

Managerial Economics

M.Com. IVth Sem.

Mr. Abhi Dutt Sharma

Date: 12/04/2020

Market Supply and Equilibrium

CONTENTS

Objectives

Introduction

3.1 Market Supply

3.2 Market Equilibrium

3.3 Summary

3.4 Keywords

3.5 Self Assessment

3.6 Review Questions

Objectives

After studying this unit, you will be able to:

- State the law of supply
- Explain how market equilibrium is reached

Introduction

It is true that economy runs on demand but that demand has to be fulfilled with corresponding supply as well. Say, if there is a huge demand for mobile phones in an economy, there has to be corresponding supply to fulfill that demand.

If adequate supply is not there, then the demand would not be fulfilled.



Example: You are willing to buy a tennis ball, but the shopkeepers tell you that there are no balls available in the market due to short supply.

We all do face such situations, many a times.

3.1 Market Supply

Supply is the specific quantity of output that the producers are willing and able to make available to consumers at a particular price over a given period of time. In one sense, supply is the mirror image of demand. Individuals' supply of the factors of production or inputs to market mirrors other individuals' demand for these factors. For example, if we want to rest instead of weeding the garden, we hire someone: we demand labour. For a large number of goods, however, the supply process is more complicated than demand.

Supply is not simply the number of a commodity a shopkeeper has on the shelf, such as '10 oranges' or '10 packet of chips', because supply represents the entire relationship between the quantity available for sale and all possible prices charged for that good. The specific quantity desired to sell of a good at a given price is known as the quantity supplied. Typically a time period is also given when describing quantity supplied. For example, when the price of an umbrella is ₹100, the quantity supplied is 500 umbrellas a week.

The supply of produced goods (tangibles) is usually indirect and the supply of non-produced goods (intangibles) is more direct. Individuals supply their labour in the form of services directly to the goods market. For example, an independent contractor may repair a washing machine. The contractor supplies his labour directly.

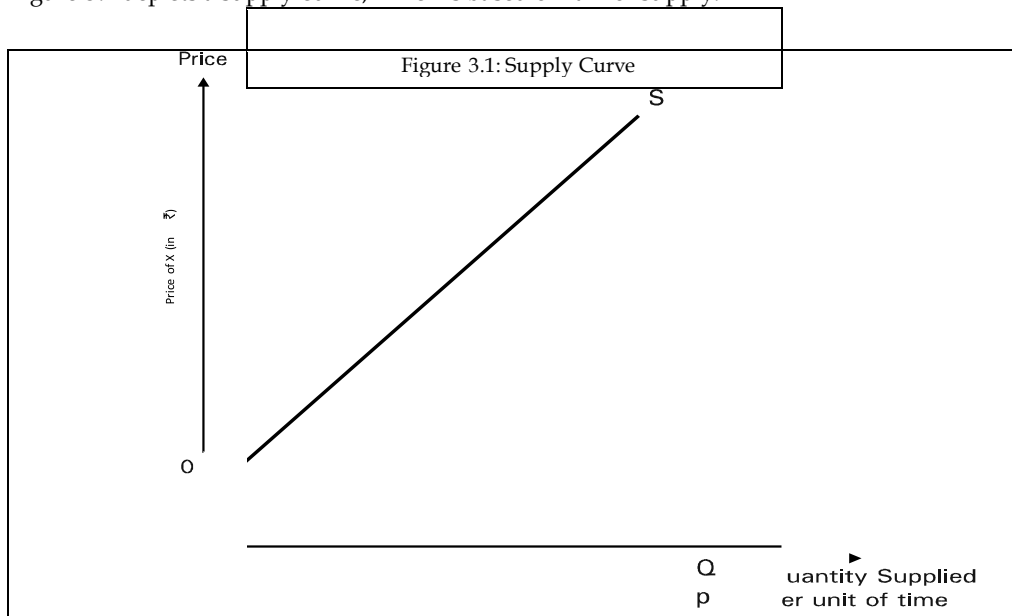
Law of Supply

According to the Law of Supply, other things remaining constant, higher the price of a commodity, higher will be the quantity supplied and vice versa. There is a positive relationship between supply and price of a commodity.

As in the case of quantity demanded, price is the major determinant of quantity supplied. In graphical terms supply refers to the entire supply curve because a supply curve tells us how much of a commodity will be offered for sale at various prices. Quantity supplied refers to a point on a supply curve. In case, the price of a good rises, individuals and firms can rearrange their activities in order to supply more of that good to the market, substituting production of that good for production of other goods.

With the firms, there is another explanation. Assuming firm's costs are constant, higher price means higher profits (the difference between a firm's revenues and its costs). The expectation of those higher profits leads it to increase output as price rises, which is what the law of supply states.

Figure 3.1 depicts a supply curve, which is based on law of supply.



The law of supply also assumes that other things are held constant. Other variables, like price of inputs used in production, technology, producers' expectations and number of producers in the market, might change, causing a shift in supply. This will be discussed in the next section.

A supply schedule is a table which lists the possible prices for a good and service and the corresponding quantity supplied.

Market supply is the summation of all individual supplies at a given price. The market supply curve is the horizontal sum of the individual supply curve.

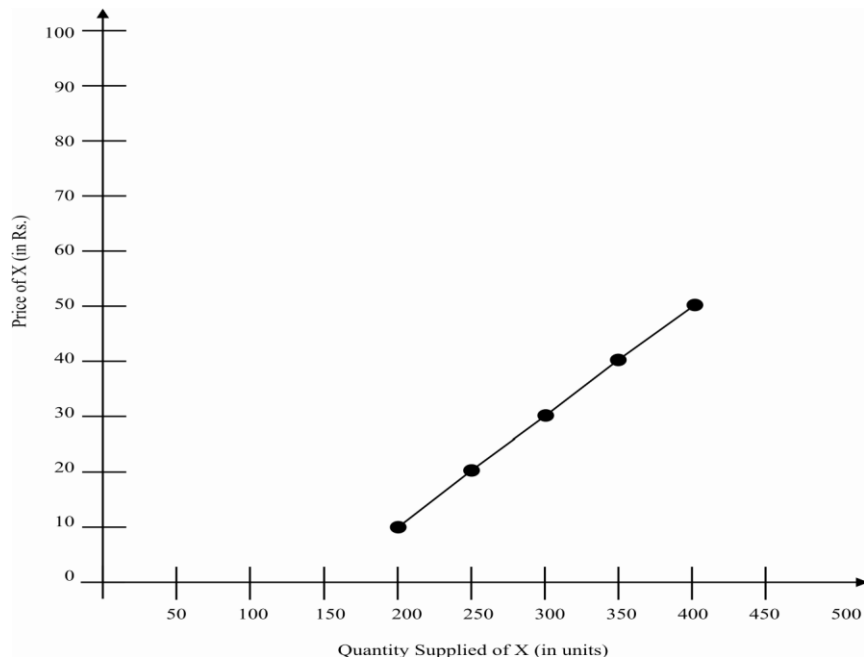


Example: From a supply schedule to a supply curve.

Let's see how a supply curve is drawn on the basis of figures given in the supply schedule.

Supply Schedule

Price of X (in ₹)	Quantity Supplied of X (in units)
10	200
20	250
30	300
40	350
50	400



From Supply Schedule to Supply Curve

3.2 Market Equilibrium

Price is determined in a free market by the interaction of supply and demand. We can underline three dynamic laws of supply and demand.

1. When quantity demanded is greater than quantity supplied, prices tend to rise; when quantity supplied is greater than quantity demanded, prices tend to fall.
2. In a market, larger the difference between quantity supplied and quantity demanded, the greater the pressure on prices to rise (if there is excess demand) or fall (if there is excess supply).
3. When quantity supplied equals quantity demanded, prices have no tendency to change.

Price theory answers the question of interaction of demand and supply to determine price in a competitive market. Let's see an example, give in Table 3.1.

Table 3.1: Market Supply and Demand for Commodity X

Price of Commodity	Total Quantity Supplied per Month	Total Quantity Demanded per Month	Surplus or Shortage
5	12,000	2,000	+10,000
4	10,000	4,000	+6,000
3	7,000	7,000	0
2	4,000	11,000	-7,000
1	1,000	16,000	-15,000

At a price of 3 units, and only at this price, the quantity which producers are willing to produce and supply is identical to the amount consumers are willing to buy. As a result, there is neither a shortage nor a surplus of commodity X at this price. A surplus causes prices to decline and a shortage causes prices to rise. With neither shortage nor surplus at 3 units, there is no reason for the actual price of commodity X to move away from this price. This price is called the equilibrium price. Equilibrium represents a situation from where there is no tendency to change. It is a state of balance. Stated differently, the price of X will be established where the supply decisions

of producers and demand decisions of buyers are mutually consistent. Interaction of demand and supply to reach equilibrium is shown in Figure 3.2.

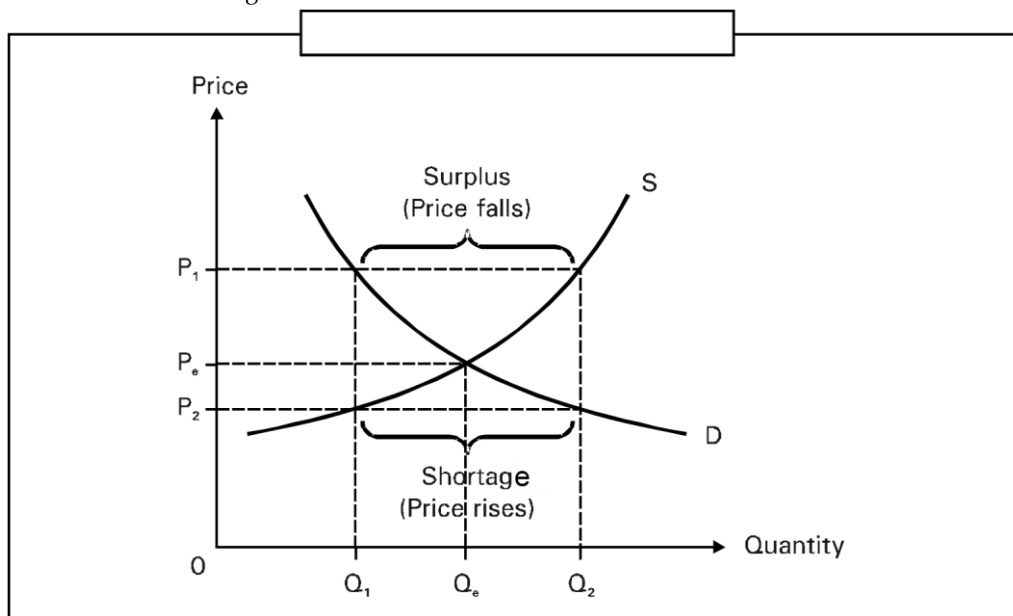


Figure 3.2:

Equilibrium Point

Graphically, the interaction of supply and demand curves will indicate the equilibrium point (E).

If market price is OP_1 , the quantity demanded by consumers is OQ_1 , while the quantity which producers wish to supply is OQ_2 . There is thus a surplus of Q_1Q_2 at this price. It is well known that a surplus leads to a downward pressure on price and so market price will fall. At the lower price of OP_2 , the quantity supplied is OQ_1 , while the quantity demanded is OQ_2 . There is, therefore, a shortage at this price, represented by Q_1Q_2 . This shortage tends to put an upward pressure on price and market price is expected to rise.

There is only one price, at which the quantity supplied is equal to the quantity demanded, there is no surplus or shortage, no rise or fall of price - OP_e . It is thus referred to as the equilibrium position.

Price Ceiling and Price Floors

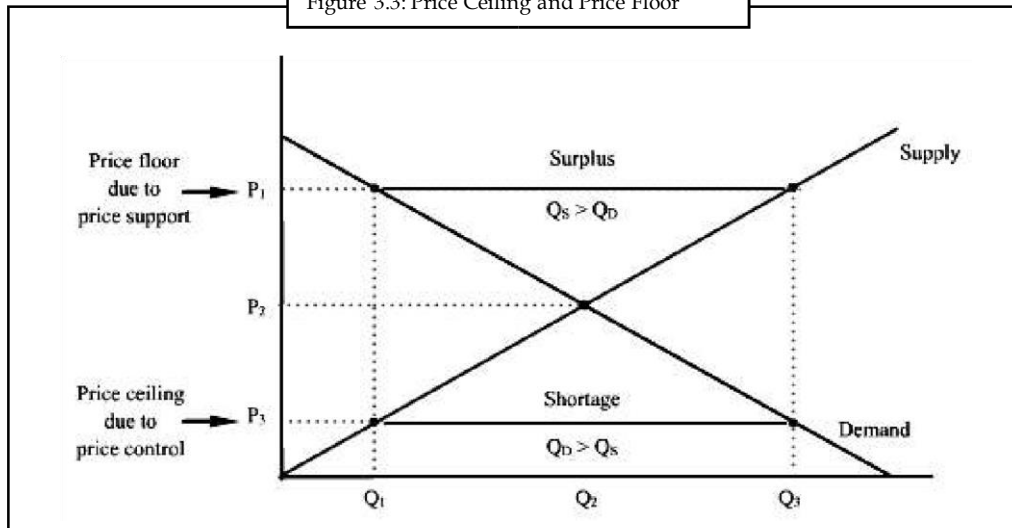
A price ceiling occurs when the price is artificially held below the equilibrium price and is not allowed to rise. There are many examples of price ceilings. Most price ceilings involve the government in some way.



Example: In many cities, there are rent controls. This means that the maximum rent that can be charged is set by a governmental agency. This rent is usually allowed to rise a certain percent each year to keep up with inflation. However, the rent is below the equilibrium rent.

If the price ceiling is above the market price, then there is no direct effect. If the price ceiling is set below the market price, then a "shortage" is created; the quantity demanded will exceed the quantity supplied. The shortage may be resolved in many ways. One way is "queuing"; people have to wait in line for the product, and only those willing to wait in line for the product will actually get it. Sellers might provide the product only to family and friends, or those willing to pay extra "under the table". Another effect may be that sellers will lower the quality of the good sold. "Black markets" tend to be created by price ceilings. Figure 3.3 depicts the effect of price ceiling and price floor.

Figure 3.3: Price Ceiling and Price Floor



A price floor exists when the price is artificially held above the equilibrium price and is not allowed to fall. There are many examples of price floors. In some cases, private businesses maintain the price floor while, in other cases, it is the government that maintains the price floor. One price floor that was maintained by the private businesses used to be called "fair trade". In the case of fair trade, the manufacturer would set a price for the product that was above the equilibrium price. The manufacturer then told the retail stores that the price could not be lowered or the store would not be able to sell any of the manufacturer's products.

When a "price floor" is set, a certain minimum amount must be paid for a good or service. If the price floor is below a market price, no direct effect occurs. If the market price is lower than the price floor, then a surplus will be generated. Minimum wage laws are good examples of price floors.

3.3 Summary

- Supply is the specific quantity of output that the producers are willing and able to make available to consumers at a particular price over a given period of time.
- According to the Law of Supply, more of a good will be supplied the higher its price, other things constant or less of a good will be supplied the lower its price, other things remaining constant.
- Price is determined by the two forces of demand and supply, in a free market. A point of balance, where demand equals supply is known as market equilibrium.

3.4 Keywords

Equilibrium: A state of balance.

Law of Supply: More of a good will be supplied the higher its price and vice-versa

Supply: Willingness and ability to produce a specific quantity of output available to consumers at a particular price over a given period of time.

3.5 Self Assessment

1. State true or false for the following statements:

- Supply is a positive function of price.
- A trader has 10 bags of cement in his store. This represents supply of cement.
- A supply schedule is a table that represents the various amounts of goods available for supply at various prices.
- When quantity demanded is more than quantity supplied, the prices tend to fall.

- (e) Price floor can be imposed by anyone in the market.
2. Fill in the blanks:
- (a) As per law of supply, more goods will be supplied at price.
- (b) The supply curve is sloping.
- (c) There is only one possible price at which quantity supplied is quantity demanded
- (d) In price ceiling, price is purposely held.....the equilibrium price.
- (e) If the market price is lower than the price floor, then is generated.
- (f) is a position at which there is no surplus or shortage in the economy.

3.6 Review Questions

- Using demand and supply analysis explain why the government might wish to control the price of rice below the market equilibrium price?
- Using the supply analysis, describe the recent increase in food items worldwide.
- Over time, the demand for wheat has shifted to the right. Why, do you think, it has occurred?
- Analyse the impact of taxes and subsidies on the supply of cigarette and LPG
- Assume yourself as a manager of any FMCG firm. In what ways supply analysis is important for you?
- Consider the following simplified demand-supply functions

Demand: $Q = 200 - 2P$

Supply: $Q = 20 + 4P$

What are the equilibrium price and quantity sold? (Hint: Just equate demand and supply equations)

7. Given the data below showing the demand and supply of X in a given market:

Price at X per ton (₹)	1	2	3	4	5
Demand at X per period (₹)	25	16	12	10	9
Supply at X per period (Tons)	3	3	12	14	29

- (a) What would be the free market price of X?
- (b) What would be the price if demand increased by 4 tons at every price?
- (c) What would be the effect of a government's imposing of a minimum price of ₹ 5 per ton in the original situation?
8. Discuss the concepts of price ceiling and price floor with examples.

Answers: Self Assessment

1. (a) True (b) False (c) True (d) False
(e) False
2. (a) Higher (b) Upward (c) Equal to (d) Below
(e) Equilibrium (f) equilibrium