Chapter:1

Basic Economic Concept

1- **Economics:** There are many definitions for economic science such as follows:

A. Social science concerned with the production distribution exchange and consumption of goods and services .

B .The Social science which studies human s behavior in trying to reconcile the unlimited available resources.

C. The study of those activities that involve mony and exchange transactions among people.

D. (the study wealth.)

2- **Economics Theory:** it is a many economic assumptions which able us to analysis and explain the economic behavior. One of the main tasks of economic theory is to explain why goods have prices and why some goods expensive and others cheap.

3-**Closed Economy:** An economy without international trade

4-OpenEconomY: An economic with international trade.

5- branches of economics:

Standard economics can be divided into two major fields. The first, Microeconomics. The second filed Macroeconomics.

- Microeconomics: it is the branch of economics that deals with small units ,including individual companies and small groups of consumers.

A-Components of Microeconomics:

The central components of microeconomics are demand supply ,and market equilibrium.

-Macroeconomics: is a branch of economics that studies an economy as a whole with a picture to understanding the relations between economic aggregates such a national income, employment and inflation.

6- Scarcity: exists in every society because human material wants are unlimited , where as the economic resources necessary to produce the goods and services to satisfy these wants are limited.

Scarcity is a fundamental problem for every society . Decision must be made regarding what to produce, how to produce, and for whom to produce.

7- positive economics:

positive economics is the branch of economics that concerns the description and explanation of economic phenomena . It focuses on facts and cause-and effect relationships and includes the developing and testing of economic theories.

8- Normative economics:

Normative economics is the branch of economics that merges value judgments about what the economy should be like or what particular policy actions should be recommended to achieve a desirable goal.

9- The Methodology of economics:

Because economic phenomena are complex, economics has found it useful to model economic behavior .In constructing a model economists make assumption which cut away unnecessary detail and reduce the complexity of economic behavior .Once modeled economic behavior may be presented as a relationship between a dependent variable and few independent variable .The behavior being explained is the dependent variable normally, the dependent variable is presented as depending upon one independent variable, with the effect of the other independent variable held constant . thus, y depends upon x.

1o- The use of tables and graphs :

A table contains data about two or more variables, one of them is independent and other are dependent graph is a visual presentation of the behavior of a variable over time (a time series graph) or of the relationship between two variables.

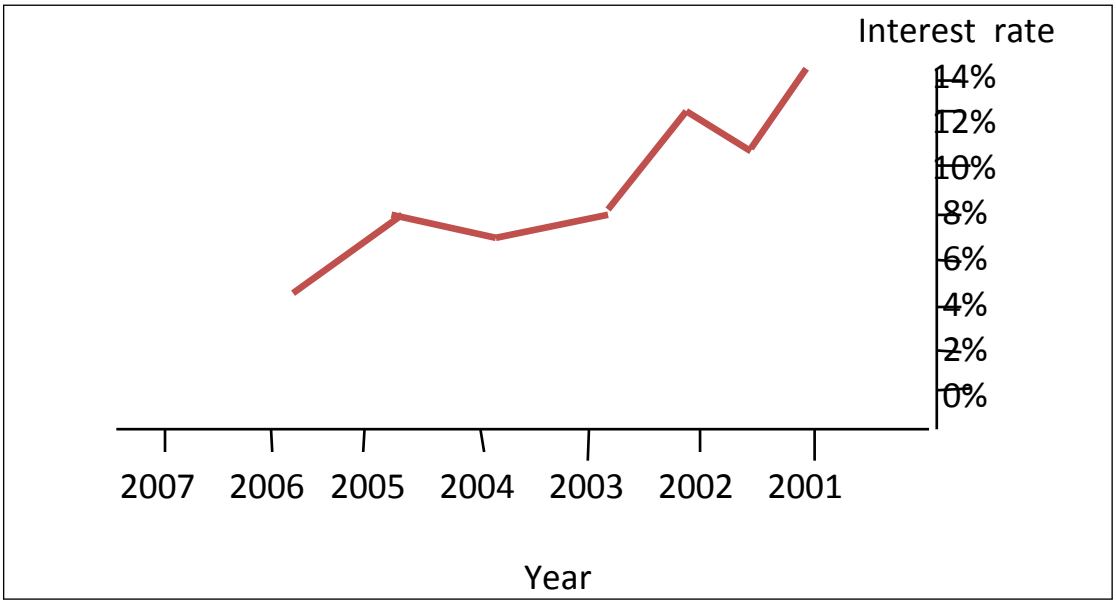
As example the table below present the relationship of a single variable has been presented at various time .

Table (1)

Interest rate (2001-2007)

Year	Interest rate
2001	12%
2002	8%
2003	9%
2004	6%
2005	4%
2006	5%
2007	3%

Fig(1)



Chapter 2 :Demand ,Supply & Market Equilibrium

1- Demand:

Demand is the quantity of good that consumers are not only willing to purchase, but also have the capacity to buy at the given price per unit of time .For example a consumer may be willing to purchase(2) kg of potatoes if the price is $0.75 per kg .but ,the same consumer may be willing to purchase only (1)kg if the price is $1.00 per kg.

1-A. demand schedule

A demand schedule can be built that shows the quantity demanded at each given price .

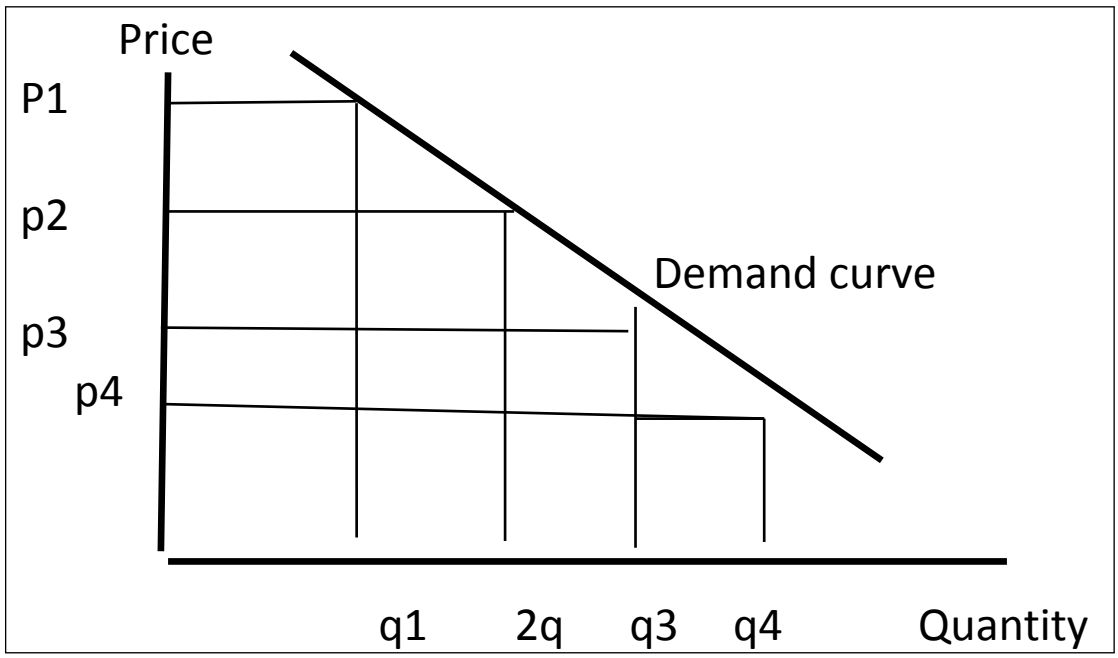
Demand schedule

Price	Quantity
6	2
5	3
4	4
3	5

It can be represented on a graph a line or curve by drawing the quantity demanded at Each price.

It can also be described mathematically by a demand equation .

1-B .Demand curve



The general form of a demand curve is that it is downward sloping because that negative relationship between price of goods and there quantities.

1-C. Special cases of a demand curve

The demand curve for most ,if not all, goods fits to this principle .There may be unusual examples of goods that have upward sloping demand curves. A good whose demand curve has an upward slope is known as a Giffen good.

1-D. Aggregate demand

- Aggregate demand is the total demand for final goods and services in the economy (y) during a specific time period .

-An aggregate demand curve is the sum of individual demand curves for different sectors of the economy.

- The aggregate demand equation has five main parts.

$$YD=C+I+G+(X-M)$$

Where

C: is consumption,

I:is Investment ,

G:is Government spending,

NX: is Net export ,

X: is total exports, and

M: is total imports.

2-6. caused of change demand :

A change in demand for a product can be caused by many factors . Below are a few of the most common.

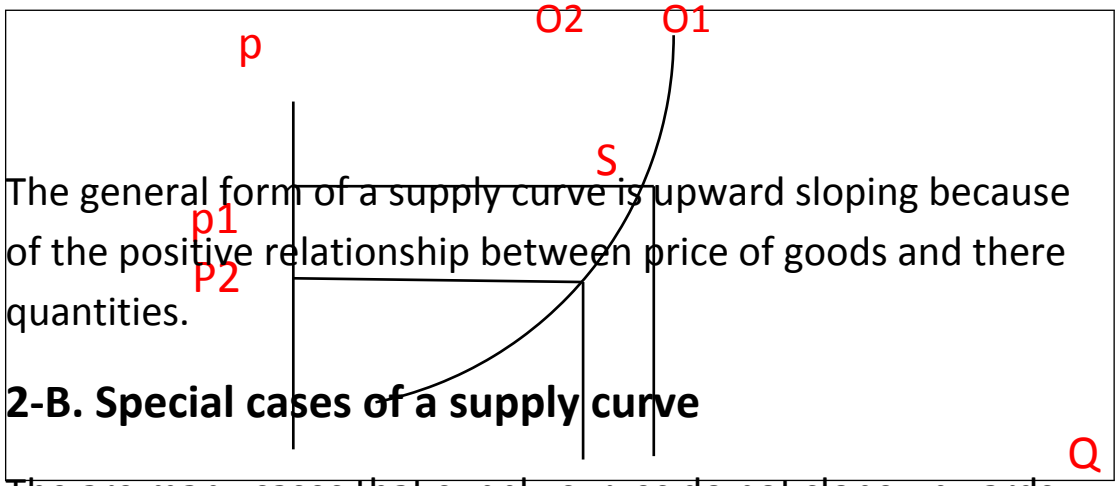
- **Population Changes** –An increase in population increases the demand for food and other products ,shifting the curve to the right.
- **Demographic Changes** – The ageing population in any country will affect the demand of many products. For example , the demand for health care will increase, shifting the curve to the right .
- **Tastes and preferences**- In recent years, health concerns have had a major effect on the preference for various types of food products.
- **Rising Incomes** – Increasing income levels in developing countries increases the demand for food ,shifting the demand curve to the right.

- **Income Distribution** –The rising income disparity in the U.S has increased the demand for high value/ expensive products by high income consumers while having little effect on the product demand of middle income consumers.
- Substitute Products –Because pork, beef and poultry are all meat products, what happens in one industy affects the others . A disease problem in the poultry industry that reduces the supply of poultry will shift the demand curves for beef and pork to right.

2- Supply

Supply is the quantity that producers are willing to sell at a given price . For example, the potato grower may be willing to sell 1million kg of potatoes if the price is $0.75 per kg and basically more if the market price is $0.90 per kg .The main determinants of supply will be the market price of the good and the cost of producing it.

2-A. Supply curve



The general form of a supply curve is upward sloping because of the positive relationship between price of goods and there quantities.

2-B. Special cases of a supply curve

The are many cases that supply curves do not slope upwards.

*A well known example is for the supply curve for labor : backward bending supply curve of labor .As a person's wage increases, they are willing to supply a greater number of hours working, but when the wage reaches an extremely high amount (say a wage of $1,000,000 per hour,),the amount of labor supplied actually decreases.

*Another example of a nontraditional supply curve is generally the supply curve for utility production companies . Because a large piece of their total costs are in the form of fixed costs, the marginal cost (supply curve) for these firms is often described- as a constant

2-C. Aggregate supply

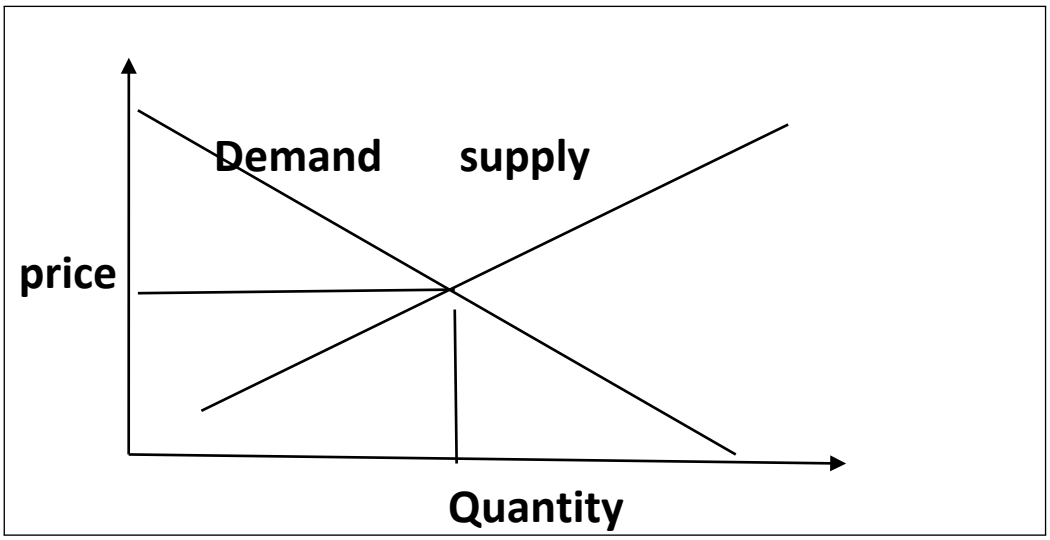
Aggregate supply is the total supply of goods and services by a national economy during a specific time period .There are at least two different versions of this concept .

- Sometimes the ‘‘S curve ,,in the "Keynesian cross " diagram is referred to as "aggregate supply ." This curve often represents the total amount of production that corresponds to the total amount of income in a country during a specific time period .Because the sum of all income received corresponds the sum of all production , this is drawn as a 45 degree line .
- In neo –Keynesian theory an ‘‘aggregate supply and demand ‘‘diagram is drawn as upward –sloping in the short run ,because the quantity of aggregate production supplied rises as the average price level rises .

2-D. theory of supply and demand

The theory of supply and demand describes how prices change as a result of a balance between product availability at each price (supply)and the desires of those with purchasing power at each price (demand).

2-E. supply and demand curves



- The slope of the demand curve (downward to the right) indicates that a greater quantity will be demanded when the price is lower .
- On the other hand, the slope of the supply curve (upward to the right) tells us that as the price goes up, producers are willing to produce more goods.
- The point where these curves intersect called the equilibrium point .
- (P) in this example , called the equilibrium price that equates supply with demand .

2-F. Market Equilibrium

When the supply and demand curves intersect, the market is in equilibrium. This is where the quantity demanded and quantity supplied are equal .The corresponding price is the equilibrium

price or market –clearing price ,the quantity is the equilibrium quantity .

Chapter 3

Elasticities of Demand &Supply

3-A. Elasticity is the ratio of the proportional change in one variable with respect to proportional change in another variable price elasticity ,for example is the sensitivity of

quantity demanded or supplied to changes in prices. Elasticity is usually expressed as a negative number but shown as a positive percentage value .

Theprice elasticity of demand (PED)

is an elasticity that measures the nature and degree of the relationship between changes in quantity demanded of a good and changes in its price .

3-C .How can we measure the price elasticity of demand ?

$$E^d = \Delta Q / Q_1 \div \Delta P / P_1$$

$$= \Delta Q / Q_1 \times P_1 / \Delta P$$

Example : find price elasticity of demand when the price of papers 10$ for band the quantity demanded are 100 bands ,but when the price increase to 12$ for band ,the quantity demanded decrease to 60 bands?

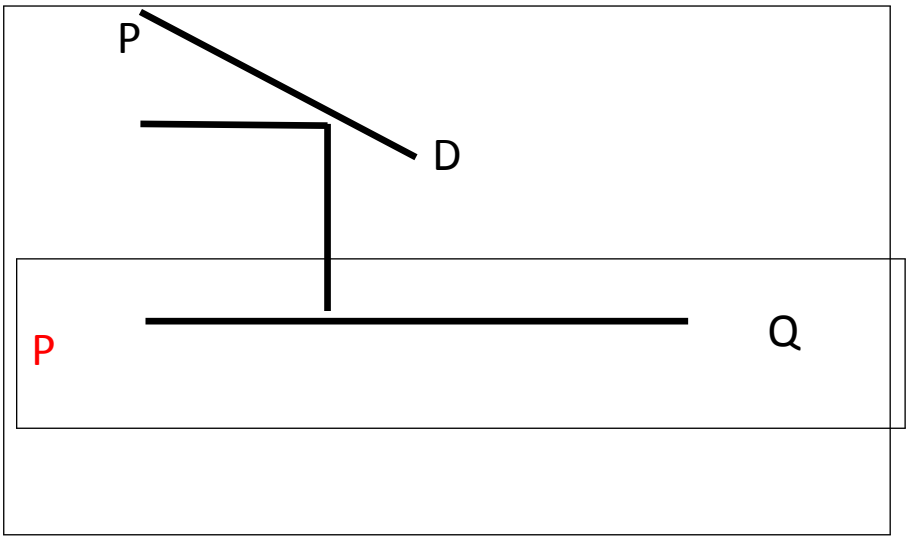
Solution :

3-D. The kinds of elasticity of demand:

There are five kinds of elasticity of demand as follows :

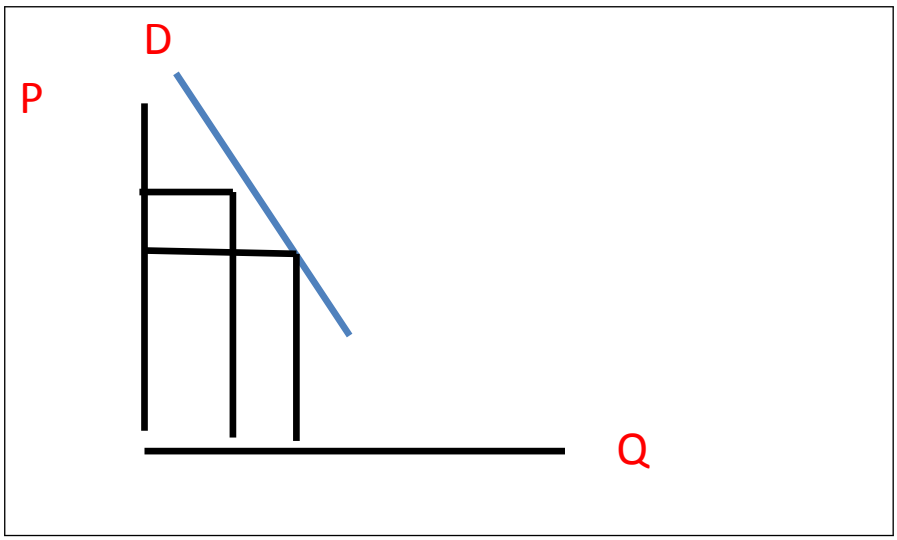
1. high elasticity :

The small change in price give the big change in quantity demanded .



Δ Δ P< Q

2. low elasticity : the big change in price give the small change in quantity demanded .

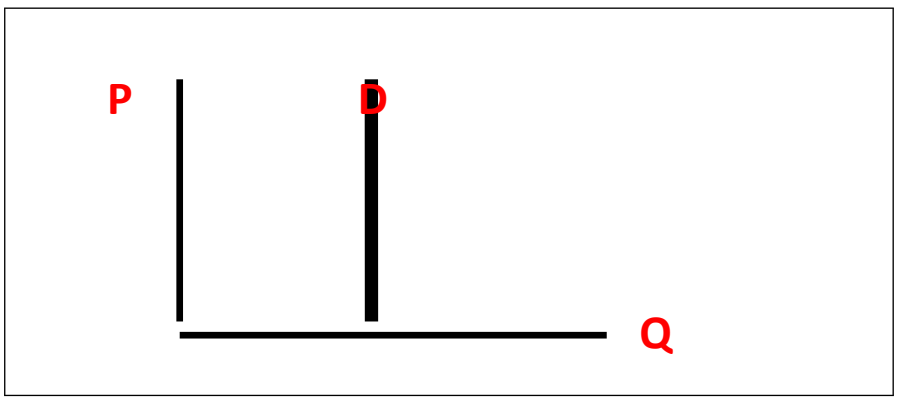


Δ Δ P> Q

3. Unity elasticity :the change in price give the same change in quantity demand .

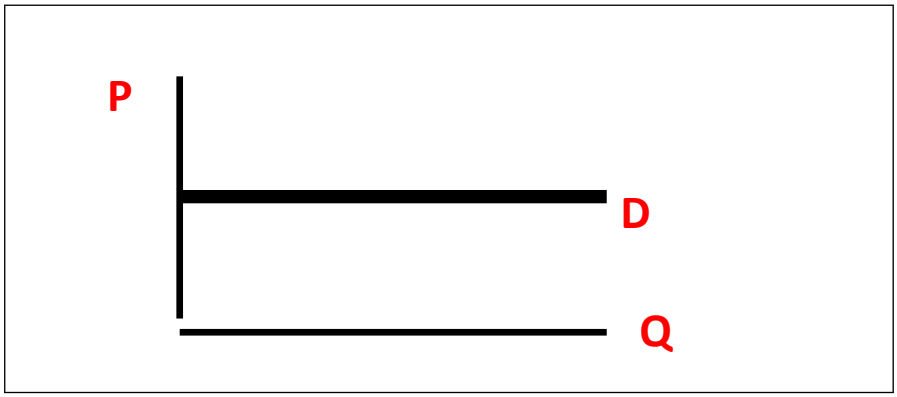
$$\Delta P = \Delta Q$$

4. Non elasticity :when the change in price doesn't give any change in quantity demanded .



E=0

5. Infinity elasticity :the small change in price will lead to replace this piece of good to another.



E

3-E**. Price elasticity of supply :** defined as a numerical measure of the responsiveness of the quantity supplied of

3-F. income elasticity of demand :

measures the responsiveness of the quantity demanded of a good to the change in the income of the people demanding the good It is calculated as the ratio of the percent change in quantity demanded to the percent change in income.

3-G.How can we measure income elasticity of demand:

$$E = \Delta Q/Q_1 \div \Delta Y/Y_1$$

$$= \Delta Q/Q_1 \times Y_1/\Delta Y$$

For example ,if in response to a 10% increase in income ,the quantity of a good demanded increased by 20% , the income elasticity of demand would be 20% /10%=2

3.H: Cross elasticity of demand and cross price elasticity of demand measures the responsiveness of the quantity demand of a good to a change in the price of another good.

It is measured as the percentage change in quantity demanded for the first good that occurs in response to a percentage change in price of the second good .

3-g.How can we measure it:

$$E = \Delta Q_k / Q_{X1} \div \Delta P_Y / P_{Y1}$$

$$Q_K / Q_{X1} * P_{Y1} / \Delta y \Delta$$

If for example , in response to a 10% increase in the price of fuel, the quantity of new cars that are fuel inefficient demanded decreased by 20% the cross elasticity of demand would be -20%/10%=-2.

Chapter 4:

The Consumer &Demand

4-A. Consumer theory

A consumer is a person who buys a product or uses any service

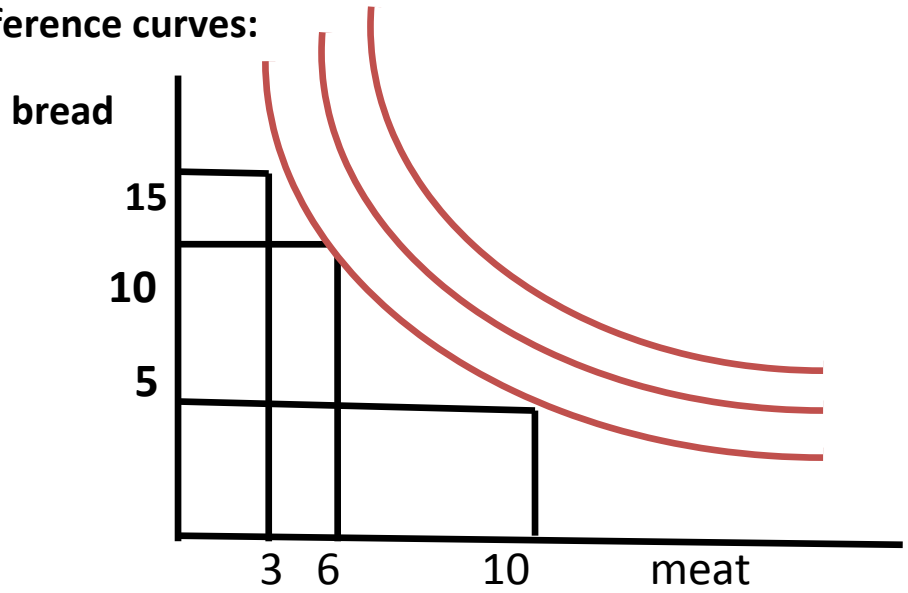
Consumer theory is a theory of economics. It relates preferences(through indifference curves and budget constraints) to consumer demand curves. Important variables used to explain the amount demanded of a good are the price per unit of that good and money income of the consumer.

4-B. indifference curve

An indifference curve is a graph showing combinations of goods for which a consumer is indifferent .that is , it has no preference for one combination against another ,as they give the same level of satisfaction for the consumer in the same curve.

Examples of Indifference Curves:

Below is an example of an indifference map having three indifference curves:



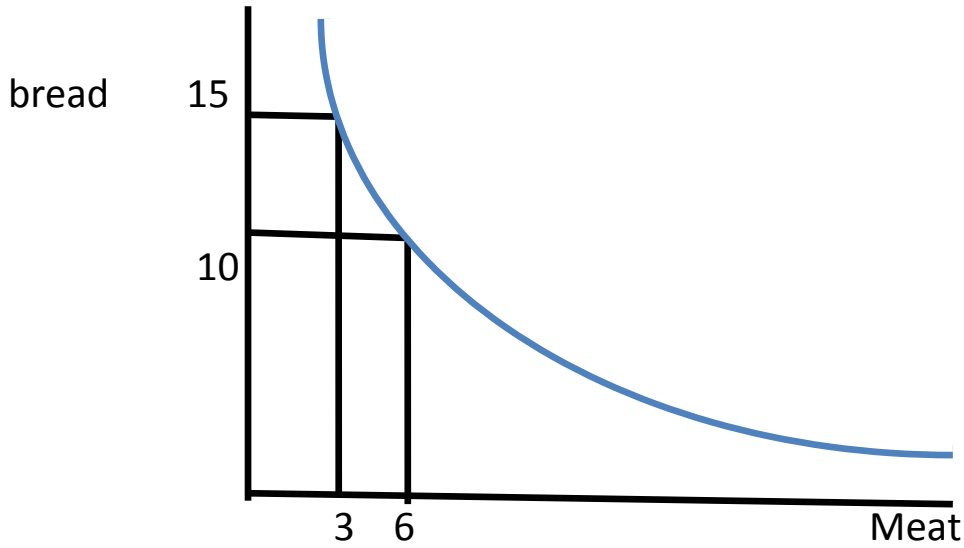
4-C. Indifference Table :

Group	Meat (kg)	Bread (piece)
1	3	15
2	6	10
3	10	5

4-D. Marginal ratio of substitution (MRS):

It's the amount of (Y)

good that the consumer can abandon it to one good from (X).



MRS=6-3/15-10

=3/5

=0.6

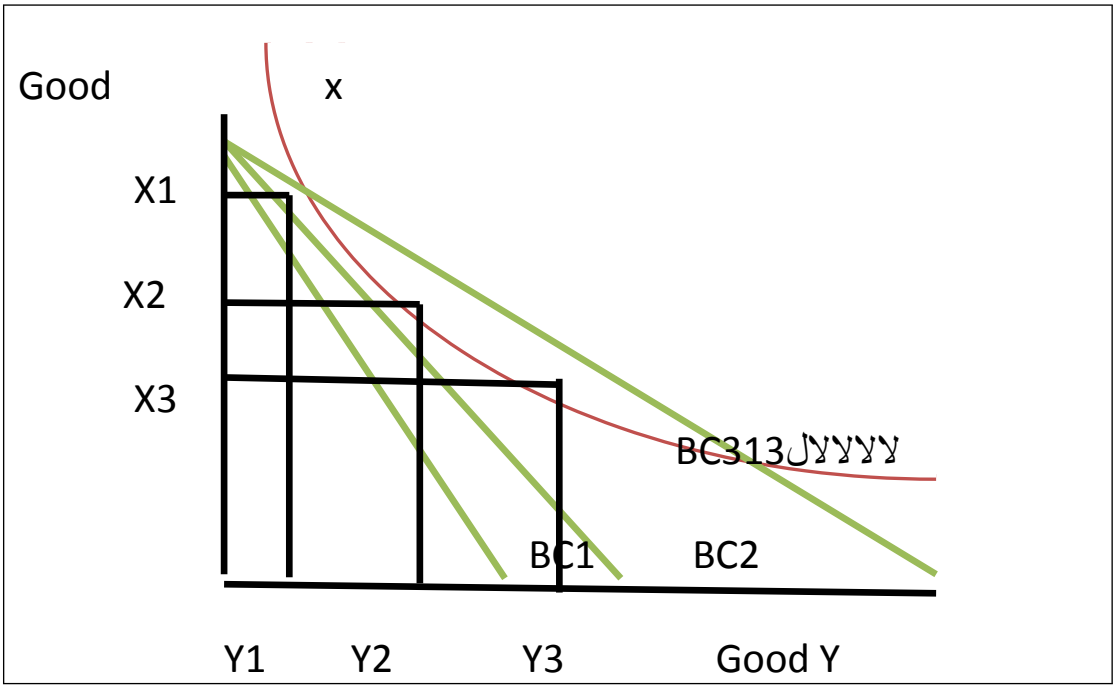
That is mean the consumer above can substitute 15 pieces of bread by 3kg of meat , or substitute 10 pieces of bread by 6kg of meat.

4-E. Price effects

These curves can be used to predict the effect of changes to the budget constraint .The graphic below shows the effect of a price shift for good Y. If the price of Y increases ,the budget constraint will shift from BC2 to BCI .

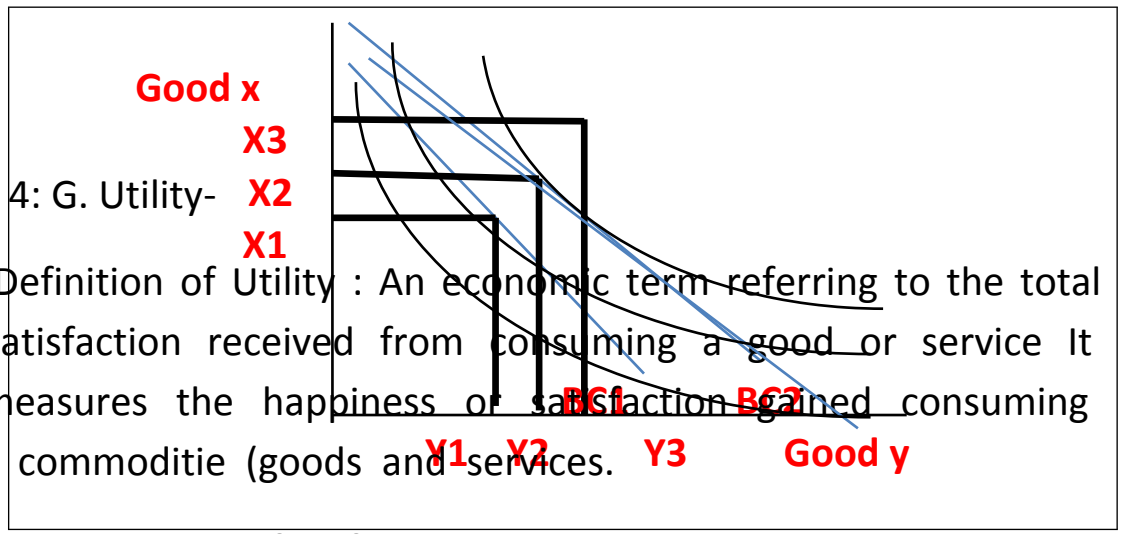
Notice: because the price of X does not change, the consumer can still buy the same amount of X if he or she chooses to buy

only good X. On the other hand ,if the consumer chooses to buy only good Y, he or she will be able to buy less of good Y because its price has increased .



4-F. In come effect

Another important item that can change is the income of the consumer .As long as the prices remain constant ,changing the income will create a parallel shift of the budget constraint .Increasing the income will shift the budget constraint right since more of both can be bought and decreasing income will shift it left.



4: G. Utility-

Definition of Utility : An economic term referring to the total satisfaction received from consuming a good or service It measures the happiness or satisfaction gained consuming commoditie (goods and services.

4-K. Marginal utility *:*

The theory of marginal utility was independently developed around 1870 by William Stanley Jevons in England ,Carl Menger in Austria and Leon Walras in Switzerland .

1. Definition of marginal utility :

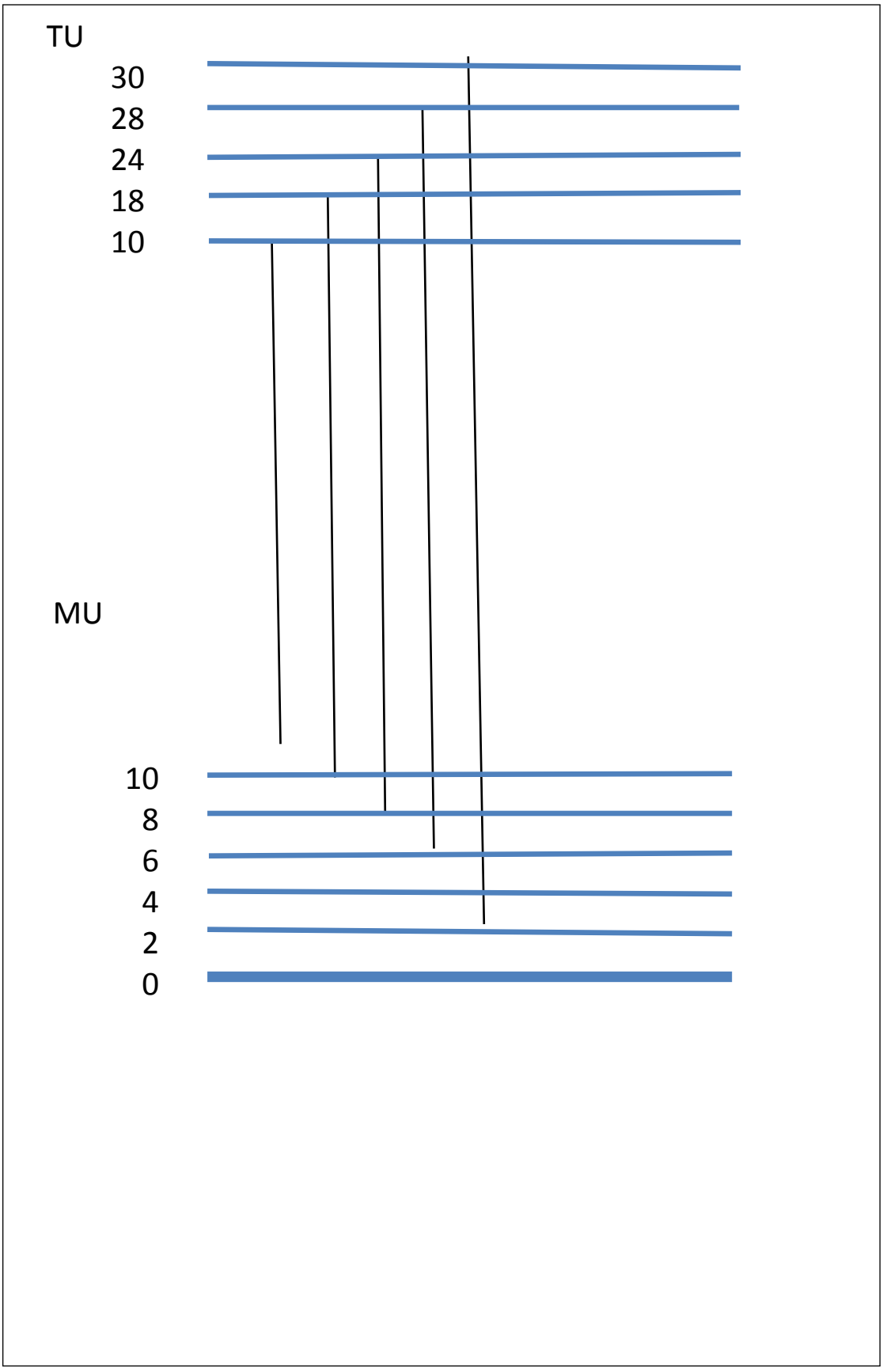
Amount of benefit derived from consuming one additional unit of a product or service.

2. Total utility &marginal utility table:

Q_x	Tu_x	MU_x
1	**10**	**10**
2	**18**	**8**
3	**24**	**6**
4	**28**	**4**
5	**30**	**2**
6	**30**	**0**

3. Total utility &marginal utility curve :

.


TU
30
28
24
18
10
MU
10
8
6
4
2
0

4. How can we get marginal utility ?

Example:

From the table below find the marginal utility ?

$$MU = \frac{\Delta}{\Delta}$$

Q	TU	MU
1	30	
2	40	
4	58	
6	70	
7	76	
8	76	

Solution