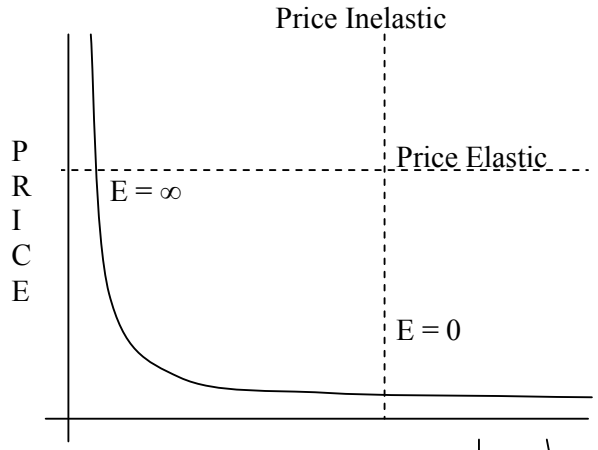
$$\Longrightarrow -2.5$$

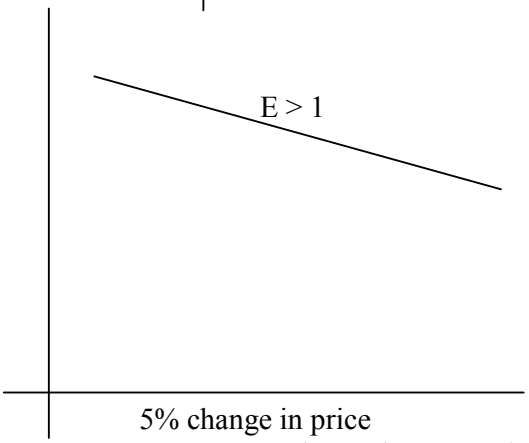
Therefore, 1% fall in price caused 2.5% increase in demand.

Types of Elasticity

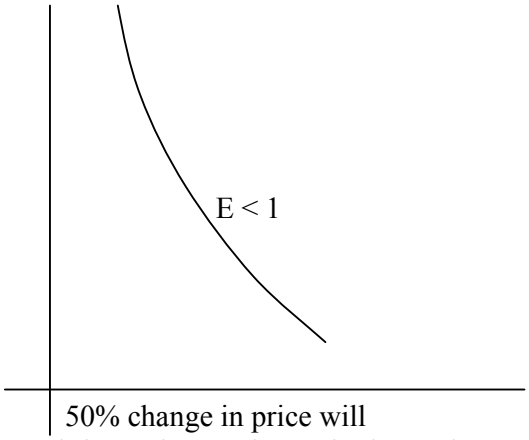
SL	Types	Numerical Expression	Description	Shape of Curve
1.	Perfectly Elastic	∞	Infinite	Horizontal
2.	Perfectly Inelastic	1	Zero	Vertical
3.	Unitary Elastic	1	Unitary	Rect Hyperbola
4.	Relatively Elastic	>1	More than !	Flatish
5.	Relatively Inelastic	<1	Less than 1	Steep

Perfectly Elastic – Small change in price will lead to large change in demand causing stockout and therefore no gain.



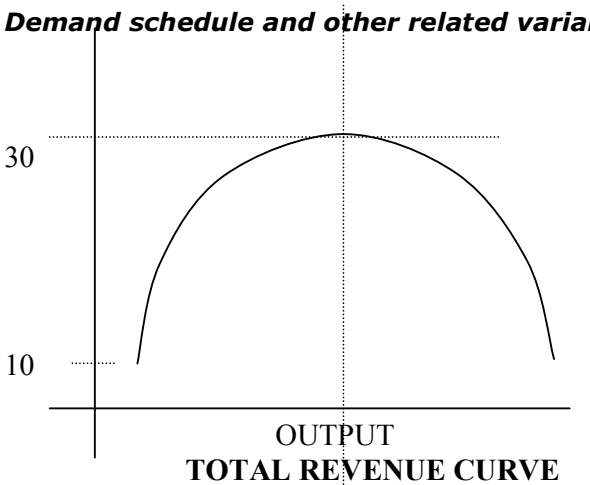


5% change in price
causes 50% change in Demand

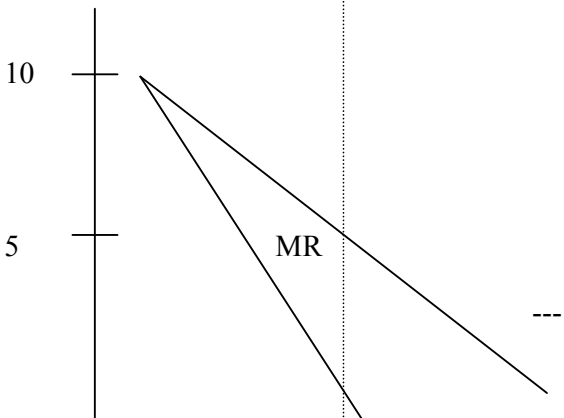


50% change in price will
bring only 5% change in demand

Demand schedule and other related variables



TOTAL REVENUE CURVE



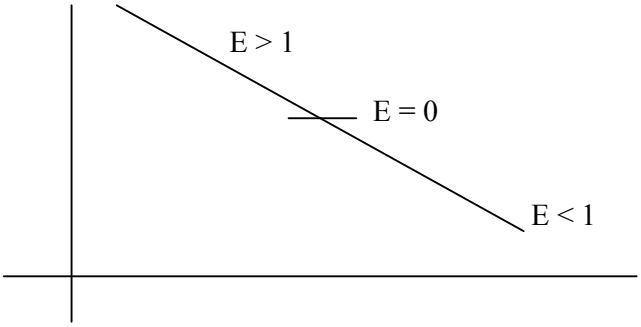
$Q_D \longrightarrow$ 5 10

Marginal Revenue (MR) = $\frac{R_2 - R_1}{Q_2 - Q_1}$

Reduction of price beyond Marginal Revenue value of **"0"** will result in reduction in revenue rather than increase.

1. MR = 0 at qty that generates max total revenue and negative beyond that point.

2. $P_{ED} > 1$. MR is +ve and total revenue rises with reduction in price



3. $P_{ED} = 1$, MR = 0 and change in price will not change the total revenue.
4. $P_{ED} < 1$, MR = -ve and change in price will cause reduction in total revenue.

Change in price	Price elasticity		
	E > 1	E = 0	E < 1
Rising	Total revenue falls	Total revenue – No Change	Total revenue increases
Falling	Total revenue increases	Total revenue – No Change	Total revenue falls

Factors determining Price Elasticity of demand: -

1. Nature of commodity
2. Extent of use – variety of uses to which commodity is put to
3. Range of substitutes
4. Income levels
5. Proportion of income spent on commodity
6. Urgency of demand
7. Durability of commodity
8. Frequency of purchase of commodity

Lecture Date:12 Feb 08
Subject: Managerial Economics
Professor: Mr Angadi

1. Consumption Function and demand
2. Income Elasticity of demand
3. Cross Elasticity of demand
4. Cross Elasticity of prices
5. Role of Advertisement
6. Types of demand
7. Forecasting

1. **Consumption Function**. It is defined as –

Ratio of expenditure on consumption to income.

Relation between consumption expenditure and income.

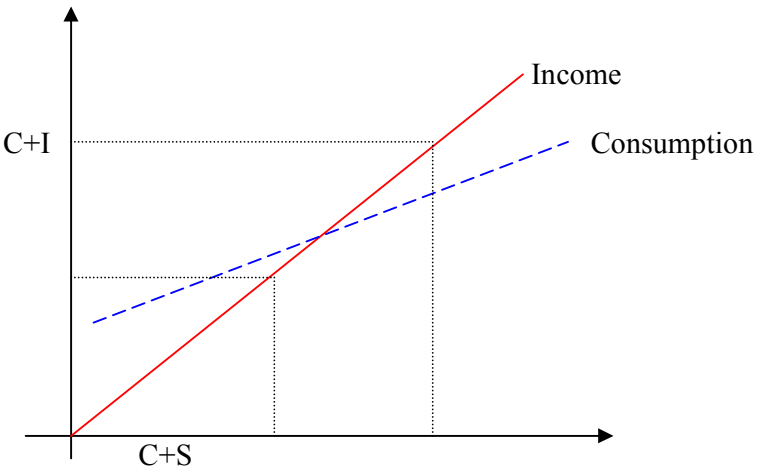
Following characteristics of consumption function

(a) In the long term, relationship of total expenditure on consumption and total income is stable. It is estimated at 80 – 90 %.

(b) Unstable in the short run.

(c) During prosperity, propensity to consume declines while it increases during depression.

(d) In developing countries like India, the propensity to consume is very high.



Consumption Function Vs Demand for individual products – Demand for individual products is determined by several other factors such as relative commodities prices, consumer stocks, durability, nature of commodity, etc.

Hence consumption function does not indicate/suggest what to buy and how much to buy.

2. **Income Elasticity of Demand**. How much increase in income leads to how much increase in demand.

Responsiveness of demand to change in income.

Income Elasticity of Demand =

$$= \frac{\text{Proportionate change in Qty Demanded}}{\text{Proportionate Change in income}}$$

$$= \frac{\frac{Q_2 - Q_1}{\frac{Q_2 + Q_1}{2}}}{\frac{Y_2 - Y_1}{\frac{Y_2 + Y_1}{2}}}$$

Zero Income Elasticity – Salt
Positive Income Elasticity – Durables, comforts
Negative Income Elasticity – Inferior Commodities like Coarse Cereals

3. **Cross Elasticity of Demands**. Elasticity of demands of related items

(a) Substitutes – Tea and Coffee
(b) Complimentary – Car and Petrol

$$= \frac{\text{\% age change in quantity purchased of X}}{\text{\% change in price of Y}}$$

4. **Cross Elasticity of Price**. A change in price of one commodity may cause change in price of other commodity.

5. **Advertisement & Demand**. Normally advertising leads to increase in demand for the commodity.

Two important functions of advertising: -

(a) To shift demand curve of a commodity to right
(b) To reduce the elasticity of demand.

Perfect Market – No need of advertising in a perfect market because all buyers are very well informed. Any raise of fall in price will not sustain due to total stoppage of sale or a run on the company's product causing stock out. It is only a theoretical possibility.

Imperfect Market. Large no of sellers selling differentiated products. Advertising will lead to shift in demand curve. Degree of imperfectness will determine the effect of advertising on demand curve.

Advertising Elasticity of demand –

= Proportionate change in sales .
Proportionate change in advertising expenditure

6. **Type of Commodity**. For necessities the elasticity is less where as for comforts and luxuries, the elasticity is very high. Again for durables, durables, the elasticity is very high. Short term and long term uses of item also affects elasticity.

7. **Forecasting**.

Lecture Date:19 Feb 08
Subject: Managerial Economics
Professor: Mr Angadi

Engiles law of consumption – 19th Century Statistician studied lots of families to arrive at conclusion that – The percentage of income spent on food decreases as income increases. This hypothesis is under testing even now. Income elasticity of demands in case of basic food is < 1.

Estimated Income Elasticity for selected food products

Food Item	Estimated Income Elasticity
Beef	1.05
Chicken	0.28
Pork	0.14
Tomato	0.24
Potato	0.15

Interpretation

1. Farmers may not prosper during economic prosperity as their product demand does not grow in same proportion and therefore price ,with rise in income level.
2. Farmers income may not rise as rapidly as income in general.
3. Productivity improvement and diversification may be necessary for offsetting this effect.

GASOLINE PRICES AND CONSUMER RESPONSE

YEAR	AVG PRICE	AVG MILES PER GAL	AVG MILES DRIVEN	AVG FUEL CONSUMPTION
1973	0.40	13.3	9,800	736
1975	0.57	13.7	9,400	685
1977	0.62	14.1	9,600	680
1979	1.31	15.7	8,700	555

Perkasie – A small community in Pennsylvania. They had a very high garbage collection and disposal cost The average cost was $ 120 per year per family and avg garbage collection was 2.2 pounds per person per day.

The municipal Corporation introduced weight based collection charges instead of flat rate. The garbage generated per person fell down to < 1 Lbs per day. Thus there was a saving of 30% to the citizens and 40% to the corporation.

Forecasting is a statistical tool which helps in reducing no of uncertainties of future.

Forecasting Techniques / Methods

1. Survey
2. Delphi
3. Collective Opinion Method
4. Market Experiment
5. Time Series Analysis
6. Barometric Forecasting
7. Input/Output (Production) for forecasting.

Delphi Method – Arriving at a consensus in certain area by questioning group of experts repeatedly unless responses appear to converge along a single line.

Collective Opinion Method – Under this method, salesmen are required to estimate expected sales in their territories.

Market Experiments – The limitations of forecasting based on survey results can be overcome by use of market experiments.

Here the experiments are designed to generate data prior to full scale introduction of products.

Pope and Price of Fish – American Economic Review, 1968. For over 1000 years particular sect was observing meatless Fridays because of Church dictate. However, in 1966, Pope decreed end to Meatless Fridays. It was estimated that this will cause the prices of fish to rise in general.

Lecture Date:26 Feb 08

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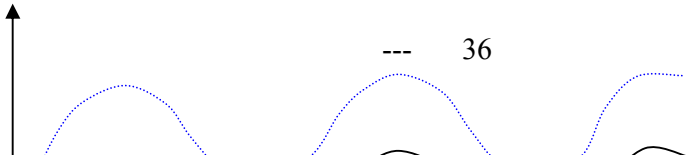
Barometric Forecasting

If two series of data frequently increase or decrease at the same time, one series may be regarded as coincident indicator of the other

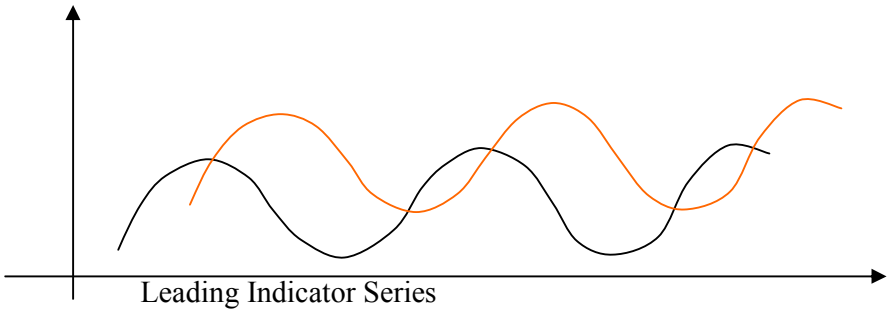


Coincidental Indicator

Primary Series

Coincidental Indicator Curve

Leading Indicator – If changes in one series consistently occur prior to changes in other series, a leading indicator is identified.



Assumptions

1. Highly co-related
2. Accurate
3. Lead time relatively constant
4. Logical explanation/sound theoretical reason exists

American publications

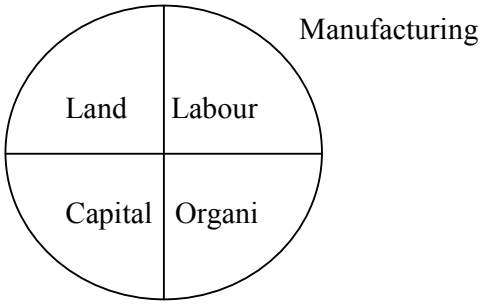
	Variable	**Predictions made**
1.	Leading Indicators	Economic variables predicted by the indicators
2.	Avg work per week	Manufacturing Output
3.	New Orders for durables	Sales of durables
4.	New orders for Capital goods	Sales of capital goods
5.	New building permits	Beginning of private home construacting activities
6.	Changes in Manufacturing and Trade inventories	General economic activities
7.	Common Stock prices	General economic activities

Cost and production analysis

Cost considerations enterinto all business decisions. It is important though some times difficult to use right kind of cost.

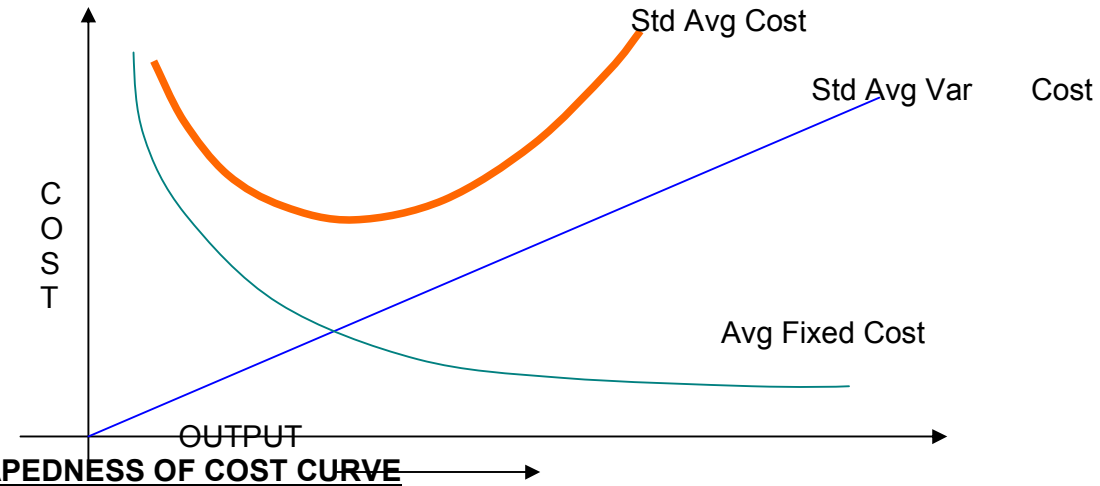
1. Actual cost
2. opportunity cost
3. Incremental cost
4. Sunk cost
5. Past cost
6. Future cost
7. Short run cost

Opportunity Cost – The revenue forgone by not making use of best alternative. In business problems, the message of opportunity cost is that it is dangerous to confine the cost knowledge to what the firm is doing. What the firm is not doing is frequently the critical cost consideration, which is perilous but easy to ignore.



Short Term Production Data

Output rate	Fixed Cost	Var cost	Total Cost	Avg Fixed cost	Avg Var Cost	Avg total cost	Marginal Cost
0	1000	0	1000	0	0	0	0
1	1000	200	1200	1000	200	1200	200
2	1000	367	1367	500	184	684	167
3	1000	510	1510	333	170	503	143
4	1000	677	1677	250	169	419	167
5	1000	877	1877	200	175	375	200
6	1000	1127	2127	167	188	355	250
7	1000	1460	2460	143	209	351	333
8	1000	2460	3460	125	308	433	1000



U SHAPEDNESS OF COST CURVE

Reasons for declining of variable cost

1. Labour economy
2. Technological Advantages
3. Managerial Economy
4. marketing Economy

5. Economies of scale (Bulk Purchase discounts etc)

<u>However, ECONOMIES OF SCALE operate only up to a point. Thereafter, some times DIS-ECONOMIES OF SCALE take over. It is called Law of diminishing Marginal Return.</u>

Law of diminishing marginal return is also called Law of variable proposition.

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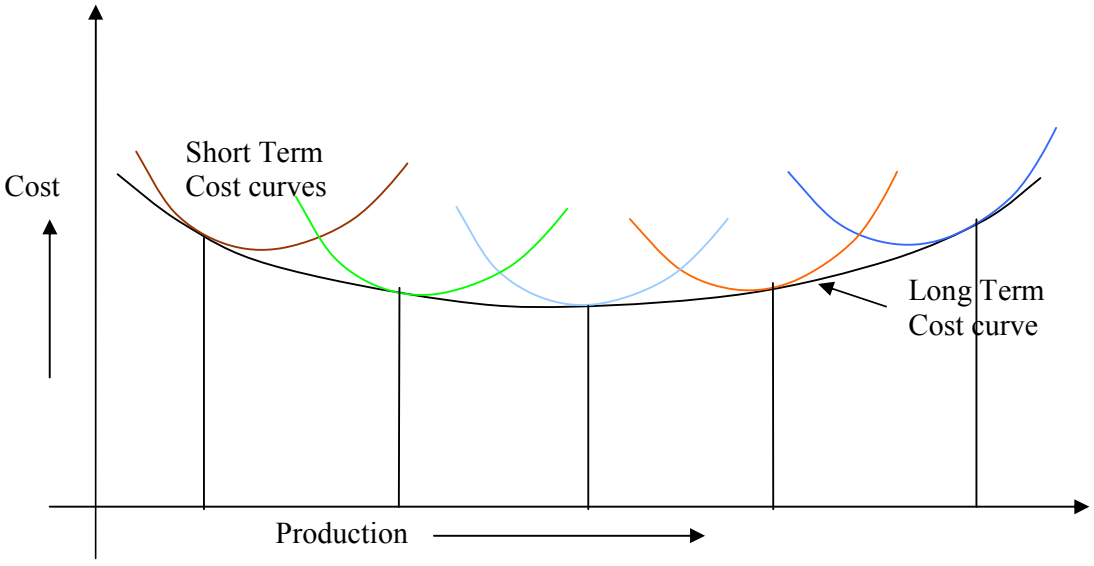
Economies of scale

<u>Internal</u>
1. Labour
2. Technical
3. Managerial
4. Marketing
5. Financial
6. Risk Diversification
7. Output diversification
8. Market Diversification

<u>External</u>
1. Common Infrastructure
2. Associations
3. Trade Bodies

Beyond a point, dis-economies of scale will take over.



Production Function
1. Problem – How much output do you produce?
2. How much labour and capital required to produce output efficiently?

Answers –
1. Information relating to Engg requirements

2. Economic info relating to price of output and prices of input.

Functional Equation
Q = f(K,L) Where Q = total output and K, L are inputs
Suppose Q = 245

Combination of inputs	**K**	**L**
a (6+1)	6	1
b (3+2)	3	2
c (2+3)	2	3
d (1+6)	1	6

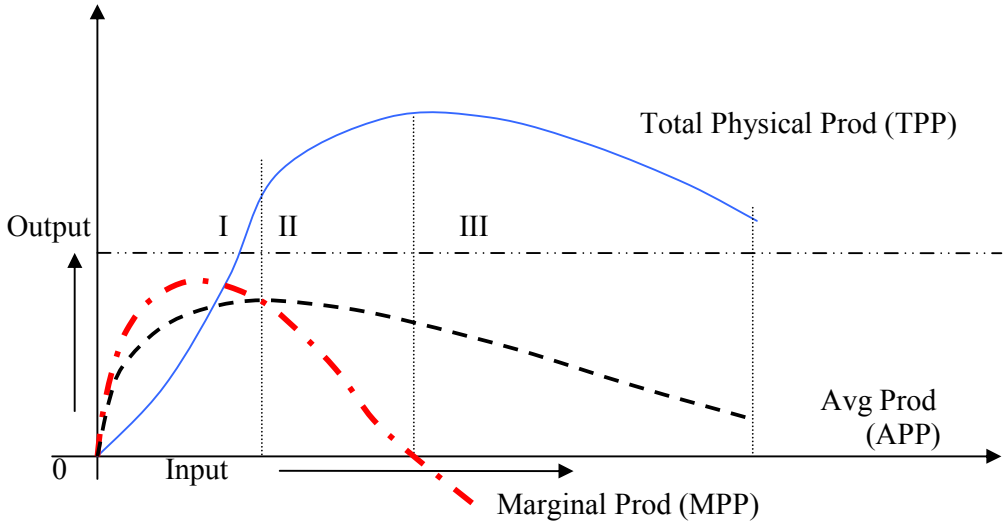
Production function with one variable input
Production function with two variable inputs
Production function with all variable inputs

$Q = f(AL^{a}, K^{(1-a)})$ a & (1-a) are elasticity of inputs
A = Constant (Technological)

$Q = 1.01\ L^{0.75}\ K^{(0.25)}$
$R^2 = 0.9409$, R being exploratory factor for L and K.

How to fix output with one variable?

Production Function with one variable input
1. Level of Output
2. Optimal input rates
3. Efficient resource allocation



Explanation of the curve is given in next page. The slope of each line at every point and each crossing point with respect to each other and vertical lines separating sections I, II and III are precisely plotted. Kindly note.

Explanation of curve –

	Total Physical Product	**Marginal Prod**	**Avg P Product**
Stage 1	Increase at increasing rate	Increases. Reaches maximum and then declines till MPP is reached	Increases and reaches its maximum
Stage 2	Increases but at diminishing rate. Reaches max	It is diminishing and becomes '0'	Starts diminishing
Stage 3	Starts declining	Becomes negative	Continues to decline

Production Function with 2 variables

1. Determine the optimal input rates. There are 3 ways
   a. Max production for given outlay on labour and capital
   b. Minimise the outlay on labour and capital necessary to produce certain level of output.
   c. Produce that output which maximises profit.

   For achieving last alternative, there is a STD MANAGERIAL ECONOMIC TECHIQUE
   - Concept of production isoqant – curve
   - Concept of production isocost – curve

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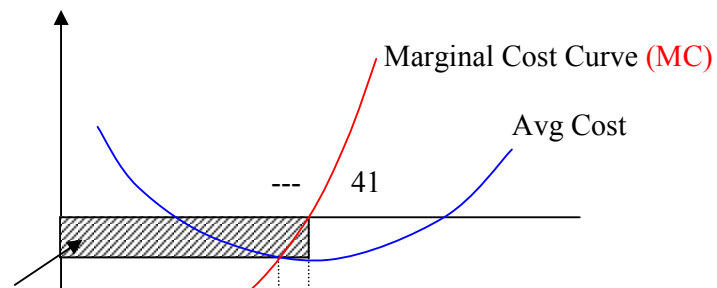
Criteria for Determining Market Structure

Perfect Market

Characteristics
1. No and size of distribution of seller – Very Large
2. No and size of distribution of buyers – Very Large
3. Product Differentiation – Almost NIL
4. Entry and Exit – Very Easy

With large no of buyers and sellers, no single buyer or seller can influence the price or supply of item.

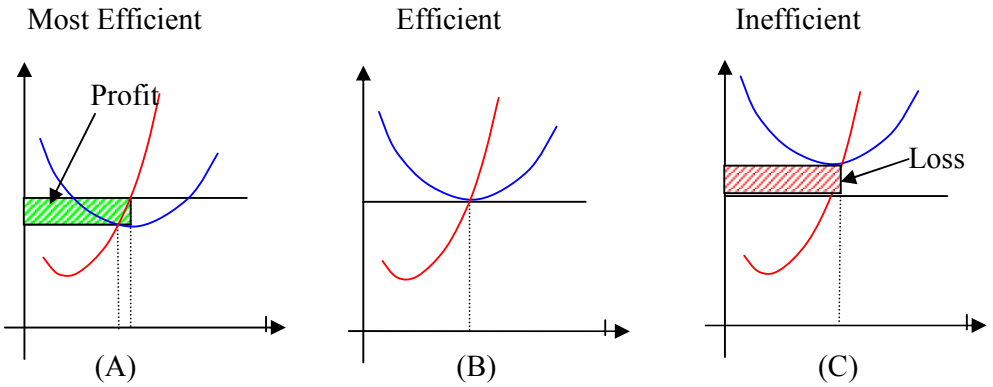
Industry – A group of firms selling the same type product.



Price (MR) Marginal Revenue/Avg Revenue Curve (Straight Line) or Selling Price

Profit

D Output



Purpose of this topic is to explore how the managers fix the prices and production level to maximise profit.

Date

In the above diagrams,
(1) The point at which MR = MC and the MC curve cuts the MR curve from below, at production (output) level the profit is maximum for the given price of the product.
(2) When competition increases, SP of the product falls down and therefore, Marginal Revenue (MR) and Average Revenue (AR) line comes down affecting profit.

Question - Why is the theoretically perfect market sound in theory?
Answer – Large consumer surplus, efficient allocation of resources, minimum cost.

Consumer Surplus – Some customer are willing to pay more than market price of the product. So consumer surplus is the difference between 'Willing to pay price and Actual Price' of the product.

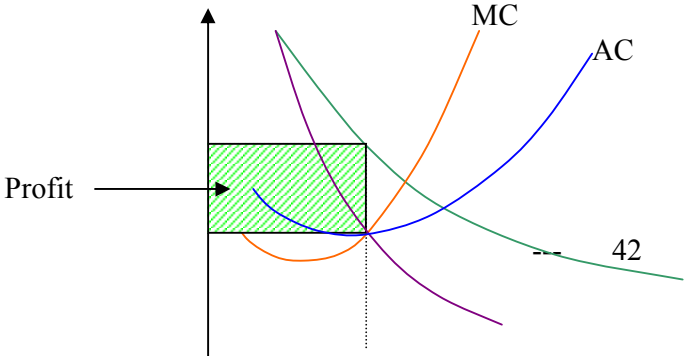
MONOPOLY Market

Characteristic Features

(a) Number and size distribution of seller - Single seller
(b) No and size distribution of buyers – Unspecified
(c) Product Differentiation – No close substitute available nor is there any competition
(d) Condition for entry and exit – Very difficult

Causes for existence of monopoly market could be Legal (patent), Public Policy (Govt regulations) or Natural (Natural Products unique to a geographical area), or cartel formation.

In a monopoly market demand curve is generally more inelastic than most other form of markets.



AR

MR

Monopoly Market Demand/Supply Curve

A pure MONOPOLY market is also a theoretical possibility only.

Factors affecting MONOPOLY market decision:

(a) Price Elasticity of demand
(b) Time horizon
(c) Potential Competitors
(d) State of Public opinion
(e) Legal/Regulatory system

Eg of a Monopoly market – Caviar Fish

This fish was produced in a particular geographical region of Russia and was considered to be a delicacy in parts of Europe and USA. The cost of production of fish was about $5 per ton. However, the fish was fetching a price of $ 500 to $1000 per ton. The govt had allowed export of only about 150 tons despite total production exceeding 2000 tons. Post Glasnost in 1991, when the erstwhile USSR broke up into 15 different independent states, this region was shared between Kazakhastan and Russia. The price competition between two new nations led to sharp fall in the price of fish in the international market. The fish prices fell down to approx $ 400 per ton.

Unique feature of the Monopoly market is price discrimination – Differential pricing for different customer for the same product without corresponding differences in the cost.

Condition for above to happen (discriminatory pricing)

1. Multiple demand elasticity (Based on segments)
2. Market segmentation
3. Existence of strong barriers between different markets.

Profit Maximising Price in Monopoly

Suppose Tc (Total Cost Equation) for a monopoly is given by

$Tc = 500 + 20\ Q^2$
Let the demand equation be given by
$P = 400 – 20Q$
$TR = 400Q – 20Q^2$
Given above find profit maximisation price and Q for the rate of output of 11 units

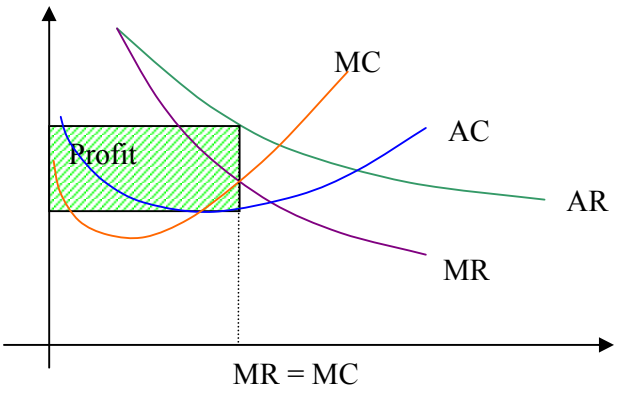
Output Rate	TR	TC	MC	MR	Price	Profit
1	380	520			380	-140
2	720	580	60	340	360	140
3	1020	680	100	300	340	340
4	1280	820	140	260	320	460
5	**1500**	**1000**	**180**	**220**	**300**	**500**
6	1680	1220	220	180	280	460
7	1820	1480	260	140	260	340
8	1920	1780	300	100	240	140

Monopolistic Competitive Market

In such a market, elements of both, Monopoly and Perfect market are present. This was invented by Professor Chamberlein.

Characteristics

1. No and size of distribution of seller – Many sellers, action of individual sellers does not have much impact on others.
2. No and size of distribution of buyers – Many small buyers
3. Product Differentiation – Differentiated product but product of an individual firm is a fairly close substitute for others
4. Entry and Exit –Easy



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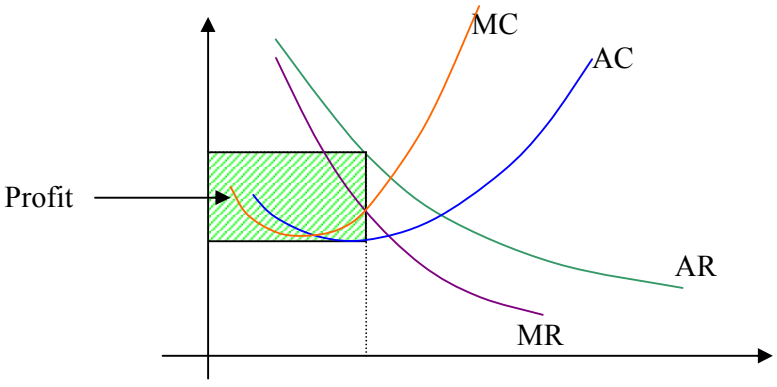
Criteria for Determining Market Structure - Contd

Monopolistic Market



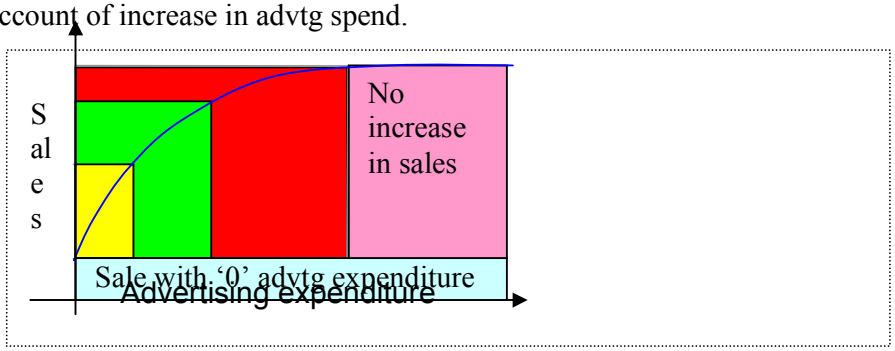
Monopolistic Market Demand/Supply Curve

Advertising is done to achieve the following objectives: -

1. To bring about the shift in demand
2. To affect the elasticity of demand equal to or less than unity.

Main features of advertising are

1. Sales relationship – A certain amount sale is possible without any advertising. Marked the chart with Sky Blue colour
2. Other things remaining same any increase in expenditure is likely to increase sales.
3. Up to a point, an increase in advtg spend will lead to more than proportionate sales. (marked in chart with Yellow colour). But beyond this point, increase in sales spend will lead to less than proportionate increase in sales till the saturation point is reached (marked in green and red colour). After this point of saturation, there will be no increase in sales on account of increase in advtg spend.



Factors affecting Advertising

1. Stage of Product Life cycle
2. Competitors reaction
3. Quality and quantity of past and present advertising
4. Non advertising determinants of demand such as elasticity of demand for product, economies of scale, market structure

Implications

1. Increase competition
2. Brings about larger output. In some circumstances, cost of advertising may be a total waste.

OLIGOPOLY

The problem of oligopoly pricing is complex and indeterminate. However a few principles of Oligopoly pricing are as under: -

1. If a rival cuts his price, it is better to match the cut than undercut (fall below his price) his price.
2. The fact that each seller knows that price cut will be met promptly by other competitors (as was the case between Hindustan Lever and Ariel brands recently), there is little incentive to resort to price cuts as a means of enlarging market share.
3. It may be safer to engage in secret price concessions to select customers than to reduce prices openly due to possibility of retaliation by competitors.
4. Price reductions once made are not easily reversible
5. Open price competition in Oligopoly usually degenerates into open price war.

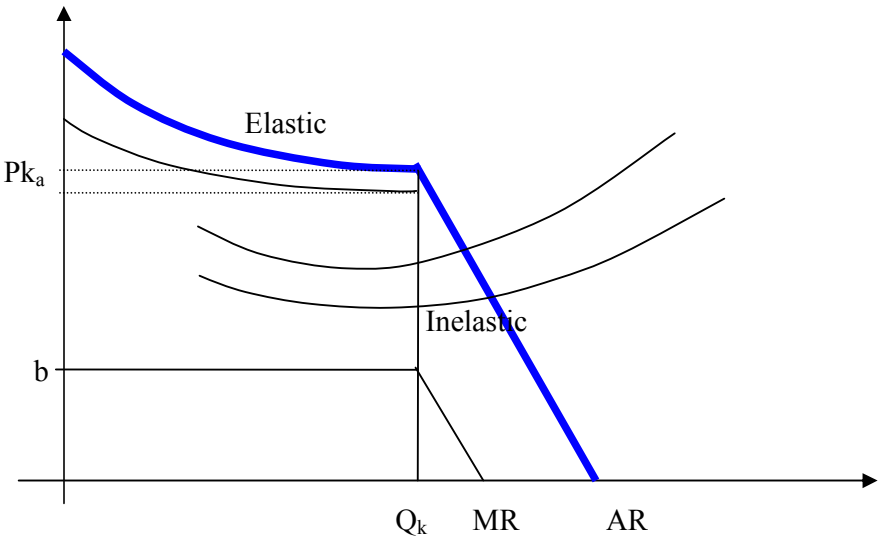
6. Many Oligopoly firms believe that their demand curve is kinked, ie, Demand is inelastic to price cuts (No increase in demand due to price cut) but highly elastic for price increases. Hence oligopoly prefer rigid prices instead of using price changes as their competitive weapon.

7. Rigid prices may be difficult to adhere strictly in a dynamic world. Oligopoly firms therefore tend to resort to such devices as non price competitive collusion & price leadership.

Oligopoly market is dominated by few sellers but large number of buyers. Product may be homogenous or differentiated.

Kinked demand curve

- Curve is inelastic for price cuts but elastic for price increases



OLIGOPOLY MARKET PRICE DEMAND CURVE

Lecture Date: 30 Mar 08

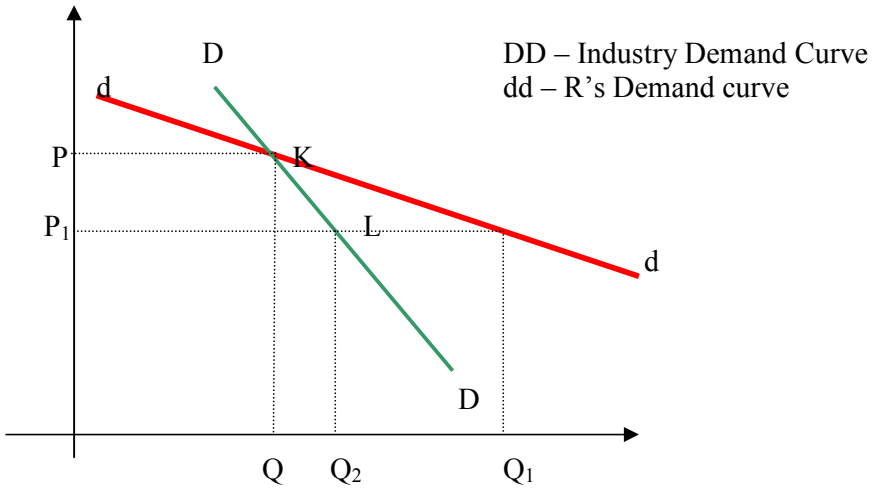
Subject: Managerial Economics
Professor: Mr Angadi

Oligopoly Contd ….

There are 3 logical conclusions which can be drawn from earlier discussion: -

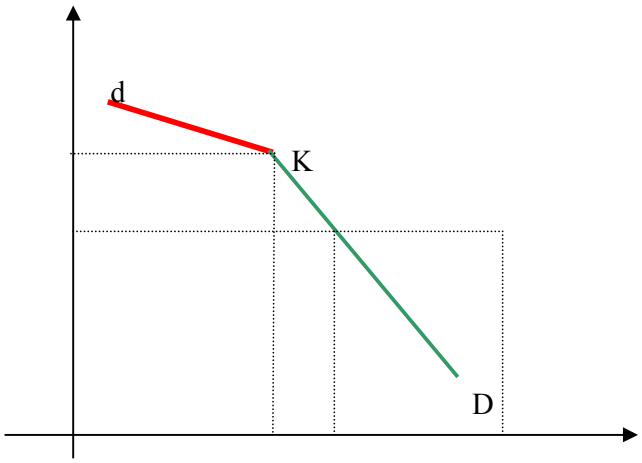
1. Price V/s demand situation is indeterminate. Which means that there is no established relationship between price and demand to enable any forecasts as in other cases.
2. Demand is inelastic for price cuts but highly elastic for price increase. This is called KINKED demand curve. Therefore, there is rigidity in pricing policy.
3. In dynamic situations, following rigid pricing policy is very difficult and hence oligopolistic firms resort to
   a. Non price competition – Other promotional excersices like better service, value addition etc.
   b. Collusion – Covert understanding between producers
   c. Price Leadership – Follow the leader (largest producer) like Indian Airlines for air fares.

Suppose R S W X Y Z are six steel producers in the country.



On unilateral reduction of price from P to P_1 by firm R, the demand for his product moves along his individual demand curve '*dd'* and changes from Q to Q_1. However, when the other firms follow the suit and lower their prices as well in the next few days, the respective market share of each player is again restored and the demand for R's product falls reverts back to Industry demand curve and accordingly falls to Q_2 which is only marginally higher than previous demand.

In the above figure – KD = inelastic demand for price cuts
dK = Elastic portion of demand curve where increase in price will cause sales drop. This is because price increases are not responded to by the competitors where as any price cut is immediately matched by them. This is called KINKED demand curve. 'K' is the kink point.



Price Leadership – The firm which takes initiative in announcing its price changes is called price leader. A dominant or Barometric price leadership occurs when the leading firm is powerful enough to set a price which all other firms will be forced to follow. A reputed price leader is one who is credited with the reputation of sound pricing decisions. Price decision of leader ware based on better info, experience judgement and so on. This type of leadership arises within the industry due to its successful profit history, sound management and long experience of price leadership. Thus it is a result of a natural growth within the industry.

Merits of price leadership: -

1. Right price decisions available to small firms who may not have where-withals to take correct pricing decisions.
2. Cost savings
3. Price stability
4. Dampening of multitude of cyclical fluctuations.
5. Reduction in price wars.

Mkt Type	# & Size Distn of Buyers	# & Size Distn of Sellers	Degree of product Different-iation	Segment of Economy	Degree of Price Control	Unique Feature
Perfect Compe-tition	Very Large. No influence of single buyer	Very Large. No influence of single seller	Homogenous	Agriculture Products like cereals/grains	None	No need for incurring selling costs
Imperfect Markets						
Mono-polistic	Unspecified	Large	Real/imaginary differentiation and no close substitutes	Retail trade, FMCG Goods	Some	Need for Advtg
Oligopoly	Unspecified	Few	1. Little or no differentiation 2. Some differentiation	Metals like steel, aluminium, copper and automobiles	Some influence	---
Monopoly	Unspecified	Single	No close substitute	Few of public utilities	Consi-derable	----
Monop-sony	Single	---	---	Railway Wagons, Labour Market in Single industry townships like Jamshedpur (TISCO)	Consi-derable	---
Oligop-sony	Few	----	---	1. Milk dairies 2. Sugar factories 3. Certain vehicle components	Some	---

Pricing Policy

Formulating Pricing Policy and setting prices are the most important aspects of managerial decision making. Economic theory reveals pricing policy based on certain assumptions. Generally it focuses on two parties viz buyers and sellers. In practice certain other parties are also involved in the process of pricing, like rival sellers, potential sellers, middle men and govt.

Pricing policy could be short term or long term or both.

Factors governing Price Policy

1. External Factors
2. Internal Factors

External Factors –

- Elasticity of Supply
- Elasticity of Demand
- Goodwill of the firm,
- Degree of competition
- Inter-relationship of products
- Market Trend
- Purchasing Power of buyers'
- Govt policy towards prices

Internal Factors

- Costs
- Multi-product Vs single product
- Management Policy
- Objectives of business

One of the tedious tasks in pricing policy is apportioning common cost in multi-products companies, like Hindustan Lever. In such cases Ramsey Pricing Formula is used which states – Price deviations from marginal cost should be inversely related to the elasticity of demand. Translated in the layman's terms – apportion higher costs to inelastic demands and lower costs to the elastic demands.

Q1. Define Managerial Economics. Discuss its nature and scope. How it is related to Managerial Decision making?

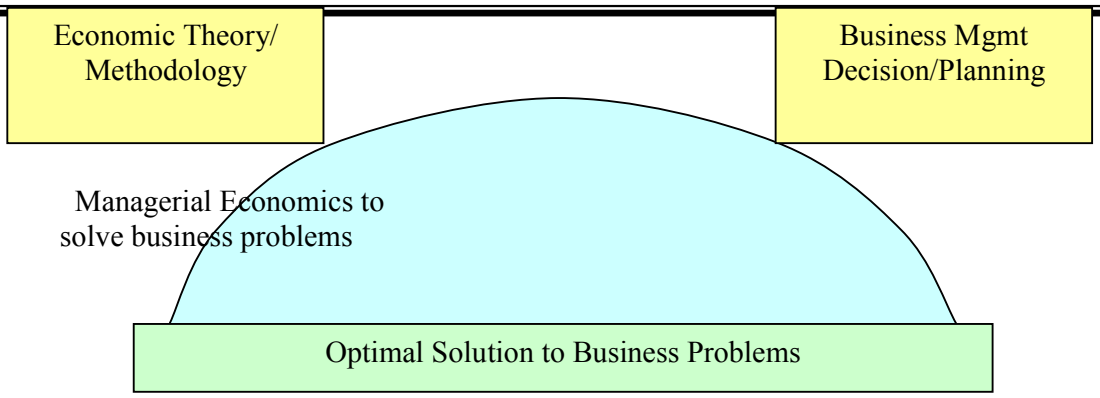
Answer. Managerial Eco simply stated is the applied branch of Pure Economics. Or to say, Managerial Eco is the applied Micro-Economics. It is also called **Economics of Firms**. There are some classical definitions also:

McNair & Mariam – Managerial Eco consists of use of economic modes of thoughts to analyse business situations.

Spencer & Siegelman – Managerial Economics refers to integration of economics with business practice for purpose of facilitating decision making and forward planning by management.

Also defined as – Economic Discipline dealing with application of economic theory to business environment.

Managerial Economics acts as a bridge between business managers and optimal solution to business problems.



Decision Making – Manager are faced with making the best choice from among the plethora of alternatives available with no concrete information available to help decision making. The resources are scarce and therefore employment of resources at one place carries the opportunity cost of employment at some other place. Managerial Economics helps in arriving at correct decision through application of concepts, principles and prescriptions taken from economics.

Nature and Scope – The scope of Managerial Economics extends to following business functions:

(a) **Demand Analysis** – The first and the foremost dilemma faced by any business man is to decide **WHAT TO PRODUCE** and **HOW MUCH QUANTITY** to produce which can be sold most profitably. Managerial Economics helps managers to understand mechanics of demand and take right decisions for creation or addition of facility to promote business.

(b) **Cost and Production Analysis** – The profit and supply curve almost universally follows the shape of a camel's back. The profit initially rises and at some point of supply quantity, it begins declining. The managers are interested in finding this point of inflexion (inversion) in order to decide how much to produce.

(c) **Pricing Decision, Policies and Practices** – Barring a couple of exceptions, demand and price move in opposite directions, called as Price Elasticity of demands. As the price of product increases, the demand falls and vice versa. As in the case of supply, here too the profit is maximum at a particular point. On either side of this point, the profit declines either due to lower sales volumes induced by price hike or lower profit margins due to low sales price. Managers need to find this point to price the product.

(d) Capital Management.

Q 2. Discuss the concept of Elasticity of Demands with graphs.

Answer – The demand for any product is not constant over time. If the prices are increased, there is a fall in demand and vice versa. Similarly, if there is change in income level of users, demand will change accordingly. There are other factors as well which affect the demand for any particular product. Summarily, demand for any product is affected by the following factors: -

Demand Determinants

9. Nature of commodity
10. Extent of use – variety of uses to which commodity is put to
11. Range of substitutes
12. Income levels
13. Proportion of income spent on commodity
14. Urgency of demand
15. Durability of commodity
16. Frequency of purchase of commodity

Each of the above factors has a direct and definite relation with demand movement. This change in demand with respect to change in any of the above determinants is called Elasticity of Demand. Mathematically it can be defined as:

$$\text{Elasticity of Demand} = \frac{\text{Percentage change in demand}}{\text{Percentage change in affecting factor}}$$

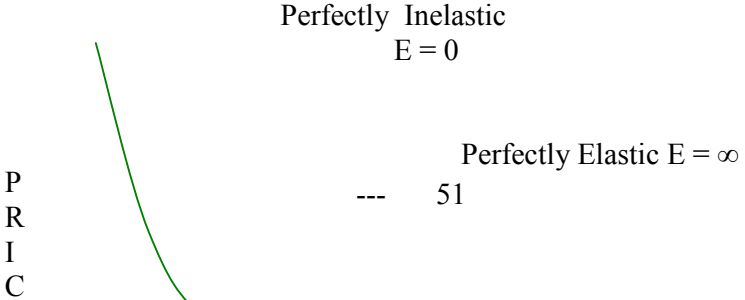
However, some factors or combination thereof, have more pronounced effect and others much less. Thus demand for some products could have wild swings for small changes in attributes of some factors while remaining largely unaffected wrt others. Based on corresponding movement of demands for percentage movement in affecting factors, the elasticity of demands can be categorized as follows:

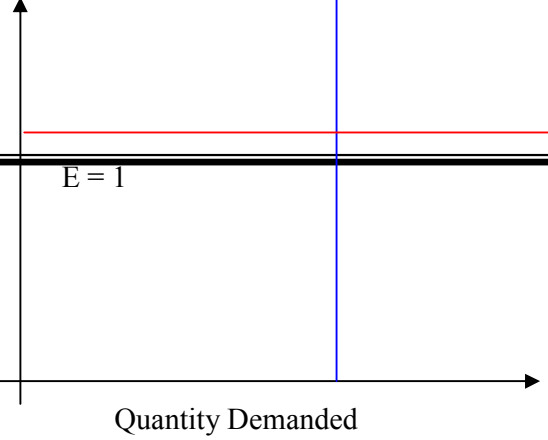
Natures of Elasticity

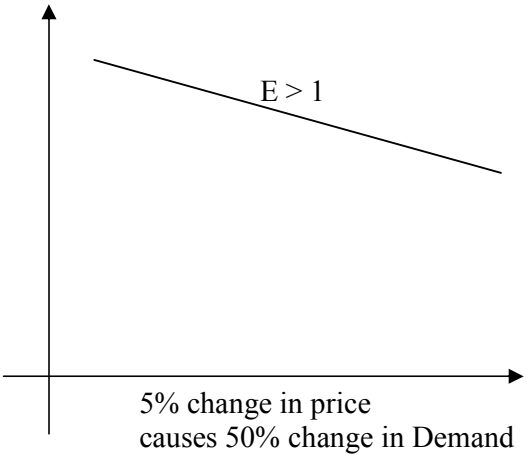
SL	Types	Numerical Expression	Description	Shape of Curve
1.	Perfectly Elastic	∞	Infinite	Horizontal
2.	Perfectly Inelastic	1	Zero	Vertical
3.	Unitary Elastic	1	Unitary	Rect Hyperbola
4.	Relatively Elastic	>1	More than !	Flatish
5.	Relatively Inelastic	<1	Less than 1	Steep

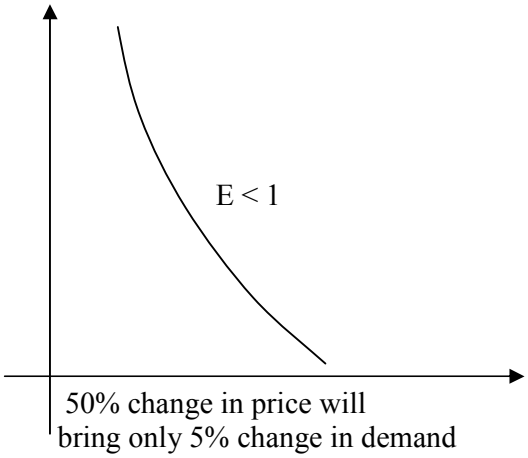
Perfectly Elastic – Small reduction/increase in price will lead to extremely large increase/decrease in demand causing stockout/NIL sales and therefore no gain. However, this is only a theoretical possibility and closest that any product demand falls in this category is Cereals/Grains like wheat or rice which are almost undifferentiated products in nearly perfect market.

Perfectly Inelastic – The demand remains constant irrespective of movement of price. This is again only a theoretical possibility and closest demand that falls in this category is SALT.









Types of Elasticity

Elasticity of demands can be further classified as per the factors affecting the demand. Accordingly there are four major classifications: -

1. **Price Elasticity of Demand** – Elasticity induced by price. Price and demand are inversely proportional. Increase in Price leads to fall in demand. But, vice versa is not true. Increase in demand does not lead to fall in price. It rather causes increase in prices.

2. **Income Elasticity of Demand** – Demand is also a function of prosperity of buyers. Higher income of users leads to increase in demand for normal products (except inferior products). It leads to left or right shift in the demand curve itself.

3. **Cross Elasticity of Demands** – Demand for most products is affected by the price and availability of substitutes. Rise in price of one product affects demand for another product provided there is no/less change in price of that product. This is called Cross Elasticity of demands. Tea and Coffee are close substitutes. Therefore, increase in price of one product will lead to fall in demand of that product while simultaneously increasing demand for the other.

Q 3. Short Notes on Consumption function.

Ans. The term Consumption function describes the relationship between private consumption and the variables that influence it. In the simplest theory, consumption is determined by the current disposal income.

It relates to the total desired consumption spending of personal sector to the factors that determine it. Simply put, it is the relation between consumption/expenditure and total income of user. In other words, it is defined as ratio of consumption to income.

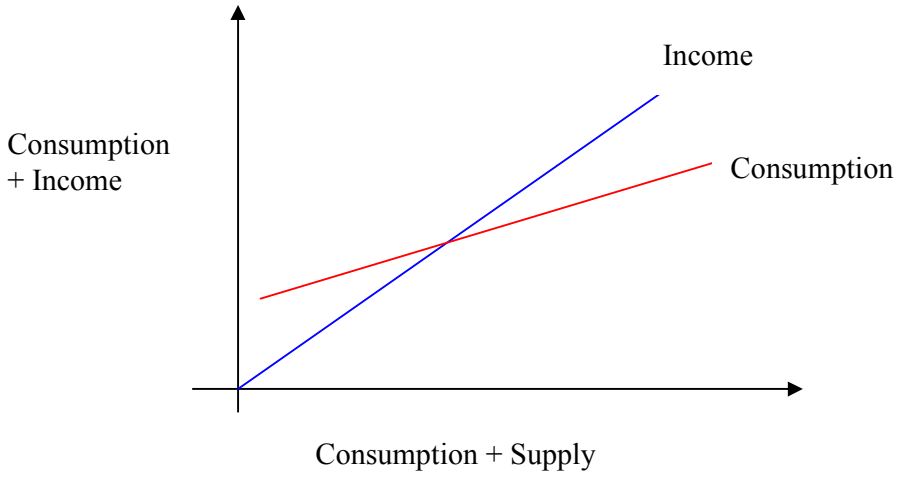
Following are the characteristics of the consumption function: -

(a) In the long term, relationship of total expenditure or consumption and total income is stable. It is estimated at 80 – 90% (Balance being the savings).

(b) It is unstable in the short run due to fluctuations in the disposal income.

(c) During prosperity, propensity to consume declines while it increases during the depression period.

(d) In developing countries like India, propensity to consume is very high



Consumption Function Vs Demand for Individual Products

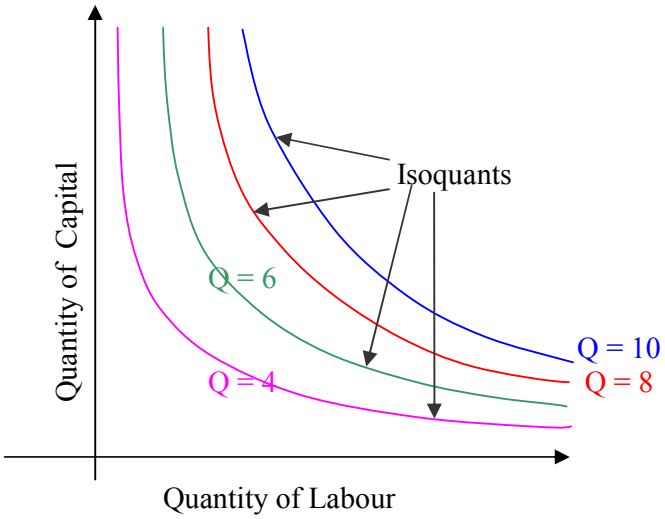
Demand for individual products is determined by several other factors such as relative commodities prices, consumer stocks, durable and non durable nature of commodities. Hence consumption function does not indicate/suggest what to buy and how much to buy.

Q. Define Isoquants.

Ans. 'Iso' means 'equal' and 'Quant' is short form of 'quantity'. Thus, isoquant means equal quantity. **Isoquants are the production input substitution curves**. Same level of production can be achieved by different combinations of capital employment and labour input. These combinations when plotted on the graph give the isoquant for the particular production level.

Isoquants are firms' equivalent of consumer indifference curves. An indifference curve shows all those combinations of products that give the consumer same level of satisfaction. Similarly, Isoquant gives all those combinations of inputs that give the firm same level of production.

There would be multiple isoquants for a single plant representing capital/labour combinations for producing various levels of output. Isoquants are used in combination with Isocosts to determine most economical combination of inputs for given production level as also most economical level of production.



Q Explain Opportunity Cost and Real Cost.

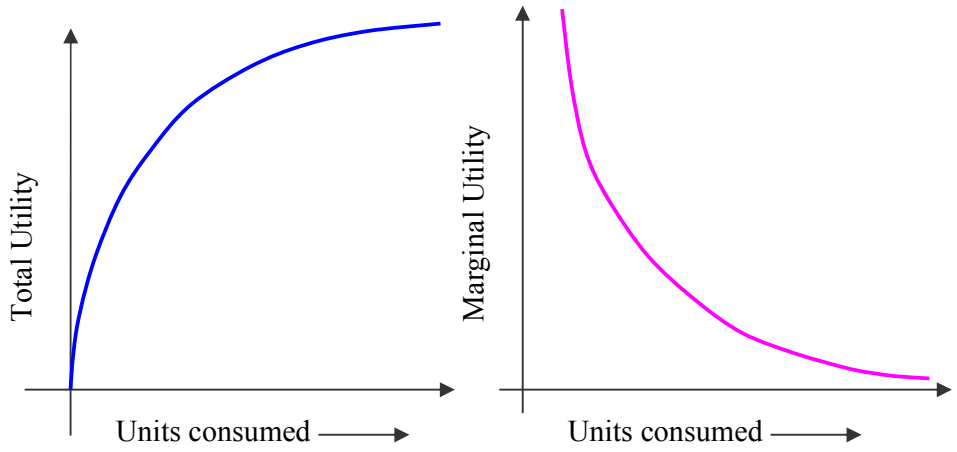
Ans. Every entreprenuer at any point of time has more than one options to choose from. However, every option demands investment of resources to acquire it. Due to constraints of resources, often only of the options can be accepted and thereby sacrificing advantages to be accrued from the remaining choices. Thus, there was an opportunity to take a particular advantage which was not taken. The advantage foregone by giving up one option in favour of other option is called the opportunity cost.

Opportunity cost is generally not expressed in money form. It is generally expressed as form of attribute that would have been gained if other option was chosen. Like, if a movie ticket was purchased with the same amount of money instead of a cricket match ticket, opportunity cost of movie is cricket match.

In contrast to Opportunity cost, the ***REAL COST*** is the absolute value paid for acquiring the option. It is mostly measured in terms of money unless it was a barter/exchange.

Q Explain Concept of Diminishing Marginal Utility.

Ans. The satisfaction that a consumer draws from consumption of a product is called UTILITY. Though the total satisfaction, and therefore Utility, generally keeps increasing (can also turn negative in some cases) as the consumption of product increases, the amount of satisfaction gained from each successive unit keeps reducing as more and more units are consumed. Marginal Utility is the measure of additional satisfaction drawn from consumption of additional unit of the product. For example, the joy of birth of first child in the family is far far greater than the joy of birth of fifth child. Thus, the utility of any product keeps diminishing as more and more quantities of it are consumed. This is called as law of ***Diminishing Marginal Utilitiy***.



Increasing Total Utility **Diminishing Marginal Utility**

Q. Distinguish between Individual and Market Demand.

Ans. An individual demand is the relationship between quantity demanded by an individual customer and the price of the product. The quantity demanded is in inverse proportion of the price of the product. However, demanded quantity is also affected by the changes in income of the individual, his tastes, availability of substitutes and many other factors. Thus, there could be wide variations in demand between different individual demands for same change of attributes.

Market demand is the aggregate/average of sufficiently large individual demands. Thus, the wild swings caused by individual whims and fancies are averaged out and therefore the pattern is more

stable. Since business largely depends on market demand except in rare cases of ***OLIGOPSONY***, wherein one single customer dominates the market, market demand is more relevant measure for study in Managerial Economics.

Q. Comment on Long run and Short run demand.

Ans **(Page 67)**. There are many products wherein the effect of change of prices does not fully reflect immediately due to their peculiar nature. The effect is seen gradually over the time. Take the example of increase in cost of electricity. Any increase in cost of electricity would not fully reflect immediately as there are no close substitutes available. However, over the time, people would replace old energy inefficient gadgets with energy efficient ones; Industry might look for alternate sources of power like gas powered heaters, or install their own captive power plants. This process might take up to 5 years or even more to precipitate fully and that is the time when impact of increase of electricity cost would fully reflect on demand. Thus, some products, which may appear relatively inelastic in short run, would turn out to be much more elastic in the long run. This is especially true for durable products. In case of FMCG products, the full effect of price changes is apparent immediately (short run).

Q Comment on Marginal Costs and Average Total costs.

Ans **(Page 137)**. Marginal cost is the increase in total cost due to raising the production by one unit. In other words, the extra cost incurred by the company for producing one additional unit, is called Marginal Cost. Marginal cost is also called ***Incremental Cost*** some times.

The cost of production does not remain constant over the entire production range. At low production levels, the cost of production is very high due to various reasons like absence of economies of scale, high share of fixed costs, etc. But the unit costs of production continues to fall as the production level is gradually increased. At some point, the unit costs begin to rise once again. Accordingly, Marginal Cost is different at different levels of production. So, Marginal Cost is very important in deciding the production level. Marginal cost are generally equal to the variable cost of the product.

Average Total Cost or simply put Average cost is the total cost of producing any given output divided by the number of units produced, that is the cost per unit for given level of production. ATC may be divided into Average Fixed Costs and Average Variable Costs.

Q. Comment on Internal Economies of Scale and External Economies of Scale.

Ans **(Page 172)**. It is generally accepted fact that larger the scale of production, more the economy of cost of production. This is called economy of scale. Such economy of scale is further divided into Internal Economies of Scale and External Economies of Scale.

Internal Economies of Scale - The economies of scale achieved through solo planning of the firm on its cost control measures made possible by the sheer scale of operation, are called Internal Economies of Scale. Eg,

(a) Labour
(b) Technical
(c) Managerial
(d) Marketing
(e) Financial
(f) Risk Diversification

(g) Output Diversification
(h) Market Diversification

External Economies of Scale: There are certain economies of scale available not due to large scale operation of any particular firm but because of large growth of a particular business (industry), like growth of a particular industry in a particular region/area. These are beyond the control of any one firm. Eg:

(a) Development of common infrastructure, like roads, power, communication facilities, transportation facilities, support facilities, etc.

(b) Associations: Associations are formed who undertake lot of industry related work like market surveys, lobbying with govt, price control, etc on collective basis thus saving costs to individual firms.

(c) Trade Bodies: They also function in the similar fashion to the Associations.

But economies of scale are available only up to a certain limit. Thereafter the Dis-Economies of Scale take over.

Q. Differentiate between Consumer Goods V/s Capital Goods.

Ans. All the tangible productions of any industry are called goods and intangibles productions like education, telephone service etc are termed as services. Goods can be classified as

(a) Consumer Goods and
(b) Capital Goods

The basic dividing line between consumer goods and capital goods is the end use they are put to. Consumer goods are meant to satisfy the needs of general public whereas Capital Goods are employed for further production of other goods or services.

Consumer Goods can be further sub-classified as

(a) Fast Moving Consumer Goods (FMCG)
(b) Consumer Durables

Differences between consumer and Capital Goods

SL	CONSUMER GOODS	CAPITAL GOODS
1	Used by General Public	Used by firms and Industry
2	FMCG are inexpensive. Durables are slightly expensive	Generally expensive
3	FMCG have low life span Durables have long life	Long life
4	Mass production and consumption	Comparatively low quantity production since few users
5	Products available off the shelf	Produced against confirmed order and therefore long delivery time.

Q. Notes on Pricing Strategy

Ans. FROM NOTES

Q. Explain Production Function.

Ans. Managers are often faced with two problems:

(a) How much output to produce?
(b) How much labour and capital is required to produce the output efficiently?

To answer the above questions, managers are required to have information relating to

(a) Engineering requirement
(b) Price of output and prices of inputs and finally

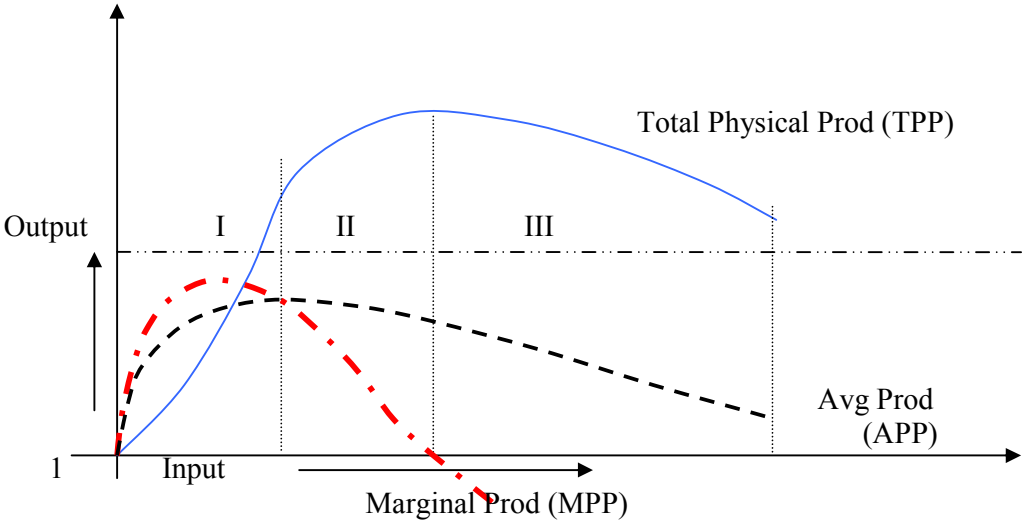
"RELATION BETWEEN INPUTS AND OUTPUTS"

Thus **Production Function** describes the technological relation between the inputs that a firm uses and the outputs that it producers.

Mathematically production function is written as

$Q = f_n (K, L, M, N, \ldots\ldots..)$ Where Q = Output
f_n = relationship
K,L,M,N,…. = Inputs

Production Curves



However, for achieving least production cost alternative, there is a Standard Managerial Technique called **Concept of Isoquants and isocosts curves.**

These two curves are drawn on same isoquant map. The point where the isocost line falls to the corresponding isoquant curve, indicates Optimum production level.

Q. Explain "Exception to the Law of Demand".

Ans. The Income elasticity of demands is positive and therefore the curves are mostly positively sloped, which means that as the income of the consumers rise, the demand also rises. Not many exceptions to this rule have been documented. However, Sir Robert Giffen had documented a case wherein an increase in price of wheat led to increase in consumption of bread by the 19th century English peasants.

Such a hypothesis, though looking to be absurd in the beginning, appears distinct possibility, when critically examined. When the price of any product increases, there are two parallel and distinct occurrences.

(a) **Substitution Effect** – Due to increase in product price, there is a negative shift in consumption of this product due to shift of demand of from this product to substitutes.

(b) **Income Effect** – Increase in the price generally means negative Income effect. However, in some rare cases it can also lead to positive effect on income for a set of consumers. This is especially applicable where the producers are themselves a large block of consumers, like the farmers.

Generally, farming is an income neutral activity. In the year of bumper harvest, the prices get suppressed and vice versa. Therefore net income of the farmer remains more or less constant. However, in the global economy of today, it is possible that while one region harvests a bumper crop, most other regions get a poor harvest and therefore increase in prices of the commodity all over the world. In such a case, increased, prices coupled with bumper harvest in one region, will make the farmers of that region much richer. Such economic prosperity will lead to farmers' demand shifting from inferior variety of grains like Jowar, Bajra, etc to Normal grains like wheat and rice despite increase in prices of normal grains.

Q. Explain Principle of Derived Demand and Autonomous demands.

Ans. Derived demands are those which are tied to the purchase of some parent product. Demand for producers' goods, raw material and components is derived demand. Demand for petrol is dependent on demand for cars. Similarly demand for wood is linked to demand for furniture.

4 Principles of Derived Demands:

1. **Diminishing Returns**. The faster the marginal productivity of an input declines as its use rises, the lower is the elasticity of each firm's demand curve for that product.

3. **Importance of Input**. Other things being equal, larger the fraction of the total costs of producing some product that are made up of payments to a particular input, the greater is the elasticity of demand for that input.

4. **Elasticity of demand for output**. Other things being equal, the more elastic the demand for the product that the input helps to make, the more elastic is the demand for the input

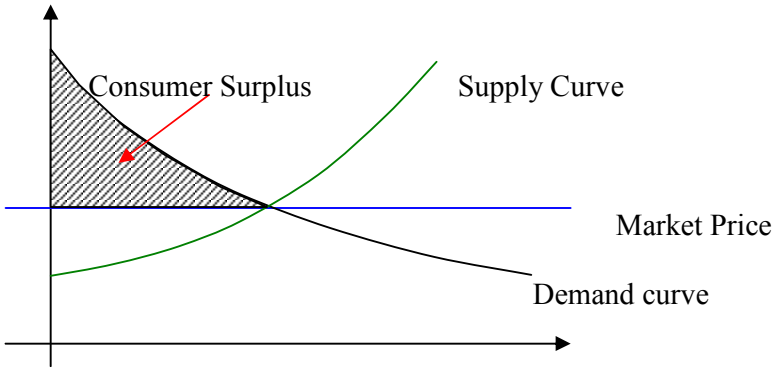
5. **Elasticity of Input**. Other things being equal, larger the fraction of the total costs of producing some product that are made up of payments to a particular input, the greater is the elasticity of demand for hat input.

Autonomous Demands: Autonomous demands are primary demands which are not linked to demand for any other product. Most of the consumer products fall in this category with the exception of few like petrol, TV antenna etc.

Q. Comment on Consumer Surplus.

Ans. "All consumers pay less than they would be willing to pay for the total amount of any product that they consume"

The difference between what they would be willing to pay – which is the value of the total utility that they derive from consuming the product – and what they do pay – which is their total spending on that product is called consumer surplus.



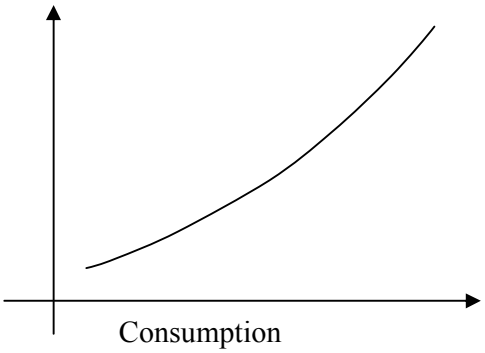
Consumer surplus is the area under the demand curve and above market price line (shaded). If market price is increased, the consumer surplus would decrease and producer's surplus would increase.

Consumer surplus has its application in improving allocative efficiency.

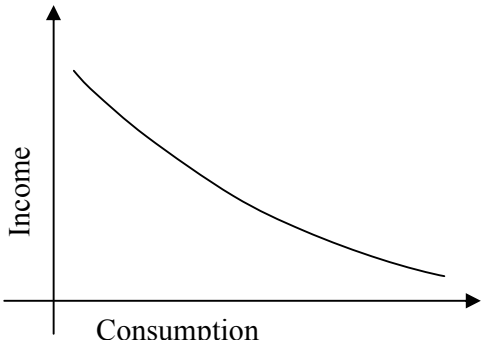
Q. Differntiate between Normal Goods and Inferior Goods.

Ans. **Inferior Goods** - For most of the goods, price demand relationship is inverse. When price increases, demand falls and vice versa. Similarly, when income of consumers rise, there is increase in demand. But in case of some goods, this almost universal law of demand is defied. The demand moves against income of consumers. This happens in case of goods consumed exclusively by poor people, like coarse grains – Jowar, Bajra, etc. With higher income, people tend to shift to better cereals, like wheat and rice, thus reducing demand for coarse cereals. Such goods are called Inferior goods.

Normal Goods - Normal goods are the ones which follow the standard Income Elasticity rule which is positively sloped.



Normal Demand Curve



Inferior Goods Demand Curve

Q Differentiate between Real Cost and Money Cost

Ans. **Real Costs** – The Physical quantities of land, labor, capital, entrepreneurship and real materials that are required to produce a give level of that commodity. The real costs are also called Engineering Costs because real costs depend upon engineering or technical conditions of productions.

Money Costs – It means minimum amount of money that is required to be spend to produce a given level of output of a particular commodity. It is expenditure in terms of money that must be incurred to pay for the services of the factors of production and raw materials required to produce given level of output. Factors of production means land labor capital and entrepreneur.

While talking of costs reduction, we mean–

For Real costs – Reduction in use of physical quantities of material etc.

Money Costs – Reduction in prices paid for factors and material input. It also includes real costs.

Q. Define Product Differentiation.

Ans. Most of the products are produced by more than one firm. Some of the products differ in their attributes depending upon which firm has produced it, where as some other products may have nothing to differentiate between the two except their packaging. Remove the wrapper and no one can tell the difference. Take for instance, Steel. Steel produced by SAIL, TISCO or Jindal have nothing different from each other. Similarly mineral water sold by different companies has nothing to identify one from another. But take the case of bathing soaps. Each soap is differentiated from other in terms of shape, fragrance, colour and even chemical composition. This identifiability of product without its packaging is called product differentiation. Maximum product differentiation is present in cooked food industry where variations occur in terms of ingredients, process and style which eventually translate into taste and aroma. Food cooked by one person can be very easily differentiated from other person's cooking.

Q. Short Notes on Pricing Policy.

Ans. Formulating Pricing Policy and setting prices are the most important aspects of managerial decision making. Economic theory reveals that pricing policy is based on certain assumptions. Generally it focuses on two parties viz buyers and sellers. In practice certain other parties are also influence the process of pricing, like rival sellers, potential sellers, middle men and govt.

Pricing policy could be short term or long term or both.

Factors governing Price Policy

3. External Factors
4. Internal Factors

External Factors –

- Elasticity of Supply
- Elasticity of Demand
- Goodwill of the firm,
- Degree of competition
- Inter-relationship of products
- Market Trend
- Purchasing Power of buyers'

- Govt policy towards prices

Internal Factors

- Costs
- Multi-product Vs single product
- Management Policy
- Objectives of business

One of the tedious tasks in pricing policy is apportioning common cost in multi-products companies, like Hindustan Lever. In such cases Ramsey Pricing Formula is used which states – Price deviations from marginal cost should be inversely related to the elasticity of demand. Translated in the layman's terms – apportion higher costs to inelastic demands and lower costs to the elastic demands.

Q. Explain Market Structures.

Ans. Classically, market structure has been divided into four segments

(a) Perfect Market
(b) Monopoly
(c) Monopolistic
(d) Oligopolistic

However, there were two more subsequent additions to the list, viz Monopsony and Oligopsony.

Perfect Market – A perfect market is only a theoretical possibility. The closest any market falls in this category is the grain (food cereals) market.

Characteristics

5. No and size distribution of seller – Very Large
6. No and size of distribution of buyers – Very Large
7. Product Differentiation – Almost NIL
8. Entry and Exit – Very Easy

Inference - With large no of buyers and sellers, no single buyer or seller can influence the price or supply of item.

Industry – A very large group of firms selling the same type product.

Monopoly Market

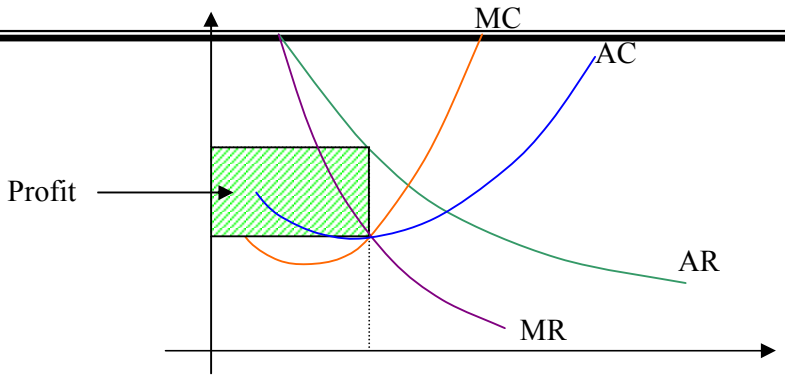
Characteristic Features

(e) Number and size distribution of seller - Single seller
(f) No and size distribution of buyers – Unspecified
(g) Product Differentiation – No close substitute available nor is there any competition
(h) Condition for entry and exit – Very difficult

Causes for existence of monopoly market could be

a. Legal (patent),
b. Public Policy (Govt regulations)
c. Natural (Natural Products unique to a geographical area), or
d. Cartel formation.

In a monopoly market demand curve is generally more inelastic than most other form of markets.



Monopoly Market Demand/Supply Curve

A pure MONOPOLY market is also a theoretical possibility only.

Factors affecting MONOPOLY market decision:

(f) Price Elasticity of demand
(g) Time horizon
(h) Potential Competitors
(i) State of Public opinion
(j) Legal/Regulatory system

Unique feature of the Monopoly market is price discrimination – Differential pricing for different customer for the same product without corresponding differences in the cost.

Condition for above to happen (discriminatory pricing)

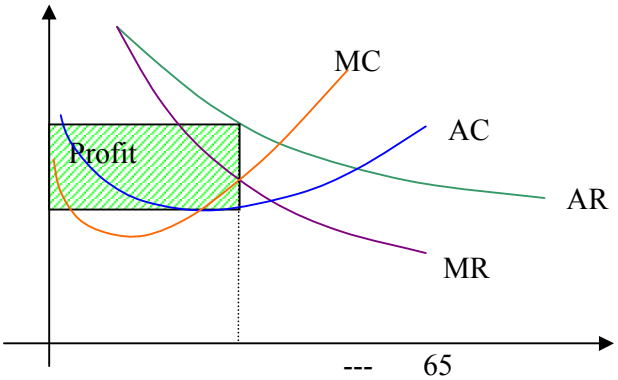
4. Multiple demand elasticity (Based on segments)
5. Market segmentation
6. Existence of strong barriers between different markets.

Monopolistic Competitive Market

In such a market, elements of both, Monopoly and Perfect market are present. This was invented by Professor Chamberlein.

Characteristics

5. No and size of distribution of seller – Many sellers, action of individual sellers does not have much impact on others.
6. No and size of distribution of buyers – Many small buyers
7. Product Differentiation – Differentiated product but product of an individual firm is a fairly close substitute for others
8. Entry and Exit –Easy



MR = MC

Oligopoly

Oligopoly market is dominated by few sellers but large number of buyers. Product may be homogenous or differentiated.

The problem of oligopoly pricing is complex and indeterminate. However a few principles of Oligopoly pricing are as under: -

8. If a rival cuts his price, it is better to match the cut than undercut (fall below his price) his price.
9. The fact that each seller knows that price cut will be met promptly by other competitors (as was the case between Hindustan Lever and Ariel brands recently), there is little incentive to resort to price cuts as a means of enlarging market share.
10. It may be safer to engage in secret price concessions to select customers than to reduce prices openly due to possibility of retaliation by competitors.
11. Price reductions once made are not easily reversible
12. Open price competition in Oligopoly usually degenerates into open price war.
13. Many Oligopoly firms believe that their demand curve is kinked, ie, Demand is inelastic to price cuts (No increase in demand due to price cut) but highly elastic for price increases. Hence oligopoly prefer rigid prices instead of using price changes as their competitive weapon.
14. Rigid prices may be difficult to adhere strictly in a dynamic world. Oligopoly firms therefore tend to resort to such devices as non price competitive collusion & price leadership.

Kinked demand curve

- Curve is inelastic for price cuts but elastic for price increases

Mkt Type	# & Size Dist^n of Buyers	# & Size Dist^n of Sellers	Degree of product Differentiation	Segment of Economy	Degree of Price Control	Unique Feature
Perfect Compe-tition	Very Large. No influence of single buyer	Very Large. No influence of single seller	Homogenous	Agriculture Products like cereals/grains	None	No need for incurring selling costs
Imperfect Markets						
Mono-polistic	Unspecified	Large	Real/imaginary differentiation and no close substitutes	Retail trade, FMCG Goods	Some	Need for Advtg
Oligopoly	Unspecified	Few	1. Little or no differentiation 2. Some differentiation	Metals like steel, aluminum, copper and automobiles	Some influence	---
Monopoly	Unspecified	Single	No close substitute	Few of public	Consi-derable	----

				utilities		
Monop-sony	Single	---	---	Railway Wagons, Labour Market in Single industry townships like Jamshedpur (TISCO)	Consi-derable	---
Oligop-sony	Few	----	---	1. Milk dairies 2. Sugar factories 3. Certain vehicle components	Some	---