Supply Analysis

"The nation's resources are insufficient to produce, the quantities of goods and services that would be required to satisfy all of its citizens wants."
– Lipsey

Syllabus

Theory of Supply :
Supply and determinants of supply - law of supply.

Content Outline :

(1) **Supply-meaning**
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1 Supply-Meaning :

In the previous chapters we have discussed about demand, We will now briefly discuss about supply.

In the ordinary sense, the term `supply' is taken to mean as the `stock' of a commodity available with the producer. But, in economics, the term `supply' should be carefully distinguished from the term `stock'. *Stock is the total volume of a commodity which can be brought into the market for sale at a short notice, whereas supply means the quantity which is actually brought in the market for sale.* Of course, in the case of perishable commodities like fruits, vegetables, meat, fish, eggs etc. supply and stock may be regarded as the same, because whatever is in stock must be disposed of. But, in the case of durable commodities it is not so, as a certain quantity of these articles can be held back, if for example, prices are not favorable. In short, *stock is potential supply, while supply refers to that part of stock of the commodity which is offered for sale in the market at a given price.*

In other words, the term `supply' may be defined as the actual amount of the commodity which is brought to the market for sale at a given price. Supply, in economics, therefore, implies two things :

(a) Stock of the commodity.

(b) Willingness to offer a part of the stock for sale in the market at a given price.

(I) Supply is Always at a Price : We have just seen in the discussion of demand that demand is always stated in terms of price. Similarly, the term supply is also stated in terms of price. To speak of supply without reference to price has no meaning. Likewise supply is also stated in relation to unit of time – say per day, per week, per month, per year etc. The term `supply' therefore, is not an absolute term, but a relative term – relative to price and time.

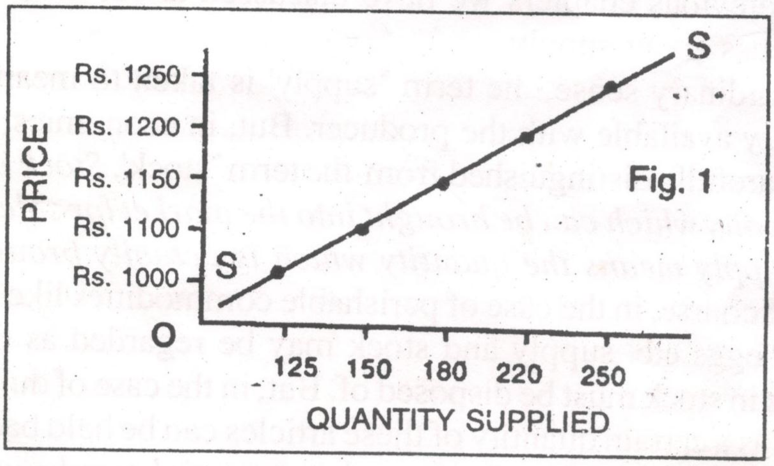
In short, supply means the quantity supplied at a given price per unit of time.

2 Supply Schedule :

Supply schedule is a tabular statement showing the different quantities of a commodity supplied at different prices. It represents a functional relationship between the price and the quantity supplied.

Price of Wheat (per quintal)	**Quantity of Wheat Supplied** (in quintals)
Rs. 1000	125 quintals
Rs. 1100	150 ,,
Rs. 1150	180 ,,
Rs. 1200	220 ,,
Rs. 1250	250 ,,

On this basis, we can draw the supply curve :



3 The Law of Supply :

It will be clear from the study of the supply schedule that, other things remaining the same, more quantity of a commodity is supplied at a higher price and less quantity at a lower price. This is the well - known law of supply which states that, *other things being equal, the amount of a commodity supplied increases with every increase in its price and decreases with every fall in its price. In other words, the quantity supplied varies directly with the price,* that is to say, other things remaining constant, more quantity of an article is supplied at a higher price and less quantity at a lower price :

Price of Rice (per quintal)	Quantity of Rice Supplied (in quintals)
A Rs. 2000	100 quintals F
B Rs. 2100	110 ,, G
C Rs. 2200	125 ,, H
D Rs. 2300	145 ,, I
E Rs. 2400	160 ,, J

Diagrammatic presentation of the law of supply :

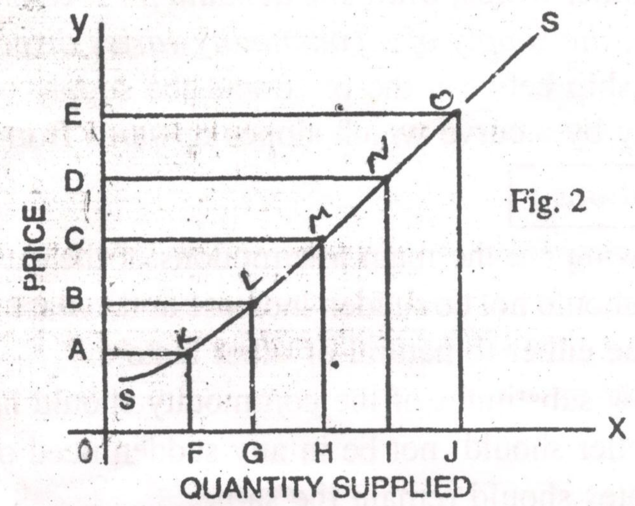


Fig. 2

Along OX we have measured the quantity supplied and along OY the price. When the price is OA, the quantity is OF : with every rise in price from OA to OB, OC, OD and OE, the quantity supplied increases from OF to OG, OH, OI and OJ respectively. SS is the supply curve.

4 The Rationale of the Law of Supply :

According to the law of supply, other things remaining constant, the quantity of a commodity supplied varies directly with the price. A rise in price leads to an increase in supply and a fall in price results in a decrease in supply. There are two reasons for this phenomenon :

(a) The rise in the price of commodity leads to an increases in the profit of the producer, because profit, after all, is nothing but a difference between the selling price and the cost price (cost of production) of an article. As a result of a rise in the price of a commodity, the difference between the selling price and the cost price increase leading to an increase in the profit of the producer which gives him an incentive to produce more and offer a larger quantity of it for sale in the market. Thus a rise in the price of a commodity leads to an increase in its supply.

(b) Conversely, a fall in the price of commodity would mean that the marginal producers are not in a position to cover even their cost of production; they incur losses. The result is that these producers produce less and offer a smaller quantity for sale in the market. Thus, a fall in the price of a commodity leads to a reduction in its supply.

(I) Supply Curve Slopes upwards from Left to Right : If we study the shape of the supply curve, we shall find that it slopes upwards from left to Right as contrasted with the demand curve which slopes downwards from left to right. The reason for this is that when price falls, demand increases but supply decreases. In other words, *while the demand for a commodity varies inversely with the price, the supply of a commodity varies directly with the price.* The direct relationship between the price and the supply of a commodity can be illustrated only by a curve which slopes upwards from left to Right.

5 Assumptions :

The following are the main assumptions of the Law of Supply :

(a) There should not be sudden increase or decrease in the production of the commodity due either to natural or other factors.

(b) No new substitutes of the commodity should have been invented.

(c) The seller should not be in any sudden need of cash.

(d) Tax rates should remain the same.

6 Exceptions to the Law Supply :

The following are the main exceptions to the Law of supply :

(a) Anticipation regarding Future Changes in Prices : If the sellers anticipate that the price of a particular commodity is going to fall in future, then in order to avoid future losses, they would try to sell as much as possibie even at the prevailing low level of prices, i.e. in such a case, the fall in price does not lead to a reduction in the supply of a commodity. Conversely, if the businessman expect the prices to rise in future, then with a view to reap as much profit as possible in future, they would restrict their sales even at the prevailing high level of prices.

(b) Rare Articles : The law does not apply in case of such rare articles like ancient coins and stamps, ancient historical statues, autographs of the departed leaders etc. The supply of such articles is fixed and cannot be increased even if there is a substantial rise in their price.

(c) Supply of Labour : It has been said that the law does not apply in the case of supply of labour. Upto a point an increase in the price of labour, i.e, increased wages, would result in an increased supply of labour because the workers would work for extra hours to get increased wages. But after a certain point, they would prefer leisure to extra work. i.e *increase in wages after a certain point does not lead to an increase in the supply of labour.* Conversely, a fall in wages would make the labourers work for extra hours to maintain their existing level of income. Here, therefore, *a fall in wages does not lead to a reduction but on the contrary an increase in the supply of labour.*

(d) Commodities whose Supply is Fixed in the Short Period : There are certain goods and factors whose supply is practically fixed in the short period and cannot be increased or decreased, although in the long run their supply can be changed, e.g. houses, machines, surgeons, pilots etc. A rise or fall in the prices of these goods and services will not, in the short period, result in an increase or decrease in their supply. Ofcourse, in the long run, their supply can be increased or decreased with a rise or fall in their prices respectively.

7 Determinants of Supply :

The main factors affecting changes in the supply of a commodity are as follows :

(I) Natural Factors : Natural factors like floods, droughts, pests, plant diseases, locusts, storm etc. affect adversely the production of agricultural commodities and consequently their supply; on the other hand, favourable climatic factors like adequate and timely rains, as also the use of improved methods of production increase agricultural output and its supply. Similarly, calamities like earthquakes, wars, fire etc. also by adversely affecting the production results in the decreased supply of goods and commodities.

(II) Cost of Production : Cost of production is another important factor affecting the supply of a commodity. If, for example, as a result of new inventions and the adoption of improved techniques, the cost of production falls, this would lead to an increase in production resulting in increased supply. On the other hand, if the cost of production rises, say due to an increase in the prices of raw materials and the prices of the factors of production like rent; wages interest etc. this would have an adverse effect on production resulting in a fall in the supply of goods and commodities.

(III) Industrial Progress : Industrial progress in a country leads to increased production and consequently in an increase in the supply of industrial goods. Thus, for example, rapid advance of science and technology, inventions and researches, adoption of improved techniques, improvement in labour efficiency – all these, by considerably increasing the industrial production, result in an increased supply of industrial goods.

(IV) Improvement in the Means of Transport and Communications : Adequate, quick and cheap means of transport and communication by facilitating the movement of commodities from areas of plenty to areas of scarcity as also amongst the different regions of the country result in increased supplies.

(V) Political Stability : Political stability in the country, maintenance of law and order, security of life and property etc. create a favourable atmosphere for the industrialists to step up production and start new concerns. This means a rise in production and consequently a rise in the supply as well. On the other hand, political instability, breakdown of law and order, insecurity of life and property create chaotic conditions in the country and discourage not only new investments but also adversely affect the existing production. All this would naturally result in a fall in the supply of goods and commodities.

(VI) Taxes and Subsidies : An increase in the rates of taxation, say excise duty, may lead to an increase in the cost of production which would adversely affect the output and the supply of a commodity. However, an increase in the import duty, by restricting the supply of foreign goods may encourage domestic production resulting in an increased supplies of those goods. Similarly, subsidies and bounties given by the government to certain industrial units encourage them to raise their production and thus increase the supply.

8 Change in Supply :

A change in the quantity of a commodity supplied as a result of a change in its price is known as *'Extension or Contraction of Supply'*. In other words, when the supply of a commodity increases due to an increase in its price or decreases due to a fall in its price, the phenomenon is known as extension or contraction of supply respectively. In short, *extension or contraction of supply is always due to change in price.*

Price	Quantity Supplied	
Rs. 5 A	B 100 units	
Rs. 4 C	D 80 units	Contraction of supply
Rs. 6 E	F 125 units	Extension of supply

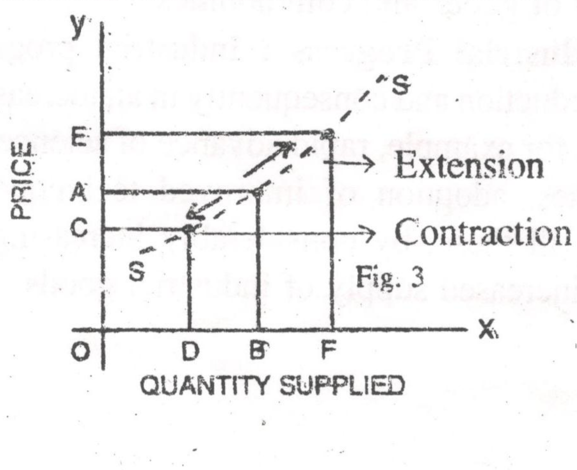


Fig. 3

At the price OA in Fig-3, the quantity supplied is OB. When the price rises from OA to OE, the quantity supplied increases from OB to OF. This is known as `*Extension of Supply*'. Similarly, when the price falls from OA to OC, the quantity supplied decreases from OB to OD. This is known as `*Contraction of Supply*'.

9 Increase and Decrease in Supply :

A change in the quantity of a commodity supplied not due to a change in price but due to changes in other factors, which we have already studied is known as an `Increase or Decrease in supply'. In other words, *increase in supply means that at the same price more quantity of commodity is offered for sale or the same quantity is offered for sale at a lower price.* Here, there will be a shift in the supply curve upwards to the right.

Price	Quantity Supplied
Rs. 5	100 units B
Rs. 5	125 units C

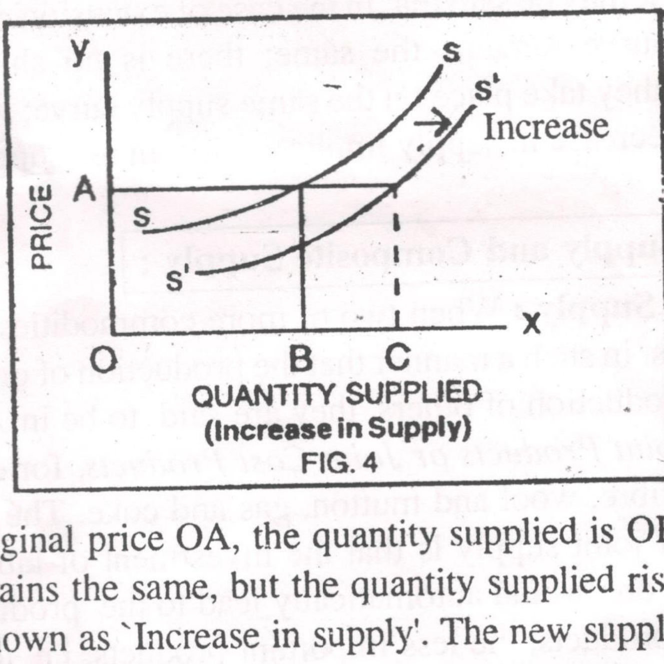


FIG. 4

At the original price OA, the quantity supplied is OB.

Price remains the same, but the quantity supplied rises from OB to OC This is known as `Increase in supply'. The new supply curve S'S' shifts to the right of the original curve SS.

Similarly, *decrease in supply means that at the same price less quantity is offered for sale.* Here, the supply curve shifts downwards to the left.

Price	Quantity supplied
Rs. 5	100 units B
Rs. 5	80 units C

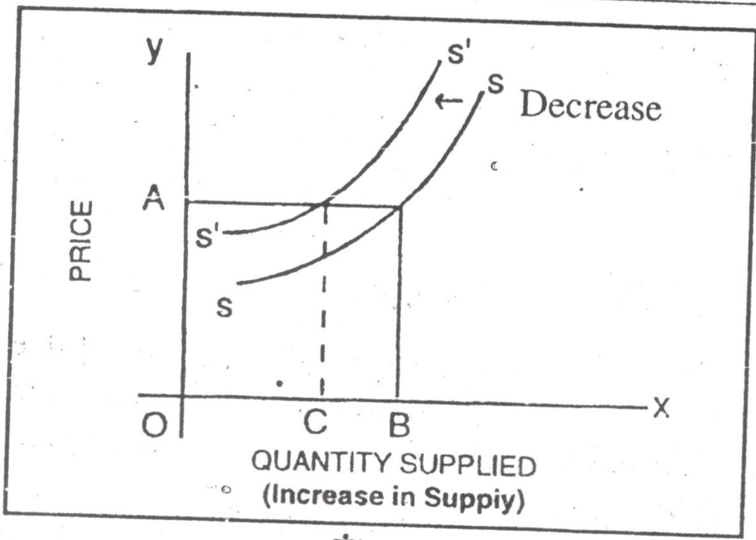


Fig. 5

At the original price OA, the quantity supplied is OB. Price remains the same but the quantity supplied falls from OB to OC.

This is known as `Decrease in supply'. The new supply curve S'S' shifts downwards to the left of the original curve SS.

In short, it may be said that in the case of extension or contraction of supply, the supply curve remains the same; there is no shift in it. Whatever the movements, they take place on the same supply curve; while on the other hand, increase or decrease in supply implies a shift in the supply curve to the right or to the left.

10. Joint Supply and Composite Supply :

(I) Joint Supply : When two or more commodities are produced with the same joint cost in such a manner that the production of one would automatically lead to the production of others, they are said to be in *Joint Supply*. They are also called *Joint Products or Joint Cost Products,* for example, cotton - seed and cotton - fibre, wool and mutton, gas and coke. The main characteristic of the articles of joint supply is that the investment of labour and capital in the production of one would automatically lead to the production of others. In the case of joint products, the less important products, i.e. those whose prices are low, are generally known as `by - products'. Thus, for instance, cotton fibre is the main product and cotton-seed is the by-product.

One thing to be noted in the case of articles of joint products is that any change in the price and supply of the main product affects the price and supply of the by-product. For example, if the price of cotton fibre increases and that of cotton-seed remains the same, then the increase in the production of cotton should result not only in an increase in the supply of cotton - fibre but also in cotton seed, thereby affecting the price of the latter. Conversely a change in the